

Metropolitan  State College of Denver

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**1995-96 CATALOG**

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Metropolitan  
State College  
of Denver



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**Photography:** Dave Neligh, Peggy O'Neill-Jones, H. Keith Williams

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## 4 POLICIES AND PROCEDURES

### COLLEGE POLICIES AND PROCEDURES

#### EQUAL OPPORTUNITY AND ADA STATEMENT

Metropolitan State College of Denver is an equal opportunity employer; applications from minorities and women are particularly invited. Metropolitan State College of Denver does not discriminate on the basis of race, color, creed, national origin, sex, age, sexual orientation, or disability in admissions or access to, or treatment or employment in, its educational programs or activities. Inquiries concerning the college grievance procedures may be directed to the designated Metro State officials. Inquiries concerning Title VI and Title IX may be referred to Dr. Percy Morehouse, Jr., Metro State Office of Equal Opportunity, Campus Box 63, P.O. Box 173362, Denver, CO 80217-3362 (303) 556-2939. Inquiries concerning ADA (Americans with Disabilities Act) or 504 may be referred to Ms. Helen Fleming, Faculty and Staff ADA Coordinator, Metro State, Campus Box 47, P.O. Box 173362, Denver, CO 80217-3362 (303) 556-8514; Dr. Manuel Escamilla, Student ADA Coordinator, Metro State, Campus Box 42, P.O. Box 173362, Denver, CO 80217-3362 (303) 556-4737; Mr. Dick Feurborn, ADA Coordinator, AHEC, Campus Box 001, P.O. Box 173361, Denver, CO 80217-3361 (303) 556-8376; or Ms. Karen Rosenchein, Manager. Otherwise, all inquiries may be referred to the Office for Civil Rights, U.S. Department of Education, 1244 Speer Boulevard, Denver, CO 80204 (303) 844-3723.

#### FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT

Metro State maintains educational records for each student who has enrolled at the college. Under the Family Educational Rights and Privacy Act of 1974 (FERPA), each parent or eligible student has the right to:

- inspect and review the student's educational records
- request the amendment of the student's educational records to ensure that they are not inaccurate, misleading, or otherwise in violation of the student's privacy or other rights
- consent to disclosures of personally identifiable information contained in the student's educational records, except to the extent that FERPA authorizes disclosure without consent (e.g. directory information and in emergency situations)
- file with the U.S. Department of Education a complaint under 34 CFR 99.64 concerning alleged failures by the college to comply with the requirements of FERPA
- obtain a copy of the college's policy on student educational records, which is located in the Office of Registration and Student Records, Central Classroom Building, room 103

Pursuant to FERPA, and subject to the Colorado Public Records Act (Section 24-72-201 et seq., C.R.S.), the college may release directory information without the prior written consent of the student unless within 10 days after registration the student has notified the college's Office of Registration and Student Records that such information shall not be released without the consent of the student. Metropolitan State College of Denver has designated the following categories of personally identifiable information as directory information under section 438(a)(5)(B) of FERPA:

- name, address, and telephone
- date and place of birth
- major and minor fields of study
- participation in officially recognized activities and sports
- weight and height of members of athletic teams
- dates of attendance at the college
- degrees and awards received
- last educational institution attended

**THE STUDENT RIGHT-TO-KNOW ACT AND THE CAMPUS SECURITY ACT**  
**Campus Crime Information**

During the past three years, the following crimes were committed on campus at the Auraria Higher Education Center, serving the University of Colorado at Denver, Metropolitan State College of Denver, and the Community College of Denver:

Occurrences of Criminal Offenses on Campus

Offense	1994	1993	1992
Murder.....	0.....	0.....	0.....
Rape.....	0.....	1.....	0.....
Robbery.....	1.....	4.....	5.....
Aggravated Assault.....	10.....	17.....	15.....
Burglary.....	17.....	28.....	33.....
Vehicle Theft.....	11.....	20.....	21.....
Sexual Assault*.....	13.....	8.....	14.....

\*Includes sexual assaults other than first- and second-degree sexual assaults (rape), such as indecent exposures and third-degree sexual assaults.

Number of Arrests for the Following Crimes on Campus

Arrests	1994	1993	1992
Liquor Law Violation*.....	0.....	8.....	3.....
Drug Abuse Violation.....	2.....	6.....	3.....
Weapons Possession.....	1.....	4.....	3.....

\*Excludes DUI arrests; however, 22 of 55 total offense arrests in 1994 involved alcohol.

These statistics were provided by the Auraria Department of Public Safety in compliance with the Crime Awareness and Campus Security Act of 1990.

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***The programs, policies, statements, and procedures contained in this Catalog are subject to change by the college without prior notice. Metropolitan State College of Denver reserves the right to withdraw courses; revise the academic calendar; or change curriculum, policies, graduation procedures, and other requirements at any time. Changes will become effective whenever the proper authorities so determine and will apply to prospective students.***



## TRUSTEES OF THE STATE COLLEGES IN COLORADO

	Date of First Appointment	Present Term Expires
<i>John Roybal, Chair, Blanca</i> .....	1991 .....	1995
<i>Aims C. McGuinness, Jr., Vice Chair, Denver</i> .....	1989 .....	1997
<i>Anne Steinbeck, Gunnison</i> .....	1987 .....	1995
<i>Harriet Barker, Boulder</i> .....	1991 .....	1995
<i>George Brantley, Denver</i> .....	1993 .....	1997
<i>Cole Finnegan, Denver</i> .....	1993 .....	1997
<i>James Fleming, Grand Junction</i> .....	1991 .....	1995
<i>James Hahn, Faculty, WSC</i> .....	1994 .....	1995
<i>Mark Bowers, Student, ASC</i> .....	1994 .....	1995
<i>William Fulkerson, Ph.D., President of The State Colleges in Colorado</i>		

## METROPOLITAN STATE COLLEGE OF DENVER OFFICERS OF ADMINISTRATION

### Office of the President

<i>President</i> .....	<i>Sheila Kaplan, Ph.D.</i>
<i>Assistant to the President for Urban and Government Affairs</i> .....	<i>Gay Cook, M.A.</i>
<i>College Counsel</i> .....	<i>Scot Silzer, J.D.</i>
<i>Executive Assistant to the President</i> .....	<i>Yvonne Flood, B.S.</i>
<i>Equal Opportunity Director and Assistant to the President</i> .....	<i>Percy A. Morehouse, Jr., Ph.D.</i>
<i>Provost and Vice President for Academic Affairs</i> .....	<i>Sharon Siverts, Ph.D.</i>
<i>Vice President for Administration and Finance</i> .....	<i>Joseph F. Arcese, M.B.A.</i>
<i>Vice President for Institutional Advancement</i> .....	<i>Carolyn M. Schaefer, B.A.</i>
<i>Vice President for Student Services</i> .....	<i>Vernon E. Haley, M.S.</i>

### Office of the Provost and Vice President for Academic Affairs

<i>Provost and Vice President for Academic Affairs</i> .....	<i>Sharon Siverts, Ph.D.</i>
<i>Associate Vice President</i> .....	<i>Jett Conner, Ph.D.</i>
<i>Director of Cooperative Education Program</i> .....	<i>Susan Lanman, M.A.</i>
<i>Assistant Vice President for Extended Education</i> .....	<i>Andrew Breckel III, M.A.</i>
<i>Director of Adult Learning Services</i> .....	<i>Eleanor M. Green, Ed.D.</i>
<i>Director of Extended Campus Programs</i> .....	<i>Gwendolyn S. Thornton, M.A.</i>
<i>Director of Grants and Sponsored Research</i> .....	<i>TBA</i>
<i>Director of Program Evaluation</i> .....	<i>Frieda Holley, Ph.D.</i>

### Office of the Vice President for Administration and Finance

<i>Vice President for Administration and Finance</i> .....	<i>Joseph Arcese, M.B.A.</i>
<i>Associate Vice President for Human Resources/Finance</i> .....	<i>Tim L. Greene, M.P.A.</i>
<i>Director of Accounting Services</i> .....	<i>Sita M. Thomas, B.S.</i>
<i>Director of Personnel and Payroll Services</i> .....	<i>Sandi L. Jones</i>
<i>Benefits Administrator</i> .....	<i>Elyse Yamauchi, B.A.</i>
<i>Associate Vice President for Information Technology</i> .....	<i>Leon Daniel, M.S.</i>
<i>Director of Academic Computing and User Services</i> .....	<i>John T. Reed, Ph.D.</i>
<i>Manager of Information Technology Applications Services</i> .....	<i>Steve Franzkowiak, B.A.</i>
<i>Technical Services Manager</i> .....	<i>Jay Martin, B.A.</i>
<i>Director of Budgets</i> .....	<i>Bruce Williams, M.B.A.</i>
<i>Assistant Vice President for Business Affairs</i> .....	<i>Michael Barnett, M.S.</i>
<i>Business Services Manager</i> .....	<i>Ginger Alcorn</i>
<i>Interim Director of Financial Aid</i> .....	<i>Cindy Hejl, B.S.</i>

### Office of the Vice President for Institutional Advancement

<i>Vice President for Institutional Advancement</i> .....	<i>Carolyn M. Schaefer, B.A.</i>
<i>Assistant Vice President for Development</i> .....	<i>Mary Konrad Feller, M.A.</i>
<i>Director of Information Resources for Development and Alumni</i> .....	<i>Bradley Snyder, Ph.D.</i>

Assistant Vice President for Communications and Media Relations.....Robert G. Brock, M.M.  
 Director of Alumni Relations.....Carolyn Champion-Sloan, B.A.

### Office of the Vice President for Student Services

Vice President for Student Services .....Vernon E. Haley, M.S.  
 Assistant Vice President for Student Services.....Manuel Escamilla, Ph.D.  
 Executive Assistant to the Vice President for Student Services .....Kelly Espinoza, M.A.  
 Director of the High School Upward Bound Program.....Charles Maldonado, B.S.  
 Director of the Student Support Services Program.....Patricia Trotman, M.A.  
 Director of the Veterans Upward Bound Program.....Glenn A. Morris, M.A.  
 Assistant Vice President for Student Services.....C. LaVonne Moton-Teague, Ph.D.  
 Director of Assessment and Testing .....John Pierce, M.A.  
 Director of Advising .....Lydia Vasquez, B.A.  
 Director of Career Services.....TBA  
 Director of the Counseling Center .....Barbara Vollmer, Ph.D.  
 Director of Probation and Suspension.....Betty Vette, B.A.  
 Assistant Dean of Registration and Student Records.....Jeffrey W. Johnson, M.S.  
 Director of Student Records .....Lynn Denzin, M.Ed.  
 Dean of Student Life.....Yolanda Ortega-Erickson, M.P.A.  
 Director of Campus Recreation.....Anne McKelvey, M.A.  
 Director of Gay, Lesbian and Bisexual Student Services.....Karen Bensen, L.C.S.W.  
 Acting Director of Student Activities .....Maggie Miller, M.S.  
 Associate Director of Student Activities.....Mariam Gratia Taft, M.S.  
 Director of the Student Health Clinic .....Steve Monaco, M.A.  
 Director of Student Legal Services.....Spike Adams, J.D.  
 Director of Student Publications.....Kate B. Lutrey, B.A.  
 Registrar.....Thomas R. Gray, M.S.  
 Director of Recruitment and Early Outreach .....Pauline R. Reece, M.A.  
 Director of Orientation.....Nancy Breckel, M.A.

### Academic Administrators

#### School of Business

Interim Dean .....R. Michael Brown, Ph.D.  
 Interim Associate Dean .....Rajendra P. Khandekar, Ph.D.  
 Department Chairs  
   Accounting.....Virginia Parker, Ph.D.  
   Computer Information Systems and Management Science.....Stuart Monroe, Ph.D.  
   Economics.....Kishore Kulkarni, Ph.D.  
   Finance.....Kenneth Huggins, Ph.D.  
   Management .....Robert Breitenbach, Ph.D.  
   Marketing.....Charles R. Vitaska, Ph.D.  
 Director of the Institute for Entrepreneurship and Creativity.....Courtney Price, D.P.A.  
 Director of the African American Leadership Institute.....Ronald M. Knights, Ph.D.  
 Director of the Small Business Institute.....Kenneth Huggins, Ph.D.

#### School of Letters, Arts and Sciences

Dean.....Joan M. Foster, Ph.D.  
 Associate Dean .....James Dixon, Ph.D.  
 Assistant to the Dean .....Tony Montoya, M.A.  
 Department Chairs  
   African American Studies .....C.J. White, Ph.D.  
   Art .....Susan Josepher, Ph.D.  
   Biology .....George C. Becker, Ph.D.  
   Chemistry.....Milton J. Wieder, Ph.D.  
   Chicano Studies.....TBA  
   Earth and Atmospheric Sciences.....James Cronoble, Ph.D.  
   English.....Elsie G. Haley, Ph.D.  
   History .....Stephen J. Leonard, Ph.D.  
   Journalism .....Deborah Hurley-Brobst, M.S.  
   Mathematical and Computer Sciences .....Charlotte Murphy, Ph.D.

## 8 ADMINISTRATION

<i>Modern Languages</i> .....	<i>David Conde, Ph.D.</i>
<i>Music</i> .....	<i>Hal Tambyln, D.M.A.</i>
<i>Philosophy</i> .....	<i>Frederick C. Doepke, Ph.D.</i>
<i>Physics</i> .....	<i>Sidney A. Freudenstein, Ph.D.</i>
<i>Political Science</i> .....	<i>Norman Provizer, Ph.D.</i>
<i>Psychology</i> .....	<i>Lyn Wickelgren, Ph.D.</i>
<i>Sociology/Anthropology/Social Work</i> .....	<i>Kenneth M. Keller, Ph.D.</i>
<i>Speech Communications</i> .....	<i>James Craig, Ph.D.</i>
<i>Director of the Honors Program</i> .....	<i>Alain D. Ranwez, Ph.D.</i>
<i>Director of the Institute for International and Intercultural Education</i> .....	<i>Akbarali Thobhani, Ph.D.</i>
<i>Director of the Institute for Women's Studies and Services</i> .....	<i>Jodi Wetzell, Ph.D.</i>
<i>Director of the Center for Mathematics, Science and Environmental Education</i> .....	<i>Larry S. Johnson, Ph.D.</i>
<i>Acting Director of the Family Center</i> .....	<i>Kenneth M. Keller, Ph.D.</i>

### **School of Professional Studies**

<i>Dean</i> .....	<i>Bill Rader, Ph.D.</i>
<i>Associate Dean</i> .....	<i>Mary A. Miller, Ph.D.</i>

#### **Department Chairs**

<i>Aerospace Science</i> .....	<i>Robert K. Mock, M.S.</i>
<i>Criminal Justice and Criminology</i> .....	<i>Waldo H. Copley, Ph.D.</i>
<i>Early Childhood and Elementary Education</i> .....	<i>William Wiener, Ph.D.</i>
<i>Engineering Technology and Industrial Studies</i> .....	<i>George S. Rowley, M.S.</i>
<i>Hospitality, Meeting and Travel Administration</i> .....	<i>Raymond Langbehn, M.A.</i>
<i>Human Performance, Sport and Leisure Studies</i> .....	<i>Cheryl J. Norton, Ph.D.</i>
<i>Human Services</i> .....	<i>Jeffrey Haber, Ed.D.</i>
<i>Co-Director of the Center for Addiction Studies</i> .....	<i>Anne S. Hatcher, Ed.D.</i>
<i>Co-Director of the Center for Addiction Studies</i> .....	<i>Michael J. Faragher, Psy.D.</i>
<i>Military Science (Army ROTC)</i> .....	<i>Maj. Hal Moore</i>
<i>Nursing and Health Care Management</i> .....	<i>Kathleen McGuire-Mahony, Ph.D.</i>
<i>Reading</i> .....	<i>J. Douglas Cawley, Ph.D.</i>
<i>Secondary Education</i> .....	<i>Marilyn Taylor, Ed.D.</i>
<i>Technical Communications</i> .....	<i>Peggy O'Neill-Jones, M.S.S.</i>
<i>Director of Professional Education</i> .....	<i>Mark O'Shea, Ed.D.</i>
<i>Director of Clinical Services</i> .....	<i>Daniel Alfaro, Ph.D.</i>
<i>Director of the Academy for Teaching Excellence</i> .....	<i>Charles V. Branch, Ed.D.</i>
<i>Director of the Child Development Center</i> .....	<i>Marge Petersen, M.A.</i>

## The College

Metropolitan State College of Denver is one of the nation's premier urban colleges, educating more Coloradans than any other institution of higher education in the state. Since the college was founded in 1963 as part of The State Colleges in Colorado, Metro State has grown to a current enrollment of about 17,500 students, awarded degrees to nearly 34,000 graduates, and delivered educational programming to approximately 230,000 people.

Outstanding academic programs, complementary support services, competitively priced tuition, flexible scheduling, and convenient campus sites make Metro State a highly attractive alternative for an increasing number of Colorado residents each year.

Located in downtown Denver, the college shares the Auraria Higher Education Center campus with the University of Colorado at Denver and the Community College of Denver. The concept of facility sharing affords Metro State students the flexibility of taking lower-division courses at the community college, as well as graduate or specialized professional courses at the university. Proximity to downtown means valuable cultural, business, and internship possibilities.

Metro State is a comprehensive academic institution, granting bachelor of science, bachelor of arts, and bachelor of fine arts degrees, offering more than 2,000 course sections during the fall and spring semesters. Students can choose from 50 majors and 68 minors offered through three schools: Business; Letters, Arts and Sciences; and Professional Studies. Programs range from the traditional disciplines, such as accounting and teacher licensure, to contemporary fields of study, such as drug abuse counseling and entrepreneurship. Unique majors for Coloradans include aerospace science, criminal justice, human services, and land use.

Metro State's emphasis is on teaching. All classes are taught by professors, not graduate assistants. The college's more than 325 full-time faculty are teachers first. Many have extensive professional backgrounds, with more than 88 percent having doctorates or the highest level of academic degrees attainable in their fields. Part-time faculty work in the metro Denver community and bring to the classroom their expertise in business, law, politics, communications, science, technology, and the arts.

Small classes—the average class size is 22—ensure students greater access to faculty, a highly interactive atmosphere, and a personalized learning experience.

As an urban school committed to serving the local community, Metro State attracts students from a rich and diverse mixture of age groups, socioeconomic classes, ethnic backgrounds, and lifestyles. The college's curriculum and philosophy reflect the diversity of the student population and the realities of urban life. While upholding high academic standards, the faculty seek to accommodate the myriad needs of nontraditional students, offering classes on weekdays, evenings, and weekends at four locations in the metropolitan area. The college also provides a network of support services.

## The Campus

Metropolitan State College of Denver is located at the Auraria Higher Education Center, a 171-acre campus in downtown Denver at Speer Boulevard and West Colfax Avenue. The Community College of Denver and the University of Colorado at Denver share the facilities with Metro State.

More than 1,000,000 square feet of space for classrooms, laboratories, and offices are included in the facility. Some administrative offices are in restored Victorian homes in Denver's historic Ninth Street Park located on the Auraria site. Other administrative offices occupy the Terracentre at 1100 Stout Street. The campus features a childcare center; a comprehensive library housing 730,000 volumes; and one of the most unusual student union facilities in the country — the historic, Bavarian-style Tivoli Brewery building.

Excellent physical facilities include a block-long physical education/events center with a swimming pool, a weightroom, game courts, dance studios, and event seating for 3,000.

The proximity of the Auraria Higher Education Center to downtown Denver enables students and faculty to use the community as a learning laboratory and to weave classroom theory into the social, political, cultural, and economic practice of the city.

## 10 GENERAL INFORMATION

### AURARIA PARKING AND TRANSPORTATION SERVICES

#### Parking Services Department

Daily Fee Parking: (in-and-out privileges in Lot E only); daily fees range from \$1.25 to \$2.50. Several lots are unattended and require quarters to purchase a receipt from the vending machine. Change is available from the Parking Office, a parking attendant in an attended lot, or the Student Union. Make sure the parking receipt is placed face-up on the driver's side of the dashboard. Receipts are valid only on the day and in the lot where purchased and are not transferable from one vehicle to another. For easy entrance/exit to the Parking and Transportation Center and lots D, K and H, a reusable debit card can be purchased for \$1 and a cash value can be encoded on its magnetic strip. Debit cards are available on the first floor of the Student Union and at the southwest entry by the phone bank in the North Classroom. Permit Parking: Limited parking is available on a semester basis. Contact the Parking Office (303) 556-2000, for information.

Motorist Assistance Program: Personnel will help jump-start dead batteries and assist in fixing flats. Jumper cables, bumper jacks, tire tools, and gasoline cans are also available at no cost to campus parkers. Call (303) 556-2000 for help. The Parking Services Department is located at 777 Lawrence Way (first floor of parking garage); hours are from 7:30 a.m.-5:30 p.m. (M-F).

Community Services Department Handivan: The wheelchair-accessible handivan provides free on-campus transportation for students, faculty, and staff from 7:00 a.m. to 10:30 p.m., Monday-Thursday, and from 7:00 a.m.-5:00 p.m. on Friday.

Nightrider: The Nightrider is a free security escort service from any campus building to any campus parking lot. Service is available from dusk to 10:30 p.m., Monday-Thursday.

#### AURARIA PUBLIC SAFETY

The Public Safety Division is fully certified and authorized to provide police services to the Auraria campus and is proud to maintain the reputation as one of the safest in the state.

In addition to a police chief and 15-20 full-time officers, the Public Safety Division employs student hourly workers as police officers, guards, and dispatchers. Officers patrol the campus 24 hours per day, seven days per week, on foot, bicycles, or golf carts, and in patrol cars.

The Public Safety Division also provides additional services to the campus community such as vehicle unlocks, crime prevention programs, emergency responses, and environmental health and safety.

The Public Safety Department is located at 1200 Seventh Street. Routine calls—556-3271; EMERGENCY CALLS—556-2222.

### Accreditations/Approvals

Metro State is accredited by the North Central Association of Colleges and Schools. Individual academic programs within the following areas are accredited or approved by the following agencies:

Program	Accreditation/Approval Agency
Human Performance, Sport and Leisure Studies	National Park Association/American Association for Leisure and Recreation
Nursing*	National League for Nursing
Teacher Education*	National Council for Accreditation of Teacher Education; Colorado Department of Education
Music*	National Association of Schools of Music
Civil Engineering Technology* Electronics Engineering Technology* and Mechanical Engineering Technology*	Technology Accreditation Commission of the Accreditation Board for Engineering and Technology
Human Services**	Council for Standards in Human Services Education
Chemistry **	American Chemical Society
Center for Addiction Studies**	Colorado Department of Health
Accounting**	Colorado State Board of Accountancy
Aerospace Science**	Federal Aviation Administration
Health Care Management**	Association of University Programs in Health Administration
* Accreditation	** Approval

## The State Colleges in Colorado

The member institutions governed by the Trustees of The State Colleges in Colorado are Adams State College, Mesa State College, Metropolitan State College of Denver, and Western State College. The purpose of The State Colleges in Colorado is to identify and facilitate cooperative efforts among the institutions.

Each member institution can provide any student in good standing with the materials needed to enroll temporarily in any other member institution without incurring additional matriculation costs. Information concerning tuition is available at the host institution.

The enrollment status of the student at the host institution is determined by the student's status at the home institution. Students should ascertain before enrolling at an institution that desired courses will satisfy degree requirements at the home institution. The process of enrolling as a system student should begin at least one month prior to the beginning of the registration period at the host institution.



## 12 STUDENT SERVICES

### ACADEMIC ADVISING

Academic advising is available in the Advising, Assessment and Support Center. Continuing and prospective students seeking these services should communicate with the coordinator of advising for the appropriate school. The Advising, Assessment and Support Center is responsible for the advising of all undeclared majors at Metro State. For additional information, please call (303) 556-4327.

### AURARIA CHILD CARE CENTER

The center provides high quality early childhood care and education to the children of students, staff, and faculty. A discovery, child-oriented approach is provided by a professional teaching staff to children ages 12 months to 6 years. These programs typically have a waiting list; therefore, pre-registration is recommended. The center is open 7:00 a.m.-8:30 p.m., Monday through Thursday; and 7:00 a.m.-6:00 p.m. on Friday. Currently there is no waiting list for evening care. The center also offers drop-in care.

### THE AURARIA LIBRARY

The Auraria Library (administered by CU-Denver) provides a wide variety of learning resources for students and faculty. The collection contains more than 730,000 books. Microforms, bound periodicals, and more than 3,300 journals and newspaper subscriptions are located in the Periodicals Reading Room. Students are encouraged to take the self-guided tour (audiotape or paper) to become more familiar with the location of various collections in the library.

As a member of the Colorado Alliance of Research Libraries, the Auraria Library has access to an additional 6,000,000 volumes in Colorado through interlibrary loan and can access other materials across the country. Services include an on-line, public access catalog (CARL), computerized literature searches, CD-ROMs, a depository of U.S. and Colorado government publications, and media listening and viewing facilities. The library handbook is available on OASIS (On-line Auraria Shared Information System).

A current ID allows patrons to check out up to 75 items, renew items over the telephone, place a hold or recall material currently checked out, use media items, and check out reserve items. For more information on the borrowing policy, call (303) 556-2639. To encourage prompt return of materials, the library charges fines and lost-item fees; borrowers are responsible for any materials charged to their account. Library hours vary according to the day of the week or semester. For more detailed information, pick up an Auraria Library bookmark at one of the library's service desks, or consult the Library News Database on CARL.

### CAMPUS RECREATION

Campus Recreation at Auraria offers a comprehensive recreational program. Student membership is free with a current validated student ID.

The Drop-in Program provides group and individual activities for students, faculty, staff, alumni, and guests. Facilities include four basketball courts, 12 tennis courts, volleyball courts, a 25-yard indoor pool, eight handball/racquetball courts, two squash courts, a weightroom, a fitness center, a dance studio, a baseball field, softball fields, and a track. In addition, Campus Recreation offers high- and low-impact aerobics, step aerobics, aqua aerobics, and stretch and tone sessions daily. Please check the Campus Recreation Drop-in schedule in room 108 of the Physical Education Building or call (303) 556-3210 for a listing of available times.

The Intramural Program consists of individual and team activities open to all students, faculty, and staff members. The emphasis of the program is on participation, sportsmanship, and social interaction. Whenever possible, competitive and recreational divisions are offered to ensure participation for all ability levels. Activities include flag football, basketball, floor hockey, volleyball, racquetball, and squash leagues, as well as tennis and golf tournaments.

Club Sports provides students, faculty, and staff members the opportunity to develop their individual athletic abilities in an organized group setting. The present clubs, which are all student initiated, include men's rugby, co-ed dance, co-ed tae kwon do, men's bowling, men's volleyball, co-ed waterpolo, co-ed team handball, co-ed outdoor club, and men's lacrosse.

Outdoor Adventure provides the opportunity to experience the beauty and challenge of nature through organized trips. The program provides outdoor recreational experiences emphasizing skill acquisition, social interaction, environmental awareness, and safety. Some of the many adventures offered are downhill skiing, cross-country skiing, kayaking/rafting, canoeing, sailing, hiking, biking, rock climbing, ice climbing, naturalist outings, and family fun outings. The program also provides rental equipment, including mountain bikes, cross-country skis, roller blades, canoes, and camping and hiking gear. The office is located in the basement of the Physical Education Building.

The Physically Challenged Program offers a variety of sporting, recreational, and fitness opportunities for students with physical or learning limitations. The adaptive programs/services encompass one-on-one or group sessions that assist in using the recreational facility. Information on planned group activities or individual help sessions is available in room 108 of the Physical Education Building. Call (303) 556-3120 for more details on available programs and services.

### CAREER SERVICES

Career Services offers assistance to students and alumni in planning their careers, finding off-campus jobs while enrolled, and seeking employment upon graduation. Specific services include career interest, personality testing, and workshops focusing on career planning, résumé preparation, job search strategies, and interviewing skills. Professional counselors are available for appointments. The student employment service and job vacancy listing are also housed in the Career Services Center, located in Arts Building, room 177. The telephone number is (303) 556-3664.

The Campus Career library contains resources to help with career planning and the job search process. Information such as employer directories, salary surveys, and career assessment resources are available.

The Colorado Career Information Center is a computerized guidance system located in the Campus Career Library. Trained advisers offer assistance in its use. This system includes specific occupation information for Colorado, career assessment inventories with immediate results, and nationwide college information. Services are available by appointment at (303) 556-2246.

### COUNSELING AND SUPPORT SERVICES

The Metropolitan State College of Denver Counseling Center is an accredited member of the International Association of Counseling Services. It provides psychological services to assist students in dealing with personal and situational problems that interfere with their academic goals. The center also provides educational programs related to personal development and improving the campus climate. Services include personal counseling, group programs, stress management, crisis intervention, and testing. Services are offered to all Metro State students. Appropriate referrals may be made to other counseling services in the community. All records and information about clients are confidential.

Counseling center staff members are on call and available to help students with a personal crisis. Students have emergency priority and will be seen as quickly as possible. After hours, call Bethesda's Support Line (303) 758-1123.

Group programs are open to all students, faculty, and staff. Groups and workshops usually available include: stress management (biofeedback, time management, relaxation, and test anxiety), diversity support groups, developing healthy relationships, substance abuse, couples communication, self-esteem, coming out, parenting skills, life/work planning, family issues, loss, study skills, spirituality, women's and men's support groups, and assertiveness training.

Various personality, interest, and ability inventories are available to assist clients in understanding themselves and identifying their goals. Clients may wish to discuss with their counselor what kind of testing might be helpful. A nominal fee is assessed on each inventory.

The Metro Connections program is an informal helping network. Students, faculty, and staff who are nominated as "natural helpers" participate in a number of programs such as peer helpers to new students, an advice column in *The Metropolitan*, and conferences on topics designed to improve the campus environment.

Metro Alternatives is a substance abuse prevention program. Established in 1991, it works actively with many campus departments and community agencies to provide proactive programs for students, faculty, and staff, such as National Collegiate Alcohol and Drug Awareness Weeks and Safe Spring Break Week. Assessment, intervention, and referral services are offered. Students can become actively involved in Metro Alternatives through internships, volunteer work, and peer education.

### DISABLED STUDENT SERVICES

The Auraria Office of Disabled Student Services provides academic support services to disabled students at Metro State and the University of Colorado at Denver. Services include an adaptive computer lab, testing accommodations, notetaking services, taping services, student advocacy, sign language and oral interpreters, orientation for incoming students, priority registration, limited tutoring, sale of parking permits, and resource and referral library.



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### GAY, LESBIAN AND BISEXUAL STUDENT SERVICES

Gay, Lesbian and Bisexual (GLB) Student Services are open to all Metro State students as a resource for exploring sexual orientation issues. This program offers a variety of support, education, and advocacy services for the entire campus community, including:

- support for members of the campus community who may have questions about their own sexual orientation or that of a friend or family member
- advocacy for students experiencing discrimination or harassment based on a real or perceived gay, lesbian, or bisexual identity
- speakers for events, workshops, and classes on various aspects of sexual orientation and lesbian, gay, or bisexual life
- training programs and workshops about working more effectively with the gay, lesbian, and bisexual communities and combating homophobia
- programs such as Gay, Lesbian, Bisexual Awareness Week and other forums providing information and dialogue about gay, lesbian, and bisexual issues

The GLB Student Services office is located in the Tivoli Student Union, room 305, and is staffed by a professional coordinator with the support of student volunteers. Input and involvement from the entire campus community is welcomed. For additional information, call (303) 556-6333.

### RECRUITMENT AND RETENTION OF STUDENTS FROM ETHNIC GROUPS

Metropolitan State College of Denver strives to enhance educational opportunities for Denver area residents by offering a variety of well-structured early intervention, recruitment, and retention activities. Metro State has established a strong network in the metropolitan area that assists students and other members of the community and informs them about higher education opportunities and how to go about receiving these benefits. A variety of counselors from different areas including admissions, financial aid, academic affairs, and student affairs are available to provide higher education counseling for both new and transfer students. Individuals interested in attending Metro State should contact the Office of Admissions at (303) 556-3058 for more information.

### STUDENT ACTIVITIES

Metropolitan State College of Denver's Office of Student Activities provides a variety of ways for students to meet others and become involved in the Metro community. The council staff produces concerts, comedy shows, lectures, and special events each semester. The council also cosponsors events with clubs and offices on campus.

The PEAK (Potential through Education, Awareness and Knowledge) leadership program offers a wide range of learning opportunities for students who want to develop and sharpen their skills. PEAK training includes coalition-building, group dynamics, and leadership theory and typology. The training is structured to fit into the busy schedules of students who work.

The Club Resource Center staff can help students find a club to meet their needs, or help them to establish a new club, raise funds for programming, and keep their ledger balanced. Metro State currently has 100 active, professional, social, academic honorary, and special interest clubs on campus.

The office is located in the Tivoli Student Union, room 305. The office number is (303) 556-2595, and hours are 8:00 a.m.-5:00 p.m., Monday through Friday.

### STUDENT HEALTH CENTER

All Metro State students are entitled to medical services at the Health Center. Student health insurance is not required for use of the Health Center. Physicians, physician assistants, nurse practitioners, and nurses staff the facility. Students will be asked to complete a sign-in sheet and show a current semester ID card each time they check in. In addition, students are required to complete a patient information sheet annually and a health history form biannually. Brief office visits are free for all Metro State students. Limited, extended, detailed, and comprehensive office visits, physicals, supplies, medications, tests, lab work, and procedures are available at reasonable charges. Payment is required at the time of service.

Services include: treatment of illness and injuries, lab testing, medications, physicals, annual GYN exams, sexually transmitted disease information/testing, birth control information/services, minor surgery, cholesterol screening, fitness profiles, immunizations, HIV testing, blood pressure checks, casting, suturing, and x-ray access. Classes regarding health-related topics are taught each semester.

Walk-in services begin at 8:00 a.m., Monday-Friday. Access is on a first-come, first-served basis. Walk-in access varies daily, contingent upon when all patient slots have been used; thus, the daily closure time for walk-in care is variable. Patients are encouraged to check in as early as possible. The Student Health Center is located in the Plaza Building, room 140, on the lower level. Brochures with more information on the variety of services are available at the center. For further information, call (303) 556-2525.

### STUDENT PUBLICATIONS

The student newspaper, *The Metropolitan*, is published by the Office of Student Publications, Tivoli Student Union, room 156 (303) 556-8361. The newspaper offers students the opportunity to explore fields such as journalism, advertising sales, marketing, graphic arts, publishing, photography, business, and accounting through work experiences. *The Metropolitan* is written and produced by and for the students of Metro State. It is published weekly during the fall and spring semesters and once during the summer semester. Students interested in working on the paper should contact the student editor at (303) 556-2507.

*Metrosphere* is Metro State's annual student literary and arts publication. It contains poetry, fiction, non-fiction, art, photography, and graphics. It is written, composed, and produced entirely by students. Submissions are accepted during the fall semester. Copies are distributed free to Metro State students in the spring semester. For more information, contact the student editor at (303) 556-3940.

The office also produces the *Student Handbook* and provides graphic art services at reduced costs to on-campus offices, departments, organizations, and individuals.

The Metro State Board of Publications is the advisory board to the editors of *Metrosphere* and *The Metropolitan*. The board appoints the editors from applicants each spring for the following academic year and deals with complaints or questions regarding content. The board is composed of five students, three administrators, and three faculty and meets monthly during the fall and spring semesters.

### STUDENT UNION

The Tivoli Student Union is housed in the historic, blue and white former Tivoli Brewery located at Ninth Street and Auraria Parkway. This is the focal point for many cultural, social, and recreational activities of the college community. The Tivoli Student Union houses the Auraria Book Center, Sigi's Cabaret (an arcade and billiards room), Conference Services Office, student activities offices, Housing and Commuter Services office, the Club Hub, student organizations, student newspapers, legal services, a computer shop, copy center, and a variety of lounges for study and relaxation. There are also 29 shops available, including cafes, restaurants, movie theaters, and retail outlets.

The Conference Services Office is located within the Tivoli Student Union, room 315. This operation schedules all facilities for nonacademic use and coordinates any services necessary for the events of campus departments or organizations. For information or to reserve a room, call (303) 556-2755.

### WOMEN'S SERVICES

The Institute for Women's Studies and Services provides referrals to campus and community resources, information about scholarships, assistance to community women with the process of entering Metro State, advocacy services for students dealing with harassment or discrimination, and programs and events that focus on issues of particular concern to women. The institute houses a small library with a variety of books and other resource materials on women's experiences, histories, and contributions to society. Students who need assistance should make an appointment with the coordinator of women's services.

## Admissions and Registration

Students who have not previously attended Metropolitan State College of Denver should review the college's admission requirements.

All continuing students in good standing at Metropolitan State College of Denver are eligible to register each semester.

Students may maintain the status of continuing student while absent from the college; however, following two full semesters of absence, students should call the Office of Registration and Student Records to determine whether an updated application for re-admission will be required.

A student may register for classes in several ways. Information on the registration procedure and registration dates is published in the *Class Schedule*, which is mailed to all continuing students. Students are responsible for ensuring that there is a correct and up-to-date address on file with the college. Address changes may be made with the Office of Registration and Student Records.

Registration procedures and dates for module classes are described in the *Class Schedule*. For further information regarding registration, please call (303) 556-2950.

## Application Instructions

Applications for admission are considered in the order in which they are received each semester. All credentials received by the college become the property of Metropolitan State College of Denver and will not be returned to the student. It is the responsibility of the applicant to notify the Office of Registration and Student Records of any changes to the application for admission prior to the first day of classes. If changes are not reported to the Office of Registration and Student Records, it could delay the registration process for subsequent semesters. Failure to report academic changes may result in rejection, dismissal, and/or loss of credit. International (visa) applicants are referred to the section on Admission of International Students in this *Catalog*.

To apply for admission:

- Applications are available from Metropolitan State College of Denver, Office of Admissions, Campus Box 16, P.O. Box 173362, Denver, CO 80217-3362 (303) 556-3058.
- A \$25 non-refundable application fee (\$40 for international applicants) is required with the application for admission. The application fee does not apply to tuition and fees. Re-admit applicants do not have to pay this fee.
- Submit a completed application and application fee directly to the Office of Admissions. The application and all required credentials (see admission requirements below) should be received at least four weeks prior to the first day of classes.
- It is the student's responsibility to request that all required credentials be mailed directly from the issuing institution or agency to the Office of Admissions at Metropolitan State College of Denver. Hand-carried documents will not be accepted.
- Although an applicant's record may be summarized on one transcript, official transcripts from each institution are required.
- The application for admission and all credentials received by the college will be kept on file for three semesters, after which time the file will no longer be maintained. Applicants wishing to attend Metro State must begin the admission process again.

## Admission Requirements

The college uses two categories for classifying applicants: those who are younger than 20 and those who are 20 or older. Based on the college's modified open admission system, each category has its own admission requirements and procedures.

### APPLICANTS YOUNGER THAN 20

If you are younger than 20 on September 15 for either the summer semester or the fall semester, or February 15 for the spring semester, you will be classified as a traditional applicant.

#### Freshmen (first-time college students)

Applicants must request that the following information be mailed directly to the Office of Admissions from the high school or testing agency:

- ACT or SAT test results
- high school grade point average
- high school class rank

This information may be submitted at the end of the sixth, seventh, or eighth semester of high school, but no later than four weeks before the expected term of enrollment. An official transcript with date of graduation is required no later than the fourth week of the term of enrollment. Students should request and verify that the high school transcript with date of graduation has been mailed by the high school and has been received by the Office of Admissions.

Metropolitan State College of Denver will admit students who are likely to successfully complete an academic program and who meet state requirements for the college as established by the Colorado Commission on Higher Education (CCHE).

Applicants who do not meet the stated admission requirements will be considered on an individual basis after careful review of all credentials, including letters of recommendation and personal interview.

Applicants who have not graduated from high school but have received the Colorado General Educational Development (GED) Certificate or its equivalent will be accepted. ACT or SAT test results are not required with a GED.

### College Transfer

Applicants must request that the following information be mailed directly to the Office of Admissions from the high school, testing agency, and/or college or university:

- ACT or SAT test results
- high school transcript
- transcript from each college or university attended or currently attending
- verification of enrollment if currently attending

These credentials should be received at least four weeks prior to the first day of classes. All required credentials must be received before a final admission decision can be made.

Metropolitan State College of Denver will admit students who are most likely to successfully complete an academic program and who meet state requirements for the college as established by the Colorado Commission on Higher Education (CCHE).

Applicants who have less than a cumulative 2.00 grade point average from all colleges and universities attended will be considered on an individual basis after careful review of all credentials, including letters of recommendation and a personal interview.

### APPLICANTS OLDER THAN 20

Applicants who are 20 on September 15 for either the summer semester or the fall semester, or February 15 for the spring semester, should read the requirements below for either a first-time college student or a college transfer student:

#### Freshmen (first-time college students)

Applicants will be admitted to Metropolitan State College of Denver upon indicating on the application for admission that they have graduated from high school or that they have received a General Educational Development Certificate (GED).

By signing the application for admission, degree-seeking applicants are certifying that they will request either a high school transcript with date of graduation or GED test scores be sent to the Office of Admissions. Degree-seeking students will not be permitted to register for a second semester until this credential is received.

By signing the application for admission, non-degree-seeking applicants understand that they do not have to submit credentials to continue at Metro State.

The ACT or SAT is not required for admission but is highly recommended for advising purposes.

#### College Transfer

Applicants will be admitted to Metropolitan State College of Denver, regardless of their cumulative college GPA, if they indicate on their application for admission that they have graduated from high school or that they have received a General Educational Development Certificate (GED).

By signing the application for admission, degree-seeking applicants are certifying that they will request either a high school transcript with date of graduation or GED test scores be sent directly to the Office of Admissions. In place of these credentials, college transfer students may have college transcripts that indicate at least 30 semester hours or 45 quarter hours of transferable "C" work sent directly to Metro State.

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Degree-seeking transfer applicants are required to have all college and university transcripts on file to receive a transfer evaluation.

By signing the application for admission, non-degree-seeking applicants understand that they do not have to submit credentials to continue at Metro State.

Applicants who indicate on their application for admission that they are not seeking a degree from Metro State may change their status by completing a Change of Status Form and submitting all required transcripts to the Office of Registration and Student Records.

The ACT or SAT is not required for admission but is highly recommended for advising purposes.

### Declaring a Major

#### INTENT-TO-MAJOR

First-time Metropolitan State College of Denver students may indicate an intent to major on the Metro State application form. Stating an intent to major on the application form is not an official declaration of major. Students with fewer than 60 hours who wish to major in the School of Business may so indicate on a School of Business Intent-to-Major form.

#### OFFICIAL DECLARATION OF MAJOR

All degree-seeking students who have completed 60 or more semester hours, including hours transferred from other institutions, must officially declare a major no later than the semester following the one in which they complete 60 or more hours.

To declare a major, students must complete an official Declaration/Change of Major form, which is available from the major department or from the Advising, Assessment and Support Center and obtain appropriate signature approval. Procedures for declaring a major depend on the school and the number of semester hours completed as outlined below. Students who transfer to Metro State cannot officially declare a major until all credentials are received and evaluated.

#### MAJORS IN THE SCHOOL OF LETTERS, ARTS AND SCIENCES OR THE SCHOOL OF PROFESSIONAL STUDIES

Students, including transfers with Metro State officially evaluated transcripts, may officially declare a major in the schools of Letters, Arts and Sciences or Professional Studies at any time. Students who have completed 29 or fewer semester hours must declare their major through the Advising, Assessment and Support Center in consultation with an academic adviser. Students who have completed 30 or more hours must declare their major through the proposed major department.

#### MAJORS IN THE SCHOOL OF BUSINESS

Students having completed fewer than 60 semester hours, including transfers with Metro State officially evaluated transcripts, may declare an intent-to-major in the School of Business through the Advising, Assessment and Support Center. Students who have completed 60 or more semester hours must officially declare their major through the academic department of the proposed major during the semester following the one in which they complete 60 or more hours.

Verification of Major: To verify the correctness of the officially declared major, students should refer to the information contained on their class confirmation notice.

### Admission of Previously Enrolled Students

Former students or re-admit students are defined as any individuals who have been accepted, have registered for a course, and have received a grade or grade notation at the college.

Former students who have not been in attendance at Metropolitan State College of Denver for one or more years should adhere to the following procedures:

- Submit a completed application for admission, available from the Admissions Office. Check the re-admission box on the top, right corner of the application. No application fee is required for re-admission.
- To ensure processing, the application and any required credentials should be received at least four weeks prior to the first day of classes of the semester for which admission is sought.
- Former students who have attended other collegiate institutions since last attending Metro State must follow the appropriate admission requirements for transfer students.

- Former students who are re-admitting after nine years of absence from the college are required to resubmit all credentials. Only non-degree-seeking Metro State graduates do not have to resubmit credentials.

## Additional Admission Programs

### SUMMER SEMESTER ONLY

Applicants who have graduated from high school or have received a General Educational Development Certificate (GED) and are applying for the summer semester and who do not wish to continue at Metro State after the summer semester may be admitted under a provisional status and are not required to submit admission credentials. Please check the appropriate box under MSCD Plans on the application for admission. Applicants applying for the summer semester and who wish to continue for the fall or spring semester must meet stated admission requirements before the semester begins.

### CONCURRENT ENROLLMENT PROGRAMS (HIGH SCHOOL STUDENTS ONLY)

#### HIGH SCHOOL STUDENT EDUCATION AND ENRICHMENT PROGRAM

The Student Education and Enrichment program (SEE) is Metropolitan State College of Denver's High School Concurrent Enrollment Program for college-ready students. SEE is designed to supplement a student's existing education through early participation in college-level classes. This advanced program should not be interpreted as an alternative to high school completion but is, instead, a cooperative college/high school effort to provide educational enrichment and early college attendance to qualified high school students. Typically, the SEE student meets the following criteria:

- currently registered in a Colorado high school
- maintaining a GPA of 3.00 or better
- preferably in the senior year of high school
- can benefit from specialized or accelerated classes
- has demonstrated the ability to do college-level work

To apply for admission, the student must, in consultation with the appropriate high school authority, submit to the Office of Admissions at Metro State an admission application with the required \$25 application fee accompanied by the following documents:

- recommendation from a high school counselor or administrator stating how the student will benefit from early college attendance
- written parental approval
- official high school transcript

Upon receipt of these documents, the student's record is reviewed and the admission decision is made. However, if additional or supporting information is required, the student may be required to have an admission interview with a Metro State admission counselor. The admission decision will be based on the student's academic preparation and past performance, recommendation of the high school official, and the student's personal motivation and readiness for a traditional college experience.

#### POSTSECONDARY ENROLLMENT OPTIONS PROGRAM

The Postsecondary Enrollment Options Program (PSEOP) is a sponsorship program enacted by state law in 1988 that provides juniors and seniors in high school younger than 22 the opportunity to take college classes for both high school and college credit. The program is intended to provide high school students with an optional learning environment.

Under the terms of the program, the high school district agrees to pay for college tuition and the student is then responsible for college fees and books. Counseling offices in Colorado high schools are provided with PSEOP application packets that include instruction sheets, application forms, and billing authorization forms. Application deadlines are scheduled 45 days prior to the first day of classes every fall and spring semester. Specific deadlines and further information relative to this program and the application process may be obtained by calling the Metro State Office of Admissions at (303) 556-3058.

## **Assessment Requirements**

### **READING, WRITING, AND MATHEMATICS PLACEMENT EXAMINATIONS**

All first-time college students are required to take a series of three exams before registering for their first semester classes. The exams measure college entry-level skills in reading, writing, and mathematics, and the scores are used to help advisers and students select appropriate courses. For additional information please call (303) 556-3677.

### **READING, WRITING, AND MATHEMATICS PROFICIENCY EXAMINATIONS**

Prior to or at the completion of 60 semester hours at Metro State, students may be asked to take a series of three exams that measure proficiency in reading, writing, and mathematics. These exams should be taken concurrently with or after appropriate coursework in the academic area has been completed. For additional information please call (303) 556-3677.

### **GENERAL STUDIES EXAMINATIONS**

In their junior year, students may be required to participate in an assessment of their general education. The Metro State faculty has determined educational goals or outcomes that it wants graduates to achieve. A copy of those goals and the methods by which their achievements are measured can be obtained from the department offices.

## **International Education**

In order to fulfill its role as a public urban institution, Metropolitan State College of Denver must be responsive to the changing qualities of the community it serves. Because Denver is a national center for commerce and technology, Colorado is affected by dynamic global relationships, as well as by national, state, and local policies. As technology draws the nations of the world closer together and Colorado becomes increasingly aware of its international role, educational institutions must increase their commitment to providing opportunities for international education. These opportunities exist for nationals enrolled at Metropolitan State College of Denver who wish to be involved with an academic experience outside the U.S., as well as internationals who feel they will gain from study at Metro State.

### **ADMISSION OF INTERNATIONAL STUDENTS**

All students who declare a country of citizenship other than the U.S. on their applications for admission must contact the Office of Registration and Student Records.

Admission of resident aliens (or refugees, political parolees, and political asylum cases, etc.) and students on temporary visas other than F-1:

- Official transcripts including secondary level education should be submitted four weeks prior to the beginning of the first day of classes of the semester for which admission is sought.
- Applicants may be required to pass an English proficiency examination.
- Applicants may be required to register for and complete certain courses during their first two semesters.

Admission of applicants on student (F-1) visas:

If students are academically admissible and have met the minimum English proficiency requirements, they will be issued the U.S. Immigration Form I-20. Questions regarding the admission of students from abroad or permanent residents should be directed to the Office of Registration and Student Records.

### **ENGLISH AS A SECOND LANGUAGE/IMMIGRANT AND REFUGEE SERVICES**

The English as a Second Language program provides assistance to students for whom English is a second language. The program provides assessment, tutoring, intensive academic and personal advising, and assistance with financial aid forms. The program also refers students with limited English proficiency to the appropriate curricula and monitors student progress. For additional information, please call (303) 556-2533.

### **THE SPRING INTERNATIONAL LANGUAGE CENTER AT AURARIA**

Intensive English classes at the Spring International Center focus on all language skills: grammar, reading, writing, and listening/speaking, in addition to special electives that students can choose each term, such as TOEFL preparation, vocabulary building, and pronunciation.

Five nine-week terms are offered throughout the year to enable students to complete their English study quickly. Students are placed at one of the five levels, with standardized evaluation tests at the completion of each level. For additional information, call (303) 534-1616.

## Transfer Credit Evaluation

Once all final official transcripts for degree-seeking students are received by the Office of Registration and Student Records, the evaluation process begins. The student receives a transfer evaluation card, which must be signed and then submitted to the Office of Registration and Student Records. Within approximately four weeks, students receive two copies of the transfer credit evaluation, one of which is taken to the major and minor departments for advice on how credits might apply to their programs.

Transfer credits will be accepted under the following guidelines:

- Credit must have been earned at an institution of higher education holding full regional accreditation.
- Grades earned must be “A,” “B,” “C,” or equivalent; however, only the credits will be shown on the Metro State academic record. Courses with grades of “D,” “F,” or similar grades will not be accepted in transfer.
- Course content should be similar to those courses offered at Metro State.
- A maximum of 64 semester hours from a two-year institution will be accepted and applied toward a Metro State degree. A maximum of 90 semester hours of credit will be given for acceptable work completed at a four-year institution or a combination of two- and four-year institutions.
- Students earning an A.A. or A.S. degree will enter with junior status at Metro State, provided all courses included in the degree carry a grade of “C” or better and otherwise meet minimum Metro State standards for transfer credit, and with the understanding that some students will need to complete additional Metro State lower-division program requirements.
- Applicants having completed the Colorado community college core curriculum, as certified on their community college transcript, are considered to have satisfied the college’s minimum general studies requirements. However, additional, specific, lower-division courses may be required for certain degree programs.
- **In accordance with policies established by the Colorado Commission on Higher Education to address student disputes regarding student transfer between Colorado public institutions, Metro State has instituted new procedures for resolving transfer credit disputes. These procedures are available from a transfer evaluator in the Office of Registration and Student Records.**

Questions pertaining to transfer credit evaluation should be referred to the Office of Registration and Student Records, Central Classroom Building, room 105 (303) 556-3069.

## Changes in Registration

Enrolled students may adjust schedules by dropping and/or adding classes during the first 15 percent of the timeframe of each semester. See the current semester *Class Schedule* for complete information concerning the tuition and fee refund schedule.

Students who reduce their course load after the fourth week of classes will receive an “NC” notation for each course they have dropped and a refund, if applicable. An “NC”/Withdrawal Form must be submitted by the deadline to the Office of Registration and Student Records.

Additional restrictions regarding assigning the “NC” notation may be set by each school, department, and/or faculty member for the period between the beginning of the fifth and the end of the tenth week of the semester (or proportional timeframe). Students reducing their course load between the beginning of the fifth and the end of the tenth week of classes during fall and spring semesters may receive an “NC” notation for each course, provided faculty approval is granted. Students are advised to seek faculty signatures well before the deadline. An “NC”/Withdrawal Form must be submitted by the deadline to the Office of Registration and Student Records. See the sections on grades, notations, course load, and class attendance in this *Catalog*.

Proportional time frames are applied for modular courses, workshops, and summer terms. Procedures for adding or dropping a modular course after the course has begun are described in the current *Class Schedule*.



## Interinstitutional Registration

Students enrolled at Metro State may register for courses at Arapahoe Community College, Community College of Denver, Front Range Community College, and Red Rocks Community College. Courses taken at these institutions in no way alter existing Metropolitan State College of Denver degree requirements, but may apply toward degree requirements subject to specific approval by Metro State. Students should be aware that courses taken interinstitutionally will be counted as part of the 64 semester hours from community colleges applicable to a Metro State degree. Interinstitutional credits will not satisfy academic residence requirements at Metro State. In the event a conflict exists between the policies/procedures of Metro State and one of the colleges listed above, the most restrictive policy prevails. Students are advised to confer with department chairs and/or coordinators of academic advising before registering interinstitutionally.

Information concerning current procedures for enrolling for courses at these other institutions is available from the Office of Registration and Student Records.

## Concurrent Enrollment

Concurrent enrollment differs from interinstitutional enrollment in that the student is simultaneously matriculated and enrolled at two different institutions. Students who find it necessary to be registered at Metropolitan State College of Denver and another college at the same time should check with Metro State advisers concerning the acceptance and application of transfer credits. Failure to do so may result in denial of transfer credit. Students concurrently enrolled are affected by the academic policies of Metro State, including the Metro State course load policy.

## Course Audit Policy

Students may audit a class with the permission of the instructor and if seating is available. Academic credit is not awarded for an audited course. The cost for auditing a course is based on regular tuition as published in the current *Class Schedule*. Audit approval forms are available in departmental offices.

## Graduation Agreement

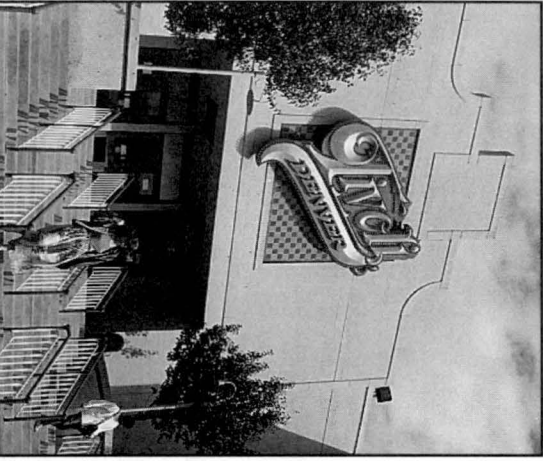
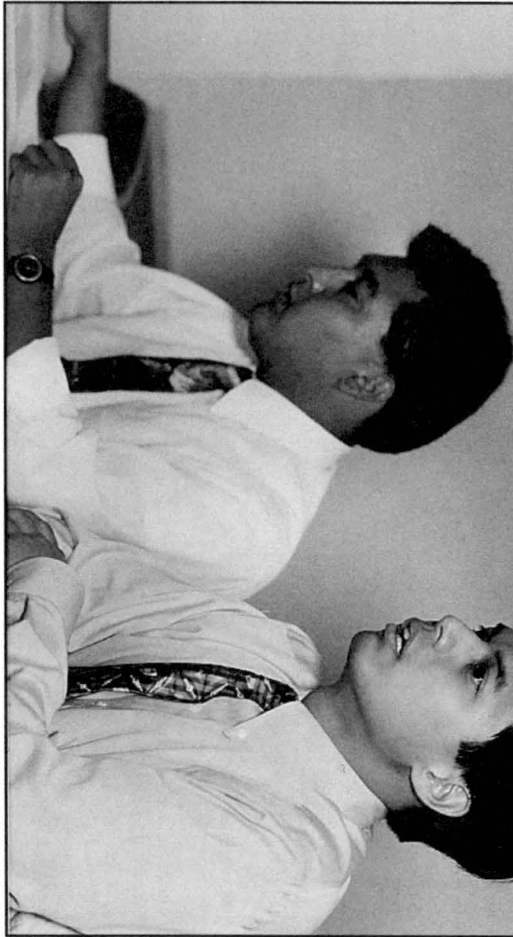
Degree-seeking students formally declare their degree plan by filing a Graduation Agreement. The agreement should be submitted to the Office of Registration and Student Records two years prior to the intended term of graduation but no later than the appropriate deadline stated in the *Class Schedule*.

Students should complete their Graduation Agreement in consultation with their adviser. When it is ready for signatures and a formal evaluation, students should submit the completed agreement to the minor department. The minor department will forward the signed agreement to the major department for signature; the major department will forward it to the dean of the school. The school will submit the agreement to the Office of Registration and Student Records for final review. Once approved, and after the completion of each subsequent semester of academic work, the student will receive an up-to-date Academic Status Report.

Students may appeal to the Board of Academic Standards Exceptions to request a variance from college academic requirements. Their Graduation Agreement should be completed before the appeal. Valid reasons for variances must accompany all petitions, and the petitions must be signed by the appropriate dean and department chair.

## Transcripts of Records

A transcript is a certified copy of a student's permanent record and shows the academic status of the student at time of issuance. Except for faxed transcripts, there is no charge. Transcripts will be released by the Office of Registration and Student Records upon formal written request by the student. Transcripts will also be issued to firms and employers if written authorization is received from the student. Requests should include the student's full name as recorded while attending Metro State, student identification number, last term of attendance, number of copies desired, and to whom and where transcripts are to be sent. Transcripts may be withheld because of indebtedness to the college or for other appropriate reasons. Transcripts from other institutions that are on file in the Office of Registration and Student Records will be issued upon signed request by the student. A charge of \$5 per request is assessed for this service. Students from other institutions taking Metro State courses under the state college system or interinstitutional registration programs must request transcripts from their home institution.



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## Financial Aid

### PHILOSOPHY

The Metropolitan State College of Denver financial aid program provides assistance and advice to students who would be unable to pursue their education at the college without such help. Scholarships, grants, loans, and part-time employment are available singly or in various combinations to meet the difference between what the student and the student's family could reasonably be expected to provide and the expected cost of attending Metro State.

### ESTIMATED EXPENSES

The 1994-1995 academic year expenses are as follows:

	Resident	Nonresident
Tuition and Fees .....	\$2,365	\$7,065
Room and Board.....	6,550	6,550
Books and Supplies .....	580	560
Transportation.....	990	990
Miscellaneous .....	1,205	1,205
	\$11,670	\$16,370

Tuition and fees are set by The State Colleges in Colorado and are subject to change without notice. All students are placed on a single-person budget. Additional allowances are made for students with day-care costs for dependent children and for expenses related to disabilities not paid by another agency (P.L. 99-498).

### ELIGIBILITY AND NEED

To qualify for financial aid, a student must be a U.S. citizen or eligible noncitizen, be registered with Selective Service (if required), have financial need, be degree- or licensure-seeking, be making satisfactory academic progress, and not be in default or owe a refund on a federal grant or federal education loan.

### APPLICATION PROCEDURES

Students must complete the Free Application for Federal Student Aid to determine financial aid eligibility. Returning Metro State students may request application forms from the Financial Aid Office. Transfer students can obtain application forms from their current college or university. Entering college freshmen should obtain application forms from their high schools or from the Metro State Financial Aid Office; students should obtain forms as early as possible, preferably by mid-February. Transferring applicants must supply the Metro State Financial Aid Office with financial aid transcripts from all schools previously attended. Detailed information concerning application procedures is available in the Metro State Financial Aid Office.

### FINANCIAL AID PROGRAMS

Undergraduate students who have a bachelor's degree are not eligible for Federal Pell Grants, Federal SEOG, CSG, or CSIG. The amount of funds made available to students depends on the maximum award allowed by regulation of each program, the student's established financial need, duration of the student's enrollment, and funds allocated to the college by the state and federal governments.

#### Grants

Grants are gift money from the federal or state government and do not have to be repaid.

**Federal Pell Grants** are federal funds and may be awarded to undergraduate students who have not yet received a bachelor's degree and who are U.S. citizens or permanent residents. The amount of the award is based on each student's financial eligibility and the number of hours for which the student is enrolled. The amount of Federal Pell grant awards for the 1995-96 academic year will range from \$400 to \$2,300 for those students who qualify. Less-than-half-time, half-time, or full-time students may qualify for a Federal Pell Grant.

**Federal Supplemental Educational Opportunity Grants (FSEOG)** are federal funds awarded to undergraduate students who have not yet received a bachelor's degree and are U.S. citizens or permanent residents. Awards are based on an individual's need and are usually awarded to students demonstrating exceptional need. Students must be enrolled full-time to receive a Federal Supplemental Educational Opportunity Grant at Metro State. The amount of FSEOG awards ranges from \$100 to \$1,000.

**Colorado State Grants (CSG)** are state funds awarded to Colorado residents, with eligibility determined by the Office of Financial Aid. Students must not have earned a prior bachelor's degree and must be enrolled full-time at Metro State. The amount of CSG awards range from \$50 to \$2,000. CSG funds are also available to part-time students who demonstrate need. Students must be enrolled a minimum of six hours to receive part-time CSG funds.

**Colorado Student Incentive Grants (CSIG)** are a combination of federal and state funds awarded by the same criteria as CSG. Students must be enrolled full-time to receive CSIG funds.

### Scholarships

**Presidential Scholarships:** These scholarships include four-year scholarships for entering high school students and two-year scholarships for transfer students. Scholars receive up to \$600 per semester to pay mandatory tuition and fees.

**Colorado Scholarships:** Grants of \$500 per semester, not exceeding the cost of resident tuition and mandatory fees per academic year, are available through the academic departments. Recipients must be Colorado residents. Interested students should contact their departments for applications.

**Athletic Scholarships:** Metro State has a limited number of athletic scholarships. Applications and additional information are available from Metro State Intercollegiate Athletics.

**Private Scholarships:** Students should refer to the Metro State *Financial Aid and Scholarship Handbook* for information and a listing of scholarships. Students should also contact academic departments and the reference desk at the Auraria Library for assistance in locating sources of scholarships.

### Loans

**Federal Family Education Loans (FFEL)**, which enable students and/or their parents to borrow funds to help with educational expenses, include Federal Stafford Loan, unsubsidized Federal Stafford Loan, and Federal PLUS Loans. To borrow these funds, students and/or their parents must complete a separate lender application in addition to the need analysis application (FAFSA). Students must also be enrolled at least half-time and be degree- or licensure-seeking. Interest rates vary for each type of loan and also vary depending on when the student borrowed the first Federal Family Education Loan. For further information on interest rates, check with the Financial Aid Office or the lender.

**Federal Stafford Loans:** Eligibility for the Federal Stafford Loan is based on the student's need as determined by the Financial Aid Office. For Stafford Loans disbursed on or after July 1, 1993, the annual loan limits are \$2,625 for freshmen, \$3,500 for sophomores, and \$5,500 for all other undergraduates.

**Unsubsidized Federal Stafford Loans:** This loan has many of the same terms and conditions as the Federal Stafford Loan. The main difference is that the borrower is responsible for the interest that accrues while in school and during the six-month grace period. A student may borrow against either parent or student contribution and, therefore, students who do not qualify for the Stafford Loan may qualify for the unsubsidized Stafford Loan. Contact the Financial Aid Office for information concerning annual loan limits.

**Federal Plus Loans:** These loans are available to parents of dependent students. Applications are available from Metro State or from lenders that participate in the program. Applications must first be submitted to the Financial Aid Office for processing. At Metro State, parents of dependent students may borrow up to the cost of education minus amount of financial aid, per student per year.

**Metro State—Emergency Loans:** If there is a delay in the disbursement of funds, the Financial Aid Office is able to advance limited funds to students, provided that financial aid has been previously awarded. The average loan is \$200 per semester. The loan must be repaid at the end of the semester in which the funds were received or as soon as financial aid funds are disbursed to students, whichever comes first.

Information on additional alternative loan programs from private sources is available at the Financial Aid Office.

### College Work-Study

The State of Colorado and federal work-study programs provide part-time employment during the summer and academic year. Only permanent Colorado residents are eligible for State of Colorado work-study awards. Awards range from \$200 to \$5,000 per fiscal year. The average award is \$2,000. The maximum hours students may work is 30 hours per week average while classes are in session and a maximum average of 40 hours per week between semesters.

### Employment

Many students who do not qualify for work-study find part-time employment to cover a portion of their educational expenses. The Auraria Placement Office helps students find part-time jobs.

### Other Forms of Assistance

**Colorado No-Need Work-Study:** Students enrolled at least half-time who are permanent residents of Colorado and either have unmet need eligibility or do not qualify for need-based financial aid, are eligible for this award. Students may apply for these funds at the Financial Aid Office.

**Financial Aid as a Form of Payment:** Students who have been awarded financial aid have the option of using that aid as their form of tuition payment during phone registration each semester. Once the award has been verified by the Business Office, the student will not be required to pay the tuition and fee charges until the aid is disbursed. Students receiving any type of financial aid are eligible for this service each semester for which aid has been awarded. Related information is provided in mail-in and phone-in registration materials and in class schedules.

### RESOURCE EXPECTATIONS

Students attending Metro State must assume responsibility for the cost of their education. Tax-supported aid programs supplement student financial resources, but do not replace them. Prospective financial aid applicants should refer to the Financial Aid Office for details concerning student's resource expectations.

### THE AID PACKAGE

Once student eligibility is determined, an aid package is developed that depends on the availability of funds and the eligibility of the applicant in relation to that of other students. Although it is not always possible to do so, the Financial Aid Office attempts to fully meet student eligibility. To facilitate the work of the Financial Aid Office, applicants must obtain all information and forms from designated sources and submit the required materials to the appropriate office according to established schedules.

Receiving a scholarship may affect a student's financial aid award. Students receiving federal and/or state aid are limited to a maximum amount of aid. A student whose full need has been met prior to receipt of a scholarship will have the aid reduced by an amount equal to the scholarship. If the student's full eligibility has not been met, the scholarship can be allowed to satisfy the unmet eligibility. Each student's situation is treated individually.

### AWARD NOTIFICATION

When the Financial Aid Office has determined the kind and amount of aid for which a student qualifies, the student is notified of the award by letter. The letter also stipulates the conditions of the award. Students awarded aid must sign the statement of education purpose on the award letter and the Anti-Drug Abuse Act certification.

### Disbursement Procedures:

- **Federal Family Education Loan Programs:** All Federal Stafford Loans and Federal PLUS Loans are required to be disbursed in two checks. One check is released at the beginning of the loan period (30 days into the semester for incoming freshmen) or as the checks arrive after the start of the loan period. The second check is released no earlier than halfway through the loan period. Federal Stafford checks are processed at the Financial Aid office and released through the Business Office. Students are required to pay any outstanding balance owed to Metro State at the time the check is released. Federal PLUS checks are mailed from lenders to the Metro State Financial Aid Office. Eligibility is verified and then the check is mailed to the parent borrower.
- **Work Study:** Work-study earnings are paid monthly and are treated as wages earned. Outstanding balances owed to Metro State are not deducted from these earnings. Students are strongly advised to pay any outstanding balance as soon as a work-study check is received.
- **All other aid:** Beginning on the first day of classes each semester, students receiving aid other than those listed above may come to the Metro State Business Office to pick up their financial aid. The Business Office will deduct any outstanding balance owed to Metro State and issue a check for any remaining funds. Students who still owe a balance after all aid has been paid will be issued a bill.

**REPAYMENT POLICY**

Students who receive financial aid and withdraw from Metro State prior to completion of a term may be required to repay a portion of financial aid and scholarships. All required financial aid repayments must be made to Metro State before the end of the current academic year or before additional Title IV funds may be disbursed to the student, whichever occurs first. Repayment is made to the Metro State Business Office.

**STUDENT RIGHTS AND RESPONSIBILITIES**

**Academic Progress Requirements**

Financial aid recipients are required to maintain satisfactory progress toward their educational objectives in order to continue to receive aid (2.00 GPA; complete at least two-thirds of the credits attempted each semester; and be enrolled in the equivalent of not more than 12 full-time semesters). Detailed information outlining the requirements is available in the Financial Aid Office. Failure to maintain satisfactory progress may result in cancellation of aid for subsequent terms.

**Change in Status**

The financial aid award may be adjusted throughout the award period to reflect any change in the student’s resources or enrollment status or in institutional, state, or federal funding.

**Renewal of Financial Aid**

Students must apply each year for continued aid. Renewal of financial assistance depends on the student’s academic performance, financial eligibility, and the availability of student financial aid funds.

Students should contact the Financial Aid Office for details concerning Metro State’s financial aid policies and procedures.

**Costs**

The Board of Trustees of The State Colleges in Colorado, the governing board of the college, reserves the right to alter any or all tuition and fees for any semester without notice.

**TUITION AND COLLEGE SERVICE FEES**

Tuition and college service fees are determined by the trustees shortly before the beginning of each academic year. Information regarding tuition and fees is published in the current *Class Schedule*.

Tuition and fees are payable at the time of registration.

**STANDARD FEES**

An application fee is required of all applicants for admission to the college. This fee is non-refundable and will not be applied to tuition.

Application fee.....	\$25
International student application fee.....	\$40
Matriculation fee.....	\$25

**SPECIAL FEES**

Returned check charge.....	\$17
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**TUITION CLASSIFICATION**

A student is classified as an in-state or out-of-state student for tuition purposes at the time of admission. This classification is based upon information supplied by the student on the application for admission and is made in accordance with the Colorado Tuition Classification Law, CRS S23-7-101 *et seq.* (1973), as amended. Once determined, a student’s tuition classification status remains unchanged unless satisfactory evidence that a change should be made is presented. A Petition for In-State Tuition Classification form and the evidence requested should be submitted to the Office of Registration and Student Records if a student believes she or he is entitled to in-state status.

The tuition classification statute requires that in order to qualify for in-state status, a student (or the parents or legal guardian of the student in the case of students under 22 years of age who are not emancipated), must have been domiciled in Colorado for one year or more immediately preceding the first day of the semester for which such classification is sought.

Domicile for tuition purposes requires two inseparable elements: (1) a permanent place of habitation in Colorado and (2) intent to remain in Colorado with no intent to be domiciled elsewhere. Some examples of connections with the state that provide objective evidence of intent are: (1) payment of Colorado state income tax as a Colorado resident, (2) permanent employment in Colorado, (3) ownership of residential real property in Colorado, (4) compliance with laws imposing a mandatory duty on any domiciliary of the state, such as the drivers' license law and the vehicle registration law, and (5) registration to vote. Other factors peculiar to the individual can also be used to demonstrate the requisite intent.

Any questions regarding the tuition classification law should be directed to an admissions officer at the college. In order to qualify for in-state status for a particular semester, the student must prove that domicile began not later than one year prior to the first day of classes for that semester. The dates for qualifying and for submitting petitions are published in the *Class Schedule* each semester.

### **OTHER COST INFORMATION**

The cost of books and supplies averages \$350 to \$500 per academic year, with the highest cost during the first semester of attendance. Other costs such as room, board, clothing, transportation, and other expenses will vary according to individual need.

### **TUITION ADJUSTMENTS**

Please see the *Class Schedule* for the current semester.

## **Student Health Insurance**

The Student Health Center Insurance is a group "Mandatory-with-Waiver" policy for all full-time students (10 credit hours in fall/spring or 8 credit hours in summer). The insurance premium for full-time students is automatically included with the semester charges/fees and is identified on a student's bill as "insurance." Students who have comparable insurance coverage may waive the insurance premium and not participate in the program. Proof of comparable insurance and a waiver form must be completed and turned in to the Business Office within the first four weeks of the fall and spring semesters, and within the first two weeks of the summer semester. A waiver must be submitted annually, every fall semester or at such time as you are registered for either spring or summer. For additional information regarding the waiver, please contact the office of Student Accounts at (303) 820-2001.

Students who are not full-time, as defined above, are not eligible for the college's group insurance coverage. In addition, if a full-time student decreases the amount of semester hours to below full-time status (10 hours during fall and spring semesters; 8 hours during summer semester) before the date listed in the *Class Schedule* for the applicable semester, the student loses insurance eligibility.

Optional coverage is available for dependents of insured students who are enrolled for 10 or more semester hours during fall and spring semesters and 8 or more semester hours during summer semester. Premiums for optional coverage must be paid at the Business Office during the first three weeks of each semester.

Those students enrolled for spring semester health insurance have the option of purchasing summer insurance coverage without attending classes, provided they pay the premium at the Business Office by the date listed in the summer *Class Schedule*.

The policy is in effect 24 hours a day and covers the period of time from the first day of classes of the semester to the first day of classes of the following semester. Insurance brochures listing other benefits, as well as insurance claim forms and information, are available at the Student Health Center in the Plaza Building, room 140 (303) 556-3873.

## CHILD DEVELOPMENT CENTER

The Metro State Child Development Center provides exemplary, on-campus children's programs: During the fall and spring semesters, the center offers pre-school programs; in the summer it provides a Summer Enrichment Program for elementary age children. Available to the Auraria campus and to the Denver community, these programs are part of the Metro State Teacher Education Division.

The classrooms are under the direction of master teachers who are trained and experienced in either early childhood or elementary education. The master teachers plan an age-appropriate program to provide quality learning experiences that meet the developmental needs of the children. Metro State teacher education students also work in the classroom providing a high adult/child ratio with opportunities for small groups and individual attention.

The preschool program is accredited by the National Academy for Early Childhood Education. There are two preschool classes available: 8:30-11:30 a.m. for children 2½ to 4 years old and 12:30-3:30 p.m. for children 4 to 6 years old. There is also one hour of childcare available before and after each preschool class.

The Summer Enrichment Program is academic in content, but recognizes children's needs for fun and different learning experiences in summer. There are two classrooms: one for children entering kindergarten or first grade in the fall and one for children entering second or third grade in the fall. There is a Day Program from 9:00 a.m.-3:30 p.m. and an Extended Program from 7:00-9:00 a.m. and from 3:30-6:00 p.m. Call (303) 556-2759 for more information.

## COOPERATIVE EDUCATION

The Cooperative Education Internship Center places students in work experiences related to their academic major. The purpose of the internships is to integrate academic training with actual work experience. This combination allows students to make realistic career decisions, gain valuable work experience, obtain recommendations for graduate school, and earn money to help defray college expenses.

Students work in large corporations, small businesses, government, and nonprofit agencies throughout the metropolitan area. Most co-op students are paid by their employers, but in those professional fields where co-op salaries are not available, volunteer internship placements are offered to help students gain essential work experience.

Co-op internship placements are available in most academic majors and minors. Students must complete 30 semester hours of college coursework with a minimum 2.50 GPA and have a declared major to be eligible for registration with co-op. No fees are charged to the student or employer for participation in the program, and each student's interests and job requirements are discussed individually with a professional coordinator.

Students may choose from three different work schedules based on the academic calendar. The alternating plan provides full-time periods of work every other semester with intervening semesters spent in full-time study. The parallel schedule places students in a job while they simultaneously attend school. These positions are usually part-time. The short term/summer plan allows students to elect a work experience that lasts for no more than one semester.

The college awards academic credit for supervised cooperative education placements. Students must complete a credit application available from the co-op office, and this application must be approved by a faculty member from the department in which credit is to be granted. No more than 15 semester hours of cooperative education credit will be applied toward Metro State degree requirements. Credit earned for the co-op education work experiences are not applicable toward general studies requirements. Additional departmental restrictions may apply to certain majors.

### **298-1-3 (Variable credit) Cooperative Education**

Prerequisite: sophomore status and permission of instructor

An entry-level work experience in a private company or an agency of the federal or state government related to the student's major and supervised by a competent professional on the worksite. Credit is awarded by a Metro State faculty member in the appropriate academic department for learning related to academic goals enumerated in the learning contract of each student.

### **398-1-12 (Variable credit) Cooperative Education**

Prerequisite: junior status and permission of instructor

An advanced work experience in a private company or governmental agency related to the student's major and supervised by a competent professional on the worksite. Credit is awarded by a Metro State faculty member in the appropriate academic department for learning related to academic goals enumerated in the learning contract of each student. For more information on the program and the placement opportunities in your academic major, contact the Cooperative Education and Internship Center office at 1045 Ninth Street Park. Phone: (303) 556-3290.



### **SERVICE-LEARNING PROGRAM**

The Metro State Service-Learning Program combines classroom experience with service to the metropolitan community. Participating students receive credit for appropriate public service, which is beneficial to the community and expands student horizons in intellectually and personally meaningful ways.

Emerging from a wide variety of disciplines, service-learning courses are structured by faculty to weave service into community-based and government agencies, with classroom reflection and analysis of the learning offered through these experiences. The courses are also designed to address real needs in our multicultural world, such as homelessness, at-risk youth, domestic violence, the environment, culture and the arts, and mental illness. Agencies that have provided service opportunities include Fort Logan Mental Health Center, the Denver Commission on Aging, Big Sisters, the Colorado Historical Society, the Rape Assistance and Awareness program, and numerous elementary and high schools, senior centers, and nursing homes.

Service-learning credit is available in most academic majors and minors. Prerequisites and other requirements vary with each department. To learn how to participate in this program, including discussions of placement options, students should contact or visit the Service-Learning Program office to schedule an interview.

### **EXTENDED EDUCATION**

The Extended Education Division of Metro State is committed to providing a purposeful learning experience to a diverse metropolitan community. Extended Education addresses changing educational needs through programs and services that emphasize accessibility, innovation, lifelong learning, and responsive delivery systems.

#### **Adult Learning Services**

Adults entering or returning to college often have questions and problems that are different from those of younger students. Adults who would like help re-entering the formal education system and in planning their educational goals may contact the Office of Adult Learning Services at (303) 556-8342.

#### **Individualized Degree Program**

Students may design an individualized interdisciplinary major or minor program when their educational goals are not met by majors and/or minors listed in the Metro State *Catalog*. Each individualized degree program is supervised by a faculty committee chosen by the student. For further information, contact the Office of Adult Learning Services at (303) 556-8342.

#### **Metro-Meritus**

People 60 or older, who do not wish to earn credit, are invited to attend tuition-free classes of their choice at either Metro State or at an Extended Campus location, on a space-available basis. Metro-Meritus is designed to give special encouragement and assistance to retired citizens to continue their personal educational growth in a stimulating and friendly campus setting. For information and to enroll, call the Office of Adult Learning Services at (303) 556-8342.

#### **Extended Campus Program**

Metro State's Extended Campus Program provides access to the college in the Denver metropolitan area by offering classes, telecourses, correspondence courses, degree programs, and services at two convenient sites. Metro South, located at 5660 Greenwood Plaza Boulevard in Arapahoe County, serves the south, southeast, and southwest metropolitan areas. Metro North, located at 11990 Grant Street in Adams County, serves the north, northeast, and northwest areas. Each site is located 14 miles from the Auraria campus along the I-25 corridor.

### **THE FIRST-YEAR PROGRAM**

The First-Year Program is designed to unify and coordinate college efforts to help entering students achieve a successful first year. The program provides intensive advising, course selection guidance, and academic monitoring throughout the first year, as well as coordinating academic support services for freshmen. Additionally, the program offers a First-Year Seminar course, which provides appropriate readings and written work enabling students to discuss and write about current issues including the value of higher education. All first-time Metro State students may enroll in the First-Year Seminar course and other appropriate courses as determined by assessment at entry. The program furnishes an environment where problem solving, creativity, and peer interaction are encouraged. For additional information, please call (303) 556-8447.

## HEALTH CAREERS SCIENCE PROGRAM

The Health Careers Science Program is designed to encourage women and ethnic minority groups who have traditionally been excluded from careers in science and technology. Students are provided with tutoring and other support to ensure their success in the science and technology areas. For more information, please call (303) 556-3215.

## HIGH SCHOOL UPWARD BOUND

This program is designed to generate the skills and motivation necessary for success in and beyond high school for youths who are low-income and first-generation college-bound students. The program provides intensive academic instruction during the school year, as well as a six-week summer session. Basic academic skill preparation in reading, writing, and mathematics is part of a comprehensive counseling and enrichment program. This program develops creative thinking, effective expression, and positive attitudes toward learning. The students are recruited at the beginning of their sophomore year in high school from five target-area high schools located in Denver County (East, Lincoln, Manual, North, and West high schools).

## THE HONORS PROGRAM

The Metro State Honors Program provides an intense, interdisciplinary academic program for highly motivated students whose capabilities suggest a broader spectrum of needs and interests. The program encourages individuality by responding to the diverse educational needs of students. Its integrated approach strengthens the program's foundation and provides a cross section of thought-provoking perspectives. Honors students realize their learning potential through creative inquiry, independent thought, and critical examination. Honors professors serve as mentors to guide students in fulfilling their intellectual pursuits and dreams. Finally, while the Honors Program encourages independent thought and individuality, it also inspires students to work together, forming a community of scholars who learn from one another. Classes are generally small to ensure the exchange of knowledge and philosophies.

Available to students are both the Honors core and a number of departmental Honors courses. There are three Honors awards available: Junior Honors Award (15 semester hours); Senior Honors Award (15 semester hours which includes a thesis or senior seminar); and a Metro State Honors Program designation on the Metro State diploma (27 semester hours).

An official Metro State Honors application form may be obtained from the Metro State Honors Program director. In addition to the Metro State application form, an interview by the Honors Council is required of prospective Honors students. It is highly recommended that all Honors applications be completed by mid-July. Furthermore, there are a number of Colorado scholarships available. Additional information on the Honors Program is available by calling (303) 556-4865, or by inquiring in Central Classroom Building, room 101B. The Honors Program reports to the dean of the School of Letters, Arts and Sciences.

Required Honors Core	Semester Hours
HON 275 The Legacy of Arts and Letters I*	3
HON 276 The Legacy of Arts and Letters II*	3
HON 295 The Art of Critical Thinking*	3
HON 380 Revolutions and Social Change I*	3
HON 381 Revolutions and Social Change II*	3
HON 385 American Culture I*	3
HON 386 American Culture II*	3
HON 492 Senior Honors Seminar	3
HON 495 Senior Honors Thesis	3
Total Hours for Honors Core	27

\*Approved General Studies courses.

## INTERNATIONAL STUDIES

**Semester-Abroad Programs:** Two semester-abroad programs, in London, England, and in Guadalajara, Mexico, operate each year. Students who are in good academic standing and feel they could benefit from a semester of study in England or Mexico should contact the coordinator of International Studies at (303) 556-3173.

**Study-Abroad Trips:** Short-term, study-abroad experiences during the summer are offered each year. These trips are always led by a full-time professor and are usually for two to four weeks in length. Academic credit is normally available. In past summers, study-abroad trips have been made to Mexico, Peru, China, Italy, France, Spain, Egypt, West Africa, Israel, England, and Russia. Contact the coordinator of International Studies at (303) 556-3173 for information about forthcoming trips.

## 32 SPECIAL PROGRAMS

**Office of International Programs and Services:** Metro State provides assistance to visiting faculty and international students. Important information and counseling is offered on visas, school transfers, work permission, housing, banking, and cultural and academic adaptation. The office also provides assistance to students who wish to arrange individualized study-abroad opportunities. For information contact the director of International Programs and Services at (303) 556-3660.

### LANGUAGE AND CULTURE INSTITUTE

The Metropolitan State College of Denver Language and Culture Institute was established in 1976 to organize study and travel abroad. The institute currently operates a summer program in Mexico, a summer intensive language institute in Germany, and a winter study and travel program in Mexico's Yucatan Peninsula and in Central America. The institute offers credit through the Modern Languages Department and the Institute for International and Intercultural Education.

### INSTITUTE FOR INTERNATIONAL AND INTERCULTURAL EDUCATION

Metro State provides assistance to visiting faculty and international students. Important information and counseling is offered on visas, school transfers, work permission, housing, banking, and cultural and academic adaptation. The office also provides assistance to students who wish to arrange individualized study-abroad opportunities. The institute organizes numerous conferences and lectures on international issues throughout the year.

The institute also provides information on cross-disciplinary individualized degree major and minor programs in international studies, international courses offered by various departments, and intercultural courses. For information contact the director of International and Intercultural Education at (303) 556-4004.

### SERVICEMEN'S OPPORTUNITY COLLEGE

Metropolitan State College of Denver has received recognition as a Servicemen's Opportunity College. Further information can be obtained from the Office of Registration and Student Records.

### STUDENT SUPPORT SERVICES PROGRAM

The purpose of the Student Support Services Program at Metro State is to provide educational assistance for selected students who, because of financial or other circumstances, may otherwise be denied a chance for participation in higher education programs. Academic assistance is provided for students on the basis of individual need. Courses in English and reading are offered for college credit, coupled with tutorial assistance. These courses are designed to strengthen and supplement a student's basic educational skills so that she or he may better address the requirements of a college course load. Other supportive services available are counseling, testing, assistance with financial aid forms, and, when possible, assistance in attending social and cultural events to enhance the student's experience at Metro State.

### VETERANS SERVICES

The Office of Veterans Services is designed to provide student veterans and veterans in the community with a variety of outreach, recruitment, and retention services. These include assistance with problems involving checks, tutorial, counseling, and referrals to on-campus offices and services. The office also certifies student veterans and dependents for their VA educational benefits.

### VETERANS UPWARD BOUND

Veterans Upward Bound at Metro State College is a federally funded program designed to identify, recruit, and motivate veterans to use their VA benefits in pursuit of personal career goals through higher education.

Veterans Upward Bound provides refresher and tutorial help so that survival in academic or vocational/technical programs is maximized. This is accomplished during a 12-week trimester. Ancillary services such as career counseling, financial aid advisement, psychological counseling, and job placement are also provided for participants.

### WEEKEND ADDITION PROGRAM

Metro State offers a variety of courses on Friday evenings and Saturdays under the auspices of the Weekend Addition Program. The program has its own office, which provides general assistance to students on specified weekends in the areas of advising, retrieval of college forms, scheduling, and assistance with student concerns that cannot be addressed during weekdays. The Weekend Office is located in the West Classroom Building, room 108E.

## Academic Information

The college operates on the semester system, with each semester during the academic year consisting of 15 weeks of instruction followed by a week of examinations. Running concurrently with the 16-week course schedule are modules scheduled to begin on the first, sixth, and eleventh week of the 16-week semester. During any 16-week semester, students may enroll in 16-week courses, 5-week courses, or combinations of both, as long as the course load limitations are not exceeded.

The college also offers either an 8- or 10-week summer term during which students may enroll for either 8- or 10-week courses, 4- or 5-week courses, or combinations of both. The course load restrictions are adjusted to be equivalent to those of the regular academic year.

Classes are scheduled during the day, in the evening, and on weekends in order to accommodate people who are employed. Students who are planning to take the majority of their classes in the evenings should check with appropriate department chairs about the availability of courses in their major during evening hours. Enrollment can be on a full-time or part-time basis and can be for the purpose of pursuing a bachelor's degree, improving vocational or professional competence, or learning about particular areas of interest for cultural or intellectual reasons. Please refer to the *Class Schedule* for current calendar information.

### ACADEMIC HONESTY

Students have a responsibility to maintain standards of academic ethics and honesty. Cases of cheating or plagiarism are handled within the policies of Academic Affairs in accordance with procedures outlined in the Metro State *Student Handbook*.

### CONDUCT OF STUDENTS

Metro State policy provides students the largest degree of freedom consistent with good work and orderly conduct. The *Student Handbook* contains standards of conduct, however, to which students are expected to adhere. Information regarding students' rights and responsibilities, including the student due process procedure (the procedural rights provided to students at Metro State before disciplinary action is imposed), is available in Central Classroom Building, room 313.

### CLASS ATTENDANCE

Students are expected to attend all sessions of courses for which they are registered. Each instructor determines when a student's absences have reached a point at which they jeopardize success in a course. When absences become excessive, the student may receive a failing grade for the course.

If students anticipate a prolonged absence, they should contact their instructors. If they find that they cannot communicate with the instructor, they should contact the chair of that department, who will inform instructors of the reasons for the anticipated absence. Whenever an instructor determines that a student's absences are interfering with academic progress, the instructor may submit a letter to the department chair informing that office of the situation.

### STUDENT CLASSIFICATION

Students are classified according to the number of semester hours of credit earned: freshmen fewer than 30; sophomores 30 or more, but fewer than 60; juniors 60 or more, but fewer than 90; seniors 90 or more.

### SEMESTER HOURS CREDIT

Course credit is based on units designed as semester hours. One semester hour or one base contact hour equals a minimum of 750 minutes; this translates to a minimum of 15, 50-minute class hours per semester. Time required for class preparation is not a consideration in the calculation of course credit. Omnibus courses involving laboratory work give one semester hour of credit for each two, three, or four hours of scheduled work in the laboratory during a week. Internships require a minimum of 2,250 minutes for each hour of credit.

### PREPARATORY COURSE CREDIT POLICY

No preparatory courses are applicable toward a Metro State degree after spring 1993. For details, please see an adviser in the Academic Assessment and Support Center.

### COURSE LOAD

The average course load per 16-week semester is 15 or 16 semester hours. Students who are academically strong may take up to 18 semester hours during fall and spring semesters and up to 12 semester hours during the summer semester. During fall and spring semesters, students with cumulative Metro State grade point averages of 3.25 or higher may take 19 or 20 semester hours and those students with grade point averages of 3.50 or higher may take 21 semester hours. Students must have completed at least 15 semester hours at Metro State. Authorization for overloads without these qualifications must be obtained from the student's major department chair and appropriate dean. Authorization for overloads in excess of 21 semester hours is given by the Board of Academic Standards Exceptions, following a successful formal appeal prior to the beginning of the semester. The student should begin the appeal by obtaining a petition from the office of the associate vice president for academic affairs, Central Classroom Building, room 318.

### COURSE NUMBERS, TITLES, DESCRIPTIONS, AND OFFERINGS

Before starting registration, students should study course descriptions for information on the level of instruction, credit, course sequence, content, and prerequisites.

The first digit in a three-digit course number designates the level of instruction. Only courses numbered 100 or above will be included in credits toward a degree. Courses with numbers up to and including 199 are primarily for freshmen, 200 through 299 primarily for sophomores, 300 through 399 primarily for juniors, and 400 through 499 primarily for seniors. Although, in general, while students should not take courses above the level of their class (based upon semester hours earned), they may do so at one level above if they have the specified prerequisites. In special cases, students may be permitted to take courses more than one level above that designated for their class if they obtain the permission of their adviser and of the faculty member teaching the course and if they meet the prerequisite requirements.

After each course number is a figure specifying the semester hours of credit. As an example, CHE 180-4 is a freshman-level, four-credit course. After the course number is the course title, which may be followed by a second set of numbers in parentheses indicating the division of time between lecture and laboratory, or field experience. The first number represents the number of lecture hours each week, and the second number indicates the number of laboratory, shop, or field hours. For example, CHE 180-4 General Chemistry I (4 + 0) represents the general chemistry course, which has four hours of lecture and zero hours of laboratory each week. Such a course would earn four hours of credit, four for lecture, and zero for laboratory work.

Course descriptions provide a summary of the content of the course. If there is a prerequisite that must be met before a student can register for the course, this information is listed above the course description.

A list of all courses, instructors, class meeting times, and locations is published in the *Class Schedule*, which is printed before the beginning of each semester and is available to all students.

### OMNIBUS COURSES

The omnibus courses listed below are designed to provide flexible learning opportunities. Experimental topics courses, seminars, and workshops deal with novel subjects and current problems. Independent study allows students to investigate problems of special interest. Supervised field study and internships, conducted cooperatively with business, industry, government, and other agencies, provide practical on-the-job learning opportunities. Content of these courses should not duplicate that of regular courses listed in the *Catalog*. Omnibus courses may be offered by all academic departments of the college.

A specific course plan for topic and group workshop courses, which covers content and semester hours, must be submitted by an instructor and approved by the chair of the department or discipline and the dean of the school before such a course can be listed in the schedule of classes. These same approvals are required for plans of study that individual students submit for registration in a workshop course (when individualized) or an independent study course.

No more than 30 semester hours earned in all of the omnibus courses will be counted toward meeting degree requirements.

The following course numbers are the same for omnibus courses in all disciplines; and, when listed in class schedules, registration forms, and college records, the course number will carry the prefix of the discipline in which the course is offered. In addition to prerequisites listed under a course and the approvals outlined above, other prerequisites appropriate to the study and departmental objectives may be added.

**190 (Credit Variable) Topics**

Prerequisite: permission of instructor

An introductory-level class to study selected topics especially appropriate for lower-division students.

**390 (Credit Variable) Advanced Topics**

Prerequisite: permission of instructor

An in-depth inquiry into selected problems.

**480 (Credit Variable) Workshop**

Prerequisite: approval of department

An advanced program of study, often of concentrated nature, designed primarily for students majoring in a particular department or discipline. Involves independent and/or group appraisal and analysis of major problems within a particular area.

**490 (Credit Variable) Seminar**

Prerequisite: permission of instructor

Presentations, discussions, reports, and critiques of various problems within the discipline in which the seminar is offered.

**498 (Credit Variable, not to exceed six semester hours) Independent Study**

Prerequisites: senior status and permission of the department chair

Independent investigation of problems within the student's major discipline. The course must be offered in that department/discipline and be supervised by a faculty member of that area.

**Field Experience/Internship Courses**

Field experience or experiential education courses offer major instructional activities conducted outside the regular classroom, whose syllabi are formally approved by the institution and maintained as an integral part of a department's curriculum. These courses incorporate actual experience with information assimilation and adhere to policies set forth by the Colorado Commission on Higher Education. Certain degree, certification, and licensure programs, such as teacher education or nursing, require experiential education courses as a part of the required coursework. Other departments offer experiential education courses, for credit applicable to graduation requirements, generally as a part of the student's major or minor. Five terms identify field experience courses offered at Metro State: external laboratory, practicum, internship, student teaching, and independent study.

**External Laboratory**

A controlled environment or organized activity emphasizing experimentation in which guided observations and participation enhance the integration of theory and practice under the guidance and supervision of the faculty member and the cooperating supervisor (i.e., child development). The external laboratory is distinguished from the on-campus laboratory, which is devoted to experimental study in any branch of the natural or applied sciences.

**Practicum**

A unit of work that involves apprenticeship in the practical application of previously studied theory under the observation and supervision of a skilled practitioner and faculty member (i.e., a practicum in reading).

**Internship**

A work-oriented training period of actual service in an agency, institution, or technical/business establishment that provides an in-depth learning experience for the student under the direct supervision of an on-site supervisor and under the scrutiny and guidance of a faculty member (i.e., cooperative education).

**Student Teaching**

Faculty-supervised learning experience in which the student applies knowledge gained in the Teacher Education Licensure Program to a classroom setting (i.e., practice teaching).

**Independent Study**

A student-initiated creative or research project conducted under the direct guidance and supervision of a faculty member from an academic department or discipline (as a thesis or special upper-division project).

**Guidelines for Field Experience/Internship Courses**

- Credit may vary from 1–15 hours, depending upon the instructional activity.
- Students are expected to meet the minimum base clock hours established by CCHE policy, which requires two to three times the clock hours established for regular classroom instruction.
- Approved cooperating agencies provide learning opportunities, prepare written statements of assignments, monitor students' performance, confer with the supervising faculty member, and provide a written evaluation.

- Minimum of one hour a week minimally is spent in seminar and discussion or in conference with the adjunct faculty at the field experience locale and/or in conference with the supervising faculty member.
- The supervising faculty member evaluates the student's performance and, in consultation with the adjunct faculty member, assigns the grade for the course according to grading policies stated in the *Catalog*.
- Omnibus courses (299, 397, 498, 499) emphasizing field experiences are subject to guidelines established for regular field-based courses, as well as omnibus course guidelines, and must be approved by the Office of Academic Affairs.

#### **299 (Credit Variable) Field Experience/Internship**

Prerequisite: sophomore status and permission of instructor

A supervised in-service field or laboratory experience in an area related to the student's major, conducted by an affiliated organization in cooperation with the department/discipline in which the student is majoring.

#### **397 (Credit Variable) Practicum**

Prerequisites: sophomore status and permission of instructor

A class that involves apprenticeship in the practical application of previously studied theory under the observance and supervision of a skilled practitioner and faculty member (i.e., practicum in reading).

#### **498 (Credit Variable, not to exceed six semester hours) Independent Study**

Prerequisites: senior status, permission of the department chair

Independent investigation of problems within the student's major discipline. The course must be offered in that department/discipline and be supervised by a faculty member in that area.

#### **499 (Credit Variable) Advanced Field Experience/Internship**

Prerequisite: permission of instructor

An advanced-level, supervised, in-service field or laboratory experience in an area related to the student's major, conducted by an affiliated organization in cooperation with the department/discipline in which the student is majoring.

- Cooperative Education courses (298, 398—variable credit) are subject to guidelines established for regular field experience courses, as well as Cooperative Education guidelines. No more than 15 semester hours of cooperative education credit will be applied toward Metro State degree requirements.

## GRADES AND NOTATIONS

If a clerical error occurs in the reporting of student grades, the faculty may adjust the grade to the actual grade earned.

### Grades

Alphabetical grades and status symbols used at Metro State are as follows:

"A"—Superior .....	4 quality points per semester hour attempted
"B"—Above Average .....	3 quality points per semester hour attempted
"C"—Average .....	2 quality points per semester hour attempted
"D"—Below Average but Passing .....	1 quality point per semester hour attempted
"F"—Failure .....	0 quality points per semester hour attempted

### Notations

"NC"—No Credit

"I"—Incomplete

"S"—Satisfactory (limited to student teaching and HPS/LES 489 internships)

"P"—Pass

"X"—Grade assignment pending. Student must see faculty for an explanation or assignment of grade. Courses taken through interinstitutional registration are normally assigned the "X" notation until grades are received and posted to the academic record.

The "NC" notation is not a grade. It may indicate withdrawal from the course or course repetition. The "NC" notation may also be used in self-paced courses to indicate that the student and/or the faculty have decided to extend the student's exposure to the course to increase the student's proficiency. To earn credit, the student must re-register for and pay for the course in a subsequent term.

The “I” notation may be assigned when a student was unable to take the final examination and/or did not complete all the out-of-class assignments due to unusual circumstances (such as hospitalization). Incomplete work denoted by the Incomplete “I” notation must be completed within one calendar year or earlier, at the discretion of the faculty member. If the incomplete work is not completed within one calendar year, the “I” notation will change to an “F.” Registering in a subsequent semester for a course in which an “I” has been received will not remove the “I.” The “I” notation may not be awarded in a self-paced course.

The following minimal requirements are required throughout the college and are a part of all school, departmental, or individual faculty policies:

- The “NC” notation is available to students in all instances through the fourth week of classes for fall and spring terms.
- Student requests for an “NC” notation in a given course will not be granted after the tenth week of the fall and spring semesters. The “I” notation may be used during this period, provided the conditions specified above apply.
- Proportional timeframes are applied for modular courses, weekend courses, workshops, and summer terms.
- A written policy statement describing the use of the “NC” notation will be given to each student for each class in which the student enrolls.

Students are expected to attend all sessions of courses for which they are registered. Each instructor determines when a student’s absences have reached a point at which they jeopardize the student’s success in a course. When absences become excessive, the student may receive a failing grade for the course.

Additional requirements for an “NC” notation may be set by each school, department, and/or faculty member.

## QUALITY POINTS

The number of quality points awarded for a course is determined by multiplying the number of semester hours for that course by the quality point value of the grade received. The cumulative grade point average is calculated by dividing the total by the number of semester hours attempted.

To be eligible for a degree, a candidate must have a minimum number of quality points equal to twice the number of semester hours attempted in addition to meeting other prescribed requirements. The notations “NC,” “I,” “S,” and “P” have no effect on the grade point average.

## FINAL EXAMINATIONS

It is the general policy of the college to require final examinations of all students in all courses in which they are registered for credit, with the possible exception of seminar courses or special projects.

## PASS-FAIL OPTION

The pass-fail option encourages students to broaden their educational experience by taking courses outside their major and minor fields. The pass notation has no effect on the grade point average (GPA); the fail notation is equivalent to the grade of “F.”

Students who have completed at least one Metro State course with at least a 2.00 cumulative GPA may choose to be evaluated for a certain course on a pass-fail basis rather than by letter grade. The pass-fail option may be used for general elective credit only. Major, minor, general studies, and other courses required for a degree or for teacher licensure, may not be taken on a pass-fail basis. Self-paced courses may not be taken under the pass-fail option. Maximum graduation credit for these ungraded courses is 18 semester hours, earned in no more than six courses, limited to one course per semester or module.

Students must declare interest in the pass-fail option no later than the last day to add classes (during the first 15 percent of the total timeframe of the semester) for a particular semester or module by contacting the Office of Registration and Student Records. The instructor will assign and record the pass-fail grade on a final grade list that identifies students electing and eligible for pass-fail grading. Students who request the option who are later declared ineligible will receive notification from the Office of Registration and Student Records during the semester. They will be assigned a regular letter grade in the course. Once approved, the request for the pass-fail option is irrevocable.

Some institutions do not accept credits for courses in which a pass notation is given. Therefore, students who plan to transfer or take graduate work should determine whether the institution of their choice will accept the credit before registering for courses under the pass-fail option.



**REPEATED COURSES (LAST GRADE STANDS)**

A student may repeat any course taken at Metro State regardless of the original grade earned. By doing so, only the credit and the grade for the latest attempt at the course will remain on the student's Metro State academic record. The grade for the prior attempt(s) will be changed to the "NC" notation. The courses must carry the same title, course number, and semester hours. To effect such a change, the student must reregister and pay tuition for the course in question, complete the course with a letter grade, and complete the necessary form in the Office of Registration and Student Records indicating that the course has been repeated. Otherwise, the grade change will be made administratively at the time of degree evaluation or earlier. Credit duplication involving transfer, interinstitutional, or state college system courses may be treated differently from the above procedure. A failing course grade assigned as a result of academic dishonesty is considered a permanent "F" and is not subject to this policy. A student may not repeat a course after the award of a Metro State degree to make use of this policy.

**Warning/Probation/Suspension Policy****ACADEMIC SATISFACTORY PROGRESS/GOOD STANDING**

A student is deemed to be making satisfactory progress toward his or her academic goal if the student maintains a cumulative GPA of 2.00 or higher. This student is deemed to be in academic good standing with the institution (hereafter in this section referred to as "good standing.") However, other academic standards may apply to specific programs. A student must satisfy those other academic standards in order to be deemed in academic good standing with that program. Please see information on the program of interest to determine specific standards for that program.

**Academic Warning Status**

A student in good standing whose cumulative GPA falls below 2.00 will be on academic warning status with the institution (hereafter in this section referred to as "warning status") during his or her next semester at Metro State. A student will be removed from this warning status and returned to good standing if he or she achieves a cumulative GPA of at least 2.00 at the end of his or her semester on warning status. More restrictive standards may apply to certain programs or schools. Please see information on the program of interest.

**Academic Probation**

A student who fails to achieve a cumulative GPA of at least 2.00 at the end of his or her semester on warning status will be put on academic probation with the institution (hereafter in this section referred to as "academic probation") during his or her next semester at Metro State. A student will be on academic probation as long as he or she has a cumulative GPA below 2.00, but is making progress toward good standing as explained below and has not been on academic probation for more than three semesters. Other conditions may apply to given programs or schools. Please see information on the program of interest.

A student is removed from academic probation and is in good standing the semester after he or she achieves a cumulative GPA of at least 2.00.

During any semester that a student is on academic probation, the student must make progress toward good standing with the institution by taking all of the following actions:

- achieving a semester GPA of 2.20 or higher
- registering and completing a minimum of 3 but no more than 12 semester hours (3 to 6 semester hours for summer semester)
- taking required activities as negotiated with the director of Academic Exceptions Program. These may include certain classes, repeated courses, tutoring, or other activities.

While on academic probation, a student may pre-register for the first semester following the academic warning status semester, but is prohibited from pre-registering any other semester. For subsequent academic probation status semesters, a GPA of at least 2.20 must be verified prior to registration.

**Academic Suspension**

A student on academic probation not making progress toward good standing will be prohibited from registering for one calendar year from the date of suspension. Appeal of suspension for this reason will be submitted to the director of Academic Exceptions Program. The director of Academic Exceptions Program will then deliver the appeal materials to the Student Academic Review Committee, which will review the appeal and notify the student of its decision. A student may appeal a suspension only two times in his or her academic career at Metro State.

A student making progress toward good standing, whose cumulative GPA remains below a 2.00 after three or more semesters on probation, will have his or her academic progress reviewed each semester by the Student Academic Review Committee. The committee will determine whether the student should be placed on suspension. In both cases, the decision of the Student Academic Review Committee is final.

Any student returning to Metro State after the one-calendar-year suspension must reapply and will be re-admitted on academic probation with the institution. For these students, all probation rules outlined above will apply.

A student who is suspended for a second time will be re-admitted only if he or she has successfully completed an associate degree program from a community college after suspension from Metro State or can demonstrate to the Student Academic Review Committee that chances for successful completion of an educational program are greatly improved.

### **STUDENT GRADE APPEAL PROCEDURE**

If students have reason to question the validity of a grade received in a course, they must make their request for a change before the end of the third week of the semester following the completion of the course—the following fall semester in the case of the spring semester. The Grade Appeal Guidelines may be obtained from the students' respective deans. It is the responsibility of the students to initiate a grade appeal within the time limit, and to follow the procedures specified for grade appeals in the Student Rights and Responsibilities section of the 1994-1996 *Student Handbook*. The handbook may be obtained from the Office of Student Services. All decisions of the Grade Appeal Committee will be reviewed by the associate vice president for academic affairs.

### **Adaptive Self-Paced Learning**

Adaptive self-paced learning is a phrase used to describe classes in which students are allowed to proceed at a pace that is suited to their personal learning needs and learning style. Students may proceed rapidly, finishing a course well in advance of the end of a semester or module, with the advantage of being able to begin new studies or to concentrate on other courses. Students may proceed slowly without time limitations that might interfere with the mastery of each required skill.

This personalized system of learning relies heavily on learning aids and media so that tutors, student proctors, and faculty are free to devote additional time to individualized instruction and assistance.

Self-paced courses are identified in the *Class Schedule* by SP, or self-paced. Information on the method of instruction and the nature of the program is available in each department. Self-paced courses are optional and are open to all students who qualify.

Students who do not complete the work of a self-paced course during a semester are given the notation of "NC" and must re-enroll in and pay for the course in a subsequent semester in order to continue in that course. A letter grade is awarded during the semester in which the work is completed satisfactorily.

### **Nontraditional Credit Options in Lieu of Course Requirements**

Successful completion of special examinations and/or completion of a prior learning portfolio, which may be substituted for the completion of course requirements, may permit placement in advanced courses, or may be used as the basis for awarding credit. A student may earn up to 60 semester hours of credit toward degree requirements using nontraditional credit options. This type of approved credit will be posted to the student's record after the completion of 8 semester hours of classroom (resident) credit. Nontraditional credit may not be used toward the last 12 semester hours of a degree program, does not substitute for residency requirements, and cannot be used to challenge prerequisite courses for courses already completed. Students are advised that letter grades are not assigned for nontraditional credit, and some institutions may not accept transfer credits that do not include letter grades.

### **ADVANCED PLACEMENT EXAMINATIONS**

Students who have performed satisfactorily in special college-level courses while in high school, and who have passed appropriate advanced placement examinations conducted by the College Entrance Examination Board, may have official AP scores submitted directly to the Office of Registration and Student Records for consideration for college credit. This office, in consultation with the appropriate department chair, determines the amount and nature of the credit and/or advanced placement granted.

### INTERNATIONAL BACCALAUREATE

Metro recognizes the greater potential for success of international baccalaureate students. Accordingly, academic departments may award credit for demonstrated proficiency on a case-by-case basis. Students who have international baccalaureate results at the higher level may have an official transcript sent directly to the Office of Registration and Student Records for consideration for college credit.

### COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP)

For the past 20 years, the College Board has offered CLEP, a program of examinations designed to evaluate non-accredited college-level learning to award credit for successful demonstration of this knowledge. CLEP consists of two series of examinations: the general examinations and the subject examinations.

The general examination series includes five separate examinations covering the areas of English composition, humanities, natural sciences, math, and social science/history. Based on the results of these examinations, the college may award up to a maximum of 30 semester hours of credit in the freshman general studies requirement areas. Thus, the successful student may test out of many of the traditional courses required during the freshman year. Metro State does not allow CLEP credit for ENG 102, which is the Freshman Composition: Analysis, Research, and Documentation course.

The subject examination series consists of more than 45 examinations that apply to specific college courses. Metro State allows credit for 15 of these examinations. Thirty semester hours of credit also may be awarded under this series, making a total of 60 semester hours of credit obtainable under a combination of the two series of examinations.

Credit obtained under CLEP at another institution will be re-evaluated according to Metro State CLEP policies.

Any interested student should contact the coordinator at (303) 556-3677 for complete information about this program before registering to take any of these exams.

### ATTAINMENT EXAMINATIONS

Any student may take attainment examinations in certain departments for the purpose of waiving specific graduation requirements. Passing such an examination, although not reducing the number of credits required for graduation, entitles students to substitute their own choice for the required subject. The examination is approximately the equivalent of the final examination in the course.

### DEPARTMENTAL COURSE EXAMINATIONS

In special cases, a department may grant students credit toward graduation for college courses in which they request and pass special college examinations. Under this provision, a maximum of 30 semester hours of credit may be awarded by the college. A fee of \$10 per semester hour credit will be charged.

Examinations for credit must be based on work equivalent to a regular course offered by the college (omnibus-numbered courses are excluded). The credit granted will be for the corresponding course, provided the student has no previous collegiate enrollment for a similar course and the credit is applicable toward the student's graduation requirements. Evidence of work justifying an examination for credit must be presented to the department chair no later than the third week of classes in a semester. Permission for such examination must be secured in advance from the appropriate dean upon recommendation of the department chair.

No application for credit by examination will be approved for a student who is not currently enrolled in good standing in a degree-seeking curriculum in the college. Credit by examination will not be approved for a student who is within 12 classroom semester hours of completing degree requirements. No credit by examination can be obtained for a course in which a student has been officially enrolled at Metro State or at another institution, whether or not the course has been completed and a grade awarded. Credit by examination cannot be obtained for college courses attended as a listener, visitor, or auditor.

If a student has completed a more advanced course than the course for which examination credit is desired, permission to take the exam will be granted if approved by the appropriate department chair and dean. If a student has already completed a sequence of courses, no examination credit can be given for courses lower in number than the highest-numbered course taken by the student. If a student has registered for a higher-numbered course in a sequence, the exam for the lower-numbered course must be completed within the first three weeks of the semester. Exceptions must be appealed to the Board of

Academic Standards Exceptions following endorsement of the department chair or dean. Examinations cannot be taken to raise grades, to remove failures, or to remove “NC,” “SP,” or “I” notations. Credit by examination is not applicable toward academic residence requirements.

Examples of unrelated subject matter:

ART 212	.....Human Anatomy for Artists
ART 103	.....Basic Photography Methods
ITS 241	.....Introduction to Photography
ITS 101	.....Introduction to Wood

Examination for credit will be taken at a time specified by the department after the special examination fee has been paid. No examination for credit in a college course may be repeated. A grade equivalent to “A” or “B” must be attained on the examination in order to receive credit, but credit so earned for the course will be recorded without grade reference on the student’s permanent record. Credits in courses for which credit is earned by examination are not considered in computing college grade point averages. Credit by examination will be posted after a student has completed 8 semester hours of credit at Metropolitan State College of Denver and after an evaluation of all possible transfer credits has been completed.

### **CREDIT FOR PRIOR LEARNING**

Students may apply for credit for college-level learning gained through experience through the Credit for Prior Learning program. Information and assistance is available through the Office of Adult Learning Services. Prior learning credit is available in most, but not all, academic departments.

Credits are awarded on the basis of a careful assessment of the prior learning portfolio by faculty in the department from which credit is sought. The prior learning portfolio is developed with the assistance of the Office of Adult Learning Services. Applicants for credit for prior learning will generally be required to take EDU 268-1, Portfolio Development Workshop. Prior learning portfolios are submitted to Adult Learning Services, which submits the portfolio to the appropriate academic department. Students are advised not to enroll in classes for which credit for prior learning may be sought.

A fee of one-half the part-time student tuition is charged for credit for prior learning; \$40 of the total fee is due prior to the assessment of the portfolio by faculty for credit. The remainder of the fee is due if and when credit is awarded. Policies governing nontraditional credit options apply to credit for prior learning. Contact the office of Adult Learning Services for assistance and further information (303) 556-8342. Information sessions about portfolio assessment and other nontraditional credit options at Metro State are held on a regular basis by the office of Adult Learning Services.

### **CREDIT FOR MILITARY TRAINING AND OTHER TRAINING PROGRAMS**

Military training and other training programs that have been assessed for college credit by the American Council on Education will be evaluated by the Office of Registration and Student Records for transfer credit at Metro. For formal military training, copies of training certificates and a copy of the DD-214 should be submitted to the Office of Registration and Student Records. For other training, official ACE transcripts should be submitted. Credit limit is 30 semester hours.

## **Honors and Awards**

Metro annually recognizes students who show outstanding leadership and service to the college and community, excellence in scholastic achievement, and outstanding personal character and integrity. Recognition of students includes:

The President’s Award (one senior); the Special Service Award for Academic Affairs (one senior) and for Student Services (one senior); Outstanding Student Awards (seniors from each school); Who’s Who Among Students in American Universities and Colleges (seniors); American Association of University Women (AAUW) Award (senior woman). Other awards include Special Service Award for Exceptionally Challenged Students, Student Government Assembly Award, Charles W. Fisher Award, and the Colorado Engineering Council Award.

Information and applications for these awards are available in Central Classroom Building, room 313. Awards are presented at the annual banquet the night before graduation.

In addition to annual awards, students with outstanding academic achievements are recognized by being named on Metro honor lists. The President’s Honor List carries the names of students who, at the time

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of computation, have achieved a cumulative GPA of 3.85 or higher. The Vice President's Honor List carries the names of students who, at the time of computation, have achieved a cumulative GPA of between 3.50 and 3.84, inclusively.

Computation will occur initially when the student has completed between 30 and 60 hours at Metro State, then again between 60 and 90 hours, and finally after more than 90 hours.

Graduation honors are awarded to students who have demonstrated superior academic ability in their baccalaureate degree while attending Metro State. Honors designations are determined according to the following criteria:

- Summa Cum Laude—Top five percent of graduates within each school with cumulative Metro State GPA of no less than 3.65
- Magna Cum Laude—Next five percent of graduates within each school with cumulative Metro State GPA of no less than 3.65.
- Cum Laude—Next five percent of graduates within each school with cumulative Metro State GPA of no less than 3.65.
- **To determine each honors category, GPAs for the previous spring semester graduates are arrayed in rank order. This rank ordering is then used to determine the honors recipients among the following fall, spring, and summer graduates.**
- **To qualify for graduation honors recognition, a student must have completed a minimum of 50 semester hours of classroom credit at Metro State prior to the term of graduation.**
- **Courses completed during the term of graduation and transfer credits are not considered when determining honors.**

Honors designations are added to the student's official academic record; no other notification will be sent. For additional information regarding graduation honors, contact the Office of Academic Affairs at (303) 556-3907.

### Diplomas and Commencement

Students who have met all requirements for graduation are granted diplomas at the end of the semester for which they are degree candidates. A formal commencement ceremony is held at the conclusion of each semester.

### Catalog Requirements for Bachelor's Degree

Students must use a single *Catalog* to meet all their degree requirements including those in the general studies, major, and minor. All degree programs must adhere to overriding current policies at Metro State. All students should refer to the General Studies for Bachelor's Degree section in this *Catalog* for important information.

Students are responsible for full knowledge of the provisions and regulations pertaining to their program contained in this *Catalog* and elsewhere. The final responsibility for completing the requirements for a degree rests with the students, and it is recommended that they seek advice. Students should never assume that they have approval to deviate from a stated requirement without a properly signed statement to that effect.

For degree requirement purposes, students must select a Metropolitan State College of Denver *Catalog* in effect while they are enrolled at Metro State, provided that the *Catalog* contains their complete program of study. Students interrupting enrollment for any three consecutive semesters or more may select only the current *Catalog* in effect upon returning to the institution.

Students transferring from a regionally accredited Colorado community college may complete degree requirements using a Metro State *Catalog* in effect while enrolled at the community college, subject to the following conditions.

- The *Catalog* followed does not predate the current Metro State *Catalog* by more than three years.
- The *Catalog* selected may have been in use at any time from the time the student was continually enrolled at a regionally accredited Colorado community college to the semester for which the student is enrolling.\*

\*Continuous enrollment is defined as not interrupting enrollment for three or more consecutive semesters (one calendar year). Continuous enrollment must be maintained from the period of the designated *Catalog* to the point of Metro State degree completion.

## Orientation

All first-time college students, regardless of age, and all transfer students younger than 20 are required to attend an orientation session. Re-admit students are encouraged to attend an orientation session. Information is provided about college requirements, class scheduling, registration procedures, college services and resources, transfer of credit, academic advising, choice of major, and career counseling. Information is also available regarding special programs offered by the college and its various departments. Orientation sessions are offered to freshmen, transfer students, adults, re-entry women, and parents of new freshmen. For additional information, call (303) 556-4055.

## Requirements for All Bachelor's Degrees

To earn a bachelor of science, a bachelor of arts, or a bachelor of fine arts degree, a student must satisfy the following minimum requirements, plus any others stipulated for the degree for which a student is a candidate.

Complete a minimum of 120 semester hours with a cumulative GPA of 2.00 or higher for all Metropolitan State College of Denver coursework.

Complete at least 40 semester hours in upper-division courses (300- and 400-level courses).

Complete all general studies requirements listed for the degree and major.

Complete a 3-hour multicultural course requirement.

Complete a 3-hour senior experience course requirement. This course must be taken at Metro State.

Complete one subject major consisting of not less than 30 semester hours. With certain exceptions (see the Degrees and Programs Available at Metropolitan State College of Denver section of this *Catalog*), complete a minor consisting of at least 18 semester hours. If a student completes two majors, the second major satisfies the minor requirement. Completing two areas of emphasis under one major does not constitute the completion of two majors. Completion of two majors does not result in two degrees or diplomas. Coursework used to meet requirements for one major or minor may not be used to meet requirements for another major or minor. Students may not major and minor in the same discipline and are encouraged to obtain verification from an adviser if uncertainty exists.

Complete all special requirements of a department and school.

Achieve a cumulative GPA of 2.00 or higher in all Metro State courses that satisfy the requirements for the major, and for all Metro State courses that satisfy requirements for a minor. Students should check with an adviser for special GPA program requirements.

Complete a Graduation Agreement.

Academic residency (classroom credit) requirements:

- Complete a minimum of 30 semester hours of classroom credit at Metropolitan State College of Denver, including the last 12 semester hours applicable to the degree.
- Complete at least 8 upper-division (300- and 400-level courses) semester hours of the major and 3 upper-division hours of the minor at Metro (classroom credit).
- Students should be aware that University of Colorado at Denver pooled courses and courses taken interinstitutionally or at one of the other state colleges will not satisfy academic residence requirements at Metro State.
- Complete the Senior Experience requirement.

Credit limitations:

- Not more than 30 semester hours of omnibus-numbered courses may be applied toward graduation requirements.
- Not more than 30 semester hours taken by extension and/or correspondence may be applied toward a bachelor's degree.
- Not more than 4 semester hours in human performance and leisure activity or varsity sports courses will be counted toward a bachelor's degree for students who are not majoring in human performance, sport and leisure studies.
- Not more than 7 semester hours in music ensemble courses will be counted toward a bachelor's degree for students who are not majoring in music.

## Requirements for a Second Degree

For an additional bachelor's degree, students must comply with the following:

- The first bachelor's degree must be recognized by Metro State.
- General studies will be considered complete unless deficiencies exist according to the major department.
- Students must complete all requirements for a new major with a minimum of 8 Metro State classroom upper-division semester hours in the major department.
- Students must complete a minor, if required by the major department for the contemplated degree.
- Students must satisfy the multicultural and senior experience course requirements for the second degree.
- Students must spend at least two additional semesters in residence.
- A minimum of 30 semester hours of classroom credit at Metro State is required in addition to the credits completed by the student for the earlier degree.
- Credit limitations for a bachelor's degree will continue to exist for the second degree.
- A Graduation Agreement must be completed as outlined in this *Catalog*.

## Individualized Degree Program

Even with the wide diversity of the majors and minors presently offered at Metro State, the need arises for an academic program that is individual in nature, meets the specific needs of the students, and is responsive to emerging educational requirements. The individualized major/minor is an organized degree program written by the student in consultation with an individualized degree faculty advising committee. Working with faculty from selected disciplines enables students to complete a specific, individual, educational objective that cannot be satisfied by any existing *Catalog* major and/or minor programs. The degree sought may be either a bachelor of arts or bachelor of science. For more information, contact the Office of Adult Learning Services at (303) 556-8342.



## GENERAL STUDIES FOR BACHELOR'S DEGREES

Students must use a single *Catalog* to meet all degree requirements, including those in the general studies, major, and minor. Some changes in general studies requirements have been made retroactive. As a consequence, many general studies requirements and policies described in this *Catalog* may be followed by students using earlier catalogs. All degree programs must adhere to overriding, current policies at Metro State.

Courses and specific prerequisites/corequisites approved for the current program are described in the Course Description section of this *Catalog*. Students should consult an adviser in the Advising, Assessment and Support Center when planning their programs.

### PHILOSOPHY OF THE GENERAL STUDIES PROGRAM

Metro State seeks to prepare its graduates for a lifetime of learning, which, in our changing and complex society, requires focused expertise (such as that provided by a major area of study) and the ability to communicate with and learn from experts in other fields. At Metro State, undergraduate education fosters the critical thinking necessary for the exploration of unfamiliar disciplines and for the synthesis of learning and exposes students to the richness and variety of the intellectual universe.

Through its General Studies Program, Metro State encourages students to use their mastery of skills to explore knowledge in a variety of disciplines. The General Studies Program provides two levels of experience with separate goals:

#### Level I—Skills

Level I courses provide students with the basic skills of reading and listening critically, recognizing faulty reasoning, drawing conclusions from quantitative data, organizing ideas, and communicating clearly.

#### Level II—Breadth of Knowledge

Level II courses provide a broader scope of skills, encourage an open attitude toward different approaches to problems, and cultivate an informed awareness of the principle achievements in history, arts and letters, social science, and science.

### DISTRIBUTION AND CREDIT REQUIREMENTS

To complete their General Studies Program, students must take approved courses that fulfill the following distribution and credit requirements:

Category	Semester Hour
<b>Level I*</b>	
Composition .....	6
Mathematics .....	3
Communications .....	3
<b>Level II**</b>	
Historical .....	3
Arts and Letters .....	6
Social Sciences .....	6
Natural Sciences .....	6
<b>Total***</b> .....	33

\*A transfer course or courses of at least 2 semester hours judged to be similar in skill development and content to a Level I course will satisfy an individual Level I course requirement. Equivalency will be determined by the department offering the Level I course.

\*\*One-hour deviations in the Level II categories may be allowed.

\*\*\*A student's completed General Studies Program must contain at least 33 semester hours.

### BASIC RULES:

- Only approved courses may be used to satisfy the general studies requirements. A current listing of these courses is published in this section, in the *General Studies, Multicultural, and Senior Experience Requirements* pamphlet, and in the Course Descriptions section of this *Catalog*.
- General studies courses need not be counted toward general studies requirements. They may be taken as electives or to satisfy requirements in the major or degree program.
- Departments or programs whose curricula are guided by accrediting agencies may specify, by prefix and number, some general studies courses in addition to courses required for the major or a professional credential.
- Courses taken using the pass-fail option cannot be counted for general studies.



**LEVEL I REQUIREMENTS: COMPOSITION, MATHEMATICS, AND COMMUNICATION;  
FRESHMAN ASSESSMENT: READING, WRITING, AND MATHEMATICS PLACEMENT EXAMS**

First-time college students are required to complete the reading, writing, and mathematics placement exams (see Assessment Requirements section). Exam results serve as the basis for academic advising. To increase their opportunity for success, students may be required to take courses below the level of first-year courses offered by Metropolitan State College of Denver. Students should be aware, however, that no credit is given for courses that are below the college level.

**Placement Test Prerequisites**

Students must have a passing score on the appropriate placement test before they will be allowed to register for Level I general studies courses in English, mathematics, and reading. Exceptions will be made for students who have earned at least a grade of "C" in the community college course specified by the department. The Advising, Assessment and Support Center administers the placement tests. Students should consult an adviser in the Advising, Assessment and Support Center for guidance in selecting the appropriate Level I courses.

**Composition: Required Courses****Semester Hours**

ENG 101 Freshman Composition: The Essay .....	3
ENG 102 Freshman Composition: Research, Analysis and Documentation.....	3

**Rules: Composition Requirement**

Students must complete the ENG 101 requirement within their first 30 semester hours at Metro and the ENG 102 requirement within their first 60 semester hours. These requirements may be postponed only if approved in writing by the English Department.

Students must demonstrate the adequacy of their writing skills in the placement exam before enrolling in ENG 101. Those students whose writing skills are inadequate will be counseled on how to improve those skills. Students may be required to complete additional coursework.

Students will have satisfied the Level I composition requirements if they

- satisfactorily complete ENG 101 and ENG 102, or
- pass a CLEP or AP examination approved by the English Department (ENG 101 only), or
- transfer equivalent courses.

**Mathematics: (minimum 3 semester hours\*)****Semester Hours**

MTH 108 Mathematical Modes of Thought .....	3
MTH 111 College Algebra.....	4
MTH 121 Introduction to Statistics.....	4
MTH 131 Finite Mathematics for the Management and Social Sciences .....	4
MTH 161 Mathematical Concepts for Teachers in Presecondary Schools .....	4

\*A transfer course or courses of at least 2 semester hours judged to be similar in skill development and content to a Level I course will satisfy an individual Level I course requirement. Equivalency is determined by the department offering the Level I course.

**Rules: Mathematics Requirement**

Students will take the mathematics placement exam to determine their abilities to calculate with fractions, decimals, and percents, and to know and use elementary geometrical formulas. Those whose skills are inadequate are required to complete college arithmetic coursework before enrolling in a Level I mathematics course. Some courses have additional requirements.

Students must complete the Level I mathematics requirement within their first 30 semester hours at Metro State. This requirement may be postponed on an individual basis if the postponement is approved in writing by the Mathematical and Computer Sciences Department.

Students will have satisfied the Level I mathematics requirement if they

- pass a mathematics course that has been approved for Level I mathematics credit (see courses listed above), or
- pass a CLEP or AP exam approved by the Mathematical and Computer Sciences Department, or
- successfully complete a mathematics course for which a Level I mathematics course is a prerequisite, or
- transfer an equivalent course.

<b>Communication: (Minimum 3 semester hours*)</b>	<b>Semester Hours</b>
FRE 102 Elementary French II .....	5
GER 102 Elementary German II.....	5
HON 295 The Art of Critical Thinking.....	3
PHI 111 Language, Logic, and Persuasion .....	3
RDG 151 Cognitive Strategies for Analytical Reading .....	3
SPA 102 Elementary Spanish II.....	5
SPE 101 Fundamentals of Speech Communication .....	3
SPE 171 Interpersonal Communications: Individual as a Communicator .....	3

\* A transfer course or courses of at least 2 semester hours judged to be similar in skill development and content to a Level I course will satisfy an individual Level I course requirement. Equivalency will be determined by the department offering the Level I course.

### **Rules: Communication Requirement**

Students must complete the required Level I communication course within their first 30 semester hours at Metropolitan State College of Denver.

Students will have satisfied the Level I communication requirement if they

- pass an approved Level I communication course (listed above), or
- pass a CLEP or AP test approved by a department offering a Level I communication course, or
- transfer an equivalent course.
- transfer a second semester, four- or five-semester hour foreign language course or a more advanced language course that is taught in a language not offered at Metro State.
- pass or transfer an advanced foreign language course that is taught in the foreign language and that has Metro State's FRE 102, GER 102, and SPA 102 or equivalent coursework, or more advanced coursework, as a prerequisite.
- pass or transfer an advanced public speaking course for which Metro State's SPE 101 or a comparable course is a prerequisite.

Students who have satisfied the communications requirement using the advanced foreign language course or the advanced public speaking course must place that course in the Level I communications requirement slot. Level II general studies courses used to satisfy the Level I communications requirements cannot also be counted in the Level II category.

### **Level II Requirements**

Courses approved to satisfy the Level II requirement are distributed among four categories. The categories, together with the minimum number of semester hours a student must accumulate to satisfy this requirement are given below. One-hour deviations in the general studies Level II categories may be allowed, provided the student has completed at least 33 semester hours of general studies courses.

<b>Level II Categories:</b>	<b>Semester Hours</b>
Historical .....	3
Arts and Letters .....	6
Social Science.....	6
Natural Science.....	6

### **Rules: Level II Requirement**

Prerequisites: Level II general studies courses have at least the following prerequisites or corequisites, and some courses have additional prerequisites (see course descriptions in this *Catalog*)

Historical and Arts and Letters:

- Courses numbered 100 to 199: minimum performance standard scores on reading and writing preassessment placement tests
- Courses numbered 200 to 299: satisfaction of the Level I mathematics course requirement and either ENG 101 or the Level I communication course requirement
- Courses numbered 300 and above: satisfaction of all Level I general studies course requirements

Natural Science and Social Science:

- Courses numbered 100 to 199: minimum performance standard scores on the reading, writing and mathematics preassessment placement tests
- Courses numbered 200 to 299: satisfaction of the Level I mathematics course requirement and either ENG 101 or the Level I communication course requirements
- Courses numbered 300 and above: satisfaction of all Level I course requirements

Students may not use courses having the same prefix as their major discipline to satisfy the Level II requirement.

Students may not apply more than 8 semester hours of credit with the same course prefix to the Level II requirements.

Students may use either prefix for a cross-listed course, i.e., one designated XXX—/YYY—. They must select the prefix they wish to use at registration; the selection may not be changed later.

History majors must take three extra semester hours at Level II in the social sciences, arts and letters, or natural sciences categories in lieu of the three hours in the historical category.

### HISTORICAL COURSES (minimum 3 semester hours\*)

Historical courses aim to impart a broad knowledge of history, emphasizing the major forces, people, and events that have shaped the modern world.

The following courses may be used to satisfy the general studies historical requirement. Other courses may have been approved for such use after the publication of this *Catalog*. For more recent information, contact the Advising, Assessment and Support Center.

\*A one-hour deviation in the general studies historical requirement may be allowed, provided the student has completed at least 33 semester hours of general studies courses.

	<b>Semester Hours</b>
AAS 113/HIS 194mc	Survey of African History .....3
AAS 213/HIS 295mc	West African Civilizations .....3
CHS 101/HIS 191mc	History of Meso-America: Pre-Columbian and Colonial Periods .....3
FRE 355	French Historical Perspectives .....3
HIS 100	American Civilization .....3
HIS 101	Western Civilization to 1715 .....3
HIS 102	Western Civilization since 1715 .....3
HIS 111	Colorado History I .....3
HIS 121	American History to 1865 .....3
HIS 122	American History since 1865 .....3
HIS 165/WMS 165	Women in U.S. History .....3
HIS 191/CHS 101mc	History of Meso-America: Pre-Columbian and Colonial Periods .....3
HIS 193/NAS 193mc	History of Indigenous/Hispanic Americans .....3
HIS 194/AAS 113mc	Survey of African History .....3
HIS 201	Contemporary World History .....3
HIS 295/AAS 213mc	West African Civilizations .....3
HIS 303	Ancient Orient and Greece .....3
HIS 306	Rome and the Caesars .....3
HIS 309mc	Native Americans in American History .....3
HIS 312	Medieval History .....3
HIS 314	Renaissance and Reformation .....3
HIS 331	England to 1714 .....3
HIS 332	England since 1714 .....3
HIS 381	Latin America: Republics .....3
HON 385	American Culture I .....3
HON 386	American Culture II .....3
NAS 193/HIS 193mc	History of Indigenous/Hispanic Americans .....3
WMS 165/HIS 165	Women in U.S. History .....3

mc — This course will also satisfy the multicultural requirement.

**ARTS AND LETTERS COURSES (minimum 6 semester hours\*)**

Arts and letters courses impart a broad knowledge of important works and major schools of thought from at least two centuries. They also provide a foundation for critical evaluation within the discipline.

The following courses may be used to satisfy the general studies arts and letters requirement. Other courses may have been approved for such use after the publication of this *Catalog*. For more recent information contact the Advising, Assessment and Support Center.

\*A one-hour deviation in the general studies arts and letters requirement may be allowed, provided the student has completed at least 33 semester hours of general studies courses.

	<b>Semester Hours</b>
AAS 324/ENG 324mc	African American Literature .....3
ART 104	Art Appreciation Survey .....3
ART 309mc	Art and Cultural Heritage .....3
ART 395/WMS 395	Women's Art/Women's Issues .....3
ENG 110	Introduction to Literature .....3
ENG 111	Introduction to Fiction .....3
ENG 112	Introduction to Drama .....3
ENG 131	Introduction to Shakespeare .....3
ENG 303	Semantics .....3
ENG 324/AAS 324mc	African American Literature .....3
ENG 342	English Bible as Literature .....3
ENG 343	Classical Mythology .....3
ENG 346	Children's Literature .....3
FRE 311	Survey of French Literature I .....3
FRE 312	Survey of French Literature II .....3
GER 320	German Culture and Civilization .....3
HON 275	Legacy of Arts and Letters I .....3
HON 276	Legacy of Arts and Letters II .....3
MUS 100	Introduction to Music .....3
MUS 304	Music and the Arts .....3
PHI 101	Introduction to Philosophy .....3
PHI 103	Ethics .....3
PHI 300	History of Greek Philosophy .....3
PHI 302	History of Modern Philosophy .....3
PHI 336	Business Ethics .....3
PSC 305	Political Theory .....3
RDG 306	Critical Reading/Thinking .....3
SPA 320	Culture and Civilization of Spain .....3
SPA 321	Spanish-American Culture and Civilization .....3
SPA 322	Folklore and Culture of the Mexican Southwest .....3
SPE 221	Introduction to Theatre .....3
SPE 277/WMS 277	Gender and Communication .....3
SPE 308	Great American Speakers .....3
SPE 374	Psychology of Communication .....3
SPE 376mc	Cultural Influences on Communication .....3
WMS 277/SPE 277	Gender and Communication .....3
WMS 351	Feminist Theory .....3
WMS 395/ART 395	Women's Art/Women's Issues .....3

mc — This course will also satisfy the multicultural requirement.

## 50 GENERAL STUDIES INFORMATION

### SOCIAL SCIENCE COURSES (minimum 6 semester hours\*)

Social science courses aim to explore the formation, behavior, and interaction of various social, cultural, political, or economic groups and institutions.

The following courses may be used to satisfy the general studies social science requirement. Other courses may have been approved for such use after the publication of this *Catalog*. For more recent information contact the Advising, Assessment and Support Center.

\*A one-hour deviation in the general studies social science requirement may be allowed, provided the student's completed General Studies Program contains at least 33 semester hours.

	<b>Semester Hours</b>
AAS 101mc	Introduction to African American Studies .....3
AAS 220/PSC 220mc	Politics and Black People .....3
AAS 330/SOC 314mc	The Black Community .....3
AAS 355/SOC 344	The Black Family .....3
ACC 101	Accounting for Non-Business Majors .....3
ANT 131	Introduction to Cultural Anthropology .....3
ANT 233	Cross-Cultural Communication .....3
ANT 331	Ethnography of North American Indians .....3
ANT 348	Cultural Diversity in Health and Illness .....3
CHS 100mc	Introduction to Chicano Studies .....3
CHS 310/SOC 313mc	The Chicano Community .....3
ECO 201	Principles of Economics—Macro .....3
ECO 202	Principles of Economics—Micro .....3
EDU 264mc	Urban and Multicultural Education .....3
EDS 320	Educational Psychology Applied to Teaching .....3
FRE 356	Contemporary Socio-Cultural Issues .....3
GEG 100	World Regional Geography .....3
GEG 130	Introduction to Human Geography .....3
GEG 202	Geography of Colorado .....3
HES 105	Dynamics of Health .....3
HIS 366	Recent U.S., 1945-1970's .....3
HMT 185mc	Multicultural/Multinational Cultural Adjustment/Readjustment .....3
HON 380	Revolutions and Social Change I .....3
HON 381	Revolutions and Social Change II .....3
HPS 272	Fundamentals of Coaching .....2
HSP 349mc	Multicultural Issues in Human Services .....4
ITS 281	Technology, Society, and You .....3
LES 473	Sociology of Athletics in American Society .....3
NAS 100mc	Introduction to Native American Studies .....3
NAS 320/PSC 320mc	Native American Politics .....3
PSC 101	American National Government .....3
PSC 102	Political Systems and Ideas .....3
PSC 220/AAS 220mc	Politics and Black People .....3
PSC 320/NAS 320mc	Native American Politics .....3
PSY 101	Introductory Psychology .....3
PSY 216	Personality and Adjustment .....3
PSY 221	Psychology of Human Development .....3
PSY 325	Child Psychology .....3
PSY 326	Psychology of Adolescence .....3
SOC 101	Introduction to Sociology .....3
SOC 104mc	Introduction to Social Gerontology .....3
SOC 201	Current Social Issues .....3
SOC 313/CHS 310mc	The Chicano Community .....3
SOC 314/AAS 330mc	The Black Community .....3
SOC 322/WMS 322mc	Race, Sex, and Ethnic Groups .....3
SOC 344/AAS 355	The Black Family .....3
WMS 101	Introduction: Woman in Transition .....3
WMS 322/SOC 322mc	Race, Sex, and Ethnic Groups .....3

mc — This course will also satisfy the multicultural requirement.

**NATURAL SCIENCE COURSES (minimum 6 semester hours\*)**

Natural science courses provide an opportunity for students to experience the systematic formulation and testing of hypotheses and to learn the importance of accurate observation and measurement. Students will differentiate among fact, speculation, evidence, inference, belief, theory, law, and generalization.

The following courses may be used to satisfy the general studies natural science requirement. Other courses may have been approved for such use after the publication of this *Catalog*. For more recent information, contact the Advising, Assessment and Support Center.

*\*A one-hour deviation in the general studies natural science requirement may be allowed, provided the student has completed at least 33 semester hours of general studies courses.*

		<b>Semester Hours</b>
ANT 101	Physical Anthropology and Prehistory.....	3
AST 104	Introduction to Astronomy.....	3
AST 304	Modern Cosmology.....	3
BIO 100	Human Biology for Non-Majors.....	3
BIO 101	Ecology for Non-Majors.....	3
BIO 108	General Introduction to Biology.....	4
BIO 330	Advanced Human Biology for Non-Majors.....	3
BIO 355	Urban Ecology.....	4
CHE 101	Chemistry and Society.....	3
CHE 110	Principles of Chemistry.....	5
CHE 180 & CHE 185*	General Chemistry I.....	6
CHE 181 & CHE 185*	General Chemistry I.....	6
CHE 310	Organic Chemistry I.....	4
CHE 312	Organic Chemistry I Laboratory.....	2
GEG 110	Introduction to Physical Geography.....	3
GEG 120	Introduction to Environmental Sciences.....	3
GEG 140	World Resources.....	3
GEL 101	General Geology.....	4
GEL 102	Geology of Colorado.....	3
GEL 115	Oceanography.....	3
HES 204	Introduction to Nutrition.....	3
HES 345	Dynamics of Disease.....	3
HON 280	History of Science.....	3
HON 281	Development of Experimental Science.....	3
HPS 330	Anatomical Kinesiology.....	3
HPS 334	Physiology of Exercise.....	3
MET 355	Rocket and Stars — A Space Trek.....	3
MTR 140	Introduction to Meteorology.....	3
MTR 350	Hazardous Weather.....	3
PHY 100	Introduction to Physics.....	4
PHY 125	Physics of Technology.....	6
PHY 201 & PHY 203	College Physics I and Laboratory.....	5
PHY 202 & PHY 204	College Physics II and Laboratory.....	5
PHY 231 & PHY 232	General Physics I and Laboratory.....	5
PHY 233 & PHY 234	General Physics II and Laboratory.....	5
PHY 362	Sound and Music.....	3
SCI 280	Conceptual Science and Mathematics.....	6

*\*Completion of both CHE 180 and 185 with passing grades is required to receive general studies credit. The same is true of the combination CHE 181 and 185.*

## Additional Graduation Requirements

### MULTICULTURAL AND SENIOR EXPERIENCE COURSE REQUIREMENTS

In addition to completing the general studies requirements, a student must complete a three-hour multicultural course and a three-hour senior experience course, or selection of courses, to be awarded a bachelor's degree from Metropolitan State College of Denver. The rules pertaining to those requirements and the courses that will satisfy those requirements are described below.

### MULTICULTURAL COURSE REQUIREMENT (minimum 3 semester hours)

Multicultural courses are designed to increase students' appreciation and awareness of the American culture and the diverse cultures that contribute to it. Multicultural educational offerings examine the interactions of values and beliefs, traditions, identities, and cultural contributions of women, and racial and ethnic groups in the United States: African American, Asian American, Hispanic American, and Native American. Students may use the course to satisfy general studies, major, or minor requirements if the course is approved for that use. If the course is used for general studies, the Level II general studies restrictions remain in effect, e.g., no courses with the major prefix may be used.

	<b>Semester Hours</b>
AAS 101	Introduction to African American Studies .....3
AAS 113/HIS 194	Survey of African History .....3
AAS 213/HIS 295	West African Civilizations .....3
AAS 220/PSC 220	Politics and Black People .....3
AAS 324/ENG 324	African American Literature .....3
AAS 330/SOC 314	The Black Community .....3
ART 309	Art and Cultural Heritage .....3
CHS 100	Introduction to Chicano Studies .....3
CHS 101/HIS 191	History of Meso-America: Pre-Columbian and Colonial Periods .....3
CHS 310/SOC 313	The Chicano Community .....3
EDU 264	Urban and Multicultural Education .....3
ENG 324/AAS 324	African American Literature .....3
HIS 191/CHS 101	History of Meso-America: Pre-Columbian and Colonial Periods .....3
HIS 193/NAS 193	History of Indigenous/Hispanic Americans .....3
HIS 194/AAS 113	Survey of African History .....3
HIS 295/AAS 213	West African Civilizations .....3
HIS 309	Native Americans in American History .....3
HMT 185	Multicultural/Multinational Cultural Adjustment/Readjustment .....3
HSP 349	Multicultural Issues in Human Services .....4
MGT 483	Workforce Diversity .....3
NAS 100	Introduction to Native American Studies .....3
NAS 193/HIS 193	History of Indigenous/Hispanic Americans .....3
NAS 320/PSC 320	Native American Politics .....3
PSC 220/AAS 220	Politics and Black People .....3
PSC 320/NAS 320	Native American Politics .....3
SOC 104	Introduction to Social Gerontology .....3
SOC 313/CHS 310	The Chicano Community .....3
SOC 314/AAS 330	The Black Community .....3
SOC 322/WMS 322	Race, Sex, and Ethnic Groups .....3
SPE 376	Cultural Influences on Communication .....3
WMS 322/SOC 322	Race, Sex, and Ethnic Groups .....3
XXX* 119	First-Year Seminar .....3

\*Variable course prefixes, e.g., ENG, PSC, RDG, SOC, SPE

**SENIOR EXPERIENCE REQUIREMENT (minimum 3 semester hours)**

The Senior Experience provides a culmination of the undergraduate experience, allowing students to synthesize their learning, using critical analysis and logical thinking. Students may use the course to satisfy major or minor requirements if the course is approved for that use. Students should consult with their adviser and check prerequisites. Students must complete a Senior Experience at the end of the undergraduate program and must take the course or courses at Metro State. Senior Experience courses have the following minimal prerequisites: satisfaction of all Level I and Level II general studies course requirements and senior status. In some cases students may need to take two courses to satisfy the requirement.

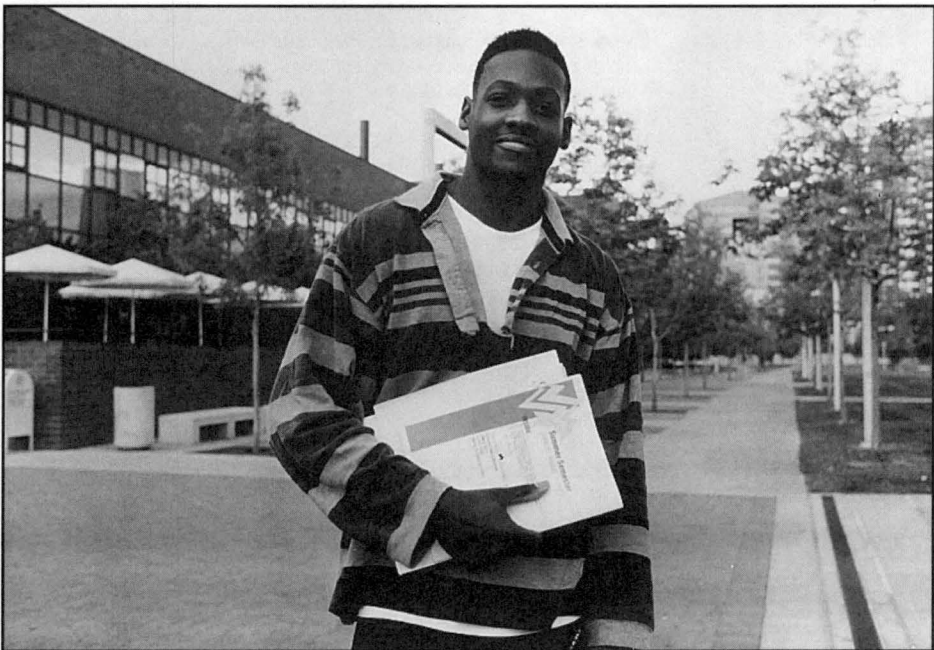
	<b>Semester Hours</b>
ART 401	Modern Art History: Theory & Criticism .....3
ART 475	Senior Experience Studio: Portfolio Development and Thesis Show .....3
BIO 451	Microbial Ecology .....3
BIO 454	Plant Ecology .....4
BIO 485	Evolution .....3
CEN 460	Senior Seminar .....3
CHE 495	Senior Experience in Chemistry .....3
CJC 465	Ethics for the Criminal Justice Professional .....3
COM 441	Budgeting and Planning for Audio-Visual Productions .....3
COM 479	Senior Seminar in Technical Communications .....3
CSI 421	Software Development and Engineering .....4
ECO 460	History of Economic Thought .....3
EDS 429	Student Teaching and Seminar: Secondary .....6, 8, 10, 12
EDU 419	Student Teaching and Seminar: Elementary .....6, 8, 10, 12
EDU 438	Teaching Practicum in Pre-primary Early Childhood Education .....3-6
EDU 439	Student Teaching and Seminar-Early Childhood (Preschool through 3rd grade) .....6, 8, 10
EDU 469	Professional Practicum .....1-6
EET 410	Senior Project I .....1
EET 411	Senior Project II .....2
ENG 452	Advanced Creative Writing: Fiction, Poetry, or Drama .....3
ENG 461	Theories and Techniques in Literary Criticism .....3
ENG 464	Teaching English in Secondary Schools .....3
ENG 466	Teaching Literature and Language K-6 .....3
FRE 452	Modern French Theater .....3
FRE 453	The French Novel .....3
GEG 496	Global Environmental Challenges .....3
GEL 496	Environmental Field Studies .....3
GER 411	The German Novel of the 19th and Early 20th Centuries .....3
GER 412	German Drama of the 19th and 20th Centuries .....3
HCM 451	Health Care Management Practicum .....6
HIS 482	Senior Seminar .....3
HMT 404	Senior Hospitality Research Experience I .....2
HMT 440	Senior Hospitality Research Experience II .....2
HSP 479	Professional Internship .....12
MET 401	Advanced Manufacturing Technology .....3
MET 407	Computer Aided Design .....3
MGT 483mc	Workforce Diversity .....3
MGT 495	Strategic Management .....3
MTH 421	Probability Theory .....4
MTH 422	Stochastic Processes .....4
MTH 441	Advanced Calculus I .....4
MTH 448	Numerical Analysis I .....4
MUS 411	Analysis of Music .....2
MUS 434	Secondary School Music Methods and .....2



**54 GENERAL STUDIES INFORMATION**

MUS 439	Supervised Field Experience .....	1
MUS 451	Instrumental Conducting .....	2
MUS 474	Performance VIII.....	4
MUS 479	Senior Recital .....	1
MUS 495	Senior Project .....	3
NUR 485	Nursing Process: Application.....	5
PHI 410	Senior Seminar .....	3
PHY 462	Computational Physics II .....	2
PHY 472	Advanced Physics Laboratory II.....	2
PHY 492	Physics Senior Seminar.....	1
PSC 402	Special Studies .....	3
PSY 451	History and Systems of Psychology.....	3
SOC 460	Advanced Research in the Social Sciences.....	3
SPA 420	Spanish American Essay: 19th & 20th Centuries.....	3
SPA 431	History of the Spanish Language .....	3
SPE 409	Classical Rhetoric.....	3
SPE 412	Freedom of Speech.....	3
SPE 449	Effects of Radio-Television on Contemporary Life .....	3
WMS 475	Senior Seminar .....	3

mc — *This course will also satisfy the multicultural requirement.*



## Degrees and Programs Available at Metropolitan State College of Denver

Metropolitan State College of Denver is organized into three schools. These are listed below with the majors and minors offered by each. The curriculum requirements for each of the programs are described in this *Catalog* in the special sections prepared by each school. Programs marked with an asterisk (\*) do not require completion of a minor.

### Bachelors Degree

Major Minor

#### SCHOOL OF BUSINESS

Accounting*	X	X
Computer Information Systems and Management Science*	X	
Economics (Business Emphasis*) **	X	X
Finance*	X	X
General Business	X	
Information Systems	X	
Management*	X	X
Marketing*	X	X
Real Estate	X	

\*\*The Economics Department offers a bachelor of arts degree, rather than a bachelor of science degree.

#### SCHOOL OF PROFESSIONAL STUDIES

##### Division of Education

Bilingual/Bicultural Education	X	
Early Childhood Education	X	
Parent Education	X	
Reading	X	
Exceptionalities	X	
Teacher Licensing: Early Childhood, Elementary, and Twelve Secondary Fields	X	

##### Division of Technology

Airframe and Power Plant Mechanics	X	
Aviation Management	X	X
Aviation Technology	X	
Civil Engineering Technology	X	X
Drafting Engineering Technology	X	X
Electronics Engineering Technology	X	X
Industrial Design*	X	
Industrial and Technical Studies*	X	X
Mechanical Engineering Technology	X	X
Private Pilot	X	
Professional Pilot	X	
Surveying and Mapping	X	X
Technical Communications	X	X
Technical and Industrial Administration*	X	

##### Division of Public Service Professions

Criminal Justice and Criminology	X	X
Gerontological Services	X	
Health and Safety	X	
Health Care Management (upper-division)	X	X
Holistic Health and Wellness (multi-minor)	X	X
Hospitality, Meeting and Travel Administration*	X	X
Hotel Administration	X	
Human Performance and Sport	X	X
Human Services*	X	X
Leisure Studies	X	X
Meeting Administration	X	
Nursing (upper-division for RNs)	X	
Restaurant Administration	X	
Travel Administration	X	

### Bachelor's Degree

Major Minor

#### SCHOOL OF LETTERS, ARTS AND SCIENCES

##### Division of Humanities

Art**	X	X
English	X	X
French	X	X
German	X	X
Industrial Design*	X	
Journalism	X	X
Language and Linguistics	X	X
Modern Foreign Languages	X	
Music	X	X
Music Education*	X	
Music Performance*	X	
Philosophy	X	X
Practical Writing	X	
Public Relations	X	
Spanish	X	X
Speech Communications	X	X

\*\*Art offers a bachelor of fine arts degree.

##### Division of Science and Mathematics

Biology	X	X
Chemistry	X	X
Computer Science*	X	X
Criminalistics	X	X
Geography	X	X
Geology	X	X
Land Use	X	
Mathematics	X	X
Meteorology	X	X
Physics	X	X
Theoretical Physics	X	X

##### Division of Social Sciences

African American Studies	X	X
Anthropology	X	X
Behavioral Science	X	
Chicano Studies	X	X
History	X	X
Interdisciplinary Legal Studies	X	X
Political Science	X	X
Psychology	X	X
Public Administration	X	X
Social Work*	X	
Sociology	X	X
Urban Studies***	X	X

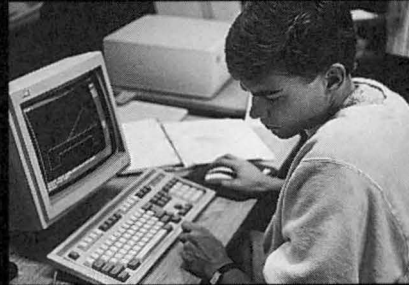
\*\*Urban Studies offers a bachelor of arts degree and a bachelor of science degree.

##### Institute for Women's Studies and Services

Women's Studies	X	
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*The School of Business  
provides the student with  
a background of  
general education,  
familiarity with basic principles  
of business, and  
specialized knowledge  
in a selected field*



## SCHOOL OF BUSINESS

The philosophy of the School of Business is to devote its resources to high-quality undergraduate programs. The curriculum provides the student with a background of general education, familiarity with basic principles of business, and specialized knowledge in a selected field of business.

Undergraduate programs within the School of Business are designed to:

- Offer the student the opportunity to receive the baccalaureate degree. This degree program consists of a broad foundation in general education, a thorough grounding in basic business courses, and specific competence in one or more significant functional areas of business
- Offer a diverse undergraduate program to meet the interests of those residents of the metropolitan area and others who desire to study business-oriented subjects without undertaking a degree program, and to meet the needs of the Denver business and professional community for continuing education programs
- Strengthen each student's power of imaginative and innovative thinking, self-reliance, creative independent analysis, and sensitivity to social and ethical values
- Instill in students a desire for learning that will continue after they have graduated and taken their places in the community
- Convey to each student the spirit of pioneering, risk, and progress that is essential to the continued development of the U.S. economic system.

### Programs

The school awards a bachelor of science degree in accounting, computer information systems and management science, finance, management, and marketing and a bachelor of arts degree in economics. The next section includes descriptions and requirements for each of the bachelor of science degrees, followed by the description and requirements for the bachelor of arts degrees in economics. Descriptions and requirements for minors in accounting, economics, finance, real estate, information systems, management, and marketing, as well as a general business minor, follow the section addressing the bachelor of arts degree in economics.

## BACHELOR OF SCIENCE

### Accounting

### Computer Information Systems and Management Science

### Finance

### Management

### Marketing

The School of Business offers bachelor of science programs in accounting, computer information systems and management science, finance, management, and marketing. The accounting major prepares students for a career in public, industrial, tax, systems, and governmental accounting. The computer information systems and management science major prepares students for careers in the rapidly expanding fields of business, data processing, systems design, and management science. The finance major is designed to prepare students for a career in corporate financial analysis, insurance, personal financial management, international financial management, accounting, real estate, investments, and financial institutions. The major in management provides areas of emphasis in personnel and human resource management, production, and managerial entrepreneurship. The marketing major prepares students for entry positions in the dynamic areas of distribution/retailing, promotion/advertising, sales, marketing research, marketing for nonprofit organizations, and marketing management.

A student desiring a major in the School of Business may declare a pre-business major at any time by contacting an academic adviser, department chair, or faculty member.

## Admissions Requirements for Bachelor of Science

Acceptance into the School of Business is contingent upon the completion of all Level I and Level II general studies courses, plus all required 200-level courses in the School of Business and necessary pre-requisites. The student must have 60 credit hours.

Admission into the School of Business will be granted to those students who have achieved an overall GPA of 2.25; this average must be maintained while a student is enrolled in a major area of study within the School of Business. If a student's overall GPA falls below a 2.25, the student will be placed on academic probation and have one semester to raise the overall GPA to 2.25. The student's major will be changed to "undeclared" if the GPA is not raised to 2.25 or better.

Upon completion of these requirements, a student may apply for admission into the School of Business. New and transfer students who intend to major in business are encouraged to see an adviser in the appropriate department before registering for classes.

Students should complete and receive department approval for a graduation agreement within the first semester after admission to the School of Business, or after declaring a major.

The School of Business requires specific courses outside the school. Since most of these courses are lower-division and also satisfy general studies requirements, students desiring a bachelor of science degree from the School of Business should complete the following courses as part of their first 60 credit hours required for admission to the school.

<b>Required Courses that also satisfy general studies requirements</b>		<b>Semester Hours</b>
<b>General Studies Level I</b>		
<b>Composition</b>		
ENG 101	Freshman Composition: The Essay .....	3
ENG 102	Freshman Composition: Analysis, Research, and Documentation .....	3
<b>Mathematics</b>		
MTH 131	Finite Mathematics for the Management and Social Sciences .....	4
MTH 132	Calculus for the Management and Social Sciences .....	3
<b>Communications</b>		
SPE 101	Fundamentals of Speech Communication .....	3
<b>General Studies Level II</b>		
<b>Historical Studies</b>		
HIS —	(American history course recommended) .....	3
<b>Arts and Letters</b>		
— —	(Check general studies guide for Level II Arts & Letters elective) .....	3
PHI 336	Business Ethics .....	3
<b>Social Sciences</b>		
ECO 201	Principles of Economics-Macro .....	3
ECO 202	Principles of Economics-Micro .....	3
PSY 101	Introductory Psychology .....	3
<sup>-OF-</sup> SOC 101	Introduction to Sociology .....	3
PSC 101	American National Government .....	3
<sup>-OF-</sup> PSC 102	Political Systems and Ideas .....	3
<b>Natural Sciences</b>		
— —	(Check general studies guide for Level II natural sciences elective) .....	3
— —	(Check general studies guide for Level II natural sciences elective) .....	3
Subtotal of required and elective general studies credit hours .....		43
<b>Required Lower-Division Business Courses</b>		
ACC 201	Principles of Accounting I .....	3
ACC 202	Principles of Accounting II .....	3
CMS 201	Principles of Information Systems .....	3
MGT 221	Legal Environment of Business .....	3
Subtotal of required lower-division business courses .....		12
Additional non-business electives (lower- or upper-division) .....		5
<i>Total credit hours needed for admission to the School of Business.</i> .....		<b>60</b>

The 60 hours listed above will qualify the student for admission into the School of Business.

In order to be awarded a degree, the student must conform to the college's general specifications for the bachelor's degree listed under Requirements for all Degrees. The School of Business requires a total of 43 general studies hours, while the college requires a minimum of 33. A summary of the School of Business course program, which meets all college requirements, follows:

General Studies (Level I, Level II, and business prerequisites)	43
Business Core	33
Major in School of Business	24
Electives Within the School of Business (upper-division)	9
Other Non-business Electives	11
<i>Total Hours (minimum)</i>	120

## General Studies and Multicultural Requirements

Students seeking a bachelor's degree in accounting, computer information systems and management science, economics (business emphasis), finance, management, or marketing must complete the general studies and multicultural requirements for Metropolitan State College of Denver. The multicultural requirement may be used to fulfill a general studies elective requirement or a business elective, if appropriate.

## Business Core

In addition to the general studies requirements, students majoring in any area of business administration must complete the following business courses:

### Required Courses

ACC 201*	Principles of Accounting I	3
ACC 202*	Principles of Accounting II	3
MKT 304	Managerial Communications	3
CMS 201*	Principles of Information Systems	3
CMS 330	Principles of Quantitative Management Systems	3
CMS 332	Quantitative Decision Making	3
FIN 330	Managerial Finance	3
MGT 221*	Legal Environment of Business I	3
MGT 300	Organizational Management	3
MGT 495**	Strategic Management	3
MKT 300	Principles of Marketing	3
<i>Total hours required in business core</i>		33

\*Student is expected to complete these courses prior to admission into the School of Business.

\*\*Senior Experience capstone course taken during the final semester of the senior year.

## Accounting Department

Courses in the Accounting Department prepare students for a career in public, industrial, tax, systems, or governmental accounting. In addition, a wide variety of internships are available through Metropolitan State's Cooperative Education Office.

Accounting students have three hours of accounting electives (to be selected from ACC 310, 320, 341, 409, 410, 430, and 452) and 9 hours of upper-division business electives available. A careful selection of these electives should be made in accordance with career objectives. Students are encouraged to consult with accounting faculty on the selection of electives.

Students interested in pursuing a career as a CPA should be aware of AICPA's 150-hour requirement scheduled to take effect in the year 2000. Metro State offers programming sufficient to meet all aspects of the AICPA's requirement. Please talk to an accounting faculty adviser to develop an appropriate academic program.

## ACCOUNTING MAJOR FOR BACHELOR OF SCIENCE

### Required Courses

		Semester Hours
ACC 309	Income Tax I	3
ACC 330	Introduction to Accounting Systems	3
ACC 340	Cost Accounting	3
ACC 351	Intermediate Accounting I	3
ACC 352	Intermediate Accounting II	3
ACC 420	Auditing	3
ACC 451	Advanced Accounting I	3
<i>Subtotal</i>		21

**Plus 3 hours from the following courses:**

ACC 310	Income Tax II	3
ACC 320	Governmental Accounting	3
ACC 341	Cost Accounting II	3
ACC 409	Tax Procedure & Research	3
ACC 410	Tax Planning	3
ACC 430	Advanced Auditing	3
ACC 452	Advanced Accounting II	3
<i>Total hours required for accounting major</i>		24

## Computer Information Systems and Management Science Department

This major offers a variety of courses in the rapidly expanding area of information systems in the business world. Students can look forward to challenging careers in computer information systems or using their computer information systems education within any other area of business. Students majoring in Computer Information Systems and Management Science are encouraged to select courses that best meet their needs in specific areas, such as systems development, programmer analyst, office systems, data communications, local- and wide-area networks, management of information systems, or management science. Advising for these areas is available from the department and individual faculty members. All Computer Information Systems and Management Science majors must adhere to the following:

- (1) Completion of CMS 211, 305, and 306
- (2) Completion of a 400-level CMS course
- (3) A maximum of 9 hours of computer language courses
- (4) Completion of 12 hours of adviser-approved courses in addition to (1) and (2) above

### COMPUTER INFORMATION SYSTEMS AND MANAGEMENT SCIENCE MAJOR FOR BACHELOR OF SCIENCE

Required Courses		Semester Hours
CMS 211	Business Problem Solving: A Structured Programming Approach	3
CMS 305	Fundamentals of Systems Analysis and Design	3
CMS 306	File Design and Database Management	3
Subtotal		9
Electives		
A 400-level CMS course		3
Approved CMS electives		12
<i>Total hours required for CMS major</i>		24

## Finance Department

The finance major is designed to prepare students for careers that concentrate on the process of managing the funds of individuals, businesses, and governments. Career opportunities are available in the fields of managerial finance and the financial services industry. The field of managerial finance is concerned with managing the financial affairs of businesses and governments and includes such activities as budgeting, financial forecasting, cash management, credit administration, investment analysis, and funds management. Career paths in the financial services industry include positions in banks, savings and loans, other financial institutions, brokerage firms, insurance companies, and the real estate field. The most dramatic increase in career opportunities is in personal financial planning, where professionals are needed to provide advice to consumers on the management of their personal financial affairs. The Finance Department has been approved to offer the academic courses required for those who will take the national exams leading to the Certified Financial Planner professional designation.

All finance majors must take FIN 301, 360, 385, and 495. To complete the major, a minimum of 12 additional semester hours of upper-division finance or closely related courses are required, with at least 6 hours at the 400-level, selected in consultation with and approved by the student's Finance Department graduation agreement adviser or by the chair of the Finance Department. At least a "C" grade is required for courses in the major.

## FINANCE MAJOR FOR BACHELOR OF SCIENCE

Required Courses		Semester Hours
FIN 301	Financial Markets and Institutions . . . . .	3
FIN 360	Investments . . . . .	3
FIN 385	Intermediate Finance . . . . .	3
FIN 495	Financial Strategies and Policies . . . . .	3
Subtotal . . . . .		12
<b>Approved electives</b>		
12 hours of upper-division finance electives selected in consultation and approved by the Finance Department . . . . .		12
<i>Total hours for finance major . . . . .</i>		<i>24</i>

## Management Department

The management major is designed to prepare students to start and manage businesses and other organizations in the context of a diverse, technologically dynamic, global environment. The program consists of required courses that build a broad conceptual foundation in identifying and solving managerial problems. Students have the flexibility to develop special skills in human resource management, operations management, or entrepreneurship.

### MANAGEMENT MAJOR FOR BACHELOR OF SCIENCE

Required Courses		Semester Hours
MGT 302	Fundamentals of Entrepreneurship . . . . .	3
MGT 322	Legal Environment of Business II . . . . .	3
MGT 353	Human Resources Management . . . . .	3
MGT 355	Manufacturing and Service Management . . . . .	3
MGT 453	Organizational Behavior . . . . .	3
MGT 482	International Business . . . . .	3
Subtotal . . . . .		18
<b>Two additional course electives from the following:</b>		
MGT 321	Commercial and Corporate Law . . . . .	3
MGT 400	Management Decision Analysis . . . . .	3
MGT 402	Entrepreneurial Creativity . . . . .	3
MGT 405	Purchasing and Materials Management . . . . .	3
MGT 442	Entrepreneurial Business Planning . . . . .	3
MGT 455	Project Management . . . . .	3
MGT 461	Labor/Employee Relations . . . . .	3
MGT 462	Appraisal and Compensation . . . . .	3
MGT 464	Employee Training and Development . . . . .	3
MGT 465	Managing Productivity . . . . .	3
MGT 483	Workforce Diversity . . . . .	3
Total elective hours . . . . .		6
<i>Total hours required for management major . . . . .</i>		<i>24</i>

## Marketing Department

The Marketing Department prepares students for entry-level positions in such dynamic areas as sales management, distribution, advertising, marketing research, retailing, and marketing management.

In addition to the department's well-rounded selection of courses, the curriculum also offers students a combination of conceptual and applied learning experiences. Through the development of marketing plans, advertising campaigns, and marketing research studies, students have the opportunity to work with Denver-area businesses on current marketing issues and problems. Students are also exposed to a variety of marketing speakers from the business community. Part-time positions are available for marketing students through the Cooperative Education Office.

Many students in the department are already involved in some aspect of marketing and, to accommodate their busy schedule, the department holds a variety of day and evening classes, as well as classes at neighborhood locations through the Extended Campus Credit Program.

Faculty members in the marketing department have an excellent combination of academic background and practical experience. All members stay current in their fields through activities both on and off campus.



**MARKETING MAJOR FOR BACHELOR OF SCIENCE**

Required Courses	Semester Hours
MKT 301 Marketing Research.....	3
MKT 331 Consumer Behavior.....	3
MKT 456 Marketing Management.....	3
15 hours of marketing electives*.....	15
<i>Total hours required for marketing major</i> .....	<i>24</i>

\*Business communications courses can be used as business electives, but not as marketing electives.

**BACHELOR OF ARTS**

**Economics Department**

Economics is the scientific study of the allocation of scarce or limited resources. The study of economics provides a general knowledge of the operation of economic systems and institutions. This training is extremely valuable regardless of the student's specific career objective. The bachelor of arts degree program prepares the student with a fundamental knowledge of domestic and foreign economies and the quantitative tools necessary for independent analytical research and thought. Specialized courses develop the student's ability to use the tools of economic theory and analysis. Such training is essential for graduates who wish to qualify for positions as professional economists. Employment opportunities are available in national and international business, federal, state, and local government, and various nonprofit organizations.

Economics majors may choose from two tracks of studies: the standard economics major, which requires a minor, or the business emphasis, which does not require a minor.

**ECONOMICS MAJOR FOR BACHELOR OF ARTS (with a minor)**

Required Courses	Semester Hours
MTH 121 Introduction to Statistics .....	4
ECO 301 Intermediate Microeconomic Theory .....	3
ECO 302 Intermediate Macroeconomic Theory .....	3
ECO 315 Econometrics.....	3
ECO 460 History of Economic Thought.....	3
Subtotal.....	16

**Approved Electives**

Fifteen hours of upper-division economics electives selected in consultation with and approved by the Economics Department .....	15
<i>Economics total</i> .....	<i>31</i>

**MINOR**

Must be completed to fulfill the minor requirement .....	18
General Studies (minimum).....	33
Free electives.....	38
<i>Total hours required for bachelor of arts in economics</i> .....	<i>120</i>

**BUSINESS EMPHASIS (with no minor)**

This emphasis prepares the student for entry into the growing professions of economics and business. It trains the student to enter the profession and assist governments and businesses in solving problems and formulating policies.

General Studies, Level I and Level II (minimum) .....	33
Business core (See business core for bachelor of science degree in School of Business) .....	33

**Required Economics Courses**

ECO 301 Intermediate Microeconomic Theory.....	3
ECO 302 Intermediate Macroeconomic Theory .....	3
ECO 315 Econometrics.....	3
ECO 460 History of Economic Thought .....	3
Subtotal.....	12

**Approved Economics Electives**

Twelve hours of upper-division economics electives selected in consultation with and approved by the Economics Department . . . . .	12
Total hours economics . . . . .	24
Electives within the School of Business (Upper-division) . . . . .	9
Other non-business electives . . . . .	21
<i>Total hours required for a bachelor of arts in economics with business emphasis . . . . .</i>	<i>120</i>

**Minors in the School of Business****GENERAL BUSINESS MINOR**

The School of Business offers the general business minor for non-business majors. Students minoring in general business must take ECO 201 and 202. These hours may be part of the student's general studies requirements. In addition to the required 24 credit hours below, students may take up to 6 additional credit hours within a specific business discipline for a total not to exceed 30 credit hours within the School of Business. If a student wishes to enroll in business courses beyond 30 hours, the student must declare a major with the School of Business.

**Prerequisites – credit may be applied in general studies.**

ECO 201	Principles of Economics-Macro . . . . .	3
ECO 202	Principles of Economics-Micro . . . . .	3

**Required Courses**

		<b>Semester Hours</b>
ACC 201	Principles of Accounting I . . . . .	3
ACC 202	Principles of Accounting II . . . . .	3
CMS 201	Principles of Information Systems . . . . .	3
CMS 330	Principles of Quantitative Management Systems . . . . .	3
FIN 330	Managerial Finance . . . . .	3
MGT 221	Legal Environment of Business I . . . . .	3
MGT 300	Organizational Management . . . . .	3
MKT 300	Principles of Marketing . . . . .	3

*Minimum total hours required for minor (not to exceed 30 credit hours) . . . . . 24*

**ACCOUNTING MINOR**

The Accounting Department provides a minor designed for non-business students. This minor offers students an opportunity to enhance their education and careers by becoming knowledgeable in accounting.

The minor offers students a broad-based education in accounting, while affording flexibility for emphasizing a particular field within this discipline, such as financial accounting, managerial accounting, tax accounting, or governmental accounting.

The Accounting Department requires 60 college credit hours (junior status) before taking 300- and 400-level accounting courses. Non-business students may not take more than 30 credit hours in business courses. At least 12 hours of accounting courses in the minor must be completed in residency, and the acceptance of transfer credits will be governed by standards and policies of the School of Business and the Accounting Department.

**Required Courses**

		<b>Semester Hours</b>
ACC 201	Principles of Accounting I . . . . .	3
ACC 202	Principles of Accounting II . . . . .	3
ACC 309	Income Tax I . . . . .	3
ACC 351	Intermediate Accounting I . . . . .	3
Approved electives*	. . . . .	6

*Total hours required for minor . . . . . 18*

\*A student may elect any courses in the accounting program or curriculum provided they are approved by the Accounting Department adviser.

**ECONOMICS MINOR**

The economics minor is designed for non-business majors and provides them with an opportunity to acquire a general knowledge of the operation of economic systems and institutions, as well as the quantitative tools necessary for analytical research and thought.

Required Courses	Semester Hours
ECO 201 Principles of Economics-Macro .....	3
ECO 202 Principles of Economics-Micro .....	3
Approved electives* .....	12
<i>Total hours required for minor</i> .....	18

\*Approved electives are upper-division economics courses selected in consultation with and approved by the Economics Department.

**FINANCE MINORS**

The Finance Department provides two minors designed primarily for non-business majors: the finance minor and the real estate minor. These programs offer students an opportunity to enhance their education and careers by becoming knowledgeable in finance or real estate.

**FINANCE MINOR**

This minor provides non-business majors with an opportunity to enhance their education and career choices by becoming knowledgeable in the finance area. The minor offers students a broad-based education in finance, while affording the flexibility to emphasize a particular field within this discipline, such as personal financial planning, investments, managerial finance, financial institutions, or international finance.

For the finance minor, the student must have completed ACC 201 and 202 (or equivalent) and ECO 201 and 202, which may be applied to the student's general studies or elective requirements as applicable. The Finance Department requires 60 college credit hours (junior status) prior to taking 300- and 400-level finance courses. A minimum grade of "C" and a 2.25 GPA in finance courses are required for completion of the minor. At least 12 hours of finance courses must be completed in residency to satisfy the requirements of the minor. The acceptance of transfer credits will be governed by standards and policies of the School of Business and the Finance Department.

Required Courses	Semester Hours
FIN 301 Financial Markets and Institutions .....	3
FIN 330 Managerial Finance.....	3
FIN 360 Investments .....	3
Approved electives* .....	9
<i>Total hours required for minor</i> .....	18

\*A student may elect any courses in the finance program or curriculum provided they are approved by the finance department adviser.

**REAL ESTATE MINOR**

This minor is designed to provide non-business majors with the opportunity to enhance their education and career choices by becoming knowledgeable in real estate. The minor prepares students for employment and a career in this field, as well as for their personal financial affairs dealing with real estate.

For the real estate minor, the student must have completed ACC 201 and 202 (or equivalent) and ECO 201, which may be applied to the student's general studies or elective requirements as applicable. The Finance Department requires 60 college credit hours (junior status) prior to taking 300- and 400-level finance courses. Non-business students may not take more than 30 credit hours in business courses. A minimum grade of "C" and a 2.25 GPA in finance and real estate courses are required for completion of the minor. At least 12 hours of finance courses in the minor must be completed in residency. The acceptance of transfer credits will be governed by standards and policies of the School of Business and the Finance Department.

Required Courses	Semester Hours
FIN 380 Real Estate Practice and Law .....	3
FIN 381 Advanced Real Estate Practice and Law .....	3
FIN 382 Real Estate Finance.....	3
FIN 484 Real Estate Appraisal .....	3
FIN 485 Commercial and Investment Real Estate .....	3
Approved elective* .....	3
<i>Total hours required for minor</i> .....	18

**\*Approved Electives**

FIN 225 Personal Money Management .....	3
FIN 301 Financial Markets and Institutions .....	3

FIN	330	Managerial Finance	3
FIN	342	Principles of Insurance	3
FIN	360	Investments	3
ECO	450	Business and Economic Forecasting	3

### COMPUTER INFORMATION SYSTEMS MINOR

This minor is designed for students majoring in a non-business discipline. The minor will provide a basic understanding of the concepts, current methodology, and rapid changes in the design, development, and use of computer-oriented systems for business and organizations. Students electing this minor are encouraged to have elective courses in accounting, management, marketing, or finance.

Required Courses			Semester Hours
CMS	201	Principles of Information Systems	3
CMS	211	Business Problem Solving: A Structured Programming Approach	3
-or-			
CMS	327	Micro-Based Software	3
CMS	305	Fundamentals of Systems Analysis and Design	3
CMS	306	File Design and Data Base Management	3
Approved CMS 300-level courses			6
<i>Total hours required for minor</i>			18

### MANAGEMENT MINOR

The management minor is designed for non-business majors. It provides them an opportunity to gain familiarity with managerial concepts and skills that can enhance their performance in managing people and organizations.

Required Courses			Semester Hours
MGT	300	Organizational Management	3
MGT	353	Human Resources Management	3
MGT	355	Manufacturing and Service Management	3
MGT	453	Organizational Behavior	3
MGT	482	International Business	3
Management elective			3
<i>Total hours required for minor</i>			18

### MARKETING MINOR

The marketing minor is designed for non-business majors and provides them with the opportunity to develop an understanding of business and sufficient familiarity with marketing skills to work in a business environment.

Required Courses			Semester Hours
MKT	300	Principles of Marketing	3
MKT	301	Marketing Research	3
MKT	304	Managerial Communications	3
MKT	331	Consumer Behavior	3
MKT	452	Seminar in Marketing Management	3
<b>Electives</b>			
Select one other marketing course. One of the following is recommended: MKT 311, 312, 314, 330, or 371.			
No other communications course with an MKT prefix may be used as a marketing elective			3
<i>Total hours required for minor</i>			18

### African American Leadership Institute

The African American Leadership Institute operates on the belief that all members of our society should have an equal opportunity to pursue their goals and aspirations. The institute provides a unique approach to the particular problems and concerns of African Americans in the Denver metropolitan area with three underlying tenets that form its philosophy:

1. To identify, motivate, and train future community leaders
2. To acquaint these individuals with problems and needs of the community while investigating alternative approaches and solutions
3. To create an opportunity for these individuals to join together and exchange ideas with current leaders for the purpose of networking for national, state, and local community improvements

Seminars cover topics that reflect current community issues, including regional business and economics, local and state government, education, health care, human services, the arts, and cultural affairs. For more information, contact the School of Business.

### **Institute for Entrepreneurship and Creativity**

The Institute for Entrepreneurship and Creativity has introduced entrepreneurial education into the region's academic arena through weekend courses for professionals and entrepreneurial seminars and forums. The purpose of the institute is to discover, foster, and mold the visions of today's aspiring entrepreneurs. It provides degree-seeking and non-degree-seeking students with opportunities to learn about entrepreneurship, to understand the entrepreneurial process, to practice skills that lead to successful entrepreneurship, and to enhance creativity and innovation. For more information, contact the School of Business.

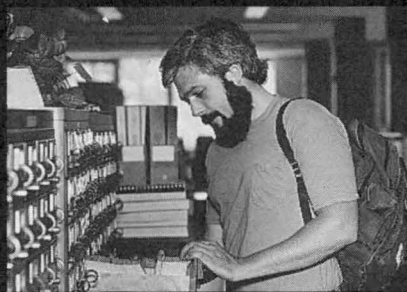
### **Small Business Institute**

The Small Business Institute is sponsored by the Small Business Administration (SBA) and involves a contractual relationship between SBA and Metropolitan State College of Denver. The Small Business Institute offers a practical opportunity that supplements academic studies with real case studies. The Small Business Institute employs senior-level students, under faculty supervision, to provide business counseling and technical assistance to small business clients in the community. For more information, contact the School of Business.



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*The School of Letters, Arts  
and Sciences provides high quality  
liberal arts education designed to  
meet the educational needs  
of the urban student.*



## SCHOOL OF LETTERS, ARTS AND SCIENCES

The School of Letters, Arts and Sciences provides programs of study for the urban student in humanities, and social, natural, and mathematical sciences. All programs are designed to prepare students for professional goals and to assist students with personal development.

The faculty presents courses in 18 departments and one institute. They offer courses in more than 30 major and minor areas of study; teach the majority of the courses in the general education program; and present content-based courses for the teacher education program. Moreover, the faculty arranges for student internships and cooperative education opportunities with state and local agencies, the media, business, and industry. Additionally, the faculty actively provides educational services to the larger Denver community through several college agencies:

The Colorado Alliance for Science, a statewide alliance of universities, offers assistance and support to students and teachers to strengthen the community's interest in science and mathematics.

The Health Careers Science Program offers support and guidance to women and people of color who are interested in careers in science and technology.

The Center for Mathematics, Science and Environmental Education leads the effort to reform science and mathematics education in Colorado. The center "connects" the college with other universities, the Denver public schools, other Colorado school districts, and the Colorado Department of Education to change the educational environment of teaching science and mathematics.

The Family Center provides a wide range of education, training, and research on policies related to family issues.

## DIVISION OF HUMANITIES

The departments of Art, English, Journalism, Modern Languages, Music, Philosophy, and Speech Communication offer courses to strengthen the students' understanding and appreciation of the worlds of art, music, language, and ideas.

Additionally, the Institute for Women's Studies and Services and the Institute for International and Intercultural Education present an array of courses to deepen and broaden the students' understanding of human cultures.

Students may complete bachelor's of art degrees and complete the requirements for teacher licensure, using programs in the Humanities Division, except philosophy.

### Art Department

The Art Department offers a full range of studio art courses in the areas of fine arts (drawing, painting, printmaking, photography, video, and sculpture); design (advertising design and computer graphics); and crafts (ceramics, metalwork, jewelry making, and art furniture) leading to the bachelor of fine arts degree; art history (studies emphasize contemporary, modern, ancient, and non-Western art) leading to the bachelor of fine arts degree; and licensure in art education.

Goals: Undergraduate studies in art and design should prepare students to function in a variety of artistic roles. In order to achieve these goals, instruction should prepare students to:

1. "read" the nonverbal language of art and design
2. develop responses to visual phenomena and organize perceptions and conceptualizations both rationally and intuitively
3. become familiar with and develop competence in a number of art and design techniques
4. become familiar with major achievements in the history of art, including the works and intentions of leading artists in the past and present and demonstrate the way art reflects cultural values
5. evaluate developments in the history of art
6. understand and evaluate contemporary thinking about art and design
7. make valid assessments of quality in design projects and in works of art



**ART MAJOR FOR BACHELOR OF FINE ARTS DEGREE**

<b>Core Requirements for All Studio Art Majors</b>		<b>Semester Hours</b>
ART 110	Basic Drawing I	3
ART 111	Basic Drawing II	3
ART 120	Design Processes and Concepts I	3
ART 121	Design Processes and Concepts II	3
ART 201	Survey of Modern Art: Impressionism to 1960	3
ART 202	Survey of Contemporary Art: 1960 to the Present	3
<i>Total</i>		18

**Senior Experience Requirements for Studio Art Majors:**

ART 401	Modern Art History: Theory and Criticism	3
ART 475	Senior Experience Studio: Portfolio Development and Thesis Show	3
<i>Total</i>		6

Students may choose one of the three areas of emphasis: fine arts, design, or crafts.

<b>FINE ARTS AREA OF EMPHASIS</b>		<b>Semester Hours</b>
Fifteen hours in area of concentration in: drawing, painting, sculpture, printmaking, or photography.		
Select a combination of 15 hours from the following two areas:		
Design		6 or 9
Crafts		6 or 9
ART 200	General History of Art	3
Art History (upper-division)		3

<b>DESIGN AREA OF EMPHASIS</b>		<b>Semester Hours</b>
Fifteen hours in area of concentration in: advertising design or computer graphics.		
Select a combination of 15 hours from the following two areas:		
Crafts		6 or 9
Fine Arts		6 or 9
ART 200	General History of Art	3
Art History (upper-division)		3

<b>CRAFTS AREA OF EMPHASIS</b>		<b>Semester Hours</b>
Fifteen hours in area of concentration in: ceramics, jewelry, or art furniture.		
Select a combination of 15 hours from the following two areas:		
Applied Arts		6 or 9
Fine Arts		6 or 9
ART 200	General History of Art	3
Art History (upper-division)		3
<i>Total</i>		66

(A minimum of 33 upper-division art hours required.)

Minor requirements for art majors are optional.

**ART HISTORY MAJOR FOR BACHELOR OF FINE ARTS**

<b>Core Requirements for All Art History Majors</b>		<b>Semester Hours</b>
ART 110	Basic Drawing I	3
ART 111	Basic Drawing II	3
ART 120	Design Processes and Concepts I	3
ART 121	Design Processes and Concepts II	3
ART 201	Survey of Modern Art: Impressionism to 1960	3
ART 202	Survey of Contemporary Art: 1960 to the Present	3
<i>Total</i>		18

**Senior Experience General Studies Requirement for Art History Majors:**

ART 401	Modern Art History: Theory and Criticism	3
<i>Total</i>		3

Art History (required) .....	15
ART 200 General History of Art.....	3
*Fine Arts .....	3 or 6
*Design .....	3 or 6
*Crafts .....	3 or 6
Art Electives .....	6
<i>Total</i> .....	60

\*15 hours are required among these three categories.  
 (A minimum of 27 upper-division art hours required.)  
 Minor requirements for art majors are optional.

**INDUSTRIAL DESIGN MAJOR FOR BACHELOR OF ARTS DEGREE**

For advising in this program, please see the Department of Industrial Studies and Mechanical Engineering Technology in the School of Professional Studies.

**ART LICENSURE: K-12**

Teacher licensure for art majors is available through the Art Department. An art major is required.

Required Courses	Semester Hours
ART 338 Introduction to Art Education .....	4
EDS 221 Processes of Education in Urban Secondary Schools.....	3
EDS 222 Field Experience in Urban Secondary Schools.....	2
EDS 320 The Adolescent as a Learner .....	3
EDS 321 Secondary School Curriculum and Classroom Management .....	3
EDS 322 Field Experience in Tutoring and Materials Construction .....	2
SED 360 The Exceptional Learner in the Classroom .....	3
RDG 328 Teaching of Reading and Writing in the Content Areas.....	4
ART 438 Art Methods/Materials: K-12.....	4
EDU 419* Student Teaching and Seminar: Elementary (K-6).....	8
EDS 429* Student Teaching and Seminar: Secondary (6-12).....	8
ART 439 Integrating the Arts for Gifted and Talented .....	3
<i>Total</i> .....	47

In addition to field experiences included in required coursework, students must present evidence of having completed at least 200 hours of work with children. This may be accomplished through organizations such as Boy Scouts, Girl Scouts, church groups, tutorial programs, or similar institutional activities. Students should plan their volunteer work in consultation with the Art Education adviser.

Students who seek licensure must pass a public speaking course (SPE 101) with a grade of "B" or better, or obtain a waiver. Students must also achieve satisfactory scores on the state licensure examination.

\*Student teaching is composed of daily full-time work during 15 weeks, split eight and seven weeks between elementary and secondary levels.

**MINOR IN ART**

Required Courses	Semester Hours
ART 110 Basic Drawing I .....	3
ART 111 Basic Drawing II.....	3
ART 120 Design Processes and Concepts I.....	3
ART 121 Design Processes and Concepts II.....	3
ART 201 Survey of Modern Art: Impressionism to 1960.....	3
ART 202 Survey of Contemporary Art: 1960 to the Present.....	3
Subtotal.....	18
Electives .....	9
Minimum of one upper-division studio course and one upper-division art history course	
<i>Total</i> .....	27

## English Department

The English Department offers instruction in literature, writing, language, and linguistics, and elementary and secondary education. Courses in each area appeal to students in every school of the college who wish to read and understand representative literatures of the world; to examine the principles underlying how language works; and to cultivate their writing skills.

The department invites students in other disciplines to select English courses to enhance their general education. Students may also choose a major or minor from different areas of emphasis.

Students who are considering a major or minor in the English Department are expected to consult with faculty for advising.

The English major may choose an emphasis in

1. literature
2. elementary school teaching, leading to licensure
3. secondary school teaching, leading to licensure
4. creative writing
5. preprofessional writing

The English minor may choose an emphasis in

1. literature
2. dramatic literature
3. language and linguistics
4. practical writing
5. secondary school teaching
6. creative writing

The English Department assesses the major in designated capstone courses. Portfolios of papers assigned through these courses will be read by several members of the faculty. Capstone courses should not be taken until the student's final year of study. Because a capstone course may not be offered every semester, students should discuss scheduling with English Department advisers. Further information is available in the English Department.

## ENGLISH MAJOR FOR BACHELOR OF ARTS

### LITERATURE EMPHASIS

The English major or minor, literature emphasis, encompasses a full range of American, British, and world literature. The program provides a strong foundation of courses in literature and language, sequenced to cultivate a sense of literary development, and fosters an increasing familiarity with major works and writers, critical theory, literary terminology, and research materials. Because of their command of the written language, their ability to deal with ideas and concepts as well as facts, and their broader understanding of human nature and social realities, literature majors are valued in many fields, including academe and the world of business.

Required Courses		Semester Hours
ENG 210	Introduction to Literary Studies	3
ENG 310	Studies in Chaucer, Shakespeare, and Milton	3
ENG 344	Myth, Symbol, and Allusion	3
ENG 461	Literary Criticism	3
Subtotal		12
Four of these courses, one of which must be ENG 222:		
ENG 211	World Literature: Beginnings to 1600	3
ENG 212	World Literature: 17th century to Present	3
ENG 221	American Literature: Beginnings through Civil War	3
ENG 222	American Literature: Civil War to Present	3
ENG 231	British Literature: Beginnings to 1785	3
ENG 233	British Literature: 1785 to Present	3
Subtotal		12

One of these courses:

ENG 201	The Nature of Language	3
ENG 202	Systems of English Grammar	3
ENG 302	History of the English Language	3
ENG 303	Semantics	3
Subtotal		3
In addition, 18 hours of English courses, at least 12 of which must be upper-division literature and include at least one development, one period, and one major authors course. Also required is one upper-division writing course.		
Subtotal		18
<i>Total</i>		45

## ELEMENTARY SCHOOL TEACHING AREA OF EMPHASIS

The elementary school teaching emphasis in English, offered in conjunction with the Colorado State Department of Education licensure program, prepares future teachers of elementary education to understand and teach the diverse subject matter required for licensure. The program will provide students with a strong foundation in literature and literary genres; a solid perspective on the English language, including its history, structure, and constituents; and both theory and practice in composition, language arts, communication, and teaching methodology. It also addresses the need to prepare teachers to teach multicultural literature, accommodate cultural and ethnic diversity in language and writing, and communicate effectively with a diverse population of students.

### Required Courses

### Semester Hours

#### I. Literature Core Courses:

ENG 210	Introduction to Literary Studies	3
ENG 222	American Literature: Civil War to Present	3
ENG 244	Myth, Symbol, and Allusion in Literature	3
ENG 310	Roots of British Literary Tradition	3
Semester hours required		12

#### II. Language/Linguistics Core Courses:

ENG 201	The Nature of Language	3
and		
ENG 302	History of the English Language	3
Semester hours required		6

#### III. Writing/Composition Courses:

ENG 251	Intermediate Composition	3
-or-		
ENG 252	Introduction to Creative Writing	3
ENG 351	Advanced Composition	3
Semester hours required		6

#### IV. Language Arts Core Courses:

ENG 346	Children's Literature	3
ENG 465	Teaching Composition in Elementary Schools	3
ENG 466	Teaching Literature and Language K-6	3
RDG 313	Teaching Reading in the Elementary School K-6	*
Semester hours required		9

#### V. English Electives

Two upper-division English courses selected in consultation with and approved by designated English adviser. 6

### Recommended Electives:

#### Communication

ENG 363	Teaching Communications	3
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#### Writing

ENG 352	Creative Writing Workshop (prerequisite: ENG 252)	3
ENG 353	Techniques of Critical Writing	3

#### Language

ENG 301	Modern English Language Studies (prerequisite: ENG 201)	3
ENG 303	Semantics (prerequisite: ENG 201)	3

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Literature		
ENG 324	African American Literature	3
ENG 341	Masterpieces of Continental Literature	3
ENG 342	The English Bible as Literature	3
ENG 343	Classical Mythology	3
ENG 347	Young Adult Literature	3
ENG 349	Chicano Folklore of the Southwest	3
Total		39

\*RDG 313 meets the reading requirements for Colorado State licensure but is carried under the student's 42-semester-hour professional education requirements.

### SECONDARY SCHOOL TEACHING EMPHASIS

The education emphasis in English, offered in conjunction with the Colorado State Department of Education licensure program, prepares future teachers of English to understand and teach the diverse subject matter required for licensure. This program equips students with a wide variety of language principles and skills; practical experience in developing and presenting the process of writing; sound knowledge of approaches to literature and literary genres, periods, and authors (including a special focus on young adult literature); and an understanding of communication and media as used in English studies. In addition to meeting specified state and departmental requirements, this program offers students the opportunity to develop further specialization in writing, language, or literature to complement the major.

#### Required Courses Semester Hours

##### I. Literature Core Courses:

ENG 210	Introduction to Literary Studies	3
ENG 221	American Literature: Beginnings through the Civil War	
-or-		
ENG 222	American Literature: Civil War to Present	3
ENG 244	Myth, Symbol, and Allusion in Literature	3
ENG 310	Roots of British Literary Tradition	3
Subtotal		12

##### II. Language/Linguistics Core Courses:

###### Required for Licensure

ENG 201	The Nature of Language	3
ENG 302	History of the English Language	3

###### Select one of the following:

ENG 202	Systems of English Grammar	3
ENG 301	Modern English Language Studies	3
ENG 303	Semantics	3
Subtotal		9

##### III. Writing/Composition Courses:

ENG 351	Advanced Composition	3
ENG 463	Composition Teaching Workshop	
-or-		
ENG 362	Teaching Composition in the Secondary Schools	
and		
ENG 364	Teaching Creative Writing in the Secondary Schools	6
Subtotal		9

##### IV. English Education Core Courses:

ENG 347	Young Adult Literature	3
ENG 363	Teaching Communications	3
ENG 464	Teaching English in Secondary Schools	3
RDG 328	Teaching of Reading and Writing in the Content Areas	*
Subtotal		9

##### V. English Electives:

Two upper-division English courses selected in consultation with and approved by designated English adviser. . . . . 6

Total		45
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\*RDG 328 meets the reading requirements for English licensure but is carried under the student's professional education requirements.

NOTE: Students with a bachelor of arts in English from an accredited institution who are seeking English licensure will receive credit for Sections I and V, in addition to any other courses in Sections II, III, and IV for which they have existing credits.

## CREATIVE WRITING EMPHASIS

The creative writing emphasis provides extensive writing practice in various genres of literature as well as a good foundation in the appreciation of the literary heritage available in the English language.

Courses should be selected after consultation with a creative writing faculty adviser.

### I. Literature Courses:

#### Lower-Division Literature Courses:

200-level, including either ENG 210 or ENG 244	15
Three of the 15 hours must emphasize modern literature.	

#### Upper-Division Literature Courses:

300-level and/or 400-level	9
<b>Total</b>	<b>24</b>

### II. Writing Courses:

#### Entry Course:

ENG 252 Introduction to Creative Writing	3
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#### Genre Courses: (select three)

ENG 351 Advanced Composition	3
ENG 352 Drama Writing Workshop	3
ENG 352 Fiction Writing Workshop	3
ENG 352 Poetry Writing Workshop	3

<b>Subtotal</b>	<b>9</b>
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#### Specialized Writing Course:

ENG 382 Creative Writing Studio (two distinct titles)	6
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#### Exit Course:

ENG 452 Advanced Creative Writing	3
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<b>Total Semester Hours of Writing Required</b>	<b>21</b>
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<b>Total</b>	<b>45</b>
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## PREPROFESSIONAL WRITING EMPHASIS

Good writing skills are an asset for any profession. This writing emphasis helps talented writers majoring in other fields develop their writing abilities and enhance their career opportunities. It can only be chosen as a second major.

The program provides the student with intensive instruction in writing and linguistics interspersed with examples of fine writing from English language literature.

### Required Courses

### Semester Hours

ENG 251 Intermediate Composition	3
ENG 201 The Nature of Language	
-or-	
ENG 202 Systems of English Grammar	3
ENG 303 Semantics	3
ENG 351 Advanced Composition	3
ENG 353 Techniques of Critical Writing	3
SPE 374 Psychology of Communication	
-or-	
ENG 363 Teaching Communications	3
<b>Subtotal</b>	<b>18</b>

Students take six literature courses of which at least two must be upper-division; these courses must be distributed among at least four of the following five areas:

1. world or continental literature
2. British literature: beginnings to 17th century
3. British literature: 17th century to 19th century
4. American literature
5. 20th century literature

<b>Subtotal</b>	<b>18</b>
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<b>Total</b>	<b>36</b>
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**ENGLISH MINOR****CREATIVE WRITING EMPHASIS**

The English minor with emphasis in creative writing serves students who desire instruction and practice in the production of imaginative literature. The minor includes a foundation in the appreciation of literature and criticism.

Courses should be selected after consultation with a creative writing faculty adviser.

## I. Literature Courses:

## Lower-Division Literature Courses:

200-level, including either ENG 210 or ENG 244 . . . . . 6  
Three of the 6 hours must emphasize modern literature.

## Upper-Division Literature Courses:

300-level and/or 400-level . . . . . 6  
Total . . . . . 12

## II. Writing Courses:

## Entry Course:

ENG 252 Introduction to Creative Writing . . . . . 3

## Genre Courses:

ENG 351 Advanced Composition . . . . . 3  
ENG 352 Drama Writing Workshop . . . . . 3  
ENG 352 Fiction Writing Workshop . . . . . 3  
RDG 352 Poetry Writing Workshop . . . . . 3

Subtotal . . . . . 6

## Exit Course:

ENG 452 Advanced Creative Writing . . . . . 3

Total Semester Hours of Writing Required . . . . . 12

Total . . . . . 24

**DRAMATIC LITERATURE EMPHASIS**

The English minor with emphasis in dramatic literature serves students who wish to develop skills in reading, writing, and thinking about the texts of drama. The program is designed to meet the needs of anyone involved in the history, teaching, writing, production, or performance of drama.

## I. Introductory Courses:

ENG 112 Introduction to Drama . . . . . 3

A second course, introductory in nature, is to be selected by agreement of the student and the department adviser.

The course need not be an English course, but if not, it should be an introductory course related to the student's major interest in the use of drama . . . . . 3

## II. Writing Course (one of the following):

ENG 252 Introduction to Creative Writing . . . . . 3

ENG 352 Creative Writing Workshop: Scriptwriting . . . . . 3

ENG 353 Techniques of Critical Writing . . . . . 3

Subtotal . . . . . 3

## III. Literature Electives (9 hours to be chosen in consultation with an adviser):

ENG 131 Introduction to Shakespeare . . . . . 3

ENG 321 Development of American Drama . . . . . 3

ENG 331 Development of British Drama: Mysteries to Melodrama . . . . . 3

ENG 431 Shakespeare: Comedies, Histories, Sonnets . . . . . 3

ENG 432 Shakespeare: Tragedies and Ethical Problem Plays . . . . . 3

ENG 413 Major Authors (Playwrights) . . . . . 3

ENG 414 Modern Continental, British, and American Drama . . . . . 3

ENG 461 Theories and Techniques in Literary Criticism . . . . . 3

Subtotal . . . . . 9

## IV. Final Study (one of the following):

ENG 480 Workshop . . . . . 3

ENG 498 Independent Study . . . . . 3

ENG 499 Internship . . . . . 3

Subtotal . . . . . 3

Total . . . . . 21

NOTE: The final study undertaken in 480, 498, or 499 presents the opportunity for students electing the minor to devote significant attention to one in-depth project for completion of the study. The project should be based on the reading of a dramatic text, but should combine this experience with some other area of design, management, performance, or writing. The project should combine the skills of reading drama with those of the associated area of expertise. The project is to be proposed by the student, approved by an adviser in the English Department, and directed in collaboration with a second adviser, associated with the other area of expertise fundamental to the study. The study may take the form of a workshop, an independent study, an internship, or a practicum.

## LITERATURE EMPHASIS

I. The following course:

ENG 210 Introduction to Literary Studies . . . . . 3

II. Two of the following courses:

ENG 211 World Literature: Beginnings to 1600

-or-

ENG 212 World Literature: 17th Century to Present . . . . . 3

ENG 221 American Literature: Beginnings through the Civil War

-or-

ENG 222 American Literature: Civil War to Present . . . . . 3

ENG 231 British Literature: Beowulf to Shakespeare

-or-

ENG 232 British Literature: Donne to Johnson

-or-

ENG 233 British Literature: Blake to Beckett . . . . . 3

Subtotal . . . . . 6

III. One of the following courses:

ENG 201 The Nature of Language . . . . . 3

ENG 202 Systems of English Grammar . . . . . 3

ENG 251 Intermediate Composition . . . . . 3

ENG 252 Introduction to Creative Writing . . . . . 3

ENG 351 Advanced Composition . . . . . 3

Subtotal . . . . . 3

IV. Two of the following courses:

ENG 321 Development of American Drama . . . . . 3

ENG 323 Development of the American Novel . . . . . 3

ENG 331 Development of British Drama: Mysteries to Melodrama . . . . . 3

ENG 333 Development of the British Novel . . . . . 3

ENG 340 Development of Modern Poetry . . . . . 3

ENG 341 Masterpieces of Continental Literature . . . . . 3

Subtotal . . . . . 6

V. Two of the following courses (one must be 413):

ENG 411 Advanced Studies in Literature . . . . . 3

ENG 412 Selected Themes in Literature . . . . . 3

ENG 413 Major Authors . . . . . 3

ENG 414 Modern Continental, British and American Drama . . . . . 3

ENG 431 Shakespeare: Comedies, Histories, Sonnets

ENG 432 Shakespeare: Tragedies and Ethical Problem Plays . . . . . 3

ENG 461 Theories and Techniques in Literary Criticism . . . . . 3

Subtotal . . . . . 6

Total . . . . . 24

## LANGUAGE AND LINGUISTICS MINOR

The language and linguistics minor offers concepts about, theories of, and analytical techniques in natural language. It represents an intellectual discipline in itself and simultaneously serves the interests of future teachers, students of literature and writing, and others who have a continuing fascination with language as language. Taken in an appropriate order made evident by careful advising, the courses in the program educate students both to use and to appreciate their language. The minor requires students to engage in vigorous, progressively more explicit and precise analysis and synthesis as they examine facts and fallacies about the miracle of language.



<b>Required Core</b>		<b>Semester Hours</b>
ENG 201	The Nature of Language .....	3
ENG 202	Systems of English Grammar .....	3
ENG 301	Modern English Language Studies .....	3
ENG 302	History of the English Language .....	3
ENG 303	Semantics .....	3
ENG 401	Studies in Linguistics .....	3
Subtotal .....		18
Any one of the following specific titles:		
Applied Linguistics		
Descriptive Linguistics		
Psycholinguistics		
Sociolinguistics		
Stylistics		
Interdisciplinary Elective Courses (chosen in consultation with and approved by departmental adviser, any one of the following):		
ANT 233	Cross-Cultural Communication .....	3
EDU 337	Language Arts and Social Studies Curricula for Early Childhood Education .....	4
PHI 111	Language, Logic, and Persuasion .....	3
SPE 352	Language Acquisition .....	3
Subtotal .....		3-4
<i>Total</i> .....		21-22

## PRACTICAL WRITING MINOR

The practical writing minor is a humanities-based, career-oriented program enabling students to develop writing skills as an adjunct to any major. Students will be prepared to do the practical writing found in magazines, newspapers, and newsletters. Students completing the program are expected to be versatile writers capable of applying the principles of good writing to different audiences and purposes.

<b>Required Core</b>		<b>Semester Hours</b>
ENG 107	English Usage and Grammar .....	3
ENG 201	The Nature of Language .....	3
ENG 303	Semantics .....	3
ENG 351	Advanced Composition .....	3
ENG 353	Techniques of Critical Writing .....	3
Subtotal .....		15
Elective Courses (choose three from the following):		
ENG 352	Creative Writing Workshop (Prerequisite ENG 252) .....	3
ENG 398	Cooperative Education: English Internship .....	3
ENG 498	Independent Study: Writing Project .....	3
JRN 182	Beginning Reporting and Newswriting .....	3
JRN 381	Feature Writing for Newspapers .....	3
JRN 481	Feature Writing for Magazines .....	3
COM 261	Introduction to Technical Writing .....	3
MKT 305	Business Research and Report Writing .....	3
SPE 309	Argumentation and Advocacy .....	3
SPE 410	Techniques of Persuasion .....	3
Subtotal .....		9
<i>Total</i> .....		24

In addition to pursuing the practical writing minor, some students may wish to seek the recognition of competency award as qualified practical writers. A student seeking this award must apply to the department's composition committee before completing nine hours applicable to the minor, and, if approved, must work out with the committee a coordinated sequence of courses, one of which must be English 498, independent study. The recognition procedure will include development of a portfolio that will be prepared under the guidance of the committee. This portfolio, designed to demonstrate student proficiency, will include such items as a letter in which students describe the development of their skills in writing and the extent to which they see these as valuable to their careers, and two different demonstrations of their ability to write and edit under pressure. The portfolio materials will be juried by at least two members of the composition committee. Some of the preparation may carry up to three hour's credit under ENG 498.

## SECONDARY SCHOOL TEACHING EMPHASIS

This minor does not satisfy Metro State requirements for licensure in secondary English, but does meet requirements for those seeking to teach English as a second area in secondary schools accredited by the North Central Accreditation Association. Students working toward this minor are expected to plan and carry out their programs in consultation with designated English Department advisers.

	Semester Hours
I. Each of the following courses:	
ENG 347 Young Adult Literature .....	3
ENG 351 Advanced Composition .....	3
ENG 362 Teaching Composition in Secondary Schools .....	3
ENG 464 Teaching English in Secondary Schools .....	3
Subtotal .....	12
II. One of the following courses:	
ENG 301 Modern English Language Studies .....	3
ENG 302 History of the English Language .....	3
ENG 303 Semantics .....	3
Subtotal .....	3
III. Three English electives from 300-level or 400-level courses selected in consultation with, and approved by, designated English Department advisers.	
Subtotal .....	9
<i>Total semester hours required</i> .....	<i>24</i>

## Institute for International and Intercultural Education

Metro State provides assistance to visiting faculty and international students. Important counseling is offered on: visas, school transfers, work permission, housing, banking, and cultural and academic adaptation. The office also provides assistance to students who wish to arrange individualized study abroad opportunities. The institute organizes numerous conferences and lectures on international issues throughout the year.

The institute also provides information on a cross-disciplinary contract major and minor in international studies, international courses offered by various departments, and intercultural courses. For information, contact the director of International and Intercultural Education at 556-4004.

## Journalism Department

The Journalism Department prepares students for careers in news and information media by providing them with a sound education in the basics of journalism and/or public relations. The department has one of the strongest journalism teaching staffs in the state. All full-time and part-time faculty have worked in the journalism and/or public relations fields.

The Journalism Department at Metro is one of two in the country to offer an internship program that allows students to get hands-on experience in political reporting. *The Capitol Reporter* is open to upper-division students, who spend an entire semester covering the Colorado legislature for credit. The editor is a full-time faculty member, and the weekly newspaper is highly regarded by legislators, lobbyists, and the college community.

Proficiency in standard written English is a prerequisite for all journalism courses. Students are required to complete ENG 101 before taking any journalism course beyond JRN 101. Proficiency in typing is required for all courses beyond JRN 101.

Anyone planning to have a major from this department must meet the general studies requirements established by the department. Students should also select an adviser immediately to begin planning their course of study.

Students may not select both a major and minor from the Journalism Department.

Students are required to take a journalism proficiency test upon completion of JRN 210—Intermediate Reporting and/or JRN 220—Intermediate Editing. Students must pass the test before they will be allowed to take upper-division courses in their major or minor. Prerequisites are enforced.

Students are also required to take an assessment test toward the end of their studies to ensure they have reached the proficiency level necessary to pursue a career in journalism or public relations.

The Journalism Department offers a journalism major and also minors in both print journalism and public relations.

**Core Courses for Journalism Major and Minors**

**Semester Hours**

JRN 110	Beginning Reporting	3
JRN 120	Beginning Editing	3
JRN 210	Intermediate Reporting	3
JRN 450	Ethical and Legal Issues in Journalism	3
Subtotal		12

**JOURNALISM MAJOR FOR BACHELOR OF ARTS**

**Semester Hours**

Journalism Core	12
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**Required Courses**

JRN 220	Intermediate Editing	3
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One of the following:

JRN 310	Publication Practicum	3
JRN 398	Cooperative Education	3
JRN 415	Capitol Reporter: Writing/Reporting	6
JRN 416	Capitol Reporter: Editing/Design	3

And three of the following:

JRN 350-1	Topics in Journalism	3
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Subtotal	9-12
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**Electives**

JRN 315	Contemporary Issues	3
JRN 340	Feature Article Writing for Newspapers	3
JRN 360	Photojournalism I	3
JRN 410	Advanced Reporting	3
JRN 420	Principles of Newspaper and Magazine Design	3
JRN 440	Feature Article Writing for Magazines	3
JRN 460	Photojournalism II	3

Subtotal	12-15
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Total	36
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**JOURNALISM MINOR**

**Semester Hours**

Journalism Core	12
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**Required Courses**

JRN 220	Intermediate Editing	3
JRN 350	Topics in Journalism	1
Subtotal	4	

**Electives**

JRN 310	Publication Practicum	3
JRN 315	Contemporary Issues	3
JRN 340	Feature Article Writing for Newspapers	3
JRN 360	Photojournalism I	3
JRN 410	Advanced Reporting	3
JRN 420	Principles of Newspaper and Magazine Design	3
JRN 440	Feature Article Writing for Magazines	3
JRN 460	Photojournalism II	3

Subtotal	9
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Total	25
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**PUBLIC RELATIONS MINOR****Semester Hours**

Journalism Core .....	12
<b>Required Courses</b>	
JRN 270 Fundamentals of Public Relations .....	3
JRN 370 Public Relations Writing and Strategies .....	3
JRN 398 Cooperative Education .....	3
JRN 470 Public Relations Strategic Planning .....	3
Subtotal .....	12
<b>One of the following:</b>	
SPE 310 Business and Professional Speaking .....	3
SPE 344 Television Production .....	3
SPE 410 Techniques of Persuasion .....	3
Subtotal .....	3
<i>Total</i> .....	<i>27</i>

**Modern Languages Department**

The Modern Languages Department offers major programs in Spanish and modern foreign languages; minor programs in French, German, and Spanish; and teacher education programs in Spanish and modern foreign languages. Courses in other foreign languages and in occupational or professional fields are offered in order to meet student and community needs. In addition, the department administers several education programs abroad.

Registration for courses is in accordance with previous preparation. Consequently, students should register for foreign language courses as follows: No previous study, or less than one year in high school—101; students with one year in high school who feel their background is weak—101; one semester in college—102; one year in college—211 and/or 231 for German and Spanish and 201 for French; two years in high school—211 and/or 231 for German and Spanish and 201 for French, or 102, if needed; three years in high school or one and one-half years in college—212 and/or 232 for German and Spanish and 202 for French; or 211 and/or 231 for German and Spanish and 201 for French, if needed; four years in high school or two years in college—300-level courses, or 212 and/or 232 for German and Spanish and 202 for French, if needed.

The above regulations may not be applicable if students have had no professional instruction in their chosen foreign language within the past two years. If students feel that they have insufficient preparation for the required level, they should strengthen their background by taking a course recommended by the Modern Language Department. Elementary courses do not apply toward the major or minor requirements.

Students seeking elementary and secondary credentials in French, German, or Spanish must satisfy the teacher education program of Metro State in addition to all of the major requirements. They must also demonstrate sufficient mastery of the target language or languages through an appropriate proficiency exam.

**SPANISH MAJOR FOR BACHELOR OF ARTS****Required Courses****Semester Hours**

SPA 211 Intermediate Spanish .....	3
SPA 212 Spanish Reading and Conversation .....	3
SPA 231 Spanish Grammar and Composition I .....	3
SPA 232 Spanish Grammar and Composition II .....	3
SPA 311 Advanced Conversation .....	3
SPA 314 Advanced Composition .....	3
SPA 315* Spanish Phonetics: Theory and Practice .....	3
SPA 320 Culture and Civilization of Spain	
-or-	
SPA 321 Spanish-American Culture and Civilization	
-or-	
SPA 322 Folklore and Culture of the Mexican Southwest .....	3
SPA 325 Introduction to Literary Studies in Spanish .....	3
SPA 340 Survey of Spanish Literature I	
-or-	
SPA 341 Survey of Spanish Literature II .....	3
SPA 351 Masterpieces of Latin American Literature .....	3
SPA 401 Advanced Spanish Writing and Grammar I .....	3

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SPA 402	Advanced Spanish Writing and Grammar II	3
SPA 411	Contemporary Spanish Literature	
-or-		
SPA 412	Contemporary Latin American Literature	3
MDL 496*	Teaching Foreign Languages in the Secondary Schools	3
Spanish electives**		3
<i>Total</i>		48***

\*Required only when seeking a teacher license.

\*\*Must be advanced courses and taken with department approval.

\*\*\*Only 42 semester credit hours for those not seeking teacher licensure.

### MINOR IN SPANISH

Required Courses		Semester Hours
SPA 211	Intermediate Spanish	3
SPA 212	Spanish Reading and Conversation	3
SPA 231	Spanish Grammar and Composition I	3
SPA 232	Spanish Grammar and Composition II	3
SPA 311	Advanced Conversation	3
SPA 320	Culture and Civilization of Spain	
-or-		
SPA 321	Spanish-American Culture and Civilization	
-or-		
SPA 322	Folklore and Culture of the Mexican Southwest	3
SPA 325	Introduction to Literary Studies in Spanish	3
<i>Total</i>		21

### MINOR IN FRENCH

Required Courses		Semester Hours
FRE 201	Intermediate French I	3
FRE 202	Intermediate French II	3
FRE 211	French Reading and Conversation	3
FRE 301	Introduction to Advanced French Studies	3
FRE 311	Survey of French Literature I	
-or-		
FRE 312	Survey of French Literature II	3
FRE 355	French Historical Perspectives	
-or-		
FRE 356	Contemporary Sociocultural Issues	3
French electives*		3
<i>Total</i>		21

\*Must be a course at the 300- or 400-level.

### MINOR IN GERMAN

Required Courses		Semester Hours
GER 211*	German Reading and Conversation	3
GER 212*	German Civilization	3
GER 231*	German Vocabulary Building and Grammar	3
GER 232*	German Composition and Free Writing	3
Subtotal		12
Select one of the following literature courses:		
GER 321**	Survey of German Literature I	3
GER 322**	Survey of German Literature II	3
GER 323**	Contemporary German Writers	3
GER 351**	Lessing, Goethe, and Schiller	3
Subtotal		3
Select two of the following skills courses:		
GER 301	Third-Year German Conversation	3
GER 331	Advanced German Composition and Grammar	3
GER 340	German for Business	3
GER 341	Translation Techniques for Scientific Materials	3
Subtotal		6
<i>Total</i>		21

\*Higher level course may be substituted with departmental approval.

\*\*Fourth-year course may be substituted with departmental approval.

**MODERN FOREIGN LANGUAGES MAJOR FOR BACHELOR OF ARTS****Required Courses**

The composite modern foreign language's major involves a minimum of 48 hours in any two modern languages, at least 12 hours in each. Students are advised into intermediate and advanced classes in each language on the basis of individual background and need. The minimum 12 hours in each of the two chosen languages must be taken as follows:

**Spanish**

SPA 211	Intermediate Spanish	3
SPA 212	Spanish Reading and Conversation	3
SPA 231	Spanish Grammar and Composition I	3
SPA 232	Spanish Grammar and Composition II	3
Subtotal		12

**French**

FRE 201	Intermediate French I	3
FRE 202	Intermediate French II	3
FRE 211	French Reading and Conversation	3
FRE 301	Introduction to Advanced French Studies	3
Subtotal		12

**German**

GER 211	German Reading and Conversation	3
GER 212	German Civilization	3
GER 231	German Vocabulary Building and Grammar	3
GER 232	German Composition and Free Writing	3
Subtotal		12

The remaining hours to complete the 48 hours required must be taken with department approval.

For those seeking teacher licensure in modern foreign languages (French, German, Spanish), all of the courses in one of the following areas of emphasis are required.

**FRENCH AREA OF EMPHASIS**

FRE 201	Intermediate French I	3
FRE 202	Intermediate French II	3
FRE 211	French Reading and Conversation	3
FRE 301	Introduction to Advanced French Studies	3
FRE 311	Survey of French Literature I	3
FRE 312	Survey of French Literature II	3
FRE 315	French Phonetics: Theory and Practice	3
FRE 331	Advanced French Composition and Grammar	3
FRE 332	Advanced Conversation	3
FRE 355	French Historical Perspectives	3
FRE 356	Contemporary Sociocultural Issues	3
MDL 496	Teaching Foreign Languages in the Secondary Schools	3

Any two of the following three:

FRE 452	Modern French Theater	3
FRE 453	The French Novel	3
FRE 475	Senior Seminar in French Studies	3
<i>Total</i>		42

**GERMAN AREA OF EMPHASIS**

GER 211	German Reading and Conversation	3
GER 212	German Civilization	3
GER 231	German Vocabulary Building and Grammar	3
GER 232	German Composition and Free Writing	3
GER 315	German Phonetics: Theory and Practice	3
GER 321	Survey of German Literature I	3
GER 322	Survey of German Literature II	3
GER 323	Contemporary German Writers	3
GER 331	Advanced German Composition and Grammar	3
GER 351	Lessing, Goethe, and Schiller	3

GER 411	The German Novel of the 19th and Early 20th Centuries	
-or-		
GER 412	German Drama of the 19th and 20th Centuries	3
GER 421	Advanced Conversation: Present-day Germany	3
German electives		3
MDL 496	Teaching Foreign Languages in the Secondary Schools	3
Total		42

### SPANISH AREA OF EMPHASIS

SPA 211	Intermediate Spanish	3
SPA 212	Spanish Reading and Conversation	3
SPA 231	Spanish Grammar and Composition I	3
SPA 232	Spanish Grammar and Composition II	3
SPA 311	Advanced Conversation	3
SPA 314	Advanced Composition	3
SPA 315	Spanish Phonetics: Theory and Practice	3
SPA 320	Culture and Civilization of Spain	
-or-		
SPA 321	Spanish-American Culture and Civilization	
-or-		
SPA 322	Folklore and Culture of the Mexican Southwest	3
SPA 325	Introduction to Literary Studies in Spanish	3
SPA 340	Survey of Spanish Literature I	
-or-		
SPA 341	Survey of Spanish Literature II	3
SPA 401	Advanced Spanish Writing and Grammar I	3
SPA 402	Advanced Spanish Writing and Grammar II	3
SPA 411	Contemporary Spanish Literature	
-or-		
SPA 412	Contemporary Latin-American Literature	3
MDL 496	Teaching Foreign Languages in the Secondary Schools	3
Total		42

## Music Department

Metropolitan State College of Denver is an accredited institutional member of the National Association of Schools of Music. The Music Department offers majors in music education and music performance, and a minor in music.

The department also offers courses specifically designed for non-music students wishing to enhance their general understanding and enjoyment of music. Musically talented students from all areas of the college are encouraged to participate in the wide variety of large and small music ensembles, including band, orchestra, choir, and chamber music.

The majors in music education and music performance are professional degree programs designed for students wishing to prepare themselves for careers as music teachers or performers. Students pursuing these majors are not required to complete a minor for graduation.

The music education degree program prepares students for careers teaching instrumental and/or choral music at the levels K-12. To be admitted to this program, students must pass the Music Education Entrance Examination. By taking an additional 16 semester hours beyond the bachelor's degree (EDU 419 and 429), the student becomes eligible for K-12 licensure in the State of Colorado. With these additional 16 hours, this degree program is approved by the Colorado State Department of Education and has full accreditation by the National Council for the Accreditation of Teacher Education. Students seeking teaching credentials in music must pass the Music Education Comprehensive Examination and must also satisfy all applicable requirements of the teacher education and licensure programs in the Division of Education in the School of Professional Studies.

The music performance degree program prepares students for further graduate study or for careers as performers or private studio teachers. To be admitted to this program, students must demonstrate the capability of developing a high level of musicianship in performance by passing the Music Performance Audition upon completion of MUS 172 (Private Instruction II).

Further information, including examination policies, procedures and requirements, is provided in the departmental publication titled *Advising Information*. All music majors and minors should familiarize themselves with this document.

New and transfer students wishing to major or minor in music should be prepared to take placement examinations in the areas of music theory and music history and to perform an audition in their primary performance area. For placement and audition appointments, contact the Music Department at least two weeks prior to the beginning of the semester.

## MUSIC EDUCATION MAJOR FOR BACHELOR OF ARTS

### Core Requirement for all Music Education Majors

Required Courses		Semester Hours
MUS 111	Music Theory I	3
MUS 112	Music Theory Lab I	1
MUS 113	Music Theory II	3
MUS 114	Music Theory Lab II	1
MUS 211	Music Theory III	3
MUS 212	Music Theory Lab III	1
MUS 213	Music Theory IV	3
MUS 214	Music Theory Lab IV	1
MUS 121	Music Literature I	3
MUS 122	Music Literature II	3
MUS 321	Music History I	3
MUS 322	Music History II	3
MUS 171	Private Instruction I (Primary Performance Area)	2
MUS 172	Private Instruction II (Primary Performance Area)	2
MUS 271	Private Instruction III (Primary Performance Area)	2
MUS 272	Private Instruction IV (Primary Performance Area)	2
MUS 371	Private Instruction V (Primary Performance Area)	2
MUS 372	Private Instruction VI (Primary Performance Area)	2
MUS 161	Class Voice I	1
MUS 161	Class Piano I*	1
MUS 162	Class Piano II*	1
MUS 261	Class Piano III*	1
MUS 262	Class Piano IV*	1

\*Note: Students whose primary performance area is piano may elect another area of study in place of class piano; however, they still must pass the Piano Proficiency Examination before enrolling in MUS 352 or 353.

Select 10 hours from the following:\*\*

MUS 281	Ensemble**	1
MUS 381	Ensemble**	1

\*\*Note: Ensembles must be chosen from those appropriate to the student's area of emphasis: choral majors must enroll in at least eight hours of choral ensembles and instrumental majors must enroll in at least eight hours of instrumental ensembles. Students majoring in music education must enroll in an ensemble during each semester of full-time residence except when student teaching.

MUS 315	Instrumental and Choral Scoring and Arranging	3
MUS 341	String Techniques and Materials	2
MUS 342	Guitar Techniques and Materials	2
MUS 345	Brass Techniques and Materials	2
MUS 346	Percussion Techniques and Materials	2
MUS 351	Basic Conducting	2
MUS 433	Elementary School Music Methods and Materials	2
MUS 439	Supervised Field Experience: MUS 433	1
MUS 434	Secondary School Music Methods and Materials	2
MUS 439	Supervised Field Experience: MUS 434	1
RDG 328	Teaching of Reading and Writing in the Content Areas	4
EDU 212	Elementary Education in United States	3
EDU 264	Urban and Multicultural Education	3
EDS 320	Educational Psychology Applied to Teaching	3
SED 360	The Exceptional Learner in the Classroom	3
<i>Total</i>		90

In addition to the above core requirement, music education majors must select one of the following emphases:



**CHORAL EMPHASIS**

MUS 140	Vocal Diction	3
MUS 352	Choral Conducting and Literature	3
MUS 442	Vocal Pedagogy	3
<i>Total</i>		9

**INSTRUMENTAL EMPHASIS**

MUS 343	Woodwind Techniques and Materials	2
MUS 348	Marching Band Techniques and Materials	2
MUS 353	Instrumental Conducting and Literature	3
<i>Total</i>		7

**MUSIC PERFORMANCE MAJOR FOR BACHELOR OF ARTS****Core Requirement for all Music Performance Majors**

Required Courses		Semester Hours
MUS 111	Music Theory I	3
MUS 112	Music Theory Lab I	1
MUS 113	Music Theory II	3
MUS 114	Music Theory Lab II	1
MUS 211	Music Theory III	3
MUS 212	Music Theory Lab III	1
MUS 213	Music Theory IV	3
MUS 214	Music Theory Lab IV	1
MUS 121	Music Literature I	3
MUS 122	Music Literature II	3
MUS 321	Music History I	3
MUS 322	Music History II	3
MUS 171	Private Instruction I (Primary Performance Area)	2
MUS 172	Private Instruction II (Primary Performance Area)	2
MUS 273	Performance III (Primary Performance Area)	4
MUS 274	Performance IV (Primary Performance Area)	4
MUS 373	Performance V (Primary Performance Area)	4
MUS 374	Performance VI (Primary Performance Area)	4
MUS 473	Performance VII (Primary Performance Area)	4
MUS 474	Performance VIII (Primary Performance Area)	4

Select 2 hours from the following:\*

MUS 161	Class Instruction I (Secondary Performance Area)*	1
MUS 162	Class Instruction II (Secondary Performance Area)*	1
MUS 171	Private Instruction I (Secondary Performance Area)*	2

\*Note: Must be Class Piano I and II unless student is able to pass the Private Instruction Audition in piano.

Exception: Students electing the organ emphasis must take Class Voice I and II unless they are able to pass the Private Instruction Audition in voice.

Select 12 hours from the following:\*\*

MUS 281	Ensemble**	1
MUS 381	Ensemble**	1

\*\*Note: Ensembles must be chosen from those appropriate to the student's area of emphasis. Students majoring in music performance must enroll in an ensemble during each semester of full-time residence.

MUS 351	Basic Conducting	2
MUS 479	Senior Recital	3
<i>Total</i>		73

In addition to the above core requirement, all music performance majors must select one of the following emphases:

**VOICE EMPHASIS**

MUS 140	Vocal Diction	3
MUS 442	Vocal Pedagogy	3
<i>Total</i>		6

**PIANO EMPHASIS**

MUS 310	Counterpoint	3
MUS 441	Piano Pedagogy	3
<i>Total</i>		6

**ORGAN EMPHASIS**

MUS 310	Counterpoint	3
MUS 352	Choral Conducting and Literature	3
<i>Total</i>		6

**GUITAR EMPHASIS**

MUS 310	Counterpoint	3
MUS 315	Instrumental and Choral Scoring and Arranging	3
<i>Total</i>		6

**WOODWIND, BRASS, STRING OR PERCUSSION EMPHASIS**

MUS 315	Instrumental and Choral Scoring and Arranging	3
MUS 353	Instrumental Conducting and Literature	3
<i>Total</i>		6

**MINOR IN MUSIC****Required Courses**

		<b>Semester Hours</b>
MUS 111	Music Theory I	3
MUS 112	Music Theory Lab I	1
MUS 113	Music Theory II	3
MUS 114	Music Theory Lab II	1
MUS 211	Music Theory III	3
MUS 212	Music Theory Lab III	1
MUS 121	Music Literature I	3
MUS 122	Music Literature II	3
MUS 171	Private Instruction I	2
MUS 172	Private Instruction II	2
Select 2 hours from the following:		
MUS 281	Ensemble	1
MUS 281	Ensemble	1
Upper-division elective in music theory, history, literature, or pedagogy		3
<i>Total</i>		27

**Philosophy Department**

Philosophic questions are of the most enduring interest because they are fundamental to our intellectual and practical concerns. As a critical investigation into the assumptions and implications associated with all disciplines, philosophy is interdisciplinary in character. However, this type of inquiry requires technical concepts and methods, so it takes on the character of a specialized discipline. Philosophical inquiry is an interaction between speculative and critical thought, recognizing no pre-established limits in its interests or its critical examinations. Therefore, philosophy as a study program enlarges the student's horizons of ideas throughout the various disciplines in the college, while providing the critical skills necessary to analyze and synthesize these ideas. It encourages students to explore creatively the full range of philosophical options, to consider alternate points of view, and to delve into profound issues. Because of the subject matter, attitudes, and methods employed in philosophy, the student will be much better prepared for leadership in personal life, civic responsibilities, and pursuit of a career.

In addition to offering a variety of courses for students who are planning to take only one or two courses in philosophy, the department offers two programs, both of which feature flexibility and individualized training:

1. A major for students seeking a solid, general training/background that can serve either as a basis for graduate studies in such varied areas as philosophy, the humanities, law, medicine, business, urban planning, and development, etc., or as a basis for a career in which the specialized training required is provided by the employer, such as careers in corporate management, government, politics, banking, or education.
2. A minor for students who have already chosen a career and seek to complement their specialized training/background with the opportunities afforded by philosophy to increase their career options and generally to increase the quality of their lives.

Metro State students who either major or minor in philosophy are encouraged to take University of Colorado at Denver courses that contribute to the requirements or the balance of their philosophy experience. These students should consult the chair of the Philosophy Department at Metro State when planning to take University of Colorado at Denver courses.

**PHILOSOPHY MAJOR FOR BACHELOR OF ARTS**

<b>Required Courses</b>		<b>Semester Hours</b>
PHI 144	Logic	3
PHI 300	History of Greek Philosophy	3
PHI 302	History of Modern Philosophy	3
PHI 410	Senior Seminar	3
<i>Total</i>		12
<b>Additional Course Subject Areas Required</b>		
Lower-Division:		
Introductory courses		6
Upper-Division:		
Metaphysics and/or Epistemology		3
Ethics and/or Social Philosophy		3
One philosophical problem or one philosopher		3
One course relating philosophy to another field, such as religion, art, science, or history		3
<i>Total</i>		18
Additional electives at any level		6
(Selected in consultation with and approved by the Philosophy Department)		
Total upper-division semester hours required for major		18
<i>Total</i>		36

**MINOR IN PHILOSOPHY**

<b>Required Courses</b>		<b>Semester Hours</b>
PHI 101	Introduction to Philosophy	3
PHI 103	Ethics	3
PHI 111	Language, Logic, and Persuasion	3
<i>Total</i>		9

**Electives**

A minimum of 11 additional semester hours of which seven are upper-division courses in philosophy selected in consultation with and approved by the Philosophy Department to make a total of 20 semester hours.

**HOLISTIC HEALTH AND WELLNESS EDUCATION MULTI-MINOR**

The multi-minor may be arranged through the Philosophy Department and includes the required courses listed under the holistic health and education multi-minor on page 189 of this *Catalog*.

**Speech Communication Department**

Proficiency in one of the areas of speech opens up many careers to the graduate. For instance, in mass communication, radio, television, and film, a graduate might aspire to careers in on-air operations, mass media ideas, promotion, public affairs, or radio-television sales. Graduates might become consultants in advertising or specialists in instructional or educational television or in the public broadcasting service. Careers are open as broadcasting specialists in public relations, public information, business, industry, and government.

An emphasis in speech pathology/audiology provides sound background for students pursuing careers in education, vocational rehabilitation, and health care. Graduates in communication disorders have the prerequisite coursework to pursue a master's degree in speech pathology or audiology, which opens doors to careers in schools, hospitals, community clinics, rehabilitation centers, and private practice.

Graduates in rhetoric and public address have achieved success in law, industrial and organizational communication, educational administration, public relations, speech writing for political figures, teaching, public relations, and theology.

Professional and educational theater occupations are open to theater graduates with specialties in stagecraft, sound, engineering, scriptwriting, directing, and acting.

Communications Theory and Organizational Communication: Communication consulting/training and conference planning both present lucrative and satisfying careers to speech graduates specializing in these areas of communication. Job opportunities are available in education, government, business, and industry as well as private practice as a consultant.

**SPEECH COMMUNICATION MAJOR FOR BACHELOR OF ARTS**

1. Core courses are required for all areas of emphasis.
2. Independent study, topic courses, and experiential education courses such as practicums and internships may be taken in each of the program areas.
3. Additional semester hours in speech courses will be selected in consultation with the adviser approved by the Department of Speech Communication.
4. Total minimum semester hours for a major in speech communication: 36

<b>Basic Core Required Courses</b>		<b>Semester Hours</b>
SPE 101	Public Speaking	3
SPE 320	Oral Interpretation: Prose and Poetry	3
SPE 374	Psychology of Communication	3
<i>Total</i>		9

**BROADCASTING AREA OF EMPHASIS**

<b>Required Courses</b>		<b>Semester Hours</b>
SPE 240	Introduction to Radio and Television Broadcasting	3
SPE 343	Radio-Television Announcing	3
SPE 344	Television Production	3
SPE 345	Broadcast Journalism: Radio	
-or-		
SPE 445	Broadcast Journalism: Television	3
SPE 348	Workshop in Radio Production	3
SPE 448	Seminar Practicum in Broadcasting	3
TLC 249	Beginning Internship in Radio, TV, Film, and Mass Communications	
-or-		
SPE 298	Cooperative Education for Speech Communication	1-6
TLC 349	Advanced Internship in Radio, TV, Film, and Mass Communications	
-or-		
SPE 398	Cooperative Education for Speech Communication	1-15
	Cooperative Education for Speech Communication	
<i>Total</i>		20-39

**COMMUNICATION THEORY AREA OF EMPHASIS**

<b>Required Courses</b>		<b>Semester Hours</b>
SPE 170	Communication Theory	3
SPE 171	Interpersonal Communication: The Individual as a Communicator	3
SPE 211	Discussion Methods	3
SPE 272	Nonverbal Communication	3
<i>Total</i>		12

**ORGANIZATIONAL COMMUNICATION AREA OF EMPHASIS**

<b>Required Courses</b>		<b>Semester Hours</b>
SPE 170	Communication Theory	3
SPE 310	Business and Professional Speaking	3
SPE 311	Strategies of Organizational Leadership	3
<i>Total</i>		9

**PUBLIC ADDRESS AND RHETORIC AREA OF EMPHASIS**

<b>Required Courses</b>		<b>Semester Hours</b>
SPE 309	Argumentation and Advocacy	3
SPE 408	Rhetorical Criticism of Public Address	3
SPE 409	Classical Rhetoric	3
SPE 410	Techniques of Persuasion	3
<i>Total</i>		12

**SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY AREA OF EMPHASIS**

<b>Required Courses</b>		<b>Semester Hours</b>
SPE 330	Voice Science: Phonetics, Voice, and Diction	
-or-		
SPE 353	Voice Science: Pathology and Technology	3

SPE	350	Speech Pathology I	3
SPE	351	Speech Pathology II	3
SPE	360	Audiology I	3
SPE	361	Audiology II	3
<i>Total</i>			15

**THEATER AREA OF EMPHASIS****Required Courses****Semester Hours**

ENG	112	Introduction to Drama	
-or-			
ENG	210	Introduction to Literary Studies	3
SPE	221	Introduction to Theatre	3
SPE	222	Techniques in Acting I	3
SPE	224	Introduction to Stagecraft	3
SPE	322	Stage Movement	3
SPE	328	Stage Directing	3
<i>Total</i>			18

**SPEECH EDUCATION AREA OF EMPHASIS****Core:****Semester Hours**

SPE	101	Public Speaking	3
SPE	320	Oral Interpretation: Prose and Poetry	3
SPE	374	Psychology of Communication	3
<i>Total</i>			9

**SECONDARY TEACHER EDUCATION PROGRAM IN SPEECH COMMUNICATION ARTS****Required Courses****Semester Hours**

SPE	211	Discussion Methods	3
SPE	221	Introduction to Theatre	3
SPE	222	Techniques of Acting I	3
SPE	224	Introduction to Stagecraft	3
SPE	240	Introduction to Radio and Television Broadcasting	3
SPE	301	Advanced Public Speaking	3
SPE	309	Argumentation and Advocacy	3
SPE	328	Stage Directing I	3
SPE	330	Voice Science: Phonetics and Voice and Diction	3
SPE	359	Speech Problems in the Schools	3
SPE	380	Instructional Methods for Speech Teachers and Creative Speech	3
SPE	410	Techniques of Persuasion	3

**Electives for the Secondary Teacher Education Program**

A minimum of six semester hours in speech courses is recommended in consultation with and approved by the Speech Communication Department. These six hours are to be selected from the following list:

SPE	305	Intercollegiate Forensics	1
SPE	308	Great American Speakers	3
SPE	322	Stage Movement	3
SPE	350	Speech Pathology I	3
SPE	360	Audiology I	3
SPE	408	Rhetorical Criticism of Public Address	3
SPE	420	Reader's Theater	3
SPE	426	Theater: Practicum I	1
SPE	449	Effects of Radio-Television on Contemporary Life	3
<i>Total</i>			48

Students seeking secondary licensure in speech education must satisfy the Teacher Education Program of Metro State in addition to all of the major requirements.

**SPEECH COMMUNICATION MINOR**

All speech communication minors are required to take a minimum of 24 hours including the core (SPE 101, 320, and 374).

Hours taken beyond the core are to be determined in consultation with a speech communication adviser.

## TELECOMMUNICATIONS

Telecommunications is one of the most beneficial internship programs for communication students in broadcasting. Under the auspices of the Speech Communication Department, the student is afforded the opportunity to gain hands-on experience through current internships in radio, television, and film, provided by industry, government, business, public, and commercial telecommunications centers. The student may begin this program upon the completion of six hours in broadcasting-telecommunications courses at Metro State. Students should contact the adviser in broadcasting for details relative to eligibility and placement in the telecommunications internships. Internship — telecommunications courses are offered every semester during each of the modules as well as on a full-semester basis.

## DIVISION OF SOCIAL SCIENCES

The departments of African American Studies; Sociology, Anthropology and Social Work; Chicano Studies; History; Political Science (Urban Studies Program); and Psychology offer programs to strengthen the students' understanding of the social world and its impact upon individuals, groups, and organizations. Departments offer lecture courses, professional internships in social agencies and legislative government, and practicums in their field of study. The programs will prepare the students for entry-level employment in helping services and social work, or graduate or professional school.

### African American Studies Department

The African American Studies Department offers a range of courses in African American studies that present the dimension of the black experience in this country. These courses encompass and afford a comprehensive understanding of the African heritage. They present African links and potential; contributions of black people in the growth and development of the United States; black culture and lifestyles; the black community; political activity and potential; religious development and importance; community service and resource assistance; and prognosis and potential for social change. The courses may apply in the general studies requirements and as electives for graduation.

Students are urged to consult with the faculty in African American Studies Department about new courses now being designed as well as special offerings.

The major in African American studies (which leads to a bachelor of arts degree) and the minor program must be planned in consultation with an adviser in the African American Studies Department.

Students desiring secondary licensure in social studies should see the Teacher Education Department.

### AFRICAN AMERICAN STUDIES MAJOR FOR BACHELOR OF ARTS

Required Courses			Semester Hours
AAS 101	Introduction to African American Studies	.....	3
AAS 113	Survey of African History (HIS 194)	.....	3
AAS 200	Social Movements and the Black Experience (SOC 200)	.....	3
AAS 330	The Black Community (SOC 314)	.....	3
AAS 370	Psychology of Racism and Group Prejudice (PSY 370)	.....	3
AAS 485	Research Seminar in African American Studies	.....	3
Select one from the following:			
MUS 201	Topics in Ethnic Music: Variable Title	.....	3
ART 304	African Art	.....	3
AAS 324	African American Literature (ENG 324)	.....	3
Electives	.....		18
<i>Total</i>	.....		39

#### Electives

Elective hours in African American studies courses are selected in consultation with the adviser.

### MINOR IN AFRICAN AMERICAN STUDIES

Required Courses			Semester Hours
AAS 101	Introduction to African American Studies	.....	3
AAS 200	Social Movements & and Black Experience (SOC 200)	.....	3
<i>Total</i>	.....		6

**Electives**

A minimum of 15 additional semester hours is required in African-American courses, three hours of which must be an African course, selected in consultation with and approved by the African American Studies adviser assigned to the student. Total hours of the minor are 21.

**Assessment Test**

During the final semester, students majoring in AAS will be required to take a comprehensive assessment test.

**Chicano Studies Department**

The Chicano Studies Department offers a bachelor of arts degree in Chicano studies. The Chicano and other Hispanic historical experiences are used as points of departure toward expanding awareness of the multicultural world and the contributions of Chicanos. The program is designed to assist in the preparation of scholars as well as human service providers.

**CHICANO STUDIES MAJOR FOR BACHELOR OF ARTS**

The requirements include core courses in the major, basic knowledge of the Spanish language, plus approved electives.

<b>Required Core Courses</b>		<b>Semester Hours</b>
CHS 100	Introduction to Chicano Studies.....	3
CHS 101	History of Meso-America: Pre-Columbian and Colonial Periods (HIS 191).....	3
CHS 102	History of the Chicano in the Southwest: 1810 to Present (HIS 192).....	3
CHS 201	Survey of Chicano Literature (ENG 241).....	3
CHS 310	The Chicano Community (SOC 313).....	3
CHS 485	Research Experience in Chicano Studies.....	3
Subtotal.....		18
<b>Language Requirements:</b>		
SPA 101	Elementary Spanish I.....	5
SPA 102	Elementary Spanish II.....	5
SPA 211	Intermediate Spanish	
SPA <sup>-or-</sup> 212	Spanish Reading and Conversation.....	3
Subtotal.....		13
Approved Electives.....		9
<i>Total</i> .....		40

A minimum of nine semester hours of electives in Chicano studies selected in consultation with the department chair is required.

**MINOR IN CHICANO STUDIES**

The minor can be designed to provide the student with course experiences that are most relevant to occupational and educational goals. Students, in consultation with a faculty adviser in Chicano studies, will develop individual minors that reflect the best possible elective curricula and ensure that a relevant emphasis is maintained. Total hours for the minor are 21.

<b>Required Courses</b>		<b>Semester Hours</b>
CHS 100	Introduction to Chicano Studies.....	3
CHS 101	History of Meso-America: Pre-Columbian and Colonial Periods.....	3
CHS 102	History of the Chicano in the Southwest: Mexican and United States Periods.....	3
CHS 201	Survey of Chicano Literature.....	3
<i>Total</i> .....		12

**Electives**

A minimum of nine semester hours of electives is required to complete the minor. The courses are to be selected in consultation with a Chicano studies faculty adviser.

**Assessment Test**

During the final semester, students majoring in CHS will be required to take a comprehensive assessment test.

## History Department

### MAJOR FOR BACHELOR OF ARTS

Required Courses			Semester Hours
HIS	101	Western Civilization to 1715 . . . . .	3
HIS	102	Western Civilization since 1715 . . . . .	3
HIS	121	American History to 1865 . . . . .	3
HIS	122	American History since 1865 . . . . .	3
HIS	482	Senior Seminar . . . . .	3
<i>Total</i> . . . . .			15

#### Electives

A minimum of 23 additional semester hours in history is required, 18 hours of which must be upper-division. No more than four hours in HIS 389 readings courses may be counted toward the major without prior written approval from the department.

#### Course Distribution

A minimum of 23 additional semester hours in history is required, 18 hours of which must be upper-division. In the minimum of 23 additional semester hours required, students must include at least three hours in each of the broad areas of history: United States, European, Developing World.

#### Grade Average

Students majoring in history must maintain at least a 2.00 average in their history courses.

#### Advising

History majors should consult with a departmental adviser to select the courses in other disciplines that complement their area of concentration in the major.

### MINOR IN HISTORY

There are three different areas of emphasis available to students seeking a history minor: (I) regular history area of emphasis, (II) American West history area of emphasis, (III) 20th century studies history area of emphasis.

#### I. REGULAR HISTORY AREA OF EMPHASIS

##### Required Courses

HIS	101	Western Civilization to 1715 . . . . .	3
HIS	102	Western Civilization since 1715 . . . . .	3
HIS	121	American History to 1865 . . . . .	3
HIS	122	American History since 1865 . . . . .	3
<i>Total</i> . . . . .			12

#### Electives

A minimum of nine additional semester hours in history is required. The hours must be upper-division and should be selected in consultation with a departmental adviser. No more than 2 hours in HIS 389 readings courses may be counted toward the minor without prior written approval from the department.

#### II. AMERICAN WEST HISTORY AREA OF EMPHASIS

##### Required Courses

HIS	110	American West . . . . .	3
HIS	111	Colorado History I . . . . .	3
HIS	121	American History to 1865 . . . . .	3
HIS	122	American History since 1865 . . . . .	3
<i>Total</i> . . . . .			12

#### Electives

A minimum of nine additional history hours treating the American West is required, all of which must be upper-division.

#### III. TWENTIETH CENTURY STUDIES HISTORY AREA OF EMPHASIS

##### Required Courses

HIS	122	American History since 1865 . . . . .	3
HIS	201	Contemporary World History . . . . .	3
<i>Total</i> . . . . .			6

#### Electives

A minimum of 15 additional hours treating 20th century history is required, of which nine must be upper-division.

#### Grade Average

Students minoring in history must maintain a 2.00 average in their history courses.



**SECONDARY SCHOOL EDUCATION LICENSURE IN SOCIAL SCIENCES**

Students majoring in history may combine their major with other courses in the social sciences and in education to earn secondary education licensure. The requirements of this program are included under the Education Department section of this *Catalog*.

**PRELAW COURSES**

Several history courses are of particular importance to legal studies. These include HIS 121, 122, 346, and 368. Students interested in prelaw courses are urged to contact the departmental adviser.

**MINOR IN INTERDISCIPLINARY LEGAL STUDIES**

The interdisciplinary legal studies minor is designed to show students how the various disciplines in the humanities and social sciences treat questions of law and justice. The interdisciplinary legal studies minor is not a pre-law preparatory program or paralegal training. Its goal is to cross disciplines so that students can understand how the humanities and social sciences illuminate the principles, practices, and policies of the law.

Required Course		Semester Hours
CJC	190 Introduction to Legal Studies .....	3
HIS	368 The Court in Crisis .....	3
PHI	343 Philosophy of Law .....	3
SOC	355 Sociology of Law .....	3
ENG	370 Literature and the Law .....	3
PSC	312 American Constitutional Law .....	3
xxx	xxx Seminar in Legal Topics (Interdisciplinary — team-taught course) .....	3
<i>Total</i> .....		21

Students will select one law-related course from the courses listed below or approved by the interdisciplinary legal studies minor adviser:

MGT	221 Legal Environment of Business I .....	3
MGT	322 Legal Environment of Business II .....	3
CJC	210 Substantive Criminal Law .....	3
HIS	346 The Constitution and the New Nation, 1787-1848 .....	3
SOC	350 Criminology .....	3
WMS	331 Women and the Law .....	3
<i>Total</i> .....		24

**Political Science Department**

The study of political science is mainly the study of governments: their social and economic environments, how they are organized, how and why they decide upon and carry out policies, and how nation-states interact on the world scene. It also includes the study of political ideas and values, past and present, citizen behavior, and recent trends in methods of research and analysis aimed at enlarging our knowledge of political processes.

In this sense, the Political Science Department provides students with the perspective and background necessary to understand the complex and often confusing reality of politics.

To focus that search for understanding, each political science major will select a primary area of study either in American politics or international/comparative politics. Course listings for each area are available in the department office.

The department also houses the college's Public Administration and Urban Studies programs.

**PRELAW**

The Political Science Department also offers prelaw advising to all students at the college, regardless of students' major fields of study. If you are thinking of applying to law school or would like more information on the LSAT or law schools, please contact the department's prelaw adviser.

**POLITICAL SCIENCE MAJOR FOR BACHELOR OF ARTS**

Required Courses		Semester Hours
PSC	101 American National Government .....	3
PSC	102 Political Systems and Ideas .....	3

PSC 202	Conducting Political Analysis	
-or-		
PSY 231	Introduction to Statistics for Social and Behavioral Sciences	3
PSC 305	Political Theory	3
PSC 402	Special Studies (Senior Experience)	3
Subtotal		15

**Electives**

A minimum of 21 additional semester hours of political science must be completed. At least 18 of these 21 hours must be upper-division courses (300- and 400-level) and must be approved by the department. Generally, students may apply only 12 hours of credit in nonclassroom courses toward the major as approved electives.

*Total* ..... 36

**Course Distribution and Area Concentration**

Of the 21 elective hours in political science, 12 must be in the student's primary area of study: American politics or international/comparative politics. A minimum of three hours must be drawn from the remaining area of concentration and six hours can be selected at the student's discretion.

**MINOR IN POLITICAL SCIENCE****Required Courses**

		<b>Semester Hours</b>
PSC 101	American National Government	3
PSC 102	Political Systems and Ideas	3
PSC 305	Political Theory	3
Subtotal		9

**Electives**

A minimum of 12 additional semester hours are required in political science courses. At least nine of these 12 hours must be in upper-division courses (300- and 400-level) and must be approved by the department. Generally, students may apply only 6 hours of credit in nonclassroom courses toward the major as approved electives.

*Total* ..... 21

**MINOR IN PUBLIC ADMINISTRATION**

Public administration is the study of governmental organizations, their management, and how government policies are formulated and carried out. The Political Science Department offers a minor in public administration available to students interested in a career in government service, to students presently employed in government who wish to increase their skills and job status, and to students planning to take postgraduate work in public administration.

**Required Courses**

		<b>Semester Hours</b>
I. Basic courses required for all public administration minors:		
PSC 101	American National Government	3
PSC 302	Introduction to Public Administration	3
II. Two of the following courses:		
PSC 322	Public Policy	3
PSC 324	Intergovernmental Relations	3
PSC 326	Politics of Budgeting	3
PSC 328	Public Personnel Administration	3
ACC 320	Governmental Accounting	3
III. One of the following courses:		
CMS 201	Principles of Information Systems	3
MTH 121	Introduction to Statistics	4
IV. Internship		
PSC 412 or substitute course (minimum)		3
<i>Total</i>		19-20

A governmental internship will be required of all students for a minimum of one semester and a minimum of three semester hours. This requirement may be waived for students with at least one calendar year of administrative work experience in a government agency.

It is recommended that public administration minors also take a course in both public speaking and in technical writing.

Also available to students is a program of courses leading to a recognition of completion award in public administration presented by the Political Science Department. Students may earn the award by successfully completing a selection of courses amounting to 26 semester hours. Contact the Political Science Department for details.

**MAJOR AND MINOR IN URBAN STUDIES**

Please see the Urban Studies section of this *Catalog*.

**INTERNSHIPS**

In addition to scheduled classes, political science students are encouraged to enroll for at least one off-campus internship. Students may receive credit for practical work experience in various areas of government service. Placement in a governmental position may be initiated by the student, Cooperative Education, or the Political Science Department. Interested students should contact the Political Science Department for details.

**COURSES WITH VARIABLE TOPICS**

Not listed among the regular courses are a variety of topics courses and self-paced courses that are offered each semester and give the student a greater variety of choice. Please be sure to check the current *Class Schedule* for these classes, which can be repeated for credit under different titles.

**WASHINGTON, D.C. PROGRAM**

During the summer session, the department offers a special program in Washington, D.C., aimed at providing students with a unique perspective on the nation's political system. The program combines a four-week module held in Washington with on-campus meetings and relevant readings. Please contact the department about this program. Also, the department works with students interested in an intern experience in Washington, D.C., during the summer or during the fall or spring semesters.

**GOLDA MEIR CENTER FOR POLITICAL LEADERSHIP**

The Golda Meir Center for Political Leadership is connected to the historic Golda Meir House on the Auraria campus. The center is organized and operated through the Political Science Department. The center's purpose is to develop programs that examine the role of leaders and leadership at all levels of the political process; blend together theoretical and applied politics; and emphasize voices and perspectives that expand the boundaries of traditional leadership analysis.

**Urban Studies Program**

Please see an adviser in the Political Science Department for updated changes being made to this program. A bachelor of arts or a bachelor of science degree with a major in urban studies is offered. The bachelor of science degree is recommended for those students desiring a stronger background in quantitative aspects of urban studies. Coursework is jointly offered by Metro State and the University of Colorado at Denver; the major is offered at Metro State. The emphasis of this program is an interdisciplinary approach to learning. To support this approach, six areas of emphasis are offered within the major.

1. local government/urban planning
2. housing patterns and alternatives
3. cultural lifestyles
4. transportation and communication
5. nonprofit organization administration
6. business, management, and urbanization

**URBAN STUDIES MAJOR FOR BACHELOR OF ARTS**

The requirements total 46 semester hours and include:

1. Twenty-five—27 hours of core courses.
2. Nine hours selected from each of four areas of process.
3. Two hours in an area of emphasis to be selected by the student.
4. Six additional hours for a bachelor of science degree.
5. Urban studies' majors who do not wish to pursue a minor in some other discipline will be required to take at least 14 semester hours for a total of 60 semester hours. The 14 semester hours must be selected in consultation with a faculty adviser.
6. There are different requirements for the nonprofit business administration, business, management, and urbanization emphases.

<b>Required Courses</b>		<b>Semester Hours</b>
URS 100	Introduction to Urban Studies . . . . .	3
URS 200	An Inside Look at Urban Institutions . . . . .	3
URS 300	World Patterns of Urbanization . . . . .	3
URS 380	Applied Urban Research Methods . . . . .	3
URS 489	Interdisciplinary Seminar . . . . .	4
URS 499*	Internship in Urban Studies . . . . .	3
Advanced writing course, which may be taken from nonprofit business administration, English or communications. . . . .		*3-4
Statistics, which may be taken from economics, geography, mathematics, psychology, or sociology . . . . .		*3-4
<i>Total</i> . . . . .		25-27

\*Nonprofit organization administration students may elect to fulfill these requirements within the nonprofit organization administration area of emphasis.

A total of nine hours should be selected from the following areas of processes. Nonprofit organization administration students will take one course from two areas for a total of at least six hours. Substitutions for these courses should be arranged through an adviser for urban studies.

#### **Urban Spatial Structuring Processes**

URS 310	Internal Structure of the City . . . . .	3
URS 351	Community Development and Planning . . . . .	3
URS 400	Urban Simulation/Game . . . . .	4
GEG 204	Geography of Denver . . . . .	3
GEG 360	Urban Geography . . . . .	3
GEG 461	Urban and Regional Planning . . . . .	3

#### **Urban Political Processes**

URS 210	An Analysis of Urban Boundaries . . . . .	3
URS 350	Emerging Urban Political Systems . . . . .	3
URS 400	Urban Simulation/Game . . . . .	4
PSC 300	American State and Local Government . . . . .	3
PSC 302	Introduction to Public Administration . . . . .	3
SOC 371	Politics and Power . . . . .	3

#### **Urban Economic Processes**

ECO 201	Principles of Economics — Macro . . . . .	3
ECO 202	Principles of Economics — Micro . . . . .	3
ECO 330	State and Local Finance . . . . .	3
ECO 335	Urban Economic Analysis . . . . .	3
ECO 340	Transportation Economics . . . . .	3
ECO 345	Environmental Economics . . . . .	3
SOC 324	Poverty in America . . . . .	3

#### **Urban Social Processes**

GEG 130	Geographic Analysis of Current Social Issues . . . . .	3
GEG 362	Population, Resources, and Land Use . . . . .	3
GEG 462	Land Use: Residential . . . . .	3
SOC 309	Urban Sociology . . . . .	3
SOC 324	Poverty in America . . . . .	3
<i>Total</i> . . . . .		9

#### **Area of Emphasis**

In each of the first four following areas of emphasis, the student selects a minimum of 12 hours with a minimum of six in urban studies. The student may take any combination of interdisciplinary courses related to the area of emphasis to be selected in consultation with an adviser. One of the courses should be a skills course related to the area of emphasis.

#### **LOCAL GOVERNMENT — URBAN PLANNING**

This area of emphasis concentrates on the basic conceptual and theoretical planning processes as they relate to and actually appear in urban government occupations and professions. The area of emphasis is designed for students seeking entry into government occupations or seeking advanced study in public administration or urban planning beyond the bachelors degree.

URS 250	New Front Range Communities . . . . .	3
URS 289	Urban Problems: Topics . . . . .	1-3
URS 351	Community Development and Planning . . . . .	3
URS 389	Readings in Urban Studies . . . . .	1-3
URS 400	Urban Simulation/Game . . . . .	1-4
URS 410	Urban Environmental Perception . . . . .	3
URS 450	Cities of the Future . . . . .	3
URS 451	Community Involvement Methods . . . . .	3
URS 471	The Urban Elderly: Prisoners of Space . . . . .	3

**HOUSING PATTERNS AND ALTERNATIVES**

This area of emphasis concentrates on the assembly and development of residential land, the nature of public and private programs to provide housing and the maintenance, and rebuilding of neighborhoods. A broad range of topics includes the evolution of public intervention in housing and residential renewal, the conflict between physical and human criteria in housing decisions, and constraints on the public's ability to deal with housing issues. Completion of this area of emphasis provides a foundation for graduate work and/or employment with a wide range of public and private housing agencies.

URS	171	Introduction to Denver Neighborhoods	3
URS	230	Introduction to Urban Housing Problems	3
URS	250	New Front Range Communities	3
URS	289	Urban Problems: Topics	1-3
URS	330	Housing: Issues and Policies	3
URS	389	Readings in Urban Studies	1-3
URS	400	Urban Simulation/Game	1-4
URS	450	Cities of the Future	3
MGT	300	Organizational Management	3
FIN	380	Real Estate Practice and Law	3

**CULTURAL LIFESTYLES**

This area of emphasis concentrates on the impacts on the urban landscape of the lifestyles of various cultures, whether ethnic, racial, chronological, religious, economic, or gender. The consequences of these impacts are viewed as among the most significant determinants of urban structure, form, function, and social interaction. The student is provided with specialized training and experience for entry into professions with public or private agencies that deal directly with these groups within a pluralistic urban environment.

URS	250	New Front Range Communities	3
URS	371	Ethnic Groups in United States Cities	3
URS	389	Readings in Urban Studies	1-3
URS	400	Urban Simulation/Game	1-4
URS	410	Urban Environmental Perception	3
URS	471	The Urban Elderly: Prisoners of Space	3

**TRANSPORTATION AND COMMUNICATION**

The transportation-communication area of emphasis has three basic academic focuses: (1) to aid students in refining their perceptions of the various networks that exist in the urban setting; (2) to provide tools and techniques to analyze these networks; and (3) to increase the students' understanding that transportation and communication are interdependent with such factors as land use, politics, and demography. Completion of this area of emphasis provides a foundation for a professional career or further graduate training.

URS	228	Introduction to Transportation Systems	3
URS	289	Urban Problems: Topics	1-3
URS	328	Transportation: Issues and Policies	3
URS	389	Readings in Urban Studies	1-3
URS	400	Urban Simulation/Game	1-4
URS	450	Cities of the Future	3

**NONPROFIT ORGANIZATION ADMINISTRATION**

This area of emphasis combines classroom theory and practical experience in a comprehensive format. Students' formal classroom experiences are supplemented by at least 20 hours per week during two semesters in placement experiences. All fieldwork is carefully supervised and student progress will be measured against learning objectives cooperatively developed for each course by the student, agency supervisor, and the college coordinator or faculty member.

This area of emphasis is designed to provide an educational program for a very specific administrative level in nonprofit agencies and organizations. The directive skills include development and management of volunteer programs, fundraising, proposal writing, program and human resource development.

**Course Requirements Include:**

	1.	URS Required Core Courses	16
	2.	Selected Electives	7
	3.	NOA Area of Emphasis	20
HSP	201	Principles of Nonprofit Administration	4
HSP	321	Organizational Stability of Nonprofit Organization	4
HSP	361	Financial Accountability and Organizational Control of NPO's	4
HSP	402	Fundraising and Proposal Writing for NPO's	4
HSP	431	Human Resource Development in NPO's	4
<i>Total</i>			43

## BUSINESS, MANAGEMENT, AND URBANIZATION

This area of emphasis stresses the interrelationships between the private business sector and the public policy and urban life designers and decision makers. Public sector/private sector/policy makers' cooperation, or the lack thereof, in the future, will have a direct effect on urban lifestyle. Issues covered are the roles of business and urban government in the overall process of urbanization; the functions of managing business and managing government; the importance of sales tax revenues to both business and government; and, with less governmental employment in the future, the changes that are in store for small and medium-sized businesses. This area of emphasis is directed toward the student seeking an undergraduate major in management or administration of government organizations at the local, state, or federal level or in management positions in private industry.

### Course Requirements Include:

1.	URS Required Core Courses	25-27
2.	Business, Management, Urbanization Emphasis	21
MGT xxx	(any Metro State introduction to business course)	3
MGT 250	Small Business Management	3
MGT 300	Organizational Management	3
MKT 300	Principles of Marketing	3
Six hours to be selected from:		
ECO 350	Managerial Economics	3
MGT 453	Organizational Behavior	3
MKT 301	Marketing Research	3
MKT 311	Advertising Management	3
MKT 330	Marketing of Services	3
MKT 331	Consumer Behavior	3
ACC 308	Small Business Taxation	3

## URBAN STUDIES MAJOR FOR BACHELOR OF SCIENCE

The requirement for the major in urban studies leading to the bachelor of science degree includes six semester hours in addition to the bachelor of arts degree. The six hours must be taken from the following list of courses.

CMS 201	Principles of Information Systems	3
CMS 214	Fundamentals of Programming — Assembler	3
CMS 223	Word Processing	3
CMS 312	BASIC Programming and Graphics for Computers	3
MTH 131	Finite Mathematics for the Management and Social Sciences	4

## URBAN STUDIES MINOR

Minors for both the bachelor of science degree and the bachelor of arts degree are available. The minor can be designed to provide the student with course experiences that are most relevant to the student's occupational and educational goals.

Students, in consultation with the department offering related courses and the student's urban studies faculty adviser, will develop individual minors that will reflect the best possible elective curriculum, and will ensure that an urban emphasis is maintained.

### Required Courses

URS 100	Introduction to Urban Studies	3
URS 200	An Inside Look at Urban Institutions	3
COM 261	Introduction to Technical Writing	3
Subtotal		21

Twelve additional semester hours are required to complete the minor. The elective courses are to be selected in consultation with a URS faculty adviser.

Elective Courses	12
<i>Total</i>	21

## Psychology Department

### PSYCHOLOGY DEPARTMENT STUDENT OUTCOME GOALS:

Upon completion of a degree program in psychology at Metropolitan State College of Denver, students will be able to:

1. Demonstrate a knowledge of the major historical contributions and themes, basic principles, current issues, and emerging developments in psychology.
2. Communicate knowledge of the field of psychology both orally and in writing, the latter following the American Psychological Association guidelines.
3. Relate psychological principles and methodology to the problems and issues in other disciplines.
4. Conduct independently a basic literature search on a given problem in psychology and integrate this new information into a coherent understanding of the basic issues relating to this problem.
5. Apply the fundamentals of research methodology and statistical analysis to the interpretation and evaluation of research reports.
6. Express an appreciation for the value of psychological knowledge in improving our world and for individual differences and universal commonalities in human experience.

The major or minor program is to be planned in consultation with an adviser from the Psychology Department by the beginning of the junior year or upon transfer into the department.

### MAJOR FOR BACHELOR OF ARTS

Required Courses		Semester Hours
PSY 101	Introductory Psychology	3
PSY 231	Introduction to Statistics for Social and Behavioral Sciences	3
PSY 232	Inferential Statistics	3
PSY 331	Psychological Research Methods I	3
PSY 332	Psychological Research Methods II	3
PSY 451	History and Systems of Psychology	3
Subtotal		18

In addition, students must choose one course from each category:

Social		3
PSY 215	Cross-Cultural Psychology	
PSY 241	Social Psychology	
PSY 305	Psychology of Gender	
PSY 347	Psychology of Violence and Aggression	
Experimental		3
PSY 357	Cognitive Psychology	
PSY 359	Theories of Motivation	
PSY 430	Sensation and Perception	
PSY 431	Physiological Psychology	
PSY 439	Psychology of Learning	
Clinical/Personality		3
PSY 216	Personality and Adjustment	
PSY 300	Theories of Personality	
PSY 310	Psychology of Counseling	
PSY 362	Abnormal Psychology	
Developmental		3
PSY 221	Psychology of Human Development	
PSY 325	Child Psychology	
PSY 326	Psychology of Adolescence	
PSY 327	Adulthood and Aging	
Subtotal		12
<b>Total</b>		<b>30</b>

### Electives

A minimum of 15 additional semester hours in psychology courses selected in consultation with and approved by a Psychology Department adviser, making a total of 45 hours in psychology. No more than nine of these hours may be PSY 295 variable topics courses, and no more than six of these hours may be PSY 498 Independent Study. The maximum number of hours in psychology a student may count toward a bachelor of arts degree is 60.

<b>Total</b>	<b>45</b>
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**Additional Requirement**

BIO 100	Human Biology for Non-Majors .....	3
-or-		
BIO 108	General Introduction to Biology .....	4
or equivalent		

This additional requirement may be applied toward general studies, the minor, or degree electives.

Students considering advanced degrees should be aware that, in addition to coursework in the areas listed above, graduate programs often have specific undergraduate course prerequisites. Required or recommended courses, depending on the graduate program, include Theories of Personality, Abnormal Psychology, Psychology of Learning, Child Psychology, Physiological Psychology, Industrial Psychology, Sensation and Perception, Cooperative Education in Psychology, Teaching of Psychology, and Advanced Statistics. Therefore, students should consult with a Psychology Department adviser to choose appropriate psychology electives.

Students interested in the gerontology area of emphasis must select a minimum of 30 hours (see list under Sociology Department, gerontology area of emphasis) in addition to the 30 hours of required courses for the psychology major. This must be done in consultation with and approved by a Psychology Department adviser. The gerontology emphasis may be applied in lieu of the 15 elective hours in the psychology major and the minor requirement. Students may not count the same course twice toward meeting requirements in both the major and the gerontology emphasis; different courses must be chosen to complete the major hours and the gerontology hours.

Students desiring secondary licensure in social studies should contact an adviser in the Secondary Teacher Education Department.

In meeting the requirements for the psychology major (described above), transfer students must take a minimum of 15 semester hours of psychology coursework at Metro State, of which at least nine must be upper-division credits.

NOTE: The Psychology Department does not count CLEP credit toward the total number of semester hours required for the major or minor; extra coursework is necessary to make up the difference. The Psychology Department does not accept correspondence study courses toward the total number of semester hours required for a major or minor. However, both CLEP and correspondence study credit can count toward the degree. Students who wish to use psychology courses to fulfill general studies' requirements or an interdisciplinary major or minor must earn additional hours to fulfill the total hours for either the major or minor in psychology. The only exception is PSY 451, History and Systems of Psychology, which may be used as a Senior Experience without being replaced in the major or minor. Please consult with an adviser.

**HOLISTIC HEALTH AND WELLNESS EDUCATION MULTI-MINOR**

The multi-minor may be arranged through the Psychology Department and includes the required courses listed under the holistic health and wellness education multi-minor on page 189 of this *Catalog*.

**MINOR IN PSYCHOLOGY**

Required Courses		Semester Hours
PSY 101	Introductory Psychology .....	3
PSY 451	History and Systems of Psychology .....	3
<i>Total</i>	.....	6

**Electives**

A minimum of 15 additional semester hours in psychology courses selected in consultation with and approved by a Psychology Department adviser is required, making a total of 21 hours in psychology. No more than six semester hours may be PSY 295 variable topics courses, no more than three semester hours may be PSY 397 Practicum, and at least two electives in psychology (6 semester hours) taken at Metro State must be upper-division. See also above NOTE.

**Sociology**

The study of sociology emphasizes understanding people in groups — small groups like the family, the all-pervasive bureaucratic organizations of American society, political parties, football crowds, groups in conflict, and society as a whole. It includes the study, from a variety of theoretical models, of past and present societies and social processes, and the analysis, using modern research methods of contemporary social issues.

The sociology program offers to its majors and minors, and to students from all academic disciplines, courses that focus on important issues and trends in today's complex societies.



**SOCIOLOGY MAJOR FOR BACHELOR OF ARTS**

<b>Required Courses</b>		<b>Semester Hours</b>
SOC 101	Introduction to Sociology .....	3
SOC 201	Current Social Issues .....	3
SOC 332	Sociological Theory: Past and Present .....	3
SOC 360	Research in the Social Sciences .....	3
SOC 460	Advanced Research in the Social Sciences .....	3
<i>Total</i> .....		<b>15</b>

**Electives**

A minimum of 21 additional semester hours in sociology courses is required, constituting a total of 36 semester hours. At least 12 upper-division semester hours in sociology must be completed at Metropolitan State College of Denver by students majoring in the field.

**Grade Requirements in the Major**

Students must attain a course grade of "C" or above in all sociology courses that count toward the sociology major. A grade of "D" or below will not count toward the 36 hours necessary for a major in sociology.

**Optional Areas of Concentration in Sociology**

Each area of concentration includes a number of courses designed to give the student an in-depth exploration of the knowledge, challenges, issues, and research in a specific subdiscipline of sociology.

**I. The Urban Community**

This concentration is particularly recommended for those interested in urban studies and all students whose career plans are aimed toward management, planning, or administration in the urban setting.

SOC 322	Race, Sex, and Ethnic Groups .....	3
SOC 355	Sociology of Law .....	3
SOC 373	Mass Media and Social Behavior .....	3
SOC 381	Population Issues .....	3

**II. Social Deviance**

This concentration is particularly recommended for criminal justice, human services, prelaw, and psychology majors and all students whose career goals involve working in prevention, treatment, and/or rehabilitation programs.

SOC 201	Current Social Issues .....	3
SOC 250	Deviant Behavior in Society .....	3
SOC 350	Criminology .....	3
SOC 351	Juvenile Delinquency .....	3
SOC 355	Sociology of Law .....	3
SOC 383	Mental Disorders .....	3

**III. The Family and Alternative Lifestyles**

This concentration is particularly recommended for teacher education, human services, and psychology majors and all students who plan people-serving careers.

SOC 240	The Chicano Family .....	3
SOC 310	Death and Dying .....	3
SOC 340	Childhood and Adolescent Socialization .....	3
SOC 341	The Family in Transition .....	3
SOC 342	Education in a Changing Society .....	3
SOC 343	Sociology of Sex Roles .....	3
SOC 344	The Black Family .....	3
SOC 346	Sociology of Sexuality .....	3
SOC 351	Juvenile Delinquency .....	3

**IV. Medicine and Health**

This concentration is particularly recommended for health care management, nursing, premed, and psychology majors.

SOC 104	Introduction to Gerontology .....	3
SOC 304	Contemporary Issues in Gerontology .....	3
SOC 310	Death and Dying .....	3
SOC 380	Health and Healers .....	3
SOC 381	Population Issues .....	3
SOC 383	Mental Disorders .....	3

**V. Social Class and Stratification**

This concentration focuses on the various ways in which societies are divided. It is recommended for all students wishing to gain further understanding of conflict and inequality in groups and societies and to explore possible solutions to these problems.

SOC 201	Current Social Issues . . . . .	3
SOC 320	Social Classes in America . . . . .	3
SOC 322	Race, Sex and Ethnic Groups . . . . .	3
SOC 324	Poverty in America . . . . .	3
SOC 343	Sociology of Sex Roles . . . . .	3

## VI. Changing Social Institutions

This concentration offers a broad overview of the dominant institutions in society, those institutions that provide the framework for our work, family life, and general social interaction.

SOC 320	Social Classes in America . . . . .	3
SOC 341	The Family in Transition . . . . .	3
SOC 342	Education in a Changing Society . . . . .	3
SOC 346	Sociology of Sexuality . . . . .	3
SOC 355	Sociology of Law . . . . .	3
SOC 371	Politics and Power . . . . .	3
SOC 380	Health and Healers . . . . .	3
SOC 391	Religious Movements in America . . . . .	3
SOC 430	Social Change . . . . .	3

PSY 311 is strongly recommended for sociology majors who plan to go on for graduate study and/or have career goals involving research. (This course will not be used as a sociology elective.)

Sociology majors are also urged to include field experience in their college plans, either through enrolling in SOC 470 or through a cooperative education placement.

Students desiring secondary licensure in social studies should see the of Teacher Education Department.

## GERONTOLOGY AREA OF EMPHASIS

Gerontology deals with the causes and consequences—biological, psychological, and social—of aging. Drawing from many fields of academic study, this area of emphasis prepares the student for professional and paraprofessional careers in human services for the aged population.

To complete the gerontology area of emphasis, a student selects (in addition to the 15 hours of required courses in the sociology major) in consultation with and approved by the Sociology/Anthropology Department a minimum of 45 hours from the following list of courses. The gerontology area of emphasis may be applied in lieu of the 21 elective hours in the sociology major and the minor requirement.

Required Courses		Semester Hours
SOC 104	Introduction to Gerontology . . . . .	3
SOC 304	Contemporary Issues in Gerontology . . . . .	3
SOC 309	Urban Sociology . . . . .	3
SOC 310	Death and Dying . . . . .	3
SOC 324	Poverty in America . . . . .	3
SOC 341	The Family in Transition . . . . .	3
SOC 380	Health and Healers . . . . .	3
SOC 381	Population Issues . . . . .	3
SOC 383	Mental Disorders . . . . .	3
SOC 470	Advanced Field Internship . . . . .	3
PSY 216	Personality and Adjustment . . . . .	3
PSY 221	Psychology of Human Development . . . . .	3
PSY 227	Death and Dying . . . . .	3
PSY 327	Adulthood and Aging . . . . .	3
PSY 398	Cooperative Education: Psychology . . . . .	3
HES 105	Dynamics of Health . . . . .	3
HES 204	Introduction to Nutrition . . . . .	3
Minimum of 45 hours required from the above list . . . . .		45

## MINOR IN SOCIOLOGY

### Required Courses

SOC 101	Introduction to Sociology . . . . .	3
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### Electives

A minimum of 15 additional semester hours in sociology courses, selected in consultation with a department adviser is required, bringing the total to 18 semester hours. At least six upper-division semester hours of the minor must be completed at Metropolitan State College of Denver.

It is suggested that students consider focusing their elective choices in one of the areas of concentration in sociology.

## Anthropology

Anthropology is the exploration of human diversity. The combination of cultural, archaeological, and biological perspectives offer a viewpoint that is unique in studying the problems related to the survival and well-being of the human species. From the living and vanished cultures of Colorado to those of New Guinea or South America, anthropology can be applied to assist our understanding of human differences.

### ANTHROPOLOGY MAJOR FOR BACHELOR OF ARTS

Required Courses		Semester Hours
ANT 101	Physical Anthropology and Prehistory	3
ANT 131	Introduction to Cultural Anthropology	3
ANT 210	Human Evolution	3
ANT 233	Cross-Cultural Communication	3
ANT 264	Archaeology	3
<i>Total</i>		15

#### Electives

A minimum of 21 additional semester hours in anthropology is required, bringing the total to 36 semester hours. At least 12 upper-division semester hours in anthropology must be completed at Metropolitan State College of Denver by students majoring in the field.

Students desiring teacher licensure in social studies should see an adviser in the teacher education program.

### MINOR IN ANTHROPOLOGY

The minor provides an opportunity for students to bring a unique anthropological perspective to their already chosen area of interest. Anyone having to deal with human or cultural differences would benefit from selecting a focus in cross-cultural contact, archaeology, or human diversity.

#### Required Courses

ANT 101	Physical Anthropology and Prehistory	3
ANT 131	Introduction to Cultural Anthropology	3
<i>Total</i>		6

#### Electives

A minimum of 15 additional semester hours in anthropology is required, bringing the total to 21 semester hours. At least six upper-division semester hours must be completed at Metropolitan State College of Denver.

## Behavioral Science

### MAJOR FOR BACHELOR OF ARTS

This is a distributed major, offering students a structured overview of the social sciences. This program emphasizes breadth of coverage with a focus in an area selected by the student. This major is particularly applicable for students interested in teacher licensure at the elementary and secondary levels. The student must have preliminary approval of the selected program by an adviser from the Sociology/Anthropology Department. A minimum of 12 upper-division hours in the major must be taken at Metro State.

#### Required Courses

Required Courses		Semester Hours
ANT 131	Introduction to Cultural Anthropology	3
ECO 201	Principles of Economics: Macro	3
HIS 122	American History since 1865	3
PSC 101	American National Government	3
PSY 101	Introductory Psychology	3
SOC 101	Introduction to Sociology	3
<i>Total</i>		18

#### Elected Focus

In addition to the introductory course, each student must select 12 hours in one of the following social science disciplines: anthropology, economics, history, political science, psychology or sociology. A minimum of nine upper-division hours must be selected with the approval of an adviser.

Total Elected Focus . . . . . 12

#### General Electives

An additional 12 hours must be selected from any of the disciplines outside of the elected focus. Courses may be selected from anthropology, economics, history, political science, psychology, or sociology. At least nine of these hours must be upper-division. No more than six hours may be taken in any one discipline.

Total general electives . . . . . 12

*Total* . . . . . 42

**GENERAL STUDIES REQUIREMENTS**

The student is expected to complete all general studies requirements as stated in this *Catalog*. The student may use up to six hours from the required courses for the behavioral science major to complete the social science component.

**SENIOR EXPERIENCE**

Selection of a Senior Experience course will vary according to the student's needs. Students seeking teacher licensure must select student teaching. Other students may select the capstone course in their focus or the applied anthropology course currently being developed by the department.

Students desiring teacher licensure should see the Teacher Education Department.

No Minor Offered

**Social Work****MAJOR FOR BACHELOR OF SCIENCE**

Social work is a professional practice. The primary educational goal of the major is preparation for beginning level social work practice in social agencies. In addition, the social work major provides an appropriate foundation for graduates who plan to pursue advanced degrees in social work (M.S.W.)

The Social Work Program prepares students for generalist practice with minority or majority clients. The focus of the program is on the needs and strengths of oppressed urban populations, ethnic minorities, and other diverse groups. Majors acquire the knowledge, skills, values and ethics required for generalist practice with individuals, groups, communities, and larger systems. Theoretical knowledge and fieldwork experiences provide preparation for social work with diverse populations in a variety of settings, such as child welfare, mental health, corrections, gerontological social work, health, public welfare, domestic violence, and developmental disabilities. Students who major in social work are not required to complete a minor.

**INDIVIDUALIZED MINOR**

Individualized minors are available in social work, which will complement a variety of health care majors.

**STATUS OF ACCREDITATION**

At the present time, the Social Work Program is pursuing accreditation with the Council on Social Work Education. As of 1995, the Social Work Program has been accepted into candidacy for accreditation. For more information, contact the Social Work Program at (303) 556-6162 or (303) 556-6163.

<b>Required Courses</b>		<b>Semester Hours</b>
SWK 101	Introduction to Social Welfare and Social Work .....	3
SWK 102	Introduction to Agency Experience .....	1
SWK 205	Human Behavior and the Social Environment I .....	3
SWK 206	Human Behavior and the Social Environment II .....	3
SWK 341	Introduction to Generalist Practice .....	4
SWK 378	Social Work Policy .....	3
SWK 379	Research in Social Work .....	4
SWK 401	Advanced Social Work Practice .....	4
SWK 425	Exploring Current Social Work Issues .....	3
SWK 441	Advanced Cross-Cultural Social Work Issues .....	4
SWK 479	Professional Internship I .....	5
SWK 481	Professional Internship II .....	5
SWK 485	Integrative Seminar .....	3
Total .....		45
<b>Electives</b>		
Select nine hours from the following:		
SWK 202	Social Work with Women .....	3
SWK 301	Social Work Services for Children and Adolescents .....	4
SWK 302	Case Management in Social Work Practice .....	4
SWK 303	Social Services for the Aging .....	4
SWK 345	Mutual Aid Groups in Social Work .....	3
SWK 480	Workshop (Variable Topics) .....	4
SWK 490	Seminar (Variable Topics) .....	4
Total Electives .....		9
Total .....		54

**CASE MANAGEMENT**

The Social Work Program and the Human Services Department have developed a joint program in Case Management and Developmental Disabilities. The purpose of the program is to prepare students to perform the roles and functions of a case manager. An award of completion is granted to individuals who complete the required courses. For further information call (303) 556-6162.

**LIBERAL ARTS FOUNDATION AND BASIC SKILL REQUIREMENTS**

Social work majors are required to take the following courses outside the Social Work Program in preparation for the major:

- SPE 101 - Public Speaking or Speech 171 - Interpersonal Communication
- ANT 131 - Introduction to Cultural Anthropology
- PSC 101 - American National Government
- PSY 101 - Introductory Psychology
- SOC 201 - Current Social Issues (contact Social Work Program for status of this prerequisite.)
- BIO 100 - Human Biology for Non-Majors
- MTH 121 - Introduction to Statistics

Many of the above courses will also fulfill general studies requirements for graduation.

**MULTICULTURAL REQUIREMENT**

Social work majors are required to take three multicultural classes outside the Social Work Program. Two must be on a specific ethnic minority (African American, Native American, Asian American or Hispanic) and one must be upper-division. The third class may be on a specific ethnic group or on a diverse group (gays and lesbians, developmentally delayed, women, and children, or the aging). This class must be approved by a Social Work Program adviser.

**DIVISION OF SCIENCE AND MATHEMATICS**

Science and mathematics programs are offered in the departments of Biology, Chemistry, Earth and Atmospheric Sciences, Mathematical and Computer Sciences, and Physics. Curricula are flexible, including interdisciplinary, career-oriented bachelor's degree programs both in the traditional areas of science and mathematics and in more career-oriented areas such as training for health-related fields, land use, applied mathematics, computer science, statistics, air pollution monitoring, or occupational health and safety. In cooperation with local colleges, universities, and health agencies, students may complete a bachelor of science or bachelor of arts degree from Metropolitan State College of Denver and earn licensure in medical technology. The Chemistry Department offers a minor in criminalistics, one of the few such programs in the country.

**Biology Department**

The Biology Department offers two majors, the bachelor of science in biology and the bachelor of arts in biology. While it is not necessary to declare an emphasis within these majors, a student may choose to emphasize botany, medical technology, microbiology, or zoology. Supportive courses associated with paramedical studies and criminalistics, as well as general courses for enrichment of the nonscience student's background, are offered by the department.

Students seeking secondary licensure in science should see the Teacher Education Department.

A biology minor is offered to students with related majors or a special interest in the field.

**BIOLOGY MAJOR FOR BACHELOR OF SCIENCE**

Required Courses	Semester Hours
BIO 108 General Introduction to Biology .....	4
BIO 360 General Genetics .....	3
Select two of the following:	
BIO 210 General Botany .....	5
BIO 220 General Zoology .....	5
BIO 240 General Microbiology .....	4

Select one of the following:

BIO 355	Urban Ecology	4
BIO 454	Plant Ecology	4
BIO 455	Animal Ecology	4
Subtotal		20-21

#### Electives

Biology courses selected from the 200-, 300-, and 400-level series, and approved by faculty advisers in the Biology Department, must be completed to bring the total of biology courses approved for the major to 40 semester hours. At least 14 of these elective semester hours must be from the 300 and 400 courses of the Biology Department.

Total	40
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#### Required Nonbiology Courses

One year of college general chemistry, one semester of upper-division organic chemistry, one semester of upper-division biochemistry, and one year of mathematics starting with MTH 111, are requisites for the bachelor of science major in biology.

### BIOLOGY MAJOR FOR BACHELOR OF ARTS

#### Required Courses

		Semester Hours
BIO 108	General Introduction to Biology	4
BIO 360	General Genetics	3

Select two of the following:

BIO 210	General Botany	5
BIO 220	General Zoology	5
BIO 240	General Microbiology	4

Select one of the following:

BIO 355	Urban Ecology	4
BIO 454	Plant Ecology	4
BIO 455	Animal Ecology	4

Subtotal	20-21
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#### Electives

Biology courses selected from the 200-, 300-, and 400-level series, and approved by faculty advisers in the Biology Department, must be completed to bring the total of biology courses approved for the major to 40 semester hours. At least 14 of these elective semester hours must be from the 300 and 400 courses of the Biology Department.

Total	40
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#### Required Nonbiology Courses

One year of general chemistry (equivalent to the present courses CHE 110 and CHE 210).

### BOTANY AREA OF EMPHASIS

Requirements for either a bachelor of arts or a bachelor of science degree in biology must be satisfied, and the 40 hours of biology courses must include BIO 210, 454, and 15 semester hours from the following botany electives:\*

#### Elective Courses

		Semester Hours
BIO 314	Plant Physiology	5
BIO 315	Plant Hormones	2
BIO 316	Plant Anatomy and Morphology	4
BIO 318	Vascular Plant Taxonomy	4
BIO 412	Algology	4
BIO 416	Mycology	4
BIO 456	Field Methods in Plant Ecology	2
BIO 485	Evolution	3
Subtotal	15	

\*BIO 301 and 305 are both applicable to the fields of botany, microbiology, and zoology and are recommended as additional electives for all three areas of emphasis.

### MEDICAL TECHNOLOGY AREA OF EMPHASIS

Students must satisfy the requirements listed for the Metro State bachelor of science degree in biology, including BIO 240. Students must also take BIO 335, 444, and 445. Additional hours must be taken from the courses listed below to complete the 20 hours of upper-division courses and a total of 40 semester credit hours in biology.

Elective Courses			Semester Hours
BIO	321	Histology .....	4
BIO	327	Parasitology .....	4
BIO	336	Animal Physiology .....	4
BIO	416	Mycology .....	4
BIO	422	Protozoology .....	3
Subtotal .....			19

**Internship**

Completion of a medical technology internship at an approved school of medical technology.

**Required Nonbiology Courses**

The student must satisfy the requirements listed for nonbiology courses for the bachelor of science major and complete the requirements for a minor in chemistry.

**MICROBIOLOGY AREA OF EMPHASIS**

Students must satisfy the requirements listed for the bachelor of science major in biology, including BIO 240. Students must also take BIO 335, 340, 445, and 447. Additional hours from the courses listed below or appropriate omnibus courses as selected by the student and approved by the microbiology faculty must be taken to complete the 20 hours of upper-division elective courses and a total of 40 semester hours in biology.\*

Elective Courses			Semester Hours
BIO	305	Cell and Molecular Biology .....	4
BIO	327	Parasitology .....	4
BIO	412	Algology .....	4
BIO	416	Mycology .....	4
BIO	422	Protozoology .....	3
BIO	444	Virology .....	4
Subtotal .....			20

\*BIO 301 and 305 are both applicable to the fields of botany, microbiology, and zoology and are recommended as additional electives for all three areas of emphasis.

**Required Nonbiology Courses**

The student must satisfy the requirements listed for nonbiology courses for the bachelor of science major including one course in biostatistics or calculus and a computer science course to fulfill the required one year of college mathematics. In addition, the student must complete CHE 300, 301, 432, and one year of college physics.

**ZOOLOGY AREA OF EMPHASIS**

Students must satisfy the requirements for the bachelor of science degree in biology and must include in the 40 semester hours of biology courses BIO 220, 455, and 15 semester hours from the following list of zoology electives:\*

Elective Courses			Semester Hours
BIO	321	Histology .....	4
BIO	322	Comparative Vertebrate Anatomy .....	5
BIO	325	Arthropod Zoology .....	4
BIO	327	Parasitology .....	4
BIO	334	Endocrinology .....	3
BIO	336	Animal Physiology .....	4
BIO	422	Protozoology .....	3
BIO	425	Entomology .....	4
BIO	427	Herpetology .....	3
BIO	428	Ornithology .....	4
BIO	429	Mammalogy .....	3
BIO	481	Vertebrate Embryology .....	4
Subtotal .....			15

\*BIO 301 and 305 are both applicable to the fields of botany, microbiology, and zoology and are recommended as additional electives for all three areas of emphasis.

**MINOR IN BIOLOGY**

Required Courses			Semester Hours
BIO	108	General Introduction to Biology .....	4

Select two of the following:

BIO	210	General Botany .....	5
BIO	220	General Zoology .....	5
BIO	240	General Microbiology .....	4
BIO	231, 232	Human Anatomy and Human Physiology I and II .....	8

Select one of the following:

BIO	355	Urban Ecology	4
BIO	360	General Genetics	3
BIO	454	Plant Ecology	4
BIO	455	Animal Ecology	4
Subtotal			16-21

#### Electives

Biology courses from the 200-, 300-, and 400-level series, approved by the Biology Department must be completed to bring the total of biology courses approved for the minor to 24 semester hours.

Total	24
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### SENIOR EXPERIENCE FOR BIOLOGY MAJORS

A student majoring in biology may fulfill the Senior Experience requirement with any course approved for the purpose by the general studies committee. Any biology course approved by the general studies committee and the Biology Department for Senior Experience credit may be counted toward the Senior Experience requirement of general studies, or toward a biology major/biology minor, but not both.

## Chemistry Department

The Chemistry Department is approved by the American Chemical Society and offers several degree programs: the bachelor of science in chemistry; bachelor of science in chemistry — occupational health and safety area of emphasis; bachelor of science in chemistry — criminalistics area of emphasis; and the bachelor of arts in chemistry. Minors in chemistry and criminalistics are also available.

Students who plan to pursue a career in chemistry after graduation or plan to attend graduate school in chemistry should choose the bachelor of science in chemistry program. The bachelor of arts in chemistry program is designed for students who plan a career in a field related to chemistry, but who do not intend to attend graduate school in chemistry. The bachelor of arts option, which requires fewer hours, may be especially attractive to those wishing a second major or to those students desiring secondary education licensure.

Criminalistics is the scientific investigation, identification, and comparison of physical evidence for criminal or civil court proceedings. Criminalists must be trained in many disciplines including chemistry, biology, law enforcement, physics, and mathematics. The four-year criminalistics curriculum leads to a bachelor of science degree and includes a half-time internship in a criminalistics laboratory during the senior year. Students in the criminalistics program are encouraged to complete all the requirements for a degree in chemistry approved by the American Chemical Society while completing the criminalistics degree program. Graduates of the program are prepared for employment in criminalistics and have completed the requirements for admission to graduate school in chemistry or criminalistics, medical school, dental school, or law school.

Students electing the chemistry major with the occupational health and safety emphasis will be trained in the recognition, evaluation, and control of hazards in the workplace. This area of emphasis includes courses equivalent to those required for the bachelor of arts major in chemistry as well as supporting science and mathematics courses and courses in instrumental analysis, toxicology, safety, and occupational health and safety. A mandatory internship during the junior or senior year provides valuable practical experience. Graduates of this program are prepared for immediate employment in the field of occupational health and safety or the field of chemistry. Graduates in this emphasis area also meet the requirements for admissions to medical school, dental school, veterinary school, or graduate school in industrial hygiene or chemistry.

For further information about the occupational health and safety or criminalistics programs, students should contact the Chemistry Department. Students seeking secondary education licensure in science should consult the Teacher Education Department for requirements.

The following courses constitute the basic core and are required in all chemistry degree programs except for the minor in chemistry.



<b>Basic Chemistry Core</b>		<b>Semester Hours</b>
CHE 180	General Chemistry I .....	4
CHE 181	General Chemistry II .....	4
CHE 185	General Chemistry Laboratory .....	2
CHE 300	Analytical Chemistry .....	3
CHE 301	Analytical Chemistry Laboratory .....	2
CHE 310	Organic Chemistry I .....	4
CHE 311	Organic Chemistry II .....	3
CHE 312	Organic Chemistry I Laboratory .....	2
CHE 313	Organic Chemistry II Laboratory .....	2
<i>Total</i>	.....	26

## CHEMISTRY MAJOR FOR BACHELOR OF SCIENCE

<b>Required Courses</b>		<b>Semester Hours</b>
Basic Chemistry Core .....		26
<b>Additional Required Chemistry Courses:</b>		
CHE 325	Physical Chemistry I .....	4
CHE 326	Physical Chemistry II .....	4
CHE 328	Physical Chemistry I Laboratory .....	2
CHE 329	Physical Chemistry II Laboratory .....	2
<i>Subtotal</i>	.....	12

### Electives

A minimum of 10 semester hours in chemistry courses selected in consultation with and approved by the Chemistry Department is required.

*Total Hours Required* ..... 48

### Bachelor of Science Required Ancillary Courses

MTH 141	Calculus I .....	4
MTH 241	Calculus II .....	4
MTH 242	Calculus III .....	4
PHY 231	General Physics I and	
PHY 233	General Physics II	
-or-		
PHY 201	College Physics I	
and		
PHY 202	College Physics II .....	4
<i>Total</i>	.....	20

### American Chemical Society Approval

To meet American Chemical Society degree criteria the following courses must be completed:

CHE 230	Inorganic Chemistry .....	3
CHE 340	Chemical Literature Search .....	1
CHE 410	Instrumental Analysis .....	3
CHE 411	Instrumental Analysis Lab .....	2
CHE 430	Advanced Inorganic Chemistry .....	3
<i>Subtotal</i>	.....	12

### Electives

An additional six credit hours of advanced level electives are required. Electives should be selected in consultation with the Chemistry Department. The following courses may be appropriate: CHE 401, 402, and 432.

*Total* ..... 56

## CHEMISTRY MAJOR FOR BACHELOR OF ARTS

<b>Required Courses</b>		<b>Semester Hours</b>
Basic chemistry core .....		26

### Additional Required Chemistry Courses:

CHE 319	Survey of Physical Chemistry .....	4
CHE 320	Survey of Physical Chemistry Laboratory .....	1

### Electives

A minimum of six semester hours in chemistry courses selected in consultation with and approved by the Chemistry Department is required.

*Total* ..... 37

**Bachelor of Arts Required Ancillary Courses**

MTH 141	Calculus I	4
PHY 201	College Physics I	4
Total ancillary courses required		8

**OCCUPATIONAL HEALTH AND SAFETY AREA OF EMPHASIS**

Students electing this program of study must complete the basic chemistry core (26 hours) in addition to the following required courses. The requirement of a minor is waived for students in this program.

<b>Required Courses</b>		<b>Semester Hours</b>
Basic Chemistry Core		26

**Additional Required Chemistry Courses:**

CHE 319	Survey of Physical Chemistry	4
CHE 320	Survey of Physical Chemistry Laboratory	2
CHE 410	Instrumental Analysis	3
CHE 411	Instrumental Analysis Laboratory	2
CHE 431	Biochemistry I	4
CHE 435	Biochemistry Laboratory	1

**Required Occupational Health and Safety Courses:**

CHE 250	Introduction to Occupational Health and Safety	3
CHE 350	Occupational Safety	3
CHE 415	Instrumentation and Analysis in the Occupational Environment	4
CHE 420	Evaluation and Control of Air Quality	3
CHE 425	Principles of Occupational Health and Safety	3
CHE 450	Occupational Toxicology	3
CHE 475	Occupational Health and Safety Internship	8

**Required Ancillary Courses:**

BIO 108	General Introduction to Biology	4
BIO 232	Human Anatomy and Physiology II	4
BIO 240	General Microbiology	4
MTH 121	Introduction to Statistics	3
MTH 141	Calculus I	4
PHY 201	College Physics I	4
PHY 203	College Physics I Laboratory	1
<i>Total</i>		92

**Electives**

The following courses are recommended as electives:

SPE 101	Fundamentals of Speech Communication	3
COM 261	Introduction to Technical Writing	3
ECO 201	Principles of Economics-Macro	3
MGT 461	Labor/Employee Relations	3

**CRIMINALISTICS AREA OF EMPHASIS**

Students electing this program of study must complete the basic chemistry core (26 hours) in addition to the following required courses. The requirement of a minor is waived for students in this program.

<b>Required Courses</b>		<b>Semester Hours</b>
Basic Chemistry Core		26

**Additional Required Chemistry Courses:**

CHE 319	Survey of Physical Chemistry	4
CHE 320	Survey of Physical Chemistry Lab	1
CHE 410	Instrumental Analysis	3
CHE 411	Instrumental Analysis Laboratory	2
CHE 431	Biochemistry I	4
CHE 435	Biochemistry Laboratory	1

**Required Criminalistics Courses:**

CHE 370	Criminalistics I	4
CHE 371	Criminalistics II	4
CHE 470	Criminalistics I Internship	7
CHE 471	Criminalistics II Internship	7

**Required Criminal Justice Courses:**

CJC	101	Introduction to the Criminal Justice System.....	3
CJC	210	Substantive Criminal Law.....	3
CJC	212	Evidence and Courtroom Procedures.....	3
CJC	312	Constitutional Law.....	3

**Required Ancillary Courses:**

BIO	108	General Introduction to Biology.....	4
BIO	240	General Microbiology.....	4
BIO	360	General Genetics.....	3
MTH	121	Introduction to Statistics.....	4
MTH	141	Calculus I.....	4
PHY	201	College Physics I and	
PHY	203	College Physics I Laboratory	
PHY	<sup>-or-</sup> 231	General Physics I	
PHY	<sup>and</sup> 232	General Physics I Laboratory.....	5
<i>Total</i> .....			99

**MINOR IN CHEMISTRY**

Students completing the basic chemistry core (26 hours) qualify for a minor in chemistry. Students may elect to substitute five semester hours in upper-division chemistry courses for CHE 311\* and 313\*.

<b>Basic Chemistry Core</b>			<b>Semester Hours</b>
CHE	180	General Chemistry I.....	4
CHE	181	General Chemistry II.....	4
CHE	185	General Chemistry Laboratory.....	2
CHE	300	Analytical Chemistry.....	3
CHE	301	Analytical Chemistry Laboratory.....	2
CHE	310	Organic Chemistry I.....	4
CHE	311	Organic Chemistry II.....	3
CHE	312	Organic Chemistry I Laboratory.....	2
CHE	313	Organic Chemistry II Laboratory.....	2
<i>Total</i> .....			26

**MINOR IN CRIMINALISTICS**

<b>Required Courses</b>			<b>Semester Hours</b>
CHE	110	Principles of Chemistry.....	5
CHE	270	Introduction to Criminalistics.....	4
CHE	275	Arson and Explosives.....	3
CHE	276	Field Testing and Laboratory Analysis of Drugs.....	1
CHE	360	Crime Scene Investigation I.....	4
CHE	361	Crime Scene Investigation II.....	4
CJC	212	Evidence and Courtroom Procedures.....	3
<i>Total</i> .....			24

**Earth and Atmospheric Sciences Department**

The Earth and Atmospheric Sciences Department is composed of three separate disciplines: geography, geology, and meteorology. The department offers a bachelor of science degree in meteorology and a bachelor of arts or bachelor of science degree in land use. The bachelor of science degree is recommended for those students desiring a stronger background in the physical and quantitative aspects of the environment.

Minor programs are available in geography, geology, and meteorology. Students working toward teacher licensure in either science or social studies may take courses in geology, geography, or meteorology. Students interested in Environmental Science or Earth Space Science may develop an individualized degree program through Adult Learning Services.

## LAND USE

The Land Use Program is very broad in scope and can be used for a number of career objectives and graduate school programs. Opportunities exist in such areas as planning, cartography, geographic information systems (GIS), air photo and satellite imagery interpretation, environmental and resource management, travel and transportation, mining and mineral resources, residential and industrial development, recreational land use, population analysis, and a variety of other interrelated fields. This program provides a solid foundation for continued study at the graduate level.

### LAND USE MAJOR FOR BACHELOR OF ARTS

<b>Required Core</b>		<b>Semester Hours</b>
MTH 121	Introduction to Statistics .....	4
GEG 122	Map Use .....	2
Choose one from each of the following sets:		
GEG 100	World Regional Geography	
-or-		
GEG 130	Introduction to Human Geography .....	3
GEG 110	Introduction to Physical Geography	
-or-		
GEL 101	General Geology .....	4
GEG 225	Introduction to Geographic Information Systems	
-or-		
GEG 321	Introduction to Cartography .....	4
GEG 361	Principles of Land Use	
-or-		
GEG 401	Environmental Hazards and Planning .....	3
GEG 495	Internship in Geography	
-or-		
GEL 495	Internship in Geology .....	2
<b>Senior Capstone Course:</b>		
GEG 496	Global Environmental Challenges	
-or-		
GEL 496	Environmental Field Studies .....	3
Core total .....		23-25
Emphasis area total .....		19-21
Land use major total .....		42-46

#### Required Areas of Emphasis

In addition to the required land use core, each student must complete one of the areas of emphasis listed below. Within the area of emphasis, students must complete a set of required courses plus electives. Electives are chosen in consultation with a departmental adviser and are designed to provide an integrated and well-planned pattern of courses related to the student's educational and career goals.

<b>Urban Land Use Core</b>		<b>Semester Hours</b>
GEG 336	Geography of Economic Activity .....	3
GEG 360	Urban Geography .....	3
GEG 461	Urban and Regional Planning .....	3
URS 450	Cities of the Future .....	3
Urban land use electives .....		7
(Choose a minimum of seven hours of elective credit, in consultation with a departmental adviser.)		
Subtotal .....		19

<b>Geographic Information Systems Core</b>		<b>Semester Hours</b>
GEG 225	Introduction to GIS	
-or-		
GEG 321	Cartography .....	4
	(whichever course was not taken as part of the core)	
GEG 322	Intermediate Cartography .....	3
GEG 325	Computer Cartography .....	3
GEG 485	Advanced Geographic Information Systems .....	3
CSI 101	Introduction to Computer Science .....	3
Geographic Information Systems Electives .....		6
(Choose a minimum of six hours of elective credit, in consultation with a departmental adviser.)		
Subtotal .....		21

<b>Environment and Resources Core</b>		<b>Semester Hours</b>
GEG 120	Introduction to Environmental Science	3
GEG 140	World Resources	3
GEG 484	Remote Sensing	3
ECO 345	Environmental Economics	3
Environment and resources electives		7
(Choose a minimum of seven hours of elective credit, in consultation with a departmental adviser.)		
Subtotal		19

<b>Geology Core</b>		<b>Semester Hours</b>
(NOTE: students selecting this area of emphasis will be required to minor in geology)		
GEL 312	Advanced Geomorphology	4
GEL 342	Soil Resources	4
GEL 344	Energy and Mineral Resources	4
GEL 400	Environmental Geology	3
Geology Electives		5
(Choose a minimum of five hours of elective credit, in consultation with a departmental adviser.)		
Subtotal		20
<b>Total</b>		<b>43</b>

**Required Minor**

Except for the geologic area of emphasis, the field of study selected as a minor is at the option of the student.

**LAND USE MAJOR FOR BACHELOR OF SCIENCE**

To fulfill the requirements for the bachelor of science with a major in land use, a student must complete the requirements as listed above under the bachelor of arts; however, the student must minor in one of the sciences, or science-oriented fields as approved by the Earth and Atmospheric Sciences Department.

**MINOR IN GEOLOGY**

<b>Required Core</b>		<b>Semester Hours</b>
GEL 101	General Geology	4
Any 100-level GEL course		3-4
GEL 201	Rocks and Minerals	4
GEL 202	The Stratigraphy and Structure of the Earth	4
Any 300- or 400-level GEL courses		8
<b>Total</b>		<b>23-24</b>

**MINOR IN GEOGRAPHY**

<b>Required Core</b>		<b>Semester Hours</b>
GEG 112	Orienteering	1
GEG 122	Map Use	2
GEG 130	Introduction to Human Geography	3
GEG 123	Weather and Climate	3
-or-		
MTR 140	Introduction to Meteorology	3

**Structured Electives**

A minimum of 13 additional hours must be selected in consultation with a departmental adviser. At least one course must be selected from each of the following groups to satisfy this requirement.

Physical (3)		
GEG 110	Introduction to Physical Geography	3
GEG 124	Landforms of the United States	3
GEL 101	General Geology	4
Resources and Environment (3)		
GEG 120	Introduction to Environmental Science	3
GEG 140	World Resources	3
GEG 340	Water Resources	3
GEL 342	Soil Resources	4
GEL 344	Energy and Mineral Resources	4
Spatial Analysis and Planning (3)		
GEG 360	Urban Geography	3
GEG 361	Principles of Land Use	3

GEG 362	Population, Resources, and Land Use	3
GEG 363	Transportation Planning and Land Use	3
GEG 462	Land Use: Residential	3
Urban Studies		
Regional Geography (3)		
GEG 100	World Regional Geography	3
GEG 202	Geography of Colorado	3
GEG 210	Geography of Latin America	2
GEG 220	Geography of the United States	3
GEG 300	Historical Geography of the United States	3
Plus one additional hour of field study in either geography or geology for a total of 22 hours.		
<i>Total</i>		22

## Meteorology Department

Meteorology is the science of the atmosphere. Modern meteorologists are involved in weather observing, forecasting, research, and dissemination of weather information to the public. Meteorologists also study global weather and climate, and investigate the influence that human beings exert on the Earth's climate. Metro State's forecasting laboratory includes a computerized observing station, daily weather maps, satellite images, and access to the national weather database. The bachelor of science degree in meteorology follows American Meteorological Society recommendations for undergraduate programs. Students should contact a meteorology faculty member to discuss degree programs, career opportunities, and graduate school options.

### METEOROLOGY MAJOR FOR BACHELOR OF SCIENCE

Required Courses		Semester Hours
MTR 140	Introduction to Meteorology	3
MTR 142	Introduction to Meteorology Lab	1
MTR 241	Meteorological Instrumentation	3
MTR 340	Synoptic Meteorology I	4
MTR 341	Synoptic Meteorology II	4
MTR 343	Dynamic Meteorology I	3
MTR 344	Physical Meteorology	3
MTR 345	Dynamic Meteorology II	3
MTR 441	Numerical Weather Prediction	3
MTR 442	Industrial Meteorology	3
MTR 444	Climatology	3
Elective meteorology courses		7
Subtotal		40
<b>Additional Course Requirements*</b>		
ENG 101	Freshman Composition: The Essay	3
ENG 102	Freshman Composition: Analysis, Research, and Documentation	3
MTH 121	Introduction to Statistics	4
MTH 141	Calculus I	4
MTH 151	Computer Programming: FORTRAN	4
MTH 241	Calculus II	4
PHY 231, 232	General Physics I and Lab	5
PHY 233, 234	General Physics II and Lab	5
CHE 180	General Chemistry I	4
Level I Communications		3
Level II Arts and Letters		6
Level II Historical		3
Level II Social Science		6
Level III Senior Experience		3
Subtotal		58
Approved electives		10
<i>Total</i>		126

\*Students must consult a faculty adviser regarding general studies' requirements.

**MINOR IN METEOROLOGY**

Required Courses	Semester Hours
MTR 140 Introduction to Meteorology .....	3
MTR 142 Introduction to Meteorology Lab.....	1
MTR 340 Synoptic Meteorology I.....	4
MTR 341 Synoptic Meteorology II.....	4
Approved electives .....	8
<i>Total</i> .....	<i>20</i>

**Mathematical and Computer Sciences Department**

The Mathematical and Computer Sciences Department offers bachelor of arts and bachelor of science degrees in mathematics and a bachelor of science degree in computer science. The department offers both a mathematics and computer science minor, both of which complement such majors as engineering technology, the other sciences, and economics. In addition, the minor program in computer science complements the mathematics major.

In addition to the general mathematics major, the department offers a mathematics major in five areas of emphasis encompassing a variety of significant mathematical ideas. These areas of emphasis give the student background for graduate school in theoretical mathematics, as well as background for both graduate school and employment in mathematically related fields including classical mathematics applications, scientific computing, probability and statistics, and mathematics education. The degree program in computer science adheres to nationally recognized standards and provides students with a more technical alternative to the mathematics emphasis in computer science.

**All students who are considering a major or minor in mathematics or computer science are expected to consult with faculty for advising.**

A degree in mathematics is useful in a variety of professional fields including, among many others, business, economics, computer science, government, education, technology, and science. Students are invited to consult with the department concerning career potentials.

All majors in mathematics are required to complete the following basic core of courses (with a required minimum grade of "C" in each of these courses). The department strongly recommends that students interested in the applied mathematics emphasis take sections of calculus using Mathematica.

Basic Mathematics Core	Semester Hours
MTH 141* Calculus I or MTH 145 Calculus & Mathematica I .....	4
MTH 241* Calculus II or MTH 240 Calculus & Mathematica II .....	4
MTH 242* Calculus III or MTH 245 Calculus & Mathematica III.....	4
MTH 310 Introduction to Mathematical Proofs.....	3
<i>Total</i> .....	<i>15</i>

\*Some sections of this course have a Mathematica component.

In addition to the core, each major, except for one in secondary education, is required, as part of the accountability requirements of the department, to take a course that is used for assessment. For mathematics majors, this is a one-hour course that also includes an overview of the major. Each major is also required to take a Senior Experience course and to complete a minor. The following mathematics courses have been approved as Senior Experience courses: MTH 421, 441, and 448.

**MAJOR IN MATHEMATICS FOR BACHELOR OF ARTS OR BACHELOR OF SCIENCE**

The Department of Mathematical and Computer Sciences offers coursework leading to the bachelor of arts or bachelor of science degree. The student may choose either degree.

The student may choose to complete a mathematics major in:

1. Mathematics — General
2. Mathematics — Applied Mathematics Emphasis
3. Mathematics — Computer Science Emphasis
4. Mathematics — Secondary Education Emphasis
5. Mathematics — Statistics and Probability Emphasis
6. Mathematics — Theoretical Mathematics Emphasis

The requirements for each are as follows:

**MATHEMATICS — GENERAL**

<b>Required Courses</b>	<b>Semester Hours</b>
Basic Core.....	15
MTH 439 Mathematics Seminar.....	1
<i>Total</i> .....	16

A minimum of 24 credit hours chosen from MTH 151, MTH 214\*, or any upper-division mathematics courses. The 24 credit hours must include at least 20 upper-division hours, at least one Senior Experience course in mathematics, and one of the following sequences:

MTH 311–314; 321–322; 342–344; 421–422; 441–442; and 448–449.....	24
<i>Total</i> .....	40

\* No credit is allowed for MTH 214 if MTH 314 is also taken.

**MATHEMATICS — APPLIED MATHEMATICS EMPHASIS**

The emphasis in applied mathematics is designed to meet the needs of the scientific, technical, and computer based economy and to prepare the student for graduate study. The department has made every effort to have state of the art technologies and practices available for student use and strongly recommends that students interested in this emphasis take sections of calculus using Mathematica.

<b>Required Courses</b>	<b>Semester Hours</b>
Basic Core.....	15
MTH 151 Computer Programming: FORTRAN.....	4
MTH 314 Linear Algebra.....	4
MTH 321 Probability and Statistics.....	4
MTH 342 Differential Equations.....	4
MTH 344 Partial Differential Equations.....	4
MTH 448 Numerical Analysis I.....	4
MTH 449 Numerical Analysis II.....	4
MTH 459 Applied Mathematics Senior Seminar.....	1
<i>Total</i> .....	44

It is recommended that students take one or more of the following courses in addition to the requirements: MTH 322, 325, 347, 421, 441, 442, and 445.

**MATHEMATICS — COMPUTER SCIENCE EMPHASIS**

This emphasis is designed for the student who wants to combine applied mathematics or statistics with computer science. The required computer science minor includes the core courses for the computer science major.

<b>Required Courses</b>	<b>Semester Hours</b>
Basic Core.....	15
MTH 314 Linear Algebra.....	4
MTH 321 Probability and Statistics.....	4
MTH 342 Differential Equations.....	4
MTH 448 Numerical Analysis I.....	4

Two of the following courses:

MTH 322 Design of Experiments.....	4
MTH 344 Partial Differential Equations.....	4
MTH 421 Probability Theory.....	4
MTH 422 Stochastic Processes.....	4
MTH 449 Numerical Analysis II.....	4

One of the following courses:

MTH 429 Senior Statistics Project.....	1
MTH 439 Mathematics Senior Seminar.....	1
MTH 459 Applied Mathematics Senior Seminar.....	1
<i>Total</i> .....	40

<b>Required Computer Science Minor</b>	<b>Semester Hours</b>
CSI 130 Introduction to Structured Programming.....	4
CSI 230 Advanced Programming and Data Structures.....	4
CSI 240 Computer Organization and Assembly Language.....	4
CSI 310 Discrete Mathematics.....	4
CSI 330 Foundations of File Structures.....	4



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One of the following courses:

CSI 421	Software Development and Engineering	4
CSI 430	Advanced Data Structures and Algorithm Analysis	4
<i>Total</i>		24

## MATHEMATICS — SECONDARY EDUCATION EMPHASIS

The emphasis in secondary education is for the preparation of classroom teachers of mathematics. Students seeking teacher licensure in mathematics must satisfy the Teacher Education Program requirements of Metro State in addition to all of the mathematics major requirements.

### Required Courses

### Semester Hours

Basic Core		15
CSI 261	Computer Programming for Educators	4
MTH 311	Abstract Algebra I	3
MTH 314	Linear Algebra	4
MTH 321	Probability and Statistics	4
MTH 360	History of Mathematics	3
MTH 361	Methods of Teaching Mathematics	3
MTH 365	Foundations of Geometry	3
A Senior Experience course in mathematics*		4
<i>Total</i>		43

\* EDS 429 or EDU 419 may be substituted.

## MATHEMATICS — STATISTICS AND PROBABILITY EMPHASIS

The emphasis in statistics and probability stresses the application of the principles and methods of statistics and probability in the biological, physical, and social sciences and engineering. This emphasis also prepares the student for graduate study.

### Required Courses

### Semester Hours

Basic Core		15
MTH 151	Computer Programming: FORTRAN	4
MTH 214	Computational Matrix Algebra*	2
MTH 321	Probability and Statistics	4
MTH 322	Design of Experiments	4
MTH 325	Optimization Techniques I	4
MTH 421	Probability Theory	4
MTH 422	Stochastic Processes	4
MTH 429	Senior Statistics Project	1
<i>Total</i>		42

\*MTH 314 may be substituted for MTH 214.

## MATHEMATICS — THEORETICAL MATHEMATICS EMPHASIS

The emphasis in theoretical mathematics prepares the student for further specialized study at the graduate level as well as being adaptable for preparation for positions in business, industry, and government.

### Required Courses

### Semester Hours

Basic Core		15
MTH 311	Abstract Algebra I	3
MTH 314	Linear Algebra	4
MTH 439	Mathematics Senior Seminar	1
MTH 441	Advanced Calculus I	4
MTH 442	Advanced Calculus II	3
A minimum of seven credit hours chosen from any upper-division mathematics courses		7
<i>Total</i>		37

## MINOR IN MATHEMATICS

### Required Core

### Semester Hours

MTH 141	Calculus I or MTH 145 Calculus and Mathematica I	4
MTH 151	Computer Programming: FORTRAN	
-or-		
CSI 130	Introduction to Structured Programming	4
MTH 241	Calculus II or MTH 240 Calculus and Mathematica II	4
Subtotal		12

**Electives**

A minimum of 10 hours at least seven of which must be at the upper-division level. These 10 hours may include MTH 242 or MTH 245, any upper-division mathematics course, or any course approved by the Mathematical and Computer Sciences Department.

Electives .....	10
Total .....	22

**MAJOR IN COMPUTER SCIENCE FOR BACHELOR OF SCIENCE**

The department offers a complete degree program in computer science that adheres to the nationally recognized standards set by the Computer Sciences Accreditation Board. Students are encouraged to contact the department for further details. The Senior Experience course in computer science is CSI 421. The CSI program includes a required mathematics minor.

Required Core Courses*		Semester Hours
CSI 130	Introduction to Structured Programming**	4
CSI 230	Advanced Programming and Data Structures	4
CSI 240	Computer Organization and Assembly Language	4
CSI 310	Discrete Mathematics	4
CSI 321	Principles of Programming Languages	4
CSI 330	Foundations of File Structures	4
Subtotal		24

\*A grade of "C" is required in each of the core courses

\*\*CSI 130 is a core course and part of the MTH minor

**Required Advanced Courses**

CSI 421	Software Development and Engineering	4
CSI 459	Computer Science Senior Practicum	2

Two courses selected from

CSI 306	Computer Architecture and Systems Programming	4
CSI 331	Fundamentals of Database Systems	4
CSI 430	Advanced Data Structures and Algorithm Analysis	4

A minimum of 8 additional credit hours selected from the following courses:

CSI 306, 312, 328, 331, 351, 412, 430, 452, CMS 305, MTH 449	8
Subtotal	22

**Required Ancillary Courses**

COM 261	Introduction to Technical Writing	3
EET 231	Digital Logic and Telecommunications	4
PHI 336	Business Ethics	3
Subtotal		10

**Required Mathematics Minor\***

MTH 141	Calculus I or MTH 145 Calculus and Mathematica I	4
MTH 214	Computational Matrix Algebra**	2
MTH 241	Calculus II	
-or-		
MTH 240	Calculus and Mathematica II	4
MTH 321	Probability and Statistics (Calculus-based)	4

Two courses chosen from

MTH 322	Design of Experiments	4
MTH 325	Optimization Techniques I	4
MTH 448	Numerical Analysis I	4
Subtotal		22

\*CSI 130 is part of the mathematics minor

\*\*MTH 314 may be substituted for MTH 214

**Additional Course Requirements**

ENG 101*	Freshman Composition: The Essay	3
ENG 102*	Freshman Composition: Analysis, Research and Documentation	3
SPE 101*	Fundamentals of Public Speaking	3
PHY 231-234*	General Physics I, Lab I, General Physics II, Lab II	
-or-		
CHE 180, 181, 185*	General Chemistry I, II, and Laboratory	10

XXX XXX* Level II General Studies — Historical .....	3
XXX XXX* Level II General Studies — Arts and Letters .....	3
XXX XXX* Level II General Studies — Social Sciences .....	6
Six additional hours from the areas of communication, historical, arts and letters, and/or social sciences .....	6
Free electives .....	5
Subtotal .....	42
*These courses, along with PHI 336, count as general studies courses. The General Studies Level I mathematics requirement is satisfied by the mathematics minor. The multicultural graduation requirement of 3 credit hours must also be satisfied.	
Total .....	120

**MINOR IN COMPUTER SCIENCE**

<b>Required Courses</b>	<b>Semester Hours</b>
CSI 130 Introduction to Structured Programming .....	4
CSI 230 Advanced Programming and Data Structures .....	4
<b>Electives</b>	
A minimum of 12 semester hours chosen from CSI 240 and upper-division CSI courses .....	12
Total .....	20

**Physics Department**

The Physics Department offers coursework leading to a bachelor of science and to a bachelor of arts degree. Minors in physics and theoretical physics are also offered. Undergraduates preparing for work in industry or for graduate study should take the bachelor of science in physics. Students preparing to teach secondary school physics should take the bachelor of arts in physics in addition to satisfying the requirements for licensure in science. See the Teacher Education Department for details.

The Physics Department is taught jointly by the faculties of Metro State and the University of Colorado at Denver. Metro State students will receive instruction from the faculty of both institutions.

The Physics Department also offers courses in astronomy, which are designed primarily as general interest courses.

**PHYSICS MAJOR FOR BACHELOR OF ARTS**

<b>Required Courses</b>	<b>Semester Hours</b>
PHY 231 General Physics I .....	4
PHY 233 General Physics II .....	4
PHY 232 General Physics Laboratory I .....	1
PHY 234 General Physics Laboratory II .....	1
PHY 281 Modern Physics .....	3
PHY 282 Classical Physics .....	3
PHY 321 Analytical Mechanics .....	4
PHY 381 Quantum Mechanics .....	3

**Required Option (Select A or B)**

**Option A:**

PHY 371 Physics Laboratory I .....	2
PHY 472 Advanced Physics Laboratory II .....	2
PHY 492 Physics Senior Seminar .....	1

**Option B:**

PHY 461 Computational Physics I .....	2
PHY 462 Computational Physics II .....	2
PHY 492 Physics Senior Seminar .....	1

**Electives**

A minimum of 10 additional semester hours of upper-division physics courses selected in consultation with and approved by the Physics Department .....	10
Total Hours Required .....	38

A one-year sequence of PHY 201-202-203-204 may be substituted for the PHY 231-233-232-234 requirements with the consent of the Physics Department.

The student is urged to take one year of general chemistry and one year of electronics. These courses should be chosen in consultation with the student's adviser in the Physics Department.

**PHYSICS MAJOR FOR BACHELOR OF SCIENCE**

<b>Required Courses</b>			<b>Semester Hours</b>
PHY	231	General Physics I . . . . .	4
PHY	233	General Physics II . . . . .	4
PHY	232	General Physics Laboratory I . . . . .	1
PHY	234	General Physics Laboratory II . . . . .	1
PHY	281	Modern Physics . . . . .	3
PHY	282	Classical Physics . . . . .	3
PHY	321	Analytical Mechanics . . . . .	4
PHY	333	Electricity and Magnetism . . . . .	4
PHY	341	Thermal Physics . . . . .	3
PHY	371	Physics Laboratory I . . . . .	2
PHY	381	Quantum Mechanics I . . . . .	3
PHY	481	Atomic and Molecular Structure . . . . .	3

**Required Option (Select A or B)****Option A:**

PHY	471	Advanced Physics Laboratory I . . . . .	2
PHY	472	Advanced Physics Laboratory II . . . . .	2
PHY	492	Physics Senior Seminar . . . . .	1

**Option B:**

PHY	461	Computational Physics I . . . . .	2
PHY	462	Computational Physics II . . . . .	2
PHY	492	Physics Senior Seminar . . . . .	1

**Electives**

A minimum of eight additional semester hours in upper-division physics courses must be selected in consultation with and approved by the Physics Department . . . . . 8

*Total* . . . . . 48

A one-year sequence of PHY 201-202-203-204 may be substituted for the PHY 231-233-232-234 requirements with the consent of the Physics Department.

The student is urged to take one year of general chemistry and one year of electronics. These courses should be chosen in consultation with the student's adviser in the Physics Department.

**MINOR IN PHYSICS**

<b>Required Courses</b>			<b>Semester Hours</b>
PHY	231	General Physics I . . . . .	4
PHY	233	General Physics II . . . . .	4
PHY	232	General Physics Laboratory I . . . . .	1
PHY	234	General Physics Laboratory II . . . . .	1
PHY	281	Modern Physics . . . . .	3
PHY	282	Classical Physics . . . . .	3

A minimum of eight additional semester hours in upper-division physics courses must be selected in consultation and approved by the Physics Department . . . . . 8

*Total* . . . . . 24

A one-year sequence of PHY 201-202-203-204 may be substituted for the PHY 231-233-232-234 requirements with the consent of the Physics Department.

**MINOR IN THEORETICAL PHYSICS**

Students entering this program are expected to have facility in using ordinary differential equations, vector calculus, and linear algebra. These skills are normally acquired in MTH 242, 314, and 342 or in PHY 311 and 312.

With the consent of the Physics Department, students with strong backgrounds in physics may elect not to complete PHY 231 and 233 and may substitute 8 semester credit hours of approved physics electives.

<b>Required Courses</b>			<b>Semester Hours</b>
PHY	231	General Physics I . . . . .	4
PHY	233	General Physics II . . . . .	4
PHY	321	Analytical Mechanics . . . . .	4
PHY	333	Electricity and Magnetism . . . . .	4
PHY	341	Thermal Physics . . . . .	3
PHY	461	Computational Physics I . . . . .	2
PHY	463	Continuum Physics . . . . .	3
<i>Total</i> . . . . .			24

## INSTITUTE FOR WOMEN'S STUDIES AND SERVICES

The institute offers a range of academic courses, both interdisciplinary and in the disciplines, which study the diversity of women's lives and experiences in the U.S. and elsewhere. Students may elect to minor in women's studies or may choose an individualized major or minor degree program. Several women's studies courses are offered for general studies course credit or in fulfillment of the multicultural graduation requirement. Students seeking licensure as secondary education teachers of the social sciences may select from a number of women's studies courses in fulfilling their requirements. Also offered are cooperative education internships in business, government, and community organizations.

Women's studies, valuing a diverse curriculum, fosters the inclusion of material on all women, men of color, and ethnic minorities in courses throughout the college. It identifies and encourages faculty, administrative, and professional mentoring of women students and facilitates collaborative interdisciplinary research on women.

The institute also provides support services for all female students whether or not they elect women's studies courses. These services include advising, information, and referral; workshops, conferences, and seminars; a newsletter; resources such as the *Women's Action Guide* and *The Scholarship Search* and a small multimedia library containing books, periodicals, manuscripts, video and audio tapes, and newspaper files all focusing on women's issues. Information and application materials for a number of scholarships are available through the institute, among them, the Pamela McIntyre-Marcum Scholarship, scholarships from several local branches of the American Association of University Women, and the Executive Women International Scholarship. During the academic year the institute convenes the interdisciplinary Front Range Feminist Scholars Colloquium bringing together faculty, graduate students, and independent scholars from the metropolitan area to share research, curriculum development, and applications of feminist scholarship. The institute also engages in cooperative ventures with women's organizations in education, business, government, and the community, for example, the Colorado Women's Agenda; African American Women 40+; and the Colorado Committee for Women's History. Finally, to encourage and recognize excellence, the institute sponsors Outstanding Women Awards annually in the spring.

### Women's Studies

#### INDIVIDUALIZED DEGREE PROGRAM

Through the Office of Adult Learning Services, students may construct an individualized interdisciplinary major combining work in women's studies with work in other disciplines. Students should consult the director of the Institute of Women's Studies and Services and the director of adult learning services to initiate planning. The women's studies individualized degree program is appropriate for any student, particularly those who plan to work specifically with female populations. Faculty strongly recommend a cooperative education internship.

A women's studies degree can be combined effectively with courses in management, organizational development, psychology, history, English, education, social work, nursing, human services, law enforcement, advertising, public relations, marketing, finance, and other fields appropriate to the student's interest. Students gain a sensitivity to women's issues and are thus prepared to work with both general and female populations in a variety of areas.

Employment opportunities for women's studies students may be found in managing women's resource centers, rape crisis programs, and battered women's shelters. Students might also work in community counseling and consulting or develop workshops or special programming for women in business and industry. Graduates are also employed in banking and as executives in professional associations. Students who plan to work in higher education, law, or medicine may find a women's studies degree a useful base for graduate or professional study.

#### MINOR

Also interdisciplinary, the women's studies minor uses faculty expertise from many different departments. Faculty strongly recommends a cooperative education internship. The objectives of both the individualized major and minor include: heightened awareness for women themselves; review of the cultural patterns that define women; the study of the historical achievements of women in all disciplines; and the exploration of emerging needs and opportunities for women. Emphasis is on both personal and professional growth. These objectives are met within the context of the new scholarship on women, including women of color, ethnic minority women, and international women.

The courses are appropriate for students in education, guidance and counseling, law enforcement, human services, business management, advertising, public relations, communication, liberal arts, and the behavioral and social sciences.

Men are welcome and encouraged to study the scholarship that focuses on women. They may find from such study a conceptual framework that will enable them to better understand, appreciate, and work with women.

<b>Required Courses</b>	<b>Semester Hours</b>
WMS 101 Introduction: Woman in Transition .....	3
WMS 165 Women in United States History .....	3
WMS 331 Women and the Law .....	3
WMS 351 Feminist Theory .....	3
WMS 475 Senior Seminar .....	3
Electives .....	9
<i>Total</i> .....	24

#### **Electives:**

In addition to the core courses, nine semester hours of electives acceptable to or taught through women's studies are required, bringing the total number of semester hour credits for a women's studies minor to 24. These courses, some of which are interdisciplinary, are selected in consultation with the women's studies faculty and are approved by the institute.

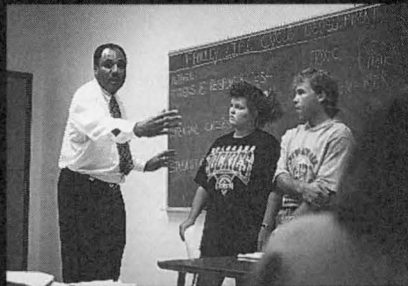
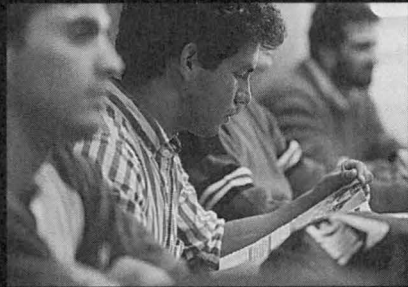
Women's studies core courses are supplemented each semester by topics, current issues, and cluster courses (WMS 342, 344, 345, 346, 367, and 425); in addition, students should check the *Class Schedule* for other relevant offerings. Appropriate electives are often listed in other departments and may be cross-listed with women's studies. For example, students may take WMS 331 for either women's studies credit or for credit in CJC 371. Students may also take WMS 165 for either women's studies credit or for credit in history (HIS 165). Similar offerings are available in humanities, fine arts, and social and behavioral sciences. Students should check the *Class Schedule* each semester for appropriate cross-listed courses. Students are urged to get advising early in their course of study and to plan their programs with care, as some courses are offered only every other semester.

## **Women's Services**

The institute is committed to the empowerment of women through education. In order to assist women with a positive college experience, women's services provides referrals to campus and community resources, information about scholarships, assistance to community women with the process of entering Metro State, advocacy services for students dealing with harassment or discrimination, and programs and events that focus on issues of particular concern to women. The institute houses a small library with a variety of books and other resource materials on women's experiences, histories, and contributions to society. Students who need assistance should make an appointment with the coordinator of women's services.

■

*The School of  
Professional Studies  
provides students  
with the  
knowledge, skill, and  
performance competencies  
needed to  
successfully enter  
a chosen profession.*



## SCHOOL OF PROFESSIONAL STUDIES

The School of Professional Studies offers many and varied degree and teaching licensure programs. Every program is designed not only to prepare graduates for success in a specific career, but to provide a broad educational background for career and life enhancement.

The major purpose of the school is to provide students with the knowledge, skills, and performance competencies needed to successfully enter a chosen profession. The School of Professional Studies includes three divisions, 12 departments, the Academy for Teaching Excellence, and other administrative units.

The purpose of the Academy for Teaching Excellence is to meet the educational, social, and economic demands of the 21st century by providing programs, activities, and services to improve teaching and learning at Metro State, in the public schools, and in the local business community. The academy serves the needs of Metro State faculty by providing workshops, seminars, assistance in conducting applied research, curriculum and program development, and resources on teaching effectiveness. The academy houses the Metro State Center for Critical Thinking, a regional center of the National Center for Excellence in Critical Thinking Instruction.

The Division of Education consists of three academic departments: Early Childhood and Elementary Education, Secondary Education, and Reading. The division also includes a parent/child development center, an educational resource center, Denver Public Schools/Metropolitan State College of Denver partnership schools, and the Office of Clinical Services. The three academic departments in the Division of Education offer teacher licensure programs in early childhood, elementary education, and 12 secondary education fields.

The Division of Technology consists of three departments: Aerospace Science, Engineering Technology and Industrial Studies, and Technical Communications. The three academic departments offer nine major and 10 minor degree programs.

The Division of Public Service Professions consists of six departments: Criminal Justice and Criminology; Hospitality, Meeting and Travel Administration; Human Services; Military Science; Nursing and Health Care Management; Human Performance, Sport and Leisure Studies; and the Center for Addiction Studies. The six academic departments offer six majors and nine minor degree programs.

There are more than 250 full-time and part-time faculty, administrators, and support personnel in the School of Professional Studies that are highly committed to assisting students attain their career goals.

### DIVISION OF EDUCATION

The Division of Education is composed of the Early Childhood and Elementary Education Department, the Secondary Education Department, the Reading Department, the Office of Clinical Services, the Parent Education Program, the Child Development Center, and the Education Resource Center. The Division of Education is the professional education division of the Professional Education Unit (PEU). The PEU consists of faculty in the departments of the schools of Professional Studies; Letters, Arts and Sciences; and Business.

The teacher education programs offer professional courses leading to licensure in the areas of early childhood education, elementary education, and secondary education. The programs are fully accredited by the National Council for the Accreditation of Teacher Education and the Colorado Department of Education.

The underlying theme of the teacher preparation programs at Metro State is The Teacher as a Decision-Maker in Diverse Contexts. This means that all courses and field experiences expose students to a wide variety of theories, models, and practices that will develop decision-making skills as teachers and enable them to work with a wide range of students in a broad spectrum of settings. There are a number of premises that underlie The Teacher as a Decision-Maker in Diverse Contexts theme. The following premises guide the teacher education programs and determine the content of the coursework and experiences students receive:

Premise 1. The practices of the effective decision-making teacher are grounded in philosophical beliefs, research, and theory.

Premise 2. The decision-making teacher must be a lifelong learner who recognizes the needs of a diverse and changing society.



Premise 3. The integration and application of knowledge from general education, academic specialization, and professional studies contributes to the development of effective teachers.

Premise 4. Effective teachers are best prepared through extensive participation in a variety of pedagogical models and in a range of clinical and field experiences.

Premise 5. Decision-making teachers effectively use reflective and critical thinking to translate theory into practice.

The Early Childhood and Elementary Education Department offers minors in early childhood and exceptionalities.

The Division of Education, with the cooperation of the departments of Modern Languages and Chicano Studies, offers a minor and endorsement in bilingual/bicultural education.

The Reading Department offers one of the few undergraduate reading minors in the area. Course offerings provide the prospective teacher with the skills to teach developmental and remedial reading at the early childhood, elementary, and secondary school levels. The department also offers college-level reading courses.

The Office of Clinical Services serves to integrate the laboratory experiences in the professional education programs. Requests for observations, research projects and studies, and tutoring situations, using diverse off-campus laboratory settings, are coordinated through this office.

The Child Development Center is a preschool laboratory that serves as a training facility for students enrolled in early childhood and other educational programs. The center provides a setting for college students to observe and participate in an ongoing educational program for young children.

Laboratory and other partnership schools are a cooperative endeavor of Metropolitan State College of Denver and selected public schools. The purposes of the laboratory and partnership schools are to work toward the simultaneous renewal of K-12 schools and higher education by (1) providing more effective education for the K-12 pupils and the Division of Education students; (2) providing professional development and collaborative opportunities for both faculties; and (3) fully using all available resources of the Auraria campus and communities.

The Education Resource Center supports students and faculty in the Division of Education with a state-of-the-art computer laboratory, audio-visual resources, and other materials for coursework and field experiences. Among other resources, the Center houses the MECC Collection of Educational Software, the George Reavis Library from PHI DELTA KAPPA, and a selection of professional journals donated by faculty for student use. The Educational Resource Center is the site of guest lectures, workshops, seminars, and meetings within the Professional Education Unit.

## **Early Childhood and Elementary Education Department, Licensure, and Related Programs**

The Early Childhood and Elementary Education Department offers professional preparation for teaching and education-related careers. This department prepares students to apply to the Colorado Department of Education for provisional teacher licensure and endorsement to teach in public schools in Colorado at two levels: early childhood (preschool through third grade) and elementary (kindergarten through sixth grade). Minors are available in early childhood education, the exceptionalities, bilingual/bicultural education with endorsement, and parent education. Courses and workshops are offered to meet Colorado Department of Education requirements for renewal of teacher licenses and Colorado Department of Social Services group leader and director qualifications. A program for licensure in K-6 Physical Education is also available.

### **REQUIREMENTS FOR EARLY CHILDHOOD/ELEMENTARY EDUCATION**

Students seeking a bachelor's degree from Metropolitan State College of Denver must meet all requirements for a bachelor's degree and the course of study leading to the desired license and endorsement. Students who already have a bachelor's or higher degree should consult with an adviser to determine the applicability of their previous degree(s) and coursework to current requirements. Specific course requirements are given under each licensure and major program.

Requirements for entry to Metro State's programs for initial teacher licensure are established by the Colorado Department of Education and Metropolitan State College of Denver.

- I. Provisional admission: Students who have not taken an education class previously in the state of Colorado may be provisionally admitted to a teacher education program for one semester. A provisional admittance card will be issued to the student in the teacher education office or in the education class in which the student is enrolled. Provisional admittance is valid for one semester only. Students who have previously taken courses in Colorado must be formally admitted prior to enrolling for courses in any education program at Metro State. Education courses less than 10 years old that are a close match to the required courses may be counted.
- II. Formal admission: Prior to or during their first semester in the professional education sequence, students must meet the following requirements for formal admission to the program:
- Early childhood education and elementary teacher education students must have a minimum grade point average of 2.50 on their most recent 30 semester hours of coursework completed at a regionally accredited institution of higher education. Early Childhood Licensure candidates who have not accrued 30 hours of college credit must have a GPA of 2.50 for a minimum of 12 semester hours of college work.
  - All teacher education students must pass the California Achievement Test in mathematics, spelling, and language usage at or above the 75th percentile (or other tests that may be specified by the Colorado Department of Education).
  - All teacher education students must demonstrate oral competence. Students seeking bachelor's degrees should pass a public speaking course with a grade of "B" or above. Students who earn a grade of "C" may attempt an oral examination. Students who have bachelor's degrees but did not pass a speech course with a grade of "B" or above may attempt an oral examination.
  - All teacher education students must complete 50 clock hours of successful experience working with children and youth.
  - All teacher education students must submit the Application for Admission into a teacher education program with appropriate adviser's authorizing signatures and copies of transcripts of all college coursework to the Teacher Education Office.
  - All teacher education students must show evidence of a negative TB test within the last year.
  - All teacher education students must obtain a normal admission card from the Teacher Education Office to verify that initial requirements have been met. Students may not take additional teacher education courses until they meet these requirements. All requirements for full admission must be met before the first day of the next semester.

### III. Admission to Student Teaching

All students should meet with an adviser in their Early Childhood or Elementary Education Program to develop a program plan. In Early Childhood and Elementary Education, transfer students or students who already have a bachelor's degree may have to take specified general studies courses if they have not fulfilled these requirements in their previous work. Students who have previous work in education should meet with an education adviser for an evaluation before enrolling.

The Early Childhood and Elementary Education Department substitutes no coursework older than 10 years for required courses in the teacher licensure sequence.

Grades below a "C" in the professional courses will not be accepted. Courses for which a grade below a "C" is received must be repeated and the college policy on last grade stands will apply.

Students must complete formal application to the Office of Clinical Services no later than the following dates:

- For fall semester student teaching - third Friday in February
- For spring semester student teaching - third Friday in September

For admission to student teaching, students must:

- Complete all other college coursework prior to student teaching.
- Complete 200 clock hours of experience with children and youth before entering 300-level courses. This service may be with any child or youth group such as the Boy Scouts, Girl Scouts, Campfire Girls, Head Start, YMCA, YWCA, church groups, other boys' and girls' clubs, and education programs. Experience may be paid or volunteer, but should be with a group of children.
- Have a minimum GPA of 2.75.
- Complete all professional courses required for licensure with a grade of "C" or better.
- Complete all subject area courses in the student's teaching area(s) required by the North Central Association of Colleges and Secondary Schools.

- F. Complete all items in the personal student teaching folder to be obtained in the Early Childhood/Elementary Education Department.
- G. Have a physical examination report including tuberculosis clearance on file with the Student Health Services Office.
- H. Have approval by the appropriate screening committee if applicable.

Information concerning requirements and courses of study are based upon current requirements of the State of Colorado and Metropolitan State College of Denver. Requirements are subject to modification; therefore, students are advised to consult the Department of Early Childhood and Elementary Education for the current status of requirements.

**1. PROFESSIONAL EARLY CHILDHOOD EDUCATION LICENSURE SEQUENCE**

Required Courses	Semester Hours
EDU 234* Urban Early Childhood Education .....	3
EDU 235* Urban Early Childhood Education Field Experience .....	2
EDU 236 Expressive Arts for the Young Child .....	2
RDG 312 Developing Print Literacy: Preschool-Third Grade .....	4
EDU 335 Assessment and Measurement in the Early Childhood Classroom .....	3
EDU 337 Language Arts and Social Studies Curricula for Early Childhood Education .....	3
SED 360 The Exceptional Learner in the Classroom .....	3
EDU 364 Curriculum and Management: Preprimary-6 .....	4
EDU 431 Parents as Partners in Education .....	3
EDU 433 Science and Mathematics for the Young Child .....	3
EDU 435 Planning and Organizing the Early Childhood Classroom .....	3
EDU 439 Student Teaching and Seminar: Early Childhood .....	10
<i>Total</i> .....	43

\*These two courses must be taken concurrently.

**2. APPROVED METROPOLITAN STATE COLLEGE OF DENVER MAJORS**

- Anthropology
- Art
- Behavioral Science
- Biology
- Chemistry
- English
- History
- Journalism
- Mathematics
- Modern Languages
- Music Education
- Philosophy
- Physics
- Political Science
- Psychology
- Sociology
- Spanish
- Speech Communication
- Human Development (transfer students)

**3. RECOMMENDED MINORS**

- Parent Education
- Reading
- Early Childhood Education
- Exceptionalities
- Bilingual/Bicultural

**4. GENERAL STUDIES REQUIREMENTS SPECIFIC TO EARLY CHILDHOOD LICENSURE**

Students are required to complete the general studies requirements of Metropolitan State College of Denver. Please consult a faculty adviser in the Department of Early Childhood and Elementary Education for guidance in selection of appropriate general studies courses for the elementary education licensure program.

## COLORADO TEACHER LICENSURE AND ENDORSEMENT IN BOTH EARLY CHILDHOOD AND ELEMENTARY EDUCATION

Students seeking an endorsement in elementary education can fulfill their requirements for a minor by taking the early childhood minor. By fulfilling the minor requirement and the additional requirements as specified below, students may receive endorsement in both early childhood and elementary education.

Required Courses	Semester Hours
Early Childhood Education Minor .....	22–25

### Additional Requirements:

An acceptable major, general studies coursework, and coursework in the elementary education professional sequence, which fulfills elementary licensure requirements.

RDG 312 Developing Print Literacy: Preschool-Third Grade .....	4
ENG 346 Children's Literature .....	3
An additional six semester hours of student teaching at the early childhood level .....	6
<i>Total</i> .....	35–38

## EARLY CHILDHOOD ADMINISTRATION

Students who wish to administer early childhood programs will meet Colorado Department of Social Services qualifications by taking the early childhood minor plus additional courses specified by the Colorado Department of Social Services, as shown below. Students do not have to be admitted to the teacher licensure program to take this sequence of courses, nor do they have to be degree-seeking.

Required Courses	Semester Hours
Early Childhood Education Minor .....	22–25

### Additional Required Courses for Administration

PSY 101 Introductory Psychology .....	3
PSY 180 Developmental Educational Psychology (prerequisite to all 300- and 400-level early childhood education courses) .....	4
HES 204 Introduction to Nutrition .....	3
EDU 334 Administration of Early Childhood Programs .....	4
SOC 101 Introduction to Sociology .....	3
-or-	
EDU 431 Parents as Partners in Education .....	3
<i>Total</i> .....	42–45

*Note: Students seeking only director qualifications may take only those courses required by the Colorado Department of Social Services. Colorado Department of Social Services regulations may be changed. Consult with the Early Childhood/Elementary Education Department for additional information.*

### Highly Recommended Courses:

HPS 206 Advanced First Aid and Cardiopulmonary Resuscitation .....	3
EDU 332 Care and Nurture of Infants and Toddlers .....	3
<i>Total</i> .....	42

## MINOR IN EARLY CHILDHOOD EDUCATION

Required Courses	Semester Hours
EDU 234* Urban Early Childhood Education .....	3
EDU 235* Urban Early Childhood Education Field Experience .....	2
EDU 236 Expressive Arts for the Young Child .....	2
EDU 335 Assessment and Measurement in the Early Childhood Classroom .....	3
EDU 337 Language Arts and Social Studies Curricula for Early Childhood Education .....	3
EDU 431 Parents as Partners in Education .....	3
EDU 435** Planning and Organizing the Early Childhood Classroom .....	3
EDU 438** Teaching Practicum in Pre-primary Early Childhood Education .....	3
<i>Total</i> .....	22

\*These two courses must be taken concurrently.

\*\*These two courses must be taken concurrently.

*Note: PSY 180 Developmental Educational Psychology is a prerequisite to all 300- and 400- level early childhood education courses.*

### Highly Recommended Courses:

EDU 332 Care and Nurture of Infants and Toddlers .....	3
EDU 436 Cultural Influence on the Socialization of Children .....	4

**Additional Requirements:**

An acceptable major, general studies coursework, and coursework in the elementary education professional sequence that fulfills elementary licensure requirements.

RDG 312	Developing Print Literacy: Preschool-Third Grade .....	4
ENG 346	Children's Literature .....	3
	An additional six semester hours of student teaching at the early childhood level .....	6
<i>Total</i> .....		35-38

**Elementary Education Program**

Colorado Teacher Licensure and Elementary Endorsement (Kindergarten through 6th Grade)

There are four parts to Metropolitan State College of Denver's Elementary Teacher Licensure Program:

1. The professional teacher education sequence in elementary education
2. A major in an academic discipline
3. A minor in an academic discipline or a professional education area
4. Metro State general studies requirement

**1. PROFESSIONAL ELEMENTARY EDUCATION AND LICENSURE SEQUENCE**

Required Courses	Semester Hours
EDU 212 Elementary Education in the United States .....	3
EDU 213 Activities and Health for the Elementary Child .....	3
EDU 264 Urban and Multicultural Education .....	3
EDU 390 Art and Music Methods for the Elementary Teacher .....	2
SED 360 The Exceptional Learner in the Classroom .....	3
EDT 361 Introduction to Educational Technology .....	2
EDU 364 Curriculum and Management: Pre-primary-6 .....	4
EDU 410 Language Arts and Social Studies Curriculum: Pre-primary-6 .....	4
EDU 412 Science and Math Curriculum: Pre-primary-6 .....	4
RDG 313 Teaching Reading in the Elementary School K-6 .....	4
EDU 419 Student Teaching and Seminar: Elementary K-6 .....	10
<i>Total</i> .....	42

**2. APPROVED METROPOLITAN STATE COLLEGE OF DENVER MAJORS**

- Anthropology
- Art
- Behavioral Science
- Biology
- Chemistry
- English
- History
- Journalism
- Mathematics
- Modern Languages
- Music Education
- Philosophy
- Physics
- Political Science
- Psychology
- Sociology
- Spanish
- Speech Communication
- Human Development (transfer students)

**3. RECOMMENDED MINORS**

- Early Childhood Education\*
- Parent Education
- Reading
- Exceptionalities
- Bilingual/Bicultural\*

\*Concurrent endorsement available in early childhood, elementary, or bilingual/bicultural education

#### 4. GENERAL STUDIES REQUIREMENTS SPECIFIC TO ELEMENTARY EDUCATION LICENSURE

Students are required to complete the general studies requirements of Metropolitan State College of Denver. Please consult a faculty adviser in the Early Childhood and Elementary Education Department for guidance in selection of appropriate general studies courses for the Elementary Education Licensure Program. There are specific general studies courses required for elementary education students.

### Secondary Education Department

Licensure in Secondary Education and K-12 Education

The Secondary Education Department offers professional preparation for teaching and education-related careers in collaboration with the Reading Department and various major departments at Metro State. This department prepares students to apply to the Colorado Department of Education for provisional teacher licensure and endorsement to teach in secondary schools (seventh through twelfth grades) with endorsements in:

English  
 Industrial Arts  
 Mathematics  
 Modern Languages (Spanish, French, German)  
 Physical Education  
 Science  
 Social Studies  
 Spanish  
 Speech

The Secondary Education Department also offers a K-12 professional teaching sequence in collaboration with three major departments. These K-12 endorsements are in:

Art  
 Music  
 Physical Education

### REQUIREMENTS FOR SECONDARY AND K-12 LICENSURE STUDENTS

Students seeking a bachelor's degree from Metropolitan State College of Denver must meet all requirements for a bachelor's degree and the course of study leading to the desired license and endorsement. Students who already have a bachelor's or higher degree should consult with an adviser to determine the applicability of their previous degree(s) and coursework to current requirements. Specific course requirements are given under each licensure and major program. All students must meet with an adviser in their Secondary Education Program to develop a program plan. All students must see an adviser in the major area as well.

Requirements for entry to Metro State's programs for initial teacher licensure are established by the Colorado Department of Education and Metropolitan State College of Denver.

- I. Provisional admission: Students who have not taken an education class previously in the State of Colorado may be provisionally admitted to a teacher education program for one semester. A provisional admittance card will be issued to the student in the Teacher Education Office or in the education class in which the student is enrolled. Provisional admittance is valid for one semester only. Students who have previously taken courses in Colorado must be formally admitted prior to enrolling for courses in any education program at Metro State. Education courses less than 10 years old that are a close match to the required courses may be counted.
- II. Formal admission: Prior to or during the first semester in the professional education sequence, students must meet the following requirements for formal admission to the program:
  - A. Secondary and K-12 teacher education students must have a minimum grade point average of 2.50 on their most recent 30 semester hours of coursework completed at a regionally accredited institution of higher education.
  - B. All teacher education students must pass a state authorized basic skills test (e.g., reading, writing, and mathematics). Consult with advisers in the Division of Education for further information.

- C. All teacher education students must demonstrate competence in oral communication. Students seeking bachelor's degrees should pass a public-speaking course with a grade of "B" or above. Students who earn a grade of "C" may attempt an oral examination. Students who have bachelor's degrees but did not pass a speech course with a grade of "B" or above may attempt an oral communication examination.
- D. All teacher education students must complete 50 clock hours of successful experience working with children and youth.
- E. All teacher education students must submit the "Application for Admission into a teacher education program" with appropriate advisers' authorizing signatures and copies of transcripts of all college coursework to the Teacher Education Office.
- F. All teacher education students must show evidence of a negative TB test within the last year.
- G. All teacher education students must obtain a formal admission card from the Teacher Education Office to verify that initial requirements have been met.  
Students may not take additional teacher education courses until they meet these requirements. All requirements for full admission must be met before the first day of the next semester.

### Admission to Student Teaching:

III. For admission to student teaching, students must:

- A. Complete all other college coursework prior to student teaching.
- B. Complete 200 clock hours of experience with children and youth. This service may be with any child or youth group such as the Boy Scouts, Girl Scouts, Campfire Girls, Head Start, YMCA, YWCA, church groups, other boys' and girls' clubs, and education programs. Experience may be paid or volunteer, but should be with a group of children.
- C. Secondary Education Students:  
Have a minimum GPA of 2.75 for the following:
  - 1. All college work attempted.
  - 2. All coursework required (i.e., approved graduation agreement courses) in their major area.
  - 3. All education courses attempted to date.
- D. Complete all professional courses required for licensure with a grade of "C" or better.
- E. Complete all subject area courses in the student's teaching area(s) required by the North Central Association of Colleges and Secondary Schools.
- F. Complete all items in the personal student teaching folder, to be obtained in the Secondary Education Department.
- G. Have complete evaluations from pre-student teaching field experiences.
- H. Have a physical examination report including tuberculosis clearance on file with the Student Health Services Office.
- I. Have approval by the appropriate screening committee when applicable.
- J. Complete formal application for student teaching to be submitted to the Office of Clinical Services no later than the following dates:
  - 1. For fall semester student teaching - third Friday in February
  - 2. For spring semester student teaching - third Friday in September
- K. Have approval by a committee in the major in those departments where a major/secondary education agreement is in place.

### SECONDARY PROFESSIONAL EDUCATION SEQUENCE

Students may prepare for teacher licensure at the secondary level (grades 7-12), being endorsed to teach in the following areas:

English, industrial arts, mathematics, physical education, science, social studies, Spanish, French, German, and speech. Students in art, music education, and physical education may prepare for K-12 licensure. An add-on endorsement in middle level education is being proposed, as is a new secondary major in business. Check with the Secondary Education Department for further information. In addition to a major in the above areas, and a minor as required, students must complete the following professional course program:

#### Required Courses

#### Semester Hours

#### Social and Cultural Bases of Secondary Schools

A block of two courses to be taken concurrently.

EDS 221	Processes of Education in Urban Secondary Schools	3
EDS 222	Field Experiences in Urban Secondary Schools	
	Psychological and Physiological Bases of Secondary Education	2

EDS	320	Educational Psychology Applied to Teaching	3
RDG	328	Teaching of Reading and Writing in the Content Area	4
SED	360	The Exceptional Learner in the Classroom	3
		In lieu of SED 360, physical education majors take:	
HPS	462	Adaptive Human Performance and Sports Activities Processes of Teaching in the Secondary Schools	3
EDS	321	Secondary School Curriculum and Classroom Management	3
EDS	322	Field Experience in Teaching, Materials Construction, and Classroom Management	2
EDT	361	Introduction to Educational Technology	2
<b>Teaching Practice</b>			
EDS	429	Student Teaching and Seminar: Secondary 7–12 (Not available summer term)	6, 8, or 12
Total			28–34

Before prospective teachers can continue with the second semester of teacher education classes, all requirements for official admission to the Secondary Education Program must be met. In addition to other requirements, students must pass the California Achievement Test in mathematics, spelling, and language usage at or above the 75th percentile (or other tests that may be specified by the Colorado Department of Education) and demonstrate oral competence. Before enrolling for student teaching, students must take a course in methods of teaching offered by their major department.

The following course of study is suggested for those students who have a bachelor's or higher degree and who are primarily completing licensure courses at Metropolitan State College of Denver. Completion of the program takes a minimum of three semesters. Additional time may be required to complete subject area courses. All secondary students must have two advisers, one in secondary education and one in their major area.

**Semester I**

EDS	221	Processes of Education in Urban Secondary Schools	3
EDS	222	Field Experiences in Urban Secondary Schools	2
EDS	320	Educational Psychology Applied to Teaching	3

**Semester I or II**

(To be taken as offered, or as these courses fit into the student's schedule)

RDG	328	Teaching of Reading and Writing in the Content Area	4
SED	360	The Exceptional Learner in the Classroom	3
EDT	361	Introduction to Educational Technology	2
—	—	Methods of Teaching Major Subject	—

**Semester II**

EDS	321	Secondary School Curriculum and Classroom Management	3
EDS	322	Field Experience in Teaching, Materials Construction, and Classroom Management	2

NOTE: All of the above listed courses are prerequisites for student teaching.

**Semester III**

EDS	429	Student Teaching and Seminar: Secondary (Not available summer term)	7–12 12
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**SCIENCE LICENSURE PROGRAM**

The program includes a major in one area of science, an area of emphasis in a second area, and a sampling from additional areas of science and mathematics. The program satisfies both major and minor requirements, so no further minor is required.

**Major**

Students must complete an academic major at Metropolitan State College of Denver in one of the following areas:

- Biology
- Chemistry
- Earth-Space Science
- Physics

Please consult with the Secondary Education Department for a list of approved and/or required courses in the major and for licensure.

**Science Support Area**

Students must complete one of the following teaching areas of emphasis in addition to their major.



<b>Biology</b>		<b>Semester Hours</b>
BIO 108	General Introduction to Biology .....	4
BIO 210	General Botany .....	5
BIO 220	General Zoology .....	5
BIO 355	Urban Ecology .....	
-or-		
BIO 360	General Genetics .....	3
Subtotal .....		17-18

<b>Chemistry</b>		<b>Semester Hours</b>
CHE 120	General Chemistry I .....	4
CHE 121	General Chemistry II .....	4
CHE 300	Analytical Chemistry .....	3
CHE 301	Analytical Chemistry Laboratory .....	2
CHE 310	Organic Chemistry I .....	4
CHE 312	Organic Chemistry Laboratory I .....	2
Subtotal .....		21

<b>Computer Science</b>		<b>Semester Hours</b>
CSI 130*	Introduction to Structured Programming .....	4
CSI 230	Advanced Programming and Data Structures .....	4
CSI 330	Foundations of File Structures .....	4
Plus nine additional hours of CSI .....		9
Subtotal .....		21

\*Prerequisites for CSI 130 are CSI 101 and MTH 111 or equivalents.

<b>Earth Science</b>		<b>Semester Hours</b>
GEL 101	General Geology .....	4
GEL 103	Historical Geology .....	4
GEG 100	World Regional Geography .....	3
GEG 123	Weather and Climate .....	3
GEG 124	Landforms .....	3
AST 104	Introduction to Astronomy .....	3
Subtotal .....		20

<b>Mathematics</b>		<b>Semester Hours</b>
MTH 141	Calculus I .....	4
MTH 241	Calculus II .....	4
MTH 310	Introduction to Mathematical Proofs .....	3
MTH 361	Methods of Teaching Mathematics .....	3
CSI 130	Introduction to Structured Programming .....	4

Plus three additional hours to be selected from:

MTH 311	Abstract Algebra .....	3
MTH 321	Probability and Statistics .....	4
MTH 360	History of Mathematics .....	3
MTH 365	Foundations of Geometry .....	3
Subtotal .....		21

<b>Physics</b>		<b>Semester Hours</b>
PHY 231	General Physics I .....	4
PHY 232	General Physics Laboratory I .....	1
PHY 233	General Physics II .....	4
PHY 234	General Physics Laboratory II .....	1
Plus eight additional hours in physics .....		8
Subtotal .....		21

### General Requirements

These may be fulfilled in the academic major or teaching area of emphasis.

Choose at least one course from each of the following areas: Specific courses are required for some majors.

<b>Biology</b>		
BIO 108	General Introduction to Biology .....	(suggested) 4

**Chemistry**

CHE 110	Principles of Chemistry	
-or-		
CHE 120	General Chemistry I	5

**Computers**

(A computer course approved by your adviser).		3-4
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**Earth Science**

AST 104	Introduction to Astronomy	
-or-		
GEG 100	World Regional Geography	
-or-		
GEL 101	General Geology	3-4

**Environmental Studies**

**Physics**

PHY 201	College Physics I	
-or-		
PHY 231	General Physics I	
and		
PHY 232	General Physics Laboratory	5

**Mathematics\***

MTH 111	College Algebra	
and		
MTH 112	College Trigonometry	7
-or-		
MTH 140	Pre-Calculus Mathematics	
and		
MTH 141	Calculus I	8

\*Students must take both MTH 111 and MTH 112 or choose MTH 140 or MTH 141.

**Science**

This course is required:

SCI 395	Methods of Teaching Science	3
Subtotal		22-25

**NOTE:**

The courses listed below are required to meet licensure requirements in these majors:

Biology	CHE 120
	and
	CHE 210
	MTH 111
	and
	MTH 112*
	-or-
	MTH 140

\*Students must take both MTH 111 and MTH 112 or choose MTH 140.

Chemistry	MTH 141
Earth Science	MTH 141
Physics	AST 104
	EET*
	MTH 141
	MTH 241
	MTH 242
	MTH 342

Students who elect the earth science or physics teaching areas of emphasis must choose at least one upper-division course in addition to SCI 395.

\*Consult with department chair.

**SOCIAL STUDIES LICENSURE PROGRAM**

The program includes a major in one area of social science, an area of emphasis in a second area, and a sampling from every social/behavioral science.

The program meets both major and minor requirements; an additional minor is not required.

**Major**

Students must complete an academic major at Metropolitan State College of Denver in one of the following areas:

African American Studies

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- Anthropology
- Behavioral Science
- Chicano Studies
- Economics
- Geography
- History
- Political Science
- Psychology
- Sociology

Please consult with the Secondary Education Department for a list of approved and/or required courses in the major and for licensure.

## SOCIAL STUDIES AREA OF EMPHASIS

Students must complete one of the following teaching areas of emphasis. History must be selected unless the academic major is history.

### History

HIS 101	Western Civilization to 1715	3
HIS 102	Western Civilization since 1715	3
HIS 121	American History to 1865	3
HIS 122	American History since 1865	3
	Non-Western history	3
	Three additional upper-division history hours selected in consultation with the department.	
	Reading courses will not apply	3
	Subtotal	18

### African American Studies

AAS 101	Introduction to African American Studies	3
AAS 200	Social Movement and the Black Experience	3
	Six additional hours in African American studies; three must be upper-division. African American History is recommended. Students should consult with a faculty adviser regarding selection of these courses.	6
	Subtotal	12

### Anthropology

ANT 101	Physical Anthropology and Prehistory	3
ANT 131	Introduction to Cultural Anthropology	3
	Six additional upper-division hours in anthropology	6
	Subtotal	12

### Chicano Studies

CHS 100	Introduction to Chicano Studies	3
CHS 101	History of Meso-America: Pre-Columbian and Colonial Periods	3
CHS 102	History of the Chicano in the Southwest: Mexico and U.S. Periods	3
	Three additional upper-division hours in Chicano studies	3
	Subtotal	12

### Economics (18 semester hours)

ECO 201	Principles of Economics — Macro	3
ECO 202	Principles of Economics — Micro	3
	Twelve additional upper-division hours in economics	12
	Subtotal	18

### Geography

GEG 123	Weather and Climate	3
GEG 130	Introduction to Human Geography	3
GEG 140	World Resources	3
	Three additional upper-division hours	3
	Subtotal	12

### Political Science

PSC 101	American National Government	3
PSC 102	Political Systems and Ideas	3
PSC 300	American State and Local Government	3
PSC 305	Political Theory	3
	Subtotal	12

**Psychology**

PSY 101	Introductory Psychology	3
PSY 211	Educational Psychology	3
Six additional hours of electives, three of which must be upper-division. Suggested lower-division electives are PSY 221 and PSY 241. Consult with Psychology Department adviser in choosing electives.		
	Subtotal	12

**Sociology**

SOC 101	Introduction to Sociology	3
SOC 360	Research in the Social Sciences	3
Six additional hours of electives, three of which must be upper-division.		
	Subtotal	12

**General Requirements**

(Some may be satisfied in the academic major or support area.)

HIS 401	Methods of Teaching Social Science: Secondary School	3
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Select one course from each of the following areas:

African American Studies\*

Anthropology

Chicano Studies

Economics

Gender Studies

Geography\*\*

International Studies

Political Science

Psychology

Sociology

\**African American History or other course dealing with African American experience in the United States.*

\*\**GEG 100–3 World Regional Geography or GEG 140–3 World Resources suggested. These credits are to be taken as part of general studies.*

**EXCEPTIONALITIES MINOR**

The minor in exceptionalities is designed to prepare teachers, physical educators, recreational therapists, counselors, and professionals to work with exceptional students in educational, therapeutic, and recreational settings. The minor also will serve as a prerequisite core for Metro State teacher education students who desire to pursue graduate programs in special education or gifted education.

**Required for Either Emphasis:****Semester Hours**

SED 360	The Exceptional Learner in the Classroom	3
One 3-hour course from alternate emphasis		3

**GIFTED EDUCATION EMPHASIS**

SED 346	Introduction to the Education of the Gifted and Talented	3
ART 439	Integrating the Arts for Gifted and Talented	3
EDU 442	Methods and Materials for Teaching the Gifted	3
EDU 443	Field Experience in Gifted and Talented	1
EDU 444	Teaching Thinking Skills to the Gifted	2
<i>Total</i>		18

**SPECIAL EDUCATION EMPHASIS**

Select a minimum of 15 hours:

SED 338	Teaching Students with Learning and Behavior Disorders	3
SED 341	Diagnosis and Evaluation of Exceptional Students	3
SED 343	Field Experience in Special Education	3
SED 344	Counseling Parents of Exceptional Children	3
SED 420	Language Development and Learning Disabilities	3
SED 425	Classroom Management for Exceptional Students	3
<i>Total</i>		18

**BILINGUAL/BICULTURAL EDUCATION MINOR**

The Division of Education offers a minor in bilingual/bicultural education. The minor is an interdisciplinary program sponsored by the departments of Chicano Studies, Early Childhood and Elementary Education, Modern Languages, and Reading. The principal objective of the bilingual/bicultural minor

is to prepare future teachers who will be able to conduct all phases of classroom instruction in a bilingual and bicultural setting. In the developmental sequence, the minor will provide the potential teacher with a background of the Mexican heritage and with an understanding of present-day Hispano/Chicano culture. Proficiency in the Spanish language is required of all students before they complete the minor. This proficiency will prepare the teacher to understand and further develop the native tongue of bilingual/bicultural children, while offering a second language to many other children. In addition, the minor will provide the teacher with sufficient field and academic experiences and resources to develop, implement, and evaluate curricular methods, techniques, and materials in the bilingual/bicultural classroom. For students who do not student teach in a bilingual/bicultural program, the practicum in bilingual/bicultural education will be required.

<b>Required Courses and Recommended Sequence</b>		<b>Semester Hours</b>
CHS 102	History of the Chicano in the Southwest: Mexico and U.S. Periods .....	3
EDU 351	Perspectives in Bilingual/Bicultural Education .....	3
RDG 353	Techniques of Teaching Reading to Non-English Speakers .....	2
SPA 310	Spanish Terminology for the Bilingual Classroom .....	3
RDG 358	Reading in the Bilingual/Bicultural Classroom .....	3
EDU 451	Development of Methods and Materials for the Bilingual/Bicultural Classroom .....	4
CHS 330	Education of Chicano Children .....	3
EDU 499*	Student Teaching and Seminar (Bilingual)	
-or-		
EDU 452**	Practicum in Bilingual/Bicultural Education .....	3-6
One of the following courses:		
SPA 311	Advanced Conversation .....	3
SPA 315	Spanish Phonetics: Theory and Practice .....	3
SPA 322	Folklore and Culture of the Mexican Southwest .....	3
<i>Total</i> .....		27-30

\*Required for bilingual endorsement

\*\*Required for students seeking minor only

### Preparation Requirements

Language Proficiency: Proficiency in oral and written Spanish will be determined by a committee composed of Spanish-speaking members of the departments of Modern Languages, Chicano Studies, and Teacher Education. The four-skills exam is used as the proficiency measure. Students who fail to achieve a satisfactory score on the proficiency examination will be required to take sufficient Spanish classes to enable them to pass the proficiency examination. The following courses are designed to help students meet the proficiency requirements before the completion of the bilingual/bicultural minor:

SPA 101	Elementary Spanish I .....	5
SPA 102	Elementary Spanish II .....	5
SPA 211	Intermediate Spanish .....	3
SPA 212	Spanish Reading and Conversation .....	3

### Parent Education

The purpose of the parent education minor is twofold. First, the program is designed to provide students who will deal with children and families with the information and skills necessary to conduct parent education programs. Second, the program addresses a need identified in the community for people with specific preparation for the role of parent educator. Many agencies offer or are interested in offering parent education programs, yet no specific preparation for that role has been available. This minor is designed to make the field of parent education more credible by providing students with education for that role and to give students a set of skills that are increasingly in demand.

The minor is seen as particularly appropriate for students entering family- and child-related fields, including (but not limited to) education, health care management, human services, criminal justice (especially juvenile justice), nursing and nurse practitioner programs, psychology, sociology, social welfare, speech, and women's studies. People entering these fields might well be in a position to develop and conduct parent education programs; a minor in parent education should serve them well in the employment market. Other fields might also provide opportunities to use this background. Parent education happens in settings ranging from churches to industry and is not limited to educational settings in the usual sense.

The parent education minor encompasses three areas of preparation. One set of classes is intended to give students basic information necessary for effective parenting (child development, parenting techniques, family management, health care). The second facet of the program gives students the skills necessary for developing and conducting parent education programs such as group techniques and program development. The third component of the program entails actual field experience working in parent education programs. This experience is incorporated into a number of classes and is the central component of the final course in the minor. A field placement is required in the last semester. Placement opportunities include parent education in hospitals, social service agencies, public and private schools, and business and industry. Students work closely with a parent education program adviser to ensure an appropriate field placement.

## MINOR IN PARENT EDUCATION

Required Courses		Semester Hours
PAR 205	Introduction to Parent Education . . . . .	3
PSY 180	Developmental Educational Psychology . . . . .	3
-or-		
PSY 221	Psychology of Human Development . . . . .	3
-or-		
PSY 325	Child Psychology . . . . .	3-4
HSP 204	Family Function, Dysfunction, and Therapy . . . . .	4
PSY 224	Parenting Techniques . . . . .	3
PAR 307	Working with the Contemporary Family . . . . .	3
HES 307	Parental Health Care Issues . . . . .	3
EDU 407	Designing and Implementing Programs for Adult Learners . . . . .	3
PAR 489	Parent Education Field Placement . . . . .	3
<i>Total</i> . . . . .		25-26

Minimum hours required for the minor are 25-26 (depending on courses selected). If the parent education minor is combined with a major in any of the following departments (Education, Human Services, Nursing, or Psychology), the combined total semester hours for major and minor must be 60 hours. Such a program must include all courses required for the minor and those listed here as required for the parent education minor. Approval by both departments will be necessary for such a combined program.

*Note: For descriptions of other courses included in the minor, see appropriate department listings: EDU—Education; HES—Health Services; HSP—Human Services; NUR—Nursing; PSY—Psychology; SOC—Sociology; WMS—Women's Studies*

## PARENT EDUCATION PROGRAM

Prerequisites: A degree (B.A., B.S., M.A., M.S.) in a field such as education, psychology, social welfare, human services, child development, or nursing.

Required Courses		Semester Hours
PAR 205	Introduction to Parent Education . . . . .	3
HSP 204	Family Function, Dysfunction and Therapy . . . . .	4
PSY 224	Parenting Techniques . . . . .	3
PAR 307	Working with the Contemporary Family . . . . .	3
HES 307	Parental Health Care Issues . . . . .	3
EDU 407	Designing and Implementing Programs for Adult Learners . . . . .	3
PAR 489	Parent Education Field Placement . . . . .	3
<i>Total</i> . . . . .		22

### Suggested Electives

PAR 480	Special Topics in Parent Education . . . . .	3
PSY 326	Psychology of Adolescence . . . . .	3
HSP 204	Family Function, Dysfunction, and Therapy . . . . .	4
SOC 341	The Family in Transition . . . . .	3
WMS 101	Introduction: Woman in Transition . . . . .	3
WMS 218	Assertiveness Training . . . . .	3
SED 344	Counseling Parents of Exceptional Children . . . . .	3
HSP 104	Applied Behavior Analysis . . . . .	4
CHS 221	The Chicano Family . . . . .	3
SWK 104	Human Behavior and the Social Environment . . . . .	4
SWK 105	Family Social Services . . . . .	4
SWK 301	Social Work Services for Children and Adolescents . . . . .	4
AAS 355	The Black Family . . . . .	3

## Physical Education Licensure

### PHYSICAL EDUCATION LICENSURE (K-6)

Required Courses		Semester Hours
SPE 101	Public Speaking.....	3
EDU 212	Elementary Education in the United States.....	3
EDT 361	Introduction to Educational Technology.....	2
EDU 364	Curriculum and Management: Pre-primary-6.....	4
HPS 462	Adaptive Human Performance & Sports Activities.....	3
RDG 313	Teaching Reading in the Elementary School: K-6.....	4
EDU 419	Student Teaching and Seminar: Elementary K-6.....	10
PSY 180	Developmental Educational Psychology.....	4
<i>Total</i> .....		33

### PHYSICAL EDUCATION LICENSURE (K-12)

Required Courses		Semester Hours
SPE 101	Public Speaking.....	3
EDS 221	Processes of Education in Urban Secondary Schools.....	3
EDS 222	Field Experiences in Urban Secondary Schools.....	2
EDS 320	Educational Psychology Applied to Teaching.....	3
RDG 328	Teaching of Reading and Writing in the Content Areas.....	3
EDT 361	Introduction to Educational Technology.....	2
EDU 364	Curriculum and Management: Pre-primary-6.....	4
EDU 419	Student Teaching and Seminar: Elementary.....	6 or 12 combined
EDS 429	Student Teaching and Seminar: Secondary.....	6 or 12 combined must total 18
HPS 462	Adaptive Human Performance and Sports Activities (in lieu of SED 360).....	3
<i>Total</i> .....		42

### SECONDARY PHYSICAL EDUCATION LICENSURE

Required Courses		Semester Hours
EDS 221	Processes of Education in Urban Secondary Schools.....	3
EDS 222	Field Experiences in Urban Secondary Schools.....	2
EDS 320	Educational Psychology Applied to Teaching.....	3
RDG 328	Teaching of Reading and Writing in the Content Areas.....	4
HPS 462	Adaptive Human Performance & Sports Activities (in lieu of SED 360).....	3
EDS 321	Secondary School Curriculum and Classroom Management.....	3
EDS 322	Field Experience in Teaching, Materials Construction, and Classroom Management.....	2
EDT 361	Introduction to Educational Technology.....	2
EDS 429	Student Teaching and Seminar: Secondary (7-12).....	12
<i>Total</i> .....		34

## Reading Department

The Reading Department offers two outstanding literacy programs. One program provides for the refinement of critical and analytical reading skills that enable college students to enhance the quality of their undergraduate education. RDG 151, Cognitive Strategies for Analytical Reading, is designed as a college-level reading course that satisfies a General Studies Level I communications requirement. RDG 306, Critical Reading/Thinking, provides further practice in the employment of cognitive strategies to discover fallacies, recognize obstacles to critical thinking, and judge the validity of expository writing. This course satisfies a General Studies Level II arts and letters requirement.

The second program is a dynamic minor in reading that prepares students for careers in business, industry, government, and education as instructional leaders in literacy programs. The minor includes knowledge of the reading process, factors influencing emergent literacy, preparation and presentation of reading lessons, development of instructional materials, identification of reading disability correlates, assessment and interpretation of test results, and a closely supervised remedial reading tutorial experience. Students planning to complete teacher licensure requirements at all levels are encouraged to elect this minor. Note: A letter grade of at least a "C" must be attained in each of the courses in the reading minor.

### READING MINOR

#### Required Courses

#### Semester Hours

Complete one of the following courses:

RDG* 312	Developing Print Literacy: Preschool–3rd Grade	4
RDG* 313	Teaching Reading in the Elementary School K–6	4
RDG* 315	Middle School Instructional Reading/Writing Strategies	4
RDG* 328	Teaching Reading and Writing in the Content Areas	4

Subtotal . . . . . 4

To be completed by all reading minors:

RDG 314	Whole Language Integration Across the Curriculum	2
RDG 360	Practicum in Teaching Reading	3
RDG 425	Literacy Assessment: Theory and Practice	4
RDG 434	Development of Reading/Writing Instructional Materials and Procedures	2
RDG 460	Practicum in Literacy Enhancement	3

Subtotal . . . . . 14

*Total* . . . . . 18

RDG 312\* is required for early childhood education licensure

RDG 313\* is required for elementary education licensure

RDG 315\* is required for middle school endorsement

RDG 328\* is required for secondary education licensure

#### Highly Recommended

RDG 316	Strategies for Enhancing Adult Literacy	4
RDG 353	Teaching Reading to Non-English Speakers	2
RDG 358	Reading in the Bilingual/Bicultural Classroom (Competency in Spanish required)	3
RDG 450	Language Arts and the Classroom Computer	3



## THE DIVISION OF TECHNOLOGY

The Division of Technology provides technical education to prepare graduates for employment in a wide variety of technical fields. Instruction emphasizes the development of technical competence at a level suitable for success in the various areas offered. The programs include courses in humanities and social sciences to broaden the student's general education. The various fields housed in this division offer great opportunities for women in non-traditional roles.

The Division of Technology offers degree programs in aviation management and professional pilot; civil engineering technology; surveying and mapping; electronics engineering technology; industrial and technical studies; technical and industrial administration; industrial design; mechanical engineering technology; and technical communications.

The aerospace science programs combine a thorough, practical, and technical training background with a general college education to prepare graduates for a wide variety of careers in aerospace. Metropolitan State College of Denver's Aerospace Science Department is a fully certified ground school approved by the Federal Aviation Administration (FAA), for private, instrument, and commercial FAA ratings. The department has FAA Airway Science approval for the aircraft systems management, aviation management, and aviation maintenance management programs.

The civil and environmental engineering technology degree program offers studies in civil engineering technology, drafting, and surveying and mapping. Environmental impact studies and the application of engineering principles are used in the planning and construction of highways, buildings, bridges, and other structures. The surveying and mapping degree program is designed to prepare the graduate for registration as a professional land surveyor, as well as other careers in the field.

The electronics engineering technology degree program combines the engineering principles and technical aspects of electronics and prepares graduates for a variety of positions in research and development, design, electronic manufacturing, and service engineering. This program emphasizes applications of theory in laboratory settings.

Industrial and technical studies offers teaching, business, and internship areas of emphasis. Programs within the Engineering Technology and Industrial Studies Department emphasize mechanical and manufacturing engineering.

The Technical Communications Department specializes in technical writing and editing, industrial communications, and technical media communications.

### Aerospace Science Department

Colorado is one of the nation's aerospace centers. Military installations, major aerospace industries, increased interest in private and corporate flying, and the airlines that serve Denver provide employment opportunities. Local Federal Aviation Administration (FAA) and other government offices offer excellent sources for information. Because of this proximity, students have the opportunity to visit these facilities and to take courses that are taught by personnel from the various organizations. The bachelor degree programs described below have been carefully planned to meet the needs of both the student and the industry. All of the technical courses have been developed in cooperation with the FAA and prospective employers. Students completing them are eligible to take a variety of FAA examinations leading to certification.

The aviation management program prepares the graduate to enter a wide variety of administrative positions within the various segments of the aviation industry. The aviation management program is accredited by the Council of Aviation Accreditation.

The airframe and power plant (A&P) courses are not offered by Metropolitan State College of Denver. However, students holding a valid FAA Airframe and Powerplant Certificate from a recognized Part 147 school may apply for 25 hours of credit toward a bachelor of science degree, providing certain validation papers are presented with the application and a comprehensive exam is passed.

The department possesses a unique flight simulation laboratory, the World Indoor Airport (WIA). The WIA is an integrated flight and air traffic control simulator lab with Fixed Base Operator (FBO) and Flight Service Station (FSS) services available. A Crew Resource Management (CRM) lab and student computer tutorial lab make up the other components of the WIA.

## BACHELOR OF SCIENCE

The Aerospace Science Department offers baccalaureate degree programs with majors in the following areas:

Aviation Management (AMG)  
 Airway Science Management Emphasis  
 Airway Science Maintenance Management Emphasis  
 Aviation Technology (ATV) (formerly Professional Pilot)  
 Air Carrier/General Aviation Emphasis  
 Aircraft Systems Management Emphasis

### Minors

Aviation Management (AMG)  
 Professional Pilot (PPT)  
 Airframe and Powerplant Mechanics (APL)  
 Private Pilot (PRP)

These programs combine a thorough, practical, and technical training background with a general college education to prepare the graduate for a wide variety of careers in the aerospace industry. These four-year bachelor degree programs have been developed in the two-plus-two concept (a bachelor of science degree program built upon a AAS two-year degree). This concept makes it easy for a community/junior college graduate in an aerospace program to transfer to Metro State and earn a bachelor of science degree in our aviation program. In order to be awarded the bachelor of science degree, the student must comply with the college's general requirements for the bachelor's degree listed in this *Catalog* under Requirements for All Degrees.

## FAA-APPROVED GROUND SCHOOL

Metro State Aerospace Science Department is a fully certified and approved ground school for the private, instrument, and commercial FAA ratings, approved by the Federal Aviation Administration. Veterans Administration flight students should see the Aerospace Science Department chair for information on approved flight training program.

## FLIGHT COURSES

Flight training is contracted by the student, with the flight training schools contracted by Metro State. In order to enroll in all flight courses and receive academic credit, the student must fly with Metro State's contract flight schools. Students must receive permission from the department before enrolling in flight courses.

The cost of the flight training is in addition to regular tuition and college services fees. This cost will vary depending upon how frequently the student is able to fly during the semester and how much total time the student requires to gain the necessary proficiency. The college instructor helps the student achieve an understanding of the relationship of flight theory to flight practice in order to acquire the knowledge required to meet FAA certification standards. Flights are scheduled by the student with the contract flight training school.

## CREDIT BY EXAMINATION PROCEDURES

The basic provision for obtaining credit-by-examination (a maximum of 30 semester hours of credit) is outlined in this *Catalog* under Academic Information. The following procedures are established by the Aerospace Science Department to implement this provision:

1. Students entering Metro State for the first time must make application for credit by examination during the first three weeks of the first semester. All examinations must be completed within the first semester.
2. Students will not be approved to take a course of a lower number than any course they have taken previously.
3. Students who are registered for but have not completed a higher-numbered course must complete the examination for the lower-numbered course within the first three weeks of the semester.
4. Examinations will not be graded during the summer session.
5. Courses authorized for credit by examination and the appropriate FAA license or rating are listed below:

	Course Title	FAA Certificate Required	Credit Hours
AES 110	Aviation Fundamentals	Private	6
AES 180	Commercial/Instrument Ground	Commercial/Instrument	6

AES 300	Aircraft Systems and Propulsion	Flt. Engineer	3
AES 353	Aerodynamics	Flt. Engineer	3
AES 404	Aircraft Performance	Flt. Engineer	3
AES 450	Flight Multi-Engine	Multi-Engine	1
AES 451	Flight Instructor	Flt. Instructor	1
AES 452	Flight Instructor-Instrument	Flt. Instructor	1
AES 453	Flt. Instructor-Multi-Engine	Flt. Inst. Multi	1
AES 455	Flight Helicopter	Helicopter	1
AES 457	Airline Transport Pilot	ATP Rating	1

**BACHELOR OF SCIENCE DEGREE IN AEROSPACE SCIENCE PROGRAMS**

Students must complete the following requirements for a bachelor of science degree:

	Semester Hours
General Studies	37
Major (Select One)	54-56
<b>Aviation Management</b>	
Aviation Management	42
Aviation Maintenance Management	57
<b>Aviation Technology</b>	
Air Carrier/General Aviation*	56
Aircraft Systems Management	54
<b>Minor or Approved Electives</b>	
Outside Aerospace Science**	18
Airframe and Powerplant (A&P) Minor***	36
Free electives	0-9
<i>Total</i>	120-134

A recommended sequence for taking all courses in a selected major or minor and a list of required general studies may be obtained from the Aerospace Science Department.

\*All air carrier/general aviation majors must possess the FAA commercial pilot certificate with an instrument rating and the FAA advanced ground instructor certificate to receive a bachelor of science degree.

\*\*Electives program must be approved by a department adviser.

\*\*\*The credit hours awarded are based on the number of clock hours required by the FAA for the award of the A&P license and the credits normally awarded by junior/community colleges, thus the increased number of hours for the aviation maintenance management emphasis major or A&P minor.

**GENERAL STUDIES**

Students seeking a bachelor's degree in an aerospace science program must complete the general studies requirements of Metro State. Students must consult with a faculty adviser for the selection of approved general studies courses.

**AVIATION MANAGEMENT (AMG)  
MAJOR FOR BACHELOR OF SCIENCE**

**AIRWAY SCIENCE MANAGEMENT EMPHASIS (AV2)\***

Required Courses	Semester Hours
AES 110 Aviation Fundamentals	6
AES 120 Fundamentals of Air Traffic Control	3
AES 321 Aviation Economics and Regulations	3
AES 322 Aviation Law and Risk Management	3
AES 324 Airline Planning and Management	3
AES 420 Airport Planning	3
AES 421 Airport Management	3
AES 423 FBO and Aircraft Marketing	3
AES 424 Air Cargo	3
AES 486 Aviation Safety	3
AES 491 Aviation Management Problems and Job Targeting	3
AES Elective	3
Subtotal	39
General Studies for all AES Majors	37

**Additional General Studies**

PSY 101	Introduction to Psychology	3
PSY 343	Industrial Psychology	3
MTH 112	College Trigonometry	3
MTH 121	Introduction to Statistics	4
MTH 132	Calculus for the Management and Social Sciences	3
SPE 310	Business and Professional Speaking	3
Subtotal		19

**Management**

MGT 300	Principles of Management	3
MGT 353	Personnel Management	3
MGT 357	Labor/Employee Relations	3
MGT 400	Organizational Decision Making	3
MGT 453	Organizational Behavior	3
MGT Elective		3
Subtotal		18

**Computer Information Systems and Management Science**

CMS 201	Principles of Information Systems	3
CMS 305	Fundamentals of Systems Analysis	3
CMS	Approved Electives (CMS 211, 306, 323, 327, or 390)	3
Subtotal		9

*Total* ..... 122

*\*This is an approved FAA airway science emphasis*

**MAJOR FOR BACHELOR OF SCIENCE****AIRWAY SCIENCE MAINTENANCE MANAGEMENT EMPHASIS (AV4)\*****Required Courses****Semester Hours**

Airframe and Powerplant Certificate	25
AES 110 Aviation Fundamentals	6
AES 160 Avionics for Aviators	3
AES 300 Systems and Propulsion	3
AES 322 Aviation Law and Risk Management	3
AES 486 Aviation Safety	3
AES Electives (AES 387 and AES 487 recommended)	6
Subtotal	49
General studies for all AES majors	37

**Additional General Studies**

PSY 101	Introduction to Psychology	3
CHE 110	Principles of Chemistry	5
MTH 112	College Trigonometry	3
MTH 121	Introduction to Statistics	4
MTH 132	Calculus for the Management and Social Sciences	3
Subtotal		18

**Management**

MGT 300	Principles of Management	3
MGT 453	Organizational Behavior	3
MGT Elective (300/400-level)		3
Subtotal		9

**Computer Information Systems and Management Science**

CMS 201	Principles of Information Systems	3
CMS 305	Fundamentals of Systems Analysis	3
CMS	Approved Elective (CMS 211, 306, 323, 327, or 390)	3
Subtotal		9

*Total hours required* ..... 122

*\*This is an approved FAA airway science emphasis.*

**AVIATION TECHNOLOGY (ATV)  
MAJOR FOR BACHELOR OF SCIENCE  
AIR CARRIER/GENERAL AVIATION EMPHASIS (AT1)**

<b>Required Courses</b>		<b>Semester Hours</b>
AES 110	Aviation Fundamentals .....	6
AES 141	Aerospace Meteorology.....	2
AES 171	Single-Engine Flight Simulation I	
-or-		
AES 176	Single-Engine Flight Simulation II .....	3
AES 180	Commercial/Instrument Ground Instructor Certification .....	6
AES 195	Advanced Ground Certification .....	0
AES 197	Professional Pilot Documentation .....	0
AES 271	Instrument Flight Simulation I.....	3
AES 300	Aircraft Systems and Propulsion .....	3
AES 346	Meteorology and Flight Operations .....	3
AES 353	Aerodynamics .....	3
AES 385	Human Factors and Physiology of Flight.....	3
AES 404	Aircraft Performance.....	3
AES 437	Advanced Navigation Systems .....	3
AES 486	Aviation Safety .....	3
AES 491	Aviation Management Problems and Job Targeting .....	3
Subtotal .....		44
Plus a minimum of 14 semester hours from the following:		
AES 320	National Airspace Operations .....	3
AES 321	Aviation Economics and Regulations .....	3
AES 322	Aviation Law and Risk Management.....	3
AES 323	Commuter Airline Management .....	3
AES 324	Airline Planning and Management.....	3
AES 390	Flight Instructor — CFI, CFII, AGI, MEI-Ground.....	3
AES 413	Flight Engineer Duties and Responsibilities.....	4
AES 414	B-727 Systems .....	4
Subtotal .....		14
General studies for all AES majors .....		37
Minor or approved electives from outside Aerospace Science Department.....		18
Electives .....		7
<i>Total</i> .....		120

**MAJOR FOR BACHELOR OF SCIENCE  
AIRCRAFT SYSTEMS MANAGEMENT EMPHASIS (AT2)\***

<b>Required Courses</b>		<b>Semester Hours</b>
AES 110	Aviation Fundamentals .....	6
AES 141	Aerospace Meteorology.....	2
AES 171	Single-Engine Flight Simulation I	
-or-		
AES 176	Single-Engine Flight Simulation II .....	3
AES 180	Commercial/Instrument Ground Instructor Certification .....	6
AES 197	Professional Pilot Documentation .....	0
AES 198	Multi-engine CFI, CFII Documentation.....	0
AES 215	Avionics for Aviators .....	3
AES 271	Instrument Flight Simulation I.....	3
AES 300	Aircraft Systems and Propulsion .....	3
AES 320	National Airspace Operations .....	3
AES 322	Aviation Law and Risk Management.....	3
MTR 346	Meteorology and Flight Operations .....	3
AES 353	Aerodynamics .....	3
AES 404	Aircraft Performance.....	3
AES 437	Advanced Navigation Systems .....	3
AES 486	Aviation Safety .....	3
AES 491	Aviation Management Problems and Job Targeting .....	3
AES	Upper-division electives .....	3
Subtotal .....		53
General studies for all AES majors .....		37

**Additional General Studies**

PSY 101	Introduction to Psychology	3
MTH 112	College Trigonometry	3
MTH 121	Introduction to Statistics	4
MTH 132	Calculus for the Management and Social Sciences	3
Subtotal		13

**Management**

MGT 300	Organizational Management	3
MGT 453	Organizational Behavior	3
MGT Elective (300/400-level)		3
Subtotal		9

**Computer Information Systems and Management Science**

CMS 201	Principles of Information Systems	3
CMS 305	Fundamentals of Systems Analysis and Design	3
CMS Approved Electives (CMS 211, 306, 323, 327, or 390)		3
Subtotal		9

<i>Total</i>		121
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\*This is an approved FAA airway science emphasis.

**MINORS**

The following aerospace minors are designed to afford other majors the opportunity to develop an understanding of the aerospace world and sufficient familiarity with aviation skills to use in their primary job. Aerospace majors normally may not elect the aviation management or professional pilot minors. Exception: aviation technology (ATV) majors enrolled in the AT1 emphasis may minor in airframe and powerplant mechanics.

**AVIATION MANAGEMENT MINOR (AMG)**

Required Courses		Semester Hours
AES 110	Aviation Fundamentals	6
MTR 141	Aerospace Meteorology	2
AES 321	Aviation Economics and Regulations	3
AES 322	Aviation Law and Risk Management	3
Total		14
Plus nine hours selected from the following courses:		
AES 300	Aircraft Systems and Propulsion	3
AES 323	Commuter Airline Management	3
AES 324	Airline Planning and Management	3
AES 385	Human Factors and Physiology of Flight	3
AES 420	Airport Planning	3
AES 421	Airport Management	3
AES 423	FBO and Aircraft Marketing	3
AES 424	Air Cargo	3
AES 486	Aviation Safety	3
AES 491	Aviation Management Problems and Job Targeting	3
Subtotal		9
<i>Total</i>		23

**PROFESSIONAL PILOT MINOR (PPT)**

Required Courses		Semester Hours
AES 110	Aviation Fundamentals	6
MTR 141	Aerospace Meteorology	2
AES 180	Commercial/Instrument Ground	6
AES 300	Aircraft Systems and Propulsion	3
MTR 346	Meteorology and Flight Operations	3
AES 385	Human Factors and Physiology of Flight	3
AES 486	Aviation Safety	3
<i>Total</i>		26

In addition, all professional pilot minors must possess the FAA commercial certificate with an instrument rating.

**AIRFRAME AND POWERPLANT MECHANICS MINOR (APL)**

Students who wish to enroll in the airframe and powerplant (A&P) mechanics minor should complete an A&P program prior to or while attending Metro State.

**Required Courses**

Completion of an FAA-approved A&P program with appropriate college credit (usual semester hours awarded) . . . . .	25
Plus:	
AES 423 FBO and Aircraft Marketing . . . . .	3
AES 486 Aviation Safety . . . . .	3
<i>Total hours required</i> . . . . .	31

**PRIVATE PILOT MINOR (PRP)****Required Courses**

	<b>Semester Hours</b>
AES 110 Aviation Fundamentals . . . . .	6
MTR 141 Aerospace Meteorology . . . . .	2
AES 171 Single-Engine Flight Simulation I . . . . .	3
AES 197 Private Pilot Documentation . . . . .	0
AES 271 Instrument Flight Simulation I . . . . .	3
AES 385 Human Factors and Physiology of Flight . . . . .	3
One of the two following courses:	
AES 300 Aircraft Systems and Propulsion . . . . .	3
AES 404 Aircraft Performance . . . . .	3
<i>Total</i> . . . . .	18

In addition, all private pilot minors must possess the FAA private pilot certificate.

**Civil Engineering Technology**

The specialized fields within civil engineering technology include programs in civil engineering technology, drafting, and surveying. The surveying program is a separate, specialized four-year program. The individual curriculum requirements are listed separately.

Civil engineering technology graduates apply engineering principles in performing many of the tasks necessary for the planning and construction of highways, buildings, railroads, bridges, reservoirs, dams, irrigation works, water systems, airports, and other structures. In planning for a construction project, they may participate in estimating costs, preparing specifications for materials, and in surveying, drafting, and design work. During the construction phase, they work closely with the contractor and the superintendent in scheduling field layout, construction, activities, and the inspection of the work for conformity to specifications. In recent years, a major work area for civil and environmental engineering technology has involved environmental problems. This includes design and construction of water supply facilities, design of wastewater collection and treatment facilities, design of air pollution control facilities, and design of solid and toxic waste-disposal facilities. The development of environmental impact studies and environmental impact reports is also included.

Students must meet the following curriculum requirements for the various degrees, minors, and areas of emphasis.

**CIVIL ENGINEERING TECHNOLOGY MAJOR FOR BACHELOR OF SCIENCE**

The four-year bachelor of science degree is awarded upon the completion of the required courses and either a structures, environmental, or surveying area of emphasis or an approved minor.

This program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

<b>Required Technical Studies</b>		<b>Semester Hours</b>
CEN 110	Civil Technology	3
CEN 120	Technical Drawing I	4
CEN 121	Technical Drawing II	4
CEN 210	Structural Drawing	4
CEN 215	Mechanics I — Statics	3
SUR 151	Surveying I	4
SUR 252	Surveying II	4
CEN 310	Construction Methods	3
CEN 312	Engineering Economy	3
CEN 313	Mechanics of Materials	3
CEN 314	Mechanics of Materials — Laboratory	1
CEN 316	Mechanics II — Dynamics	3
CEN 317	Introduction to Structural Analysis	3
CEN 318	Fluid Mechanics I	3
CEN 319	Fluid Mechanics II	3
CEN 413	Soils Mechanics	3
CEN 460	Senior Seminar	3
COM 261	Introduction to Technical Writing	3
MET 311	Thermodynamics I	3
CSI 102	BASIC Computer Programming	2
Approved upper-division technical elective		2
Subtotal		64
<b>Additional Requirements</b>		
SPE 101	Fundamentals of Speech Communication	3
CHE 180	General Chemistry I	4
ECO 201	Principles of Economics — Macro	
-or-		
ECO 202	Principles of Economics — Micro	3
MTH 111	College Algebra	4
MTH 112	College Trigonometry	3
MTH 141	Calculus I	4
MTH 241	Calculus II	4
PHY 231 & 232	General Physics I/General Physics Laboratory I	
-or-		
PHY 201 & 203	College Physics I/College Physics Laboratory I	5
PHY 233 & 234	General Physics II/General Physics Laboratory II	
-or-		
PHY 202 & 204	College Physics II/College Physics Laboratory II	5
Total		35

## ENVIRONMENTAL AREA OF EMPHASIS

<b>Required Technical Studies</b>		
CEN 332	Environmental Impact Statements	3
CEN 333	Environmental Technology Processes	3
CEN 450	Water Supply and Treatment	3
CEN 451	Wastewater Treatment and Disposal	3
MTR 140	Introduction to Meteorology	3
Approved upper-division technical elective		3
Total		18

## STRUCTURES AREA OF EMPHASIS

<b>Required Technical Studies</b>		
CEN 412	Concrete Design I	3
CEN 414	Concrete Design II	3
CEN 440	Steel Design I	3
CEN 441	Steel Design II	3
CEN 333	Environmental Technology Processes	
-or-		
CEN 450	Water Supply and Treatment	
-or-		
CEN 451	Wastewater Treatment and Disposal	3
Approved upper-division technical elective		3
Total		18



**ENGINEERING AND LAND SURVEYING AREA OF EMPHASIS****Required Technical Studies**

SUR 253	Route Surveying	4
SUR 262	Survey Drafting	3
SUR 354	Boundary Law I	3
SUR 453	Site Planning	3
SUR 454	Boundary Law II	3
Surveying elective		3-4
Total		19-20

**CONTROL SURVEYING AND MAPPING AREA OF EMPHASIS****Required Technical Studies**

SUR 262	Survey Drafting	3
SUR 265	Photogrammetry I	3
SUR 362	Cartographic Surveys	3
SUR 366	Land Information Systems	3
SUR 474	Geodetic and Special Surveys	4
SUR 453	Site Planning	3
Total		19

**MINOR IN CIVIL ENGINEERING TECHNOLOGY****Required Technical Studies**

CEN 110	Civil Technology	3
CEN 120	Technical Drawing I	4
CEN 215	Mechanics I—Statics	3
CEN 310	Construction Methods	3
SUR 151	Surveying I	4
Approved lower-division technical elective		3
Approved upper-division technical elective		3
Total		23

**MINOR IN DRAFTING ENGINEERING TECHNOLOGY****Required Technical Studies**

CEN 120	Technical Drawing I	4
CEN 121	Technical Drawing II	4
CEN 221	Architectural Drawing	3
CEN 320	Advanced Technical Drawing	3
Approved lower-division technical elective		3
Approved upper-division technical elective		3
Total		20

**Surveying and Mapping**

The bachelor of science program in surveying and mapping is the only one of its kind in Colorado or the region. It prepares graduates for registration as professional land surveyors, but is broad enough to prepare them for careers in any other area of surveying and mapping, or for graduate study. Graduates are in professional-level positions with the Bureau of Land Management and other federal, state, and local government agencies, utilities, and private companies. Several have become presidents of their societies (Professional Land Surveyors of Colorado and the Colorado Section of the American Congress on Surveying and Mapping). A relatively new employment area for graduates is in land information systems (storing information on land parcels, public utilities, natural resources, etc., in computer systems for recordkeeping and planning purposes).

**SURVEYING AND MAPPING MAJOR FOR BACHELOR OF SCIENCE**

<b>Required Technical Studies</b>		<b>Semester Hours</b>
CEN 120	Technical Drawing I	4
SUR 151	Surveying I	4
SUR 252	Surveying II	4
SUR 253	Route Surveying	4
SUR 255	Surveying Computations	3
SUR 262	Survey Drafting	3
SUR 265	Photogrammetry I	3
SUR 271	Astronomy for Surveyors	2
SUR 354	Boundary Law I	3
SUR 362	Cartographic Surveys	3
SUR 366	Land Information Systems	3
SUR 376	Surveying Data Adjustment	3
SUR 448	Geodesy	3
SUR 453	Site Planning	3
SUR 454	Boundary Law II	3
SUR 465	Photogrammetry II	3
SUR 474	Geodetic and Special Surveys	4
GEL 101	General Geology	4
GEG 484	Remote Sensing	3
Subtotal		62
<b>Additional Course Requirements</b>		
ENG 101	Freshman Composition: The Essay	3
ENG 102	Freshman Composition: Analysis, Research, and Documentation	3
MTH 140	Pre-Calculus Mathematics	4
PHY 231	General Physics I	4
PHY 232	General Physics Laboratory I	1
PHY 233	General Physics II	4
PHY 234	General Physics Laboratory II	1
SPE 101	Fundamentals of Public Speaking	3
COM 261	Introduction to Technical Writing	3
MGT 300	Organizational Management	3
Social/behavioral electives		9
Humanities electives		6
Subtotal		44
Approved technical electives		4
<b>Required Math Minor</b>		
MTH 141	Calculus I	4
MTH 151	Computer Programming: FORTRAN	4
MTH 214	Matrix Algebra	2
MTH 241	Calculus II	4
MTH 321	Probability and Statistics	4
Approved math elective		(min.) 2
Subtotal		20
Total		130

**General Studies Requirements**

The Level I mathematics requirements do not apply to the Surveying and Mapping Program because it includes a math minor and SUR 376. At least one elective must be 300- or 400-level. At least two technical elective credits must be used to complete the math minor.

**MINOR IN SURVEYING**

<b>Required Technical Studies</b>		
SUR 151	Surveying I	4
SUR 252	Surveying II	4
SUR 262	Survey Drafting	3
SUR 265	Photogrammetry I	3
SUR 271	Astronomy for Surveyors	2
SUR 362	Cartographic Surveys	3
SUR 465	Photogrammetry II	3
Total		22

## Electronics Engineering Technology

Graduates are employed in a variety of positions in the following functional areas:

### RESEARCH AND DEVELOPMENT

Technical activities in research and development are primarily directed toward obtaining new information and new knowledge of the field. The engineering technologist is a member of the research team. Specific work may involve the development and construction of prototypes, test and evaluation of equipment, or other activities necessary to render technical support to a research project.

### MANUFACTURING

A graduate employed in a manufacturing facility might be involved in actual manufacturing, fabrication, test, prototype development, calibration, and quality control. In some cases, students may also become involved in sales or management.

### SERVICES

Service engineering has become a field of its own. This area involves extensive activities involving computers, communications, instrumentation, new product development, and numerous other activities involving electrical and electronic systems.

### DESIGN

Some graduates design electronic equipment and systems, when the design is application-oriented.

The EET curriculum provides a foundation in mathematics and science as well as a thorough treatment of the characteristics of electric circuits and electronic devices. In this four-year program, specialization may be achieved by selection of an area of emphasis in computers, communications (including satellite, fiber optics, microwave, and laser), control systems (including robotics), and power (including solar energy).

## ELECTRONICS ENGINEERING TECHNOLOGY MAJOR FOR BACHELOR OF SCIENCE

Because this program emphasizes applications of theory, students are required to take concurrent laboratory courses. In the EET 100 series of courses, students who drop or change to No Credit in the theory/laboratory course must make the same change in the companion laboratory/theory course.

The bachelor of science degree is awarded upon completion of the courses listed below. Students should contact the department for recent changes to this major.

This program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

Required Technical Courses		Semester Hours
EET 110	Circuits I . . . . .	4
EET 111	Circuits I Laboratory . . . . .	1
EET 112	Circuits II . . . . .	4
EET 113	Circuits II Laboratory . . . . .	2
EET 214	Electronics I . . . . .	4
EET 215	Electronics II . . . . .	4
EET 232	Digital Circuits I . . . . .	3
EET 234	Technical Programming Applications . . . . .	2
EET 235	Advanced Technical Programming . . . . .	3
EET 311	Circuit Analysis with Laplace . . . . .	4
EET 312	Advanced Analog Electronics . . . . .	4
EET 333	Digital Circuits II . . . . .	3
EET 336	Microprocessors . . . . .	3
EET 362	Analog and Digital Communications . . . . .	3
EET 371	Control Systems Analysis . . . . .	3
EET 410	Senior Project I . . . . .	1
EET 411	Senior Project II . . . . .	2
MET 306	Statistics and Dynamics . . . . .	4
MET 311	Thermodynamics . . . . .	3
XXX XXX	Upper-division EET electives (or MIS 401 and MIS 402 may be substituted) . . . . .	6
Subtotal . . . . .		63

**Additional Course Requirements**

ENG	101*	Freshman Composition: The Essay	3
ENG	102*	Freshman Composition: Analysis, Research and Documentation	3
MTH	140	Pre-calculus Math (MTH 111/112 may be substituted)	4
MTH	141*	Calculus I	4
MTH	241	Calculus II	4
PHY	231*	General Physics I	4
PHY	232*	General Physics Laboratory I	1
PHY	233*	General Physics II	4
PHY	234*	General Physics Laboratory II	1
CHE	180	General Chemistry I	4
COM	261	Introduction to Technical Writing	3
SPE	101*	Fundamentals of Speech Communication	3
XXX	XXX	Level II General Studies—Historical	3
XXX	XXX	Level II General Studies—Arts and Letters	6
XXX	XXX	Level II General Studies—Social Science	6
Subtotal			54

\*These courses count as general studies courses. At least three hours of Level II general studies courses must be upper-division. Multicultural requirement of three credits may be applied to any Level II category or taken as additional hours.

**Areas of Emphasis**

(Only one area needs to be chosen)

**COMPUTER****Required EET Courses****Semester Hours**

EET	432	Digital Filters	3
EET	433	Data Communications	3
EET	434	Interface Techniques	3
EET	437	Microcontrollers	3
XXX	XXX	Upper-division EET electives	6
Subtotal			18

**COMMUNICATIONS**

EET	363	Electromagnetic Fields	3
EET	364	Communications Laboratory	3
EET	367	Measurements for Communications Systems	3
EET	433	Data Communications	3
EET	462	Advanced Communication Systems	3
EET	464	Communication Circuit Design	3
Subtotal			18

**CONTROL SYSTEMS****Required EET Courses**

EET	342	Electric Power Distribution	3
EET	372	Control Systems Laboratory	1
EET	373	Process Control Systems	2
EET	374	Programmable Logic Controllers	2
EET	433	Data Communications	3
EET	434	Interface Techniques	3
EET	471	Digital Control Systems Design	4
Subtotal			18

**POWER****Required Courses**

EET	341	Electric Machines	3
EET	342	Electric Power Distribution	3
EET	343	Power Generation Using Solar Energy	3
EET	372	Control Systems Laboratory	1
EET	373	Process Control Systems	2
EET	374	Programmable Logic Controllers	2
MET	312	Heat Transfer	2
XXX	XXX	Upper-division EET electives	2
Subtotal			18

## 154 SCHOOL OF PROFESSIONAL STUDIES

### Totals

Required technical courses .....	63
Additional courses .....	54
Area of emphasis** .....	18
<i>Program total</i> .....	135

*\*\*In select cases, a minor in another department may be substituted for area of emphasis, with prior approval of chair of the Engineering Technology and Industrial Studies Department.*

### MINOR IN ELECTRONICS ENGINEERING TECHNOLOGY

Required EET Courses	Semester Hours
EET 200 Electronic Circuits and Machines .....	3
(The sequence EET 110, EET 111, EET 112, EET 113 may be substituted)	
EET 234 Technical Programming Applications .....	2
(Any one of the following may substitute: CSI 130, CSI 222, CMS 211, MTH 151, or MET 321)	
EET 301 Industrial Electronics .....	4
(The sequence EET 214 and 215 may be substituted)	
EET 232 Digital Circuits I .....	3
(EET 231 may be substituted for computer science majors)	
EET 333 Digital Circuits II .....	3
EET 336 Microprocessors .....	3
<i>Total</i> .....	18

### Industrial and Technical Studies

The Industrial and Technical Studies program offers the following majors:

#### Bachelor of Science:

- Industrial and Technical Studies (ITS)
- Industrial Arts Teaching Area of Emphasis
- Business Area of Emphasis
- Technical and Industrial Administration (TIA)

#### Bachelor of Arts:

- Industrial Design (IND)

#### Minors:

- Industrial Arts Teaching Area of Emphasis

### GENERAL STUDIES

Students must consult with a faculty adviser regarding general studies requirements.

### CREDIT BY EXAMINATION

Often students selecting the industrial and technical studies major have extensive experience in business, industry, or the military, which parallels the content of some of the courses. To receive credit for such experience the student must contact the program coordinator for evaluation.

### INDUSTRIAL AND TECHNICAL STUDIES MAJOR FOR BACHELOR OF SCIENCE DEGREE

In order to be awarded the bachelor of science degree in Industrial and Technical Studies, the student must meet the college's general specifications for the bachelor's degree and must complete the courses required for one of the two areas of emphasis (industrial arts teaching or business) as listed below.

No minor required.

### I. INDUSTRIAL ARTS TEACHING AREA OF EMPHASIS

Graduates meet all the state requirements for a secondary teaching credential and are qualified to teach industrial arts in both junior and senior high schools. Courses are also offered that are designed for those already in teaching and desire to further their professional growth.

<b>Required Courses</b>		<b>Semester Hours</b>
General Studies .....		36
ITS 101	Introduction to Woodworking .....	4
ITS 103	Finishing Materials and Processes .....	2
ITS 113	Introduction to Plastics .....	3
ITS 120	Introduction to General Metals: Cold Metals .....	2
-or-		
ITS 122	Introduction to General Metals: Hot Metals .....	2
ITS 143	Introduction to Industrial Drawing .....	2
ITS 150	Introduction to Graphic Arts I .....	2
-or-		
ITS 151	Introduction to Graphic Arts II .....	2
ITS 166	Introduction to Power .....	3
Subtotal .....		18
Choose two from ITS 171, 172, or 175		
ITS 171	Consumer Electricity/Electronics: Communication Systems .....	2
ITS 172	Consumer Electricity/Electronics: Control Systems .....	2
ITS 175	Consumer Electricity/Electronics: Residential Systems .....	2
ITS 269	Alternate Energy and Transportation .....	2
ITS 281	Technology, Society, and You .....	3
ITS 283	Manufacturing Organization and Processes .....	2
ITS 341	Computer Aided Drafting for Industry .....	3
ITS 380	Industrial Safety and Production .....	4
ITS 481	Curriculum and Methods of Teaching Industrial Arts .....	3
ITS 483	Organization and Administration of Industrial Arts .....	3
ITS 484	Emerging Technologies .....	2
ITS 486	Research in Industrial Technology .....	2
ITS	Upper-division electives (two different areas) .....	8
Subtotal .....		32
<b>Teaching Licensure Requirements</b>		
EDS 221	Process of Learning in Urban Secondary Schools .....	3
EDS 222	Field Experiences in Urban Secondary Schools .....	2
EDS 320	Educational Psychology Applied to Teaching .....	3
EDS 321	Secondary School Curriculum and Classroom Management .....	3
EDS 322	Field Experiences in Tutoring and Materials Construction .....	2
SED 360	The Exceptional Learner in the Classroom .....	3
EDT 361	Introduction to Educational Technology .....	2
EDS 429	Student Teaching and Seminar: Secondary .....	12
RDG 328	Teaching of Reading and Writing in the Content Areas .....	4
Total .....		124

## II. BUSINESS AREA OF EMPHASIS

Selection of the business emphasis prepares students to enter business and industry in a variety of capacities. Sales, manufacturing, management, and small-business operation provide diverse opportunities for graduates. Within this emphasis, specialty areas are available in:

- drafting
- graphics
- woods
- electricity/electronics
- metals

### Industrial and Technical Studies Core—Non-Teaching

The following core courses are required for all specialty areas within the business emphasis:

ITS 101	Introduction to Woodworking .....	4
ITS 103	Finishing Materials and Processes .....	2
ITS 113	Introduction to Plastics .....	3
ITS 120	Introduction to General Metals: Cold Metals .....	2
ITS 122	Introduction to General Metals: Hot Metals .....	2
ITS 143	Introduction to Industrial Drawing .....	2
ITS 150	Introduction to Graphic Arts I .....	2
ITS 151	Introduction to Graphic Arts II .....	2
ITS 166	Introduction to Power .....	3
Subtotal .....		22

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Choose two from ITS 171, 172, or 175

ITS 171	Consumer Electricity/Electronics: Communication Systems	2
ITS 172	Consumer Electricity/Electronics: Control Systems	2
ITS 175	Consumer Electricity/Electronics: Residential Systems	2

Subtotal ..... 4

ITS 269	Alternate Energy and Transportation	2
ITS 281	Technology, Society, and You	3
ITS 283	Manufacturing Organization and Processes	2
ITS 341	Computer Aided Drafting for Industry	3
ITS 380	Industrial Safety and Production	4
ITS 486	Research in Industrial Technology	2
ITS 496	Industrial Internship	4

Subtotal ..... 20

Total ..... 46

General Studies ..... 36

## Science and/or Mathematics for Electricity/Electronics Specialty

MTH 111	College Algebra	4
PHY 100	Introduction to Physics	4

## Business Core

Choose from the following:

ITS 370	Industrial Safety	3
ITS 371	Developments in Industrial and Technical Processes	3
ITS 372	Characteristics of Industrial and Technical Personnel Selection, Supervision, and Evaluation	3
ITS 473	Assessment of Trade and Technical Enterprises	3
ITS 474	Organizational Structures for Technical Enterprises	2
ACC 201	Principles of Accounting I	3
ACC 308	Small Business Taxation	3
ECO 201	Principles of Economics—Macro	3
MGT 221	Legal Environment of Business I	3
MGT 250	Small Business Management	3
MGT 300	Organizational Management	3
MGT 321	Commercial and Corporate Law	3
MKT 300	Principles of Marketing	3

Total ..... 24

## Specialty Areas

### Drafting

ITS 341	Computer Aided Drafting for Industry I	3
ITS 350	Advanced Graphic Arts	4
ITS 441	Computer Aided Drafting for Industry II	3
ITS 487	Special Studies in Industrial and Technical Studies	5
CEN 210	Structural Drawing	4
SUR 262	Survey Drafting	3

### Electricity/Electronics

EET 214	Electronics I	4
EET 232	Digital Circuits I	3
EET 333	Digital Circuits II	3
EET 336	Microprocessors	3
ITS 487	Special Studies in Electronics	4

### Graphics

ITS 255	Introduction to Photography	3
ITS 341	Computer Aided Drafting for Industry I	3
ITS 350	Advanced Graphic Arts	4
ITS 487	Special Studies in Industrial and Technical Studies	5
TEI 200	Airbrush I (CCD Course)	6

### Metals

ITS 231	Art Metal, Silversmith and Lapidary	2
ITS 321	Advanced Metalworking	4
ITS 341	Computer Aided Drafting for Industry I	3
ITS 420	Welding Technology	4
ITS 487	Special Studies in Industrial and Technical Studies	5

**Wood**

ITS 341	Computer Aided Drafting for Industry I	3
ITS 403	Advanced Wood Processes	4
ITS 487	Special Studies in Industrial and Technical Studies	12
Electives		0-7
<i>Total</i>		121-122

**INDUSTRIAL AND TECHNICAL STUDIES MINOR**

This minor must be approved in writing by the program coordinator. The coordinator must approve the plan of study and will take into account the student's previous experience and future occupational goal.

**INDUSTRIAL ARTS TEACHING AREA OF EMPHASIS****Required Courses**

ITS 380	Industrial Safety and Production	4
ITS 481	Curriculum and Methods of Teaching Industrial Arts	3
ITS 483	Organization and Administration of Industrial Arts	3
ITS	Lower-division elective	8
ITS	Upper-division elective	4
<i>Total</i>		22

**Technical and Industrial Administration**

Please Note: Beginning fall 1995, this program will be phased out. For more information, see an adviser in the dean's office.

The technical and industrial administration major builds on the technical expertise attained through completion of an associate of applied science, associate of science, or associate of arts degree with specialties from within the field of trade and industry (T&I) or technical education. This major provides students with an increased opportunity for career mobility and advancement in jobs related to, or associated with, their technical background. Students who have met Metro State's general studies requirements should be able to complete the bachelor of science degree in four to five semesters. Technical credits earned in the associate degree will be accepted and applied toward requirements for a minor. Students entering this program must possess an associate degree and complete the following requirements.

**TECHNICAL AND INDUSTRIAL ADMINISTRATION  
MAJOR FOR BACHELOR OF SCIENCE DEGREE****Required Courses****Semester Hours**

General Studies		36
Technical and Industrial Administration		20
ITS 370	Industrial Safety	3
ITS 371	Development in Industrial and Technical Processes	3
ITS 372	Characteristics of Industrial and Technical Personnel Selection, Supervision, and Evaluation	3
ITS 473	Assessment of Trade and Technical Enterprises	3
ITS 474	Organizational Structures for Technical Enterprises	2
ACC 201	Principles of Accounting I	3
MGT 300	Organizational Management	3
Select 1-12 semester hours		1-12
ITS 487	Special Studies in Industrial and Technical Studies	1-5
ITS 471	Trade and Technical Practicum	8
ITS 496	Professional Internship	4
Electives to complete 30 credit hour major		0-9
ACC 308	Small Business Taxation	3
CMS 201	Principles of Information Systems	3
FIN 225	Personal Money Management	3
FIN 342	Principles of Insurance	3
MGT 250	Small Business Management	3
MKT 200	Business and Interpersonal Communications	3
MKT 300	Principles of Marketing	3
MKT 301	Marketing Research	3
MKT 310	Retail Marketing	3



COM Upper-division courses

ITS Upper-division courses

Minor — Four upper-division credit hours must be completed in addition to technical credits transferred from associate degree. These courses must be selected in consultation with and approved by an ITS program adviser . . . . . 4

Associate degree credits . . . . . 50–60

*Total* . . . . . 120

## Industrial Design

The industrial design major is a program offered through Industrial and Technical Studies leading to a bachelor of arts degree.

### INDUSTRIAL DESIGN MAJOR FOR BACHELOR OF ARTS DEGREE

No Minor Required

#### Required Courses

	<b>Semester Hours</b>
General Studies . . . . .	36
ART 110 Basic Drawing I . . . . .	3
ART 120 Design Processes and Concepts I . . . . .	3
ART 121 Design Processes and Concepts II . . . . .	3
ART 201 Survey of Modern Art: Impressionism to 1960 . . . . .	3
ART 240 Beginning Advertising Design . . . . .	3
ART 245 Beginning Product and Industrial Design . . . . .	3
ART 300 Art Nouveau . . . . .	3
-or-	
ART 303 History of Art Between World Wars . . . . .	3
ART 340 Intermediate Advertising Design . . . . .	3
ART 345 Intermediate Product and Industrial Design . . . . .	3
ART 445 Advanced Product and Industrial Design I . . . . .	3
ART 446 Advanced Product and Industrial Design II . . . . .	3
ITS 101 Introduction to Woodworking . . . . .	4
ITS 103 Finishing Materials and Processes . . . . .	2
ITS 113 Introduction to Plastics . . . . .	3
ITS 120 Introduction to General Metals: Cold Metals . . . . .	2
ITS 122 Introduction to General Metals: Hot Metals . . . . .	2
ITS 143 Introduction to Industrial Drawing . . . . .	2
ITS 255 Introduction to Photography . . . . .	3
ITS 341 Computer Aided Drafting for Industry . . . . .	3
ITS 380 Industrial Safety and Production . . . . .	4
ITS 403 Advanced Wood Processes . . . . .	4
PSY 441 Human Factors Engineering . . . . .	3
Elective courses (selected in consultation with adviser, 10 of which must be upper-division) . . . . .	19
<i>Total</i> . . . . .	120

## Mechanical Engineering Technology

The program, developed in 1968, is continually upgraded to meet the needs of industry and employers of MET graduates. An advisory group including employers, graduates, and students of the program meets with faculty and administration to review curriculum and facilities on a semester basis.

The mechanical engineering technology program offers the bachelor of science degree in MET. It is structured with two distinct areas of emphasis: (1) a series of courses with an emphasis on manufacturing or (2) design and thermo-science courses under the designated mechanical emphasis.

The educational approach is "hands-on" with 70 percent of the courses requiring laboratory work in addition to lectures. The curriculum includes courses in thermodynamics, fluid mechanics, electrical circuits, solid mechanics, chemistry, engineering materials, and math (including calculus), which prepares graduates for the Fundamentals of Engineering examination, the initial step for registration as a Professional Engineer (P.E.). Students are required to take an assessment examination prior to graduation. The written exam is given in the capstone course, MET 407, mechanical emphasis, or MET 408, in the manufacturing option.

The mechanical engineering technology program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

**MECHANICAL ENGINEERING TECHNOLOGY MAJOR FOR BACHELOR OF SCIENCE DEGREE**

<b>Required Technical Courses</b>		<b>Semester Hours</b>
MET 100	Materials and Manufacturing Technology .....	3
MET 101	Manufacturing Processes .....	3
MET 131	Principles of Quality Assurance .....	3
MET 220	Materials of Engineering .....	3
MET 221	Mechanical Drawing .....	3
MET 222	Computer Aided Drafting for Engineering Technology .....	3
MET 301	Fluid Flow I .....	3
MET 306	Statistics and Dynamics .....	4
MET 307	Machine Design .....	3
MET 308	Statics Laboratory .....	1
MET 309	Dynamics Laboratory .....	1
MET 311	Thermodynamics I .....	3
MET 321	Introduction to Computer Aided Design .....	4
MET 341	Geometric Dimensioning and Tolerancing .....	3
MET 400	Project Engineering .....	3
Subtotal .....		43

<b>Additional Technical Course Requirements:</b>		<b>Semester Hours</b>
CEN 120	Technical Drawing I (or equivalent experience) .....	4
CEN 313	Mechanics of Materials .....	3
CEN 314	Mechanics of Materials Laboratory .....	1
EET 200	Electric Circuits and Machines .....	3
EET 301	Industrial Electronics .....	4
Subtotal .....		15

<b>Additional Course Requirements:</b>		
ENG 101	Freshman Composition .....	3
ENG 102	Freshman Composition: Analysis, Research, and Documentation* .....	3
SPE 101	Fundamentals of Speech Communication* .....	3
COM 261	Introduction to Technical Writing .....	3
MTH 140	Pre-Calculus Mathematics (MTH 111, 112 may be substituted) .....	4
MTH 141	Calculus I* .....	4
MTH 241	Calculus II .....	4
PHY 201	College Physics I* .....	3
PHY 203	College Physics I Laboratory* .....	2
PHY 202	College Physics II* .....	3
PHY 204	College Physics II Laboratory* .....	2
CHE 180	General Chemistry I .....	4
ECO 201	Principles of Economics* .....	3
PHI 103	Ethics* .....	3
XXX XXX	Level II General Studies—Historical* .....	3
XXX XXX	Level II General Studies—Arts and Letters* .....	3
XXX XXX	Level II General Studies—Social Science* .....	3
Subtotal .....		54

**Areas of Emphasis**

(Only one area of emphasis needs to be chosen)

**MANUFACTURING**

MET 300	Manufacturing Analysis .....	4
MET 310	N/C Computer Programming .....	3
MET 325	Tool Design and Production Tooling .....	3
MET 330	Statistical Process Control .....	3
MET 333	Robotics for Manufacturing .....	3
MET 401	Advanced Manufacturing Technology* .....	3
MET 408	Computer Aided Manufacturing .....	3
Subtotal .....		22

**MECHANICAL**

MET 302	Fluid Flow II	3
MET 312	Heat Transfer	2
MET 314	Heat Transfer Laboratory	1
MET 331	Thermodynamics II	3
MET 332	Instrumentation Laboratory	3
MET 407	Computer Aided Design*	3
MET 428	Advanced Energy Technology	3
XXX XXX	Upper-division MET elective	3
Subtotal		21
Total		133-134

\*These courses count as general studies courses. At least three hours of Level II must be upper-division.

**MECHANICAL ENGINEERING TECHNOLOGY MINOR**

MET 100	Materials and Manufacturing Technology	3
MET 101	Manufacturing Processes	3
MET 131	Principles of Quality Assurance	3
MET 220	Materials of Engineering	3
Upper-division MET Electives		6
Total		18

**Technical Communications**

The Technical Communications Department offers three areas of emphasis and a technical communications minor. The three areas of emphasis are technical writing and editing, industrial communications, and technical media. Each area of emphasis offers training in one or more communications areas that are most in demand by industry and government. Technical writing and editing prepares an individual to write, edit, and publish the wide variety of reports, manuals, and other technical or lay publications produced by industry and government. The industrial communications emphasis is designed for the person who desires to manage the flow of information within a company, government agency, or between industries and agencies. The technical media emphasis meets two needs of industry and government: people prepared to design and implement internal training programs, and people seeking careers to provide technical information through visual media.

The technical communications minor provides a general background in preparing technical information designed to meet the *minimal* needs of industry and government, with the opportunity to emphasize the area of most interest to the individual student. The minor is particularly useful to people majoring in scientific and technological disciplines as a means of expanding their employment skills.

The program welcomes students from the community and other areas of the college whose professional or academic work will benefit from one or more of the program offerings. Students enrolling in one of the major areas of emphasis or the minor must confer with a program adviser because all degree plans are tailored to the career goals of the individual student.

Computerized document processing ability is required of all students majoring or minoring in the technical communications programs. Students can meet this requirement in one of three ways:

1. Students can provide documentary evidence of a previous satisfactory completion of an academic or industrial training course in computer literacy and document processing at the time they declare their major or minor.
2. Students can enroll in an approved Metro State course in CMS or CSI in the semester following the declaration of their major or minor.
3. Students can complete a skills test administered by the program during the semester they declare their major or minor.

All students majoring in the technical communications program must participate in program assessment. See the department for details.

**TECHNICAL COMMUNICATIONS MAJOR FOR BACHELOR OF ARTS****TECHNICAL WRITING AND EDITING AREA OF EMPHASIS**

This communications area of emphasis provides the student with both the theory and production practices of technical writing and editing used by industry and government. It includes coursework in the writing, editing, design, and production of technical reports, proposals, and manuals in addition to professional experience, hands-on practice with computer, and the production of software instruction manuals.

<b>Required Core</b>		<b>Semester Hours</b>
COM 272	Introduction to Communication Concepts and Systems .....	3
COM 378	Communications Law .....	3
Total .....		6

**Required Area of Emphasis Courses**

Twenty-four hours from the following:

COM 243	Introduction to Technical Media .....	3
COM 244	Writing for Radio .....	3
COM 246	Presentation Graphics .....	3
COM 261	Introduction to Technical Writing .....	3
COM 299	Internship .....	3
COM 331	International Technical Communications .....	3
COM 332	Semiotics of International Technical Communications .....	3
COM 333	Technical Writing for Translation .....	3
COM 344	Corporate Scriptwriting for Film and Television .....	3
COM 347	Writing for Corporate Audio .....	3
COM 361	Advanced Technical Writing .....	3
COM 362	Industrial Editing and Production .....	3
COM 363	Designing Technical Publications .....	3
COM 364	Writing Computer-User Software Documentation .....	3
COM 365	Writing Hardware Documentation .....	3
COM 366	Variable Topics in Industrial and Technical Communications .....	3
COM 463	Costing and Planning Technical Publications .....	3
COM 476	Advanced Internship in Technical Communications .....	3
COM 479*	Senior Seminar in Technical Communications .....	3
COM 480	Workshop .....	3
ITS 151	Introduction to Graphic Arts II .....	2
ITS 350	Advanced Graphic Arts .....	4
Total .....		24

\*If used as the capstone course, this course cannot be used as an emphasis course or a required elective.

**Electives**

Twelve hours of electives from any of the areas of emphasis and/or courses approved by the student's adviser that would specifically benefit the student's career goals .....		12
Total .....		42

**INDUSTRIAL COMMUNICATIONS AREA OF EMPHASIS**

This communications area of emphasis prepares the student for a career in managing the flow of information within and among technical and industrial communications networks and systems. It includes practical experience and a theoretical understanding of industrial communication, the culture that exists within corporations, and various methodologies for the dissemination of information within industries and governmental agencies.

<b>Required Core</b>		<b>Semester Hours</b>
COM 272	Introduction to Communication Concepts and Systems .....	3
COM 378	Communications Law .....	3
Total .....		6

**Required Area of Emphasis Courses**

Twenty-four hours from the following:

COM 243	Introduction to Technical Media .....	3
COM 246	Presentation Graphics .....	3
COM 261	Introduction to Technical Writing .....	3
COM 299	Internship .....	3
COM 331	International Technical Communications .....	3
COM 332	Semiotics of International Technical Communications .....	3
COM 333	Technical Writing for Translation .....	3
COM 351	Industrial Communication .....	3

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COM 352	Communication of Power and Authority	3
COM 353	Corporate Cultures	3
COM 356	Variable Topics in Industrial Communicating	3
COM 476	Advanced Internship in Technical Communications	3
COM 479*	Senior Seminar in Technical Communications	3
COM 480	Workshop	3
MGT 355	Manufacturing and Service Management	3
MGT 461	Labor/Employee Relations	3
PSY 345	Industrial Psychology	3
PSY 441	Human Factors Engineering	3
SOC 316	Industry and Occupations	3
SPE 310	Business and Professional Speaking	3
SPE 313	Conference Leadership	3
Total		24

\*If used as the capstone course, this course cannot be used as an emphasis course or a required elective.

### Electives

Twelve hours of electives from any of the areas of emphasis and/or courses approved by the student's adviser that would specifically benefit the student's career goals	12
Total	42

### TECHNICAL MEDIA AREA OF EMPHASIS

This communications area of emphasis provides the student with the theoretical and practical experience required to design, write, and produce multi-image slide and videotape productions for nonbroadcast use in industry, government, and other large organizations. Such productions are frequently used for training, image creation, and technical information dissemination.

#### Required Core

	Semester Hours	
COM 272	Introduction to Communication Concepts and Systems	3
COM 378	Communications Law	3
Total	6	

#### Required Area of Emphasis Courses

Twenty-four hours from the following:

COM 241	Basic Multi-Image Production	3
COM 242	Basic Corporate Videotape Production	3
COM 243	Introduction to Technical Media	3
COM 244	Writing for Radio	3
COM 245	Basic Multimedia Production	3
COM 246	Presentation Graphics	3
COM 261	Introduction to Technical Writing	3
COM 299	Internship	3
COM 331	International Technical Communications	3
COM 332	Semiotics of International Technical Communications	3
COM 341	Advanced Multi-Image Production	3
COM 342	Intermediate Corporate Videotape Production	3
COM 344	Corporate Scriptwriting for Film and Television	3
COM 345	Intermediate Multimedia Production	3
COM 347	Writing for Corporate Audio	3
COM 441*	Budgeting and Planning for Audio-Visual Productions	3
COM 442	Advanced Corporate Videotape Production	3
COM 476	Advanced Internship in Technical Communications	3
COM 479*	Senior Seminar in Technical Communications	3
COM 480	Workshop	3
ITS 151	Introduction to Graphic Arts II	2
ITS 255	Introduction to Photography	3
ITS 350	Advanced Graphic Arts	4
SPE 310	Business and Professional Speaking	3
SPE 313	Conference Leadership	3
Total	24	

\*If used as the capstone course, this course cannot be used as an emphasis course or a required elective.

### Electives

Twelve hours of electives from any of the areas of emphasis and/or courses approved by the student's adviser that would specifically benefit the student's career goals	12
Total	42

**TECHNICAL COMMUNICATIONS MINOR**

The technical communications minor is designed to provide additional skills for the student majoring in a scientific or technological discipline that will increase his or her employability. In addition to the required core courses, the student selects five courses that may be in one of the specialized areas or may be divided among the areas offered by the technical communications program to provide an overview of the discipline.

I. Each of the following courses:

COM 243	Introduction to Technical Media	3
COM 261	Introduction to Technical Writing	3
COM 272	Introduction to Communication Concept and Systems	3
	Semester hours required	9

II. Five of the following courses:

COM 241	Basic Multi-Image Production	3
COM 242	Basic Corporate Videotape Production	3
COM 244	Writing for Radio	3
COM 245	Basic Multimedia Production	3
COM 246	Presentation Graphics	3
COM 331	International Technical Communications	3
COM 332	Semiotics of International Technical Communications	3
COM 333	Technical Writing for Translation	3
COM 341	Advanced Multi-Image Production	3
COM 342	Intermediate Corporate Videotape Production	3
COM 344	Corporate Scriptwriting for Film and Television	3
COM 345	Intermediate Multimedia Production	3
COM 347	Writing for Corporate Audio	3
COM 351	Industrial Communication	3
COM 352	Communication of Power and Authority	3
COM 353	Corporate Cultures	3
COM 356	Variable Topics in Industrial Communicating	3
COM 361	Advanced Technical Writing	3
COM 362	Industrial Editing and Production	3
COM 363	Designing Technical Publications	3
COM 364	Writing Computer-User Software Documentation	3
COM 365	Writing Hardware Documentation	3
COM 366	Variable Topics in Industrial Communications	3
COM 378	Communications Law	3
COM 441	Budgeting and Planning for Audio-Visual Productions	3
COM 442	Advanced Corporate Video Production	3
COM 463	Costing and Planning Technical Publications	3
COM 476	Advanced Internship in Technical Communications	3
COM 479	Senior Seminar in Technical Communications	3
	Semester hours required	15
	<i>Total</i>	24

## DIVISION OF PUBLIC SERVICE PROFESSIONS

The Division of Public Service Professions is composed of six departments and one center: The Criminal Justice and Criminology Department; the Hospitality, Meeting and Travel Administration Department; the Human Services Department; the Military Science Department; the Nursing and Health Care Management Department; the Human Performance, Sport and Leisure Studies Department; the Air Force Reserve Officers' Training Corps Program; and the Center for Addiction Studies.

The Criminal Justice and Criminology Department offers a bachelor of science degree with a choice of five areas of emphasis: law enforcement/public safety, corrections, youth advocacy, criminal justice administration, and corporate security.

The Human Performance Sport and Leisure Studies Department offers a major in human performance and sport with six emphasis areas and a major in leisure studies with two emphasis areas, and minors in human performance and sport, leisure studies, and health and safety.

The Hospitality, Meeting and Travel Administration Department provides a flexible and individualized interdisciplinary program leading to the bachelor of arts degree, with minors in hotel, restaurant, meeting, and travel administration.

The Human Services Department provides a core service in programs of rehabilitation and training that emphasizes client self-help. Such programs conducted by local, state, and federal institutions and private agencies have created expanded opportunities for a variety of interesting new and existing careers. The Center for Addiction Studies is designed to provide opportunities for people seeking to become state-certified addiction counselors to meet those requirements through a degree in human services with an addiction emphasis or a non-degree program through the center.

The Military Science Department offers Army ROTC programs leading to a commission in the active Army, Army Reserve, or National Guard.

The Nursing and Health Care Management Department houses two programs. The purposes of the Baccalaureate Registered Nurse Program and the Health Care Management Program are to provide diploma and associate degree RN graduates and other health care professionals with a broadened educational base for improvement of health care practice and preparation for meeting future health-care needs of society.

The Air Force ROTC Program allows students to register and receive credit at Metropolitan State College of Denver for Air Force Reserve Officers' Training Corps (AFROTC) classes at the University of Colorado, Boulder.

### Air Force ROTC Program

Air Force ROTC (UC-B) Folsom Stadium, 218  
University of Colorado at Boulder, Boulder, Colorado 80309  
(303) 492-8351

U.S. Air Force ROTC offers several programs leading to a commission in the U.S. Air Force upon receipt of at least a baccalaureate degree.

#### Standard Four-Year Program

This program is in three parts: the General Military Course (GMC) for lower-division (normally freshmen and sophomore) students; the Professional Officer Course (POC) for upper-division students (normally juniors and seniors); and Leadership Laboratory (LLAB) (attended by all cadets). Completion of the General Military Course is a prerequisite for entry into the Professional Officer Course. Completion of a four-week summer training course is required prior to commissioning.

#### Modified Two-Year Program

This program is offered to full-time, regularly enrolled degree students. It requires at least two years of full-time college (undergraduate or graduate level, or a combination). Those selected for this program must complete a six-week field-training program during the summer months as a prerequisite for entry into the Professional Officer Course the following fall semester.

#### Leadership Lab

All AFROTC cadets must attend Leadership Lab (one and one-half hours per week). The laboratory involves a study of Air Force customs and courtesies, drill and ceremonies, career opportunities, and the life and work of an Air Force junior officer.

### **Other AFROTC Programs**

Other programs are frequently available based on current Air Force needs. Any AFROTC staff member in Boulder (303) 492-8351 can discuss best alternatives. Interested students should make initial contact as early as possible to create the best selection opportunity, as selection is on a competitive basis. There is no obligation until a formal contract is entered.

### **Air Force College Scholarship Program**

Students participating in Air Force ROTC may be eligible to compete for Air Force ROTC college scholarships. Students selected for this program are placed on scholarships that pay tuition, book allowances, non-refundable educational fees, and a subsistence of \$150 per month, tax-free. All cadets enrolled in the Professional Officer Course receive a \$150 per month subsistence during the regular academic year. Two- and three-year scholarships are available to both men and women in all academic disciplines. In addition, there are special programs for minority students.

### **Flight Opportunities**

Prior to entering the fourth year of the AFROTC program, qualified AFROTC students can compete for pilot allocations. Cadets are also eligible to fly with the Civil Air Patrol as ROTC members.

### **USAF Medical Programs**

Qualified pre-med or nursing students can compete for pre-med or nursing scholarships and programs. These scholarships and programs can lead to a rewarding career as an Air Force officer, serving as a doctor or a nurse.

### **AFROTC Course Credit**

AFROTC courses are worth 16 credit hours toward graduation.

### **Registration**

Metro State students who wish to register for AFROTC classes sign up for them through the normal course registration process. AFROTC classes begin with the AFR prefix.

## **Army ROTC Program**

Students may enroll in Army ROTC classes available on campus in the Military Science Department. For further details and program offerings, refer to the Military Science section of this *Catalog*.

## **Department of Criminal Justice and Criminology**

The present and future needs of American society require substantially greater numbers and more highly educated persons in criminal justice agencies at all levels of government. Increasingly, potential employers demand applicants who have had professional education. In addition, there is considerable interest in the criminal justice system to increase professionalization through education. The present curriculum not only provides a solid foundation in police-related areas, but also prepares students who are interested in further study in the areas of probation and parole, corrections, juvenile agency work, criminal justice administration, and private/corporate security. Course offerings within these professional fields are related to the human services program, public administration, urban studies, and commercial enterprises.

### **CRIMINAL JUSTICE AND CRIMINOLOGY MAJOR FOR BACHELOR OF SCIENCE**

The bachelor of science in criminal justice and criminology is designed to provide professional courses, as well as a broad general education. The curriculum is structured for the student seeking either preservice or inservice education. Recognizing that many interested in such education are already employed in some form of criminal justice work, and that many have completed coursework at the community college level, the department has developed a four-year program that provides comprehensive fundamental subjects in the first two years (lower-division) and emphasizes subjects of an advanced, specialized, and administrative nature in the second two years (upper-division). The curriculum is structured to facilitate transfer from two-year police science/criminal justice programs. The department has an articulation agreement with the Colorado Community College System. The articulation agreement states that if a transfer student has completed the total general education requirements at any accredited Colorado community college, Metro State will consider the student's general studies requirements completed.



A minor in sociology, psychology, political science, business management or urban studies is strongly recommended, but others are accepted. An individualized degree minor may also be designed to meet the individual student's area of interest.

Students must meet the college's requirements for the bachelor's degree, including general studies, and should consult with a faculty adviser regarding general studies courses, the selection of a criminal justice area of emphasis, and the minor.

**AREAS OF STUDY**

The Criminal Justice and Criminology Department offers a bachelor of science degree with a choice of five areas of emphasis. These areas of emphasis recognize the growing specialization within the criminal justice system and the expanding information base in the fields of law enforcement, corrections, youth advocacy, criminal justice administration, and corporate security. The areas also acknowledge the educational and professional needs of the criminal justice and criminology student by providing a commonality of learning experiences through core courses required for all areas of emphasis in criminal justice and criminology.

**CRIMINAL JUSTICE AND CRIMINOLOGY MAJOR FOR BACHELOR OF SCIENCE**

**Criminal Justice Core**

Required Courses for All Areas of Emphasis			Semester Hours
CJC 101	Introduction to the Criminal Justice System	.....	3
CJC 110	Evolutionary Legal Concepts in Criminal Justice	.....	3
CJC 210	Substantive Criminal Law	.....	3
CJC 465	Ethics for the Criminal Justice Professional	.....	3
Total .....			12

In all areas of emphasis, students must complete a minimum of 18 upper-division semester hours.

**AREA OF EMPHASIS I: LAW ENFORCEMENT/PUBLIC SAFETY**

This emphasis is designed for those students who seek academic preparation for careers within law enforcement agencies or who may be considering law school or other graduate school programs.

Required Courses in Addition to Core:			Semester Hours
CJC 212	Evidence and Courtroom Procedures	.....	3
CJC 214	Criminal Procedure	.....	3
CJC 312	Constitutional Law	.....	3
Total .....			9

Students electing this area of emphasis must select 18 hours from the following courses to complete the law enforcement/public safety area of emphasis:

CJC 215	Municipal Law	.....	3
CJC 220	Law Enforcement Operations	.....	3
CJC 291	Critical Issues in Criminal Justice	.....	1-2
CJC 314	Juvenile Law	.....	3
CJC 320	Criminal Justice Administrative Behavior	.....	3
CJC 335	Seminar in Delinquency Causation, Prevention and Control	.....	3
CJC 340	Criminal Behavior and Criminal Careers	.....	3
CJC 341	Criminal Justice and the Social Structure	.....	3
CJC 350	Criminal Investigation	.....	3
CJC 370	Civil Law for Criminal Justice Administration	.....	3
CJC 440	Criminal Justice Planning, Policy Analysis, Evaluation and Budgeting Systems	.....	3
CJC 441	Special Topics in Law Enforcement	.....	3
Total .....			18

**AREA OF EMPHASIS II: CORRECTIONS, PROBATION, AND PAROLE ADMINISTRATION**

This emphasis is designed for those students seeking academic preparation for careers within the adult corrections systems at the community or institutional level.

Required Courses in Addition to Core:			Semester Hours
CJC 214	Criminal Procedure	.....	3
CJC 312	Constitutional Law	.....	3
CJC 328	Classification and Treatment of the Offender	.....	3
Total .....			9

Students electing this area of emphasis must select at least 20 hours from the following courses to complete the corrections, probation, and parole administration area of emphasis:

CJC 212	Evidence and Courtroom Procedure.....	3
CJC 314	Juvenile Law.....	3
CJC 320	Criminal Justice Administrative Behavior.....	3
CJC 329	Probation and Parole.....	3
CJC 334	Counseling Skills for Corrections Personnel.....	3
CJC 340	Criminal Behavior and Criminal Careers.....	3
CJC 430	Penology.....	3
CJC 431	Correctional Law.....	3
CJC 440	Criminal Justice Planning, Policy Analysis, Evaluation and Budgeting Systems.....	3
CJC 442	Practicum in Corrections.....	5
CJC 462	Special Topics in Corrections Administration.....	3
<i>Total</i>	.....	20

**AREA OF EMPHASIS III: YOUTH ADVOCACY/DELINQUENCY CONTROL**

This emphasis is designed for students transferring from a two-year program in criminal justice/law enforcement and for those who wish to prepare and enhance career skills for specialization in youth advocacy and delinquency control, based upon competencies acquired as a practitioner in this field. Students completing an associate degree in a criminal justice program are encouraged, but not required, to complete a minor.

**Required Courses in Addition to Core:**

		<b>Semester Hours</b>
CJC 312	Constitutional Law.....	3
CJC 314	Juvenile Law.....	3
CJC 335	Seminar in Delinquency Causation, Prevention, and Control.....	3
CJC 340	Criminal Behavior and Criminal Careers.....	3
CJC 345	Behavior Development and Treatment Plans.....	3
CJC 466	Youth Advocacy Initiatives.....	1-15
PSY 325	Child Psychology.....	3
PSY 326	Psychology of Adolescence.....	3
<i>Total</i>	.....	22-36

NOTE: PSY 325 and 326 have prerequisites.

**AREA OF EMPHASIS IV: CRIMINAL JUSTICE ADMINISTRATION AND MANAGEMENT**

This area is designed to enhance the career skills of students preparing for specialization in criminal justice management and administration, based on competencies acquired as criminal justice practitioners or transferring from a two-year program in criminal justice/law enforcement. Students completing an associate degree in a criminal justice program are encouraged, but not required, to complete a minor.

**Required Courses in Addition to Core:**

		<b>Semester Hours</b>
CJC 312	Constitutional Law.....	3
CJC 320	Criminal Justice Administrative Behavior.....	3
CJC 370	Civil Law for Criminal Justice Administration.....	3
CJC 440	Criminal Justice Planning, Policy Analysis, Evaluation and Budgeting Systems.....	3
CJC 467	Research Seminar in Criminal Justice Administration.....	5
<i>Total</i>	.....	17

Students electing this area of emphasis must complete 12 semester hours from the following courses to meet requirements in the criminal justice administration and management area of emphasis:

CJC 310	Logic and the Law.....	3
CJC 314	Juvenile Law.....	3
CJC 325	Criminal Justice Delivery of Services and Decision-Making.....	3
CJC 410	Advanced Jurisprudence.....	3
CJC 443	Comparative Criminal Justice.....	3
CJC 461	Special Topics in Criminal Justice Administration.....	3
<i>Total</i>	.....	12

**AREA OF EMPHASIS V: PRIVATE SECURITY ADMINISTRATION AND MANAGEMENT**

This area is designed for students seeking professional careers in the diverse areas of private or corporate security.

**Required Courses in Addition to Core:**

	<b>Semester Hours</b>
CJC 201 Introduction to Private Security . . . . .	3
CJC 212 Evidence and Courtroom Procedures . . . . .	3
CJC 214 Criminal Procedure . . . . .	3
CJC 312 Constitutional Law . . . . .	3
CJC 320 Criminal Justice Administrative Behavior . . . . .	3
CJC 341 Criminal Justice and the Social Structure . . . . .	3
CJC 370 Civil Law for Criminal Justice Administration . . . . .	3
CJC 385 Corporate Security Management . . . . .	3
CJC 475 Crime Prevention and Loss Reduction . . . . .	3
ACC 201 Principles of Accounting I . . . . .	3
CMS 201 Principles of Information Systems . . . . .	3
<i>Total</i> . . . . .	<i>33</i>

**MINOR IN CRIMINAL JUSTICE AND CRIMINOLOGY**

CJC 101 Introduction to the Criminal Justice System . . . . .	3
CJC 110 Evolutionary Legal Concepts in Criminal Justice . . . . .	3
CJC 465 Ethics for the Criminal Justice Professional . . . . .	3
CJC Electives selected in consultation with and approved by the department adviser, at least four hours of which must be upper-division . . . . .	9
<i>Total</i> . . . . .	<i>18</i>

**Hospitality, Meeting and Travel Administration****MAJOR FOR BACHELOR OF ARTS**

The Hospitality, Meeting and Travel Administration Department provides a flexible and individualized interdisciplinary major program leading to the bachelor of arts degree and four academic minor programs.

Students are offered areas of emphasis in hotel administration, meeting administration, restaurant administration, or travel administration. Each area of emphasis is designed to provide students with both the theoretical knowledge and practical experience needed for employment in these rapidly expanding industries.

To be awarded a degree, the student must complete the general studies requirement of Metro State. Students must consult with faculty advisers for selection of approved general studies courses.

In addition to meeting degree requirements, including the general studies requirement, the HMTA student must:

1. Maintain a grade point average of 2.25.
2. Demonstrate a typing proficiency of 35 wpm.
3. Present CPR and first aid certification.
4. Demonstrate a basic competence in a foreign language.\*
5. Present verification of 1,200 clock hours of on-the-job experience in the HMTA areas of emphasis. These may be secured through paid job experience, cooperative education, externships, or a combination of the three. No more than nine semester hours in cooperative education will be accepted, and these hours must contain specific descriptions of the job duties performed.
6. Travel students must present certification of 40 clock hours of computer reservation training.
7. Complete a graduation agreement and have it approved by the adviser no later than the third semester of enrollment (second semester for transfer students) in the HMTA Program.

\*Competence to be certified by Metro State Modern Language Department as having the equivalence of, or taking SPA/FRE 111 or 112 (or other approved language) and earn a grade of "C" or better.

**HMTA Core (Required of all HMTA Majors)**

	<b>Semester Hours</b>
HMT 102 Principles of Hotel/Restaurant Administration . . . . .	3
HMT 103 Principles of Meeting/Travel Administration . . . . .	3
HMT 109 Job Search Strategies* . . . . .	2
ANT 233 Cross-Cultural Communication . . . . .	3
MGT 300 Organizational Management* . . . . .	3
SPE 374 Psychology of Communication . . . . .	3
HMT 465 Hospitality Employee Resource Development . . . . .	3
CSU/	
CMS 101 Introduction to Computers* . . . . .	3
<i>Total</i> . . . . .	<i>23</i>

\*Or equivalent approved by HMTA faculty adviser.

**HOTEL ADMINISTRATION EMPHASIS****Required Courses**

ACC 201	Principles of Accounting I	3
HMT 256	Hotel Financial Accounting	3
HMT 351	Hotel Administration I	3
HMT 352	Hotel Administration II	3
HMT 356	Hotel/Restaurant Law	3
HMT 357	Hospitality Marketing	3
HMT 360	Beverage Control	3
HMT 365	Hospitality Property Management	3
HMT 366	Restaurant Administration I	3
HMT 466	Training and Development in Hospitality	3
Subtotal		30

In addition to the above courses, students must choose a minimum of three courses from the following list:

HMT 161	Kitchen Procedures and Production I	4
HMT 162	Kitchen Procedures and Production II	4
HMT 200	Externship I	3
HMT 250	Applied Hotel/Restaurant Operations	2
HMT 276	Meeting Administration I	3
HMT 361	Enology: The Study of Wine	3
HMT 367	Restaurant Administration II	3
HMT 375	Promotional Materials: Analysis and Design	3
HMT 400	Externship II	3
HMT 401	Externship III	1
HMT 450	Hospitality Sales	3
HMT 459	Seminar in Hotel Administration	2
HMT 473	Principles of Negotiation	3
HMT 479	Seminar in Meeting (Variable Topics)	2
Subtotal		8-11
Total		38-41

**RESTAURANT ADMINISTRATION EMPHASIS****Required Courses**

ACC 201	Principles of Accounting I	3
HMT 161	Kitchen Procedures and Production I	4
HMT 162	Kitchen Procedures and Production II	4
HMT 265	Restaurant Financial Accounting	3
HMT 356	Hotel/Restaurant Law	3
HMT 357	Hospitality Marketing	3
HMT 360	Beverage Control	3
HMT 361	Enology: The Study of Wine	3
HMT 365	Hospitality Property Management	3
HMT 366	Restaurant Administration I	3
HMT 367	Restaurant Administration II	3
HMT 466	Training and Development in Hospitality	3
Total		38

**MEETING ADMINISTRATION EMPHASIS****Required Courses**

ACC 201	Principles of Accounting I	3
JRN 284	Fundamentals of Public Relations	3
HMT 276	Meeting Administration I	3
MKT 300	Principles of Marketing	3
HMT 375	Promotion Materials: Analysis and Design	3
HMT 376	Meeting Administration II	3
HMT 479	Seminar in Meeting: Variable Topics	2
Subtotal		20

Electives: It is strongly recommended that meeting administration students utilize their electives and a minor to secure an area of specialization in the meeting field.

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## Category I (Select three hours plus MGT 400-3 Organizational Decision Making):

ECO 202	Principles of Economics — Micro	3
MGT 221	Legal Environment of Business I	3
MKT 311	Advertising	3
MKT 312	Promotional Strategy	3
ECO 315	Econometrics	3
MKT 316	Sales Management	3
ECO 350	Managerial Economics	3
MKT 371	International Marketing	3
Subtotal		6

## Category II (Select three hours)

COM 243	Introduction to Technical Media	3
HMT 378	Leadership by Objectives	3
HMT 472	Meeting Law	3
HMT 473	Principles of Negotiation	3
Subtotal		6

## Category III (Select six hours)

HMT 181-4	Basic Ticketing and Reservation Procedures	4
HMT 250-2	Applied Hotel/Restaurant Operations	2
HMT 351-3	Hotel Administration I	3
HMT 352-3	Hotel Administration II	3
HMT 366-3	Restaurant Administration I	3
HMT 367-3	Restaurant Administration II	3
HMT 481-4	Tour Management	4
Subtotal		6

<i>Total</i>		38
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## TRAVEL ADMINISTRATION EMPHASIS

### Required Courses

		Semester Hours
HMT 181	Basic Ticketing and Reservations Procedures	4
HMT 182	Travel References and Case Studies	2
HMT 183	Cruise Development, Marketing, and Sales	4
HMT 284	Tour Operations	4
HMT 286	Tourism	2
HMT 385	Financial Management in the Travel Industry	4
HMT 386	Incentive Travel	2
HMT 481	Tour Management	4
HMT 482	Marketing in the Travel Industry	4
HMT 483	Corporate Travel Management	2
HMT 484	Travel Industry Management	4
HMT 489	Seminar in Travel: Variable Topics	2
Subtotal		38

Select two hours of credit in a travel specialization from the categories below:

### Air Travel Specialization:

HMT 383	Inflight Services	2
HMT 384	Airport Services	3
HMT 485	Airline Sales	2

### Travel Agency Specialization:

HMT 285	Travel Agency Accounting	3
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### Corporate Travel Specialization:

HMT 389	Cases in Corporate Travel Management	2
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<i>Total</i>		40-41
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## HMTA MINORS

The Hospitality, Meeting and Travel Administration Department offers minors in all four areas of emphasis. Students are expected to know any prerequisites for courses in other departments.

## Noncourse Requirements:

300 clock hours of on-the-job experience

CPR and first aid certification

Language competence

Typing proficiency of 35 WPM

Travel students — verification of 40 clock hours of computer reservation training by a qualified reservation trainer or manager.

Minor requirements are listed below.

**HOTEL ADMINISTRATION MINOR****Required Courses**

		<b>Semester Hours</b>
HMT 102	Principles of Hotel/Restaurant Administration	3
HMT 351	Hotel Administration I	3
HMT 352	Hotel Administration II	3
HMT 356	Hotel/Restaurant Law	3
HMT 357	Hospitality Marketing	3
HMT 366	Restaurant Administration I	3
HMT 465	Hospitality Employee Resource Development	3
HMT electives (approved by faculty adviser)		3
<i>Total</i>		24

**RESTAURANT ADMINISTRATION MINOR****Required Courses**

HMT 102	Principles of Hotel/Restaurant Administration	3
HMT 161	Kitchen Procedures and Production I	4
HMT 162	Kitchen Procedures and Production II	4
HMT 356	Hotel/Restaurant Law	3
HMT 357	Hospitality Marketing	3
HMT 360	Beverage Control	3
HMT 366	Restaurant Administration I	3
HMT 367	Restaurant Administration II	3
HMT 465	Hospitality Employee Resource Development	3
<i>Total</i>		29

**MEETING ADMINISTRATION MINOR****Required Courses**

HMT 102	Principles of Hotel/Restaurant Administration	3
HMT 181	Basic Ticketing and Reservations Procedures	4
HMT 276	Meeting Administration I	3
HMT 375	Promotion Materials: Analysis and Design	3
HMT 376	Meeting Administration II	3
HMT 378	Leadership by Objectives	3
HMT 472	Meeting Law	3
HMT 473	Principles of Negotiation	3
<i>Total</i>		25

**TRAVEL ADMINISTRATION MINOR****Required Courses**

HMT 181	Basic Ticketing and Reservations Procedures	4
HMT 182	Travel References and Case Studies	2
HMT 183	Cruise Development, Marketing, and Sales	4
HMT 284	Tour Operations	4
HMT 375	Promotional Materials: Analysis & Design	3
HMT 385	Financial Management in the Travel Industry	4
HMT 481	Tour Management	4
HMT 482	Marketing in the Travel Industry	4
HMT 483	Corporate Travel Management	2
HMT 489	Seminar in Travel: Variable Topics	2
<i>Total</i>		33

## Human Performance, Sport and Leisure Studies

The Human Performance, Sport and Leisure Studies Department offers coursework leading to the bachelor of arts degree. Students preparing for work in industry or graduate study can choose from the emphasis areas of adult fitness and exercise science, athletic training, sport, and allied fields, or one of the major emphasis areas in leisure studies: either recreation and parks administration or therapeutic recreation. Those students preparing to teach at the elementary, secondary, or K–12 levels can choose either the elementary, secondary, K–12, secondary physical education/athletic training, or secondary physical education/coaching emphasis.

Students seeking teaching credentials in physical education must satisfy the teacher licensure program at Metro State in addition to all the requirements of the Human Performance, Sport and Leisure Studies Department. Requirements for formal admission to the teacher licensure programs, as listed under the teacher education programs section of this *Catalog*, must also be met. Students should contact the Teacher Education Division for information regarding teacher licensure programs.

Additional Requirement: A grade of “C” or better is required for all HPSL courses taken in any major/minor emphasis areas.

### HUMAN PERFORMANCE AND SPORT MAJOR FOR BACHELOR OF ARTS

#### A. ELEMENTARY PHYSICAL EDUCATION EMPHASIS

Semester Hours

##### 1. Professional Activity Courses

Basic Skills (all of the following):

HPS 162	Fundamentals of Movement	2
HPS 164	Physical Fitness	2
HSL 150	Tumbling	2

Team Sports (four of the following):

HSL 150	Volleyball	2
HSL 150	Basketball	2
HSL 150	Soccer/Speedball	2
HSL 150	Football/Flag Football	2
HSL 150	Softball	2
HSL 150	Field Hockey/Floor Hockey	2

Miscellaneous (two of the following):

HSL 150	Square and Folk Dance	2
HSL 150	Track and Field	2
HSL 150	Wrestling	2
HSL 150	Advanced Lifesaving	2
HSL 150	Racquetball and Handball	2

Total 18

##### 2. Additional Elementary Activity Courses

HPS 250	Activities for the Young Child	3
HPS 252	Rhythms for the Young Child	2
HPS 258	Movement Education	3

Total 8

##### 3. Theory Classes (all of the following):

HPS 160	Introduction to Human Performance and Sports	2
HPS 330	Anatomical Kinesiology	3
HPS 334	Physiology of Exercise	3
HPS 346	Evaluation and Measurement in Human Performance, Sport and Leisure Studies	3
HPS 350	Methods of Teaching Human Performance and Sports for Children	3
HPS 450	Psychology of Motor Learning	3
HPS 460	Organization, Administration of Human Performance and Sports Programs	3

Approved electives 3

Total 23

NOTE: A current Advanced First Aid and Cardiopulmonary Resuscitation card is required. Students may take HPS 206 or complete an Advanced First Aid and Cardiopulmonary Resuscitation course from the American Red Cross.

Total Minimum Hours for Major 49

#### Physical education teacher licensure required course:

HPS 462	Adaptive Human Performance and Sports Activities	3
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NOTE: See Teacher Education Division for Colorado teacher licensure requirements.

**B. SECONDARY PHYSICAL EDUCATION EMPHASIS****1. Professional Activity Courses**

Secondary physical education majors must present proof of proficiency in 15 different activities. A total of 32 credits will be counted toward completion of the major requirements. Students must present proof of proficiency by receiving a grade of "C" or better in Human Performance and Sports and Leisure courses.

Basic Skills (all of the following):

HPS	166	Swimming	2
HPS	162	Fundamentals of Movement	2
HPS	164	Physical Fitness	2
HSL	150	Tumbling	2

Team Sports (four of the following):

HSL	150	Volleyball	2
HSL	150	Football/Flag Football	2
HSL	150	Field Hockey/Floor Hockey	2
HSL	150	Soccer/Speedball	2
HSL	150	Softball	2
HSL	150	Basketball	2

Individual Sports (five of the following):

HSL	150	Advanced Lifesaving	2
HSL	150	Gymnastics	2
HSL	150	Track and Field	2
HSL	150	Tennis	2
HSL	150	Archery and Badminton	2
HSL	150	Golf	2
HSL	150	Racquetball and Handball	2
HSL	150	Personal Defense	2

Miscellaneous (three of the following):

HSL	150	Square and Folk Dance	2
HSL	150	Ballroom Dancing	2
HSL	150	Wrestling	2
HSL	150	Improvisation and Choreography	2
HSL	150	Weight Training	2

Total Credits . . . . . 32

**2. Theory Courses (all of the following):**

HPS	160	Introduction to Human Performance and Sports	2
HPS	330	Anatomical Kinesiology	3
HPS	332	Biomechanics	3
HPS	334	Physiology of Exercise	3
HPS	340	Methods of Teaching Human Performance and Sports for the Adolescent and Young Adult	3
HPS	346	Evaluation and Measurement in Human Performance, Sport, and Leisure Studies	3
HPS	460	Organization, Administration of Human Performance and Sport Programs	3
Approved electives			3
Total Credits			23

*NOTE: A current Advanced First Aid and Cardiopulmonary Resuscitation card is required. Students may take HPS 206 or complete an Advanced First Aid and Cardiopulmonary Resuscitation course from the American Red Cross.*

Total minimum hours for major . . . . . 55

**Physical education teacher licensure required course:**

HPS	462	Adaptive Human Performance and Sports Activities	3
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*NOTE: See Teacher Education Division for teacher licensure requirements.*

**C. K–12 PHYSICAL EDUCATION EMPHASIS****1. Professional Activity Courses**

Students must be proficient in 16 different activities, selected from the categories below. A total of 32 credits will be counted toward completion of the major requirements. Students must present proof of proficiency by receiving a grade of "C" or better in Human Performance and Sports and Leisure courses.

Basic Skills (all of the following):

HPS	166	Swimming	2
HPS	162	Fundamentals of Movement	2
HPS	164	Physical Fitness	2
HSL	150	Tumbling	2



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## Team Sports (four of the following):

HSL	150	Volleyball	2
HSL	150	Football/Flag Football	2
HSL	150	Field Hockey/Floor Hockey	2
HSL	150	Soccer/Speedball	2
HSL	150	Softball	2
HSL	150	Basketball	2

## Individual Sports (five of the following):

HSL	150	Advanced Lifesaving	2
HSL	150	Gymnastics	2
HSL	150	Track and Field	2
HSL	150	Tennis	2
HSL	150	Archery and Badminton	2
HSL	150	Golf	2
HSL	150	Racquetball and Handball	2
HSL	150	Personal Defense	2

## Miscellaneous (three of the following):

HSL	150	Square and Folk Dance	2
HSL	150	Ballroom Dancing	2
HSL	150	Wrestling	2
HSL	150	Improvisation and Choreography	2
HSL	150	Repertory Choreography	2
HSL	150	Weight Training	2

Total credits ..... 32

## 2. Theory Classes

HPS	160	Introduction to Human Performance and Sports	2
HPS	250	Activities for the Young Child	3
HPS	252	Rhythms for the Young Child	2
HPS	258	Movement Education	3
HPS	278	Care and Prevention of Athletic Injuries	3
HPS	330	Anatomical Kinesiology	3
HPS	332	Biomechanics	3
HPS	334	Physiology of Exercise	3
HPS	340	Methods of Teaching Human Performance and Sport for the Adolescent and Young Adult	3
HPS	346	Evaluation and Measurement in Human Performance, Sport and Leisure Studies	3
HPS	350	Methods of Teaching Human Performance and Sports for Children	3
HPS	450	Psychology of Motor Learning	3
HPS	460	Organization, Administration of Human Performance and Sport Programs	3
HPS	399*	Field Experience in Human Performance and Sport	2
Total credits			39

Total minimum hours for major ..... 71

*\*This course must be taken during the student's senior year in a junior high, middle school, or senior high school at the level in which the student does not do student teaching.*

*NOTE: A current Advanced First Aid and Cardiopulmonary Resuscitation card is required. Students may take HPS 206 or complete an Advanced First Aid and Cardiopulmonary Resuscitation course from the American Red Cross.*

### Physical education teacher licensure required course:

HPS	462	Adaptive Human Performance & Sports Activities	3
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*NOTE: See Teacher Education Division for teacher licensure requirements. Completion of this program eliminates the requirement of a minor.*

## D. SECONDARY PHYSICAL EDUCATION/ATHLETIC TRAINING AREA OF EMPHASIS

This major area is designed for the student who desires to major in human performance and sports and also obtain an emphasis in the area of athletic training, but emphasis does not meet all NATA requirements.

### Required Courses

### Semester Hours

I.	Complete the 55 required credit hours in the Secondary Physical Education emphasis (must include HSL 150, Weight Training)			55
II.	Athletic Training Courses:			
	HES	204	Introduction to Nutrition	3
	HPS	206	Advanced First Aid and CPR	3
	PSY	216	Personality and Adjustment	3

HPS 278	Care and Prevention of Athletic Injuries	3
HPS 300	Health Programs in Human Performance and Sport	3
HPS 370	Psychology of Coaching	2
HPS 478	Advanced Athletic Training	3
<i>Total minimum hours for major</i>		75

III. Teaching licensure requirement would be the same as the secondary physical education license. Completion of this program eliminates the requirement of a minor.

**E. SECONDARY PHYSICAL EDUCATION/COACHING**

This emphasis is designed for the student who desires to major in human performance and sports and wishes to obtain an emphasis in the area of coaching.

**Required Courses** **Semester Hours**

I.	Complete the 55 required credit hours in the secondary physical education emphasis (must include HSL 150 Weight Training)	55
II.	Take the following courses that are specific to the coaching emphasis:	
HPS 278	Care and Prevention of Athletic Injuries	3
HPS 370	Psychology of Coaching	2
HPS 372	Science and Art of Coaching & Athletic Administration	3
HPS 466	Legal Liability for Physical Educators, Coaches, and Administrators	3
Subtotal		11
Select nine hours from the following:		
HPS 272	Fundamentals of Coaching	2
LES 371	Administration of Intramural Sports & Student Recreation	2
LES 473	Sociology of Athletics in American Society	3
HPS 399	Field Experience in Human Performance & Sports	1-3
HSP 147	Addictive Experiences: Sex, Drugs, Rock & Roll	3
HES 204	Introduction to Nutrition	3
Subtotal		9
Total hours coaching		20
Hours secondary human performance and sport major		55
<i>Total</i>		75

III. Teaching licensure requirement would be the same as the secondary physical education license. Completion of this program eliminates the requirement of a minor.

**F. SPORT AND ALLIED FIELDS AREAS OF EMPHASIS** **Semester Hours**

HSL 150	Professional Activities (select any 12 credits)	12
HPS 160	Introduction to Human Performance and Sports	2
HPS 206	Advanced First Aid and Cardiopulmonary Resuscitation (or valid American Red Cross Card)	3
HPS 330	Anatomical Kinesiology	3
HPS 332	Biomechanics	3
HPS 334	Physiology of Exercise	3
HPS 362	Trends and Issues in Human Performance and Sports	2
LES 473	Sociology of Athletics in American Society	3
Approved electives		13
To be selected in accordance with student's intended career objectives. Must be preplanned with an adviser in Human Performance and Sports and Leisure Department and approved by the chair.		
<i>Total</i>		44

**G. ATHLETIC TRAINING AREA OF EMPHASIS**

This emphasis area is designed for those primarily interested in athletic training at the high school, college, or professional level and is complementary to allied fields (e.g., biology).

HSL 150	Weight Training	2
HPS 164	Physical Fitness	2
HPS 206	Advanced First Aid and CPR	3
HPS 278	Care and Prevention of Athletic Injuries	3
HPS 300	Health Programs in Human Performance and Sport	3
HPS 330	Anatomical Kinesiology	3
HPS 332	Biomechanics	3

HPS 334	Physiology of Exercise	3
HPS 370	Psychology of Coaching	2
HPS 382	Mechanism of Athletic Injury	3
HPS 384	Evaluation Procedures in Athletic Training	3
HPS 386	Therapeutic Modalities in Sports Medicine	3
HPS 462	Adaptive Human Performance and Sports Activities	3
HPS 476	Therapeutic Rehabilitation in Sports Medicine	3
HPS 489	Internship	10
HES 204	Introduction to Nutrition	3
PSY 216	Personality and Adjustment	3
BIO 231	Human Anatomy and Physiology I	4
BIO 232	Human Anatomy and Physiology II	4
Total		60

### Requirements to enter the program:

To be accepted into the program, students must:

- Have a declared major in human performance and sports with an athletic training emphasis.
- Have completed a minimum of 15 semester hours at Metro State.
- Have completed these prerequisite courses:  
HPS 206—Advanced First Aid & CPR/or equivalent  
BIO 231/232—Human Anatomy and Physiology I and II or acceptable transfer course
- Maintain a GPA of 2.75.

To qualify for the NATA certification exam, students must complete 1,500 volunteer hours of work with a certified athletic trainer (not required for graduation).

### H. ADULT FITNESS AND EXERCISE SCIENCE EMPHASIS

Adult fitness and exercise science is an emphasis program for those seeking an entrance into the adult fitness profession as an instructor or those who have aspirations in the exercise science field through advanced degree work in exercise physiology. For those interested and capable of pursuing an advanced graduate degree with adult fitness and exercise science as a foundation, there are careers in research, college teaching, and private corporate fitness program development.

#### 1. Professional Activity Courses: Semester Hours

HSL 150	Stress Management	2
HSL 150	Weight Training	2
Total		4

#### 2. Basic Theory Courses:

HPS 164	Physical Fitness	2
HES 204	Introduction to Nutrition	3
PSY 241	Social Psychology	3
HPS 278	Care and Prevention of Athletic Injuries	3
LES 307	Health and Movement Problems in the Aging Adult	3
HPS 330	Anatomical Kinesiology	3
HPS 334	Physiology of Exercise	3
HPS 378	Fitness Programs for Special Populations	2
HPS 420	Community Fitness Testing and Program Planning	3
HPS 466	Legal Liability for Physical Educators, Coaches, and Administrators	3
HPS 468	Advanced Exercise Assessment Techniques	2
HPS 484	Comparative Fitness Programs	2
HPS 489	Internship	10
Total credits		42
*Total		46

NOTE: Students must have a 2.75 GPA to be accepted for an internship.

### HUMAN PERFORMANCE AND SPORT MINORS

The human performance and sport minor emphasis areas are for nonmajors in human performance and sport. Programs are open to all other disciplines of study within the college. The primary objective is to provide instructional studies in a liberal arts institution in human performance and sport, thereby enhancing one's knowledge, understanding, and skillful use of this area of study to pursue a better quality of life.

Minor programs will not meet requirements for teacher licensure with the State Department of Education in Colorado.

Additional requirement: A grade of "C" or better is required for all Human Performance and Sports courses taken in any major/minor emphasis area.

**ELEMENTARY AREA OF EMPHASIS**

**Semester Hours**

HSL 150	Professional Activities	4
HPS 206	Advanced First Aid and Cardiopulmonary Resuscitation and/or valid Advanced American Red Cross Card and 3 hours of HPSL Department electives	3
HPS 250	Activities for the Young Child	3
HPS 252	Rhythms for the Young Child	2
HPS 258	Movement Education	3
HPS 350	Methods of Teaching Human Performance and Sports for Children	3
HPS 460	Organization, Administration of Human Performance and Sports Programs	3
<i>Total</i>		21

**SECONDARY AREA OF EMPHASIS**

HSL 150	Professional Activities	8
HPS 162	Fundamentals of Movement	2
HPS 206	Advanced First Aid and CPR (or valid Advanced American Red Cross Card) Students with valid Red Cross Cards must substitute 3 hours HPSL Department electives	3
HPS 334	Physiology of Exercise	3
HPS 340	Methods of Teaching Human Performance and Sports for the Adolescent and Young Adult	3
Approved electives (150 or above of HPSL Department electives)		3
<i>Total</i>		22

**SPORT AND ALLIED FIELDS AREA OF EMPHASIS**

HSL 150	Professional Activities	6
HPS 160	Introduction to Human Performance and Sports	2
HPS 206	Advanced First Aid and Cardiopulmonary Resuscitation (or valid Advanced American Red Cross Card plus three hours of Human Performance and Sports and Leisure Department electives)	3
HPS 362	Trends and Issues in Human Performance and Sports	2
LES 473	Sociology of Athletics in American Society	3

Approved electives: Selected in accordance with student's intended career objectives.

Must be preplanned with an adviser in Human Performance and Sports and Leisure Department		7
<i>Total</i>		23

**COACHING AREA OF EMPHASIS**

HSL 150	Weight Training	2
HSL 150	Professional Activity Course	2
HPS 162	Fundamentals of Movement	2
HPS 164	Physical Fitness Techniques and Programs	2
HPS 272	Fundamentals of Coaching	2
HPS 278	Care and Prevention of Athletic Injuries	3
HPS 334	Physiology of Exercise	3
HPS 370	Psychology of Coaching	2
HPS 372	Science and Art of Coaching and Athletic Administration	3
HPS 466	Legal Liability for Physical Educators, Coaches, and Administrators	3
<i>Total</i>		24

**DANCE AREA OF EMPHASIS**

HSL 150	Repertory Choreography	2
HSL 150	Improvisation and Choreography	2
HSL 150	Ballroom Dancing	2
HSL 150	Teaching Dance (Ballet/Jazz/Modern)	2
HPS 162	Fundamentals of Movement	2
HPS 244	Dance Production	3
HPS 330	Anatomical Kinesiology	3
HPS 450	Psychology of Motor Learning	3

Select one of the following electives:

HSL 150	Rhythmic Activities for Special Populations	
-or-		
HPS 252	Rhythms for the Young Child	
-or-		
HPS 278	Care and Prevention of Athletic Injuries	2-3
<i>Total</i>		21-22

**ATHLETIC TRAINING AREA OF EMPHASIS**

HSL	150	Weight Training	2
HPS	164	Physical Fitness	2
HES	204	Introduction to Nutrition	3
HPS	206	Advanced First Aid and CPR	3
PSY	216	Personality and Adjustment	3
HPS	278	Care and Prevention of Athletic Injuries	3
HPS	300	Health Programs in Human Performance and Sport	3
HPS	330	Anatomical Kinesiology	3
HPS	332	Biomechanics	3
HPS	334	Physiology of Exercise	3
HPS	478	Advanced Techniques in Athletic Training	3
<i>Total</i>			31

**ADULT FITNESS AND EXERCISE SCIENCE EMPHASIS**

HES	204	Introduction to Nutrition	3
PSY	241	Social Psychology	3
LES	307	Health and Movement Problems in the Aging Adult	3
HPS	378	Fitness Programs for Special Populations	2
HPS	399	Field Experience in Human Performance and Sports	1-3
HPS	468	Advanced Exercise Assessment Techniques	2
HPS	484	Comparative Fitness Programs	2
HPS	Electives (selection based on exercise science needs)		3
<i>Total</i>			19-21

**HOLISTIC HEALTH AND WELLNESS EDUCATION MULTI-MINOR**

This multi-minor may be arranged through the Department of Human Performance, Sport and Leisure Studies and includes the required courses listed under the holistic health and education multi-minor on page 189 of this *Catalog*.

**Health and Safety Education**

**MINOR IN HEALTH AND SAFETY**

The emphasis in health education is intended to prepare students to teach health education at either the secondary, elementary, or K-12 levels. This is an excellent area of emphasis for the student who is obtaining a teaching license in another area or for those nurses who are interested in the area of school health nurse.

**HEALTH EDUCATION AREA OF EMPHASIS**

CJC	351	Drug Abuse: Legal Issues and Treatment	3
HPS	202	Community Health	3
HES	204	Introduction to Nutrition	3
HPS	206	Advanced First Aid and Cardiopulmonary Resuscitation	3
HPS	300	Health Programs in Human Performance and Sport	3
HPS	391	Safety Education	3
PSY	325	Child Psychology	3
PSY	<sup>-or-</sup> 326	Psychology of Adolescence	3
<i>Total</i>			21

**Leisure Studies**

The leisure studies major is intended to prepare students to enter recreation-related jobs that are available at both local and national levels. The major consists of a common core of courses deemed essential for all recreation personnel, and emphasizes fieldwork with various types of recreation, parks, conservation, and other social service agencies.

In conjunction with the core course selections, the student will select one area of emphasis. The areas of emphasis provide the student with specialized knowledge and skills related to particular job functions of the various recreation-related service agencies. The areas of emphasis from which the student may select are:

1. Therapeutic Recreation Services
- \*2. Leisure Services Management

The following courses are required by the Leisure Studies Program to meet NRPA/AALR Accreditation Standards:

			Semester Hours
ECO	201	Principles of Economics .....	3
HIS	101	Western Civilization to 1715 .....	3
	-or-		
HIS	102	Western Civilization since 1715 .....	3
PSY	221	Psychology of Human Development .....	3
SPE	171	Interpersonal Communications .....	3
LES	489	Recreation Internship .....	12
<b>Core Courses</b>			
LES	187	Introduction to Recreation and Leisure Services .....	3
LES	211	Leadership Skills and Techniques in Leisure Services .....	3
LES	235	Leisure Services for Special Populations .....	3
LES	387	Leisure Services Internship Seminar .....	2
LES	393	Contemporary Issues in Leisure Services (variable topic) .....	1-3
LES	397	Practicum in Leisure Services .....	3
LES	411	Program Development in Leisure Services .....	3
LES	413	Administration of Leisure Services .....	3
Total		.....	21-23

**Emphasis**

Therapeutic Recreation .....	41-43
Leisure Services Management .....	33-35

**Areas of Emphasis**

Semester Hours

**THERAPEUTIC RECREATION SERVICES\***

Select six hours from the following:

HSL	150	Activity and Fitness Programs for the Elderly .....	2
HSL	150	Rhythmic Activities for Special Populations .....	2
HSL	150	Camping for Special Populations .....	2
HSL	150	Sports Programs for Special Populations .....	2
HSL	150	Adaptive Aquatic Programs .....	2
HSL	150	Stress Management .....	2
Total		.....	6

**Required Theory Courses:**

BIO	232	Human Anatomy and Physiology II .....	4
PSY	321	Abnormal Psychology .....	3
LES	333	Introduction to Therapeutic Recreation .....	3
LES	343	Program Development in Therapeutic Recreation .....	3
LES	353	Techniques in Therapeutic Recreation .....	3
LES	415	Advanced Techniques in Therapeutic Recreation .....	3
LES	403	Issues and Trends in Therapeutic Recreation .....	3
Total		.....	22

Select 11 hours from the following:

LES	233	Advocacy, Leisure, and the Aging Adult .....	3
LES	307	Health and Movement Problems in the Aging Adult .....	3
LES	463	Leisure Service Programs for the Older Adult .....	3
LES	480	Workshop Courses (variable credit) .....	1-3
LES	481	Grants and Financial Aid Programs in Leisure Services .....	3
HPS	330	Anatomical Kinesiology .....	3
HPS	334	Physiology of Exercise .....	3
SOC	310	Death and Dying .....	3
SOC	250	Deviant Behavior in Society .....	3
PSY	340	Psychology of Exceptional Children .....	3
Total		.....	11
Electives outside of major .....			11
Total		.....	41-43

\*Extended major—no minor required

**LEISURE SERVICES MANAGEMENT\*****Required Courses**

LES 215	Maintenance of Leisure Service Facilities and Recreation Equipment	3
LES 383	Facilities and Area Design in Leisure Services	3
LES 485	Advanced Administration of Leisure Services	3
MGT 300	Organizational Management	3
MGT 353	Human Resources Management	3
MKT 300	Principles of Marketing	3
Total		18

Select eight hours from the following:

LES 221	Camping and Outdoor Recreation	3
LES 233	Advocacy, Leisure, and the Aging Adult	3
LES 455	Management of Aquatic Resources	3
LES 463	Leisure Service Programs for the Older Adult	3
LES 480	Workshops (variable credit)	1-3
LES 481	Grants and Financial Aid Programs in Leisure Services	3
HPS 346	Evaluation and Measurement in Human Performance, Sport & Leisure Studies	3
HPS 466	Legal Liability for Physical Educators, Coaches and Administrators	3
HSL 150	Select one HSL 150 course	2
Total		8

Electives outside of major		7
Total		33-35

\*Requires completion of a minor

**LEISURE SERVICES MINOR**

LES 187	Introduction to Recreation and Leisure Services	3
LES 211	Leadership Skills and Techniques in Leisure Services	3
LES 235	Leisure Services for Special Populations	3
LES 397	Practicum in Leisure Services	3
LES 411	Program Development in Leisure Services	3
Total		15

Select six hours from the following (in consultation with an adviser):

LES 215	Maintenance of Leisure Service Facilities and Recreation Equipment	3
LES 221	Camping and Outdoor Recreation	3
LES 233	Advocacy, Leisure and The Aging Adult	3
LES 333	Introduction to Therapeutic Recreation	3
LES 383	Facilities and Area Design in Leisure Services	3
LES 413	Administration of Leisure Services	3
LES 463	Leisure Service Programs for The Older Adult	3
LES 481	Grants and Financial Aid Programs in Leisure Services	3
Total		6

Total hours required for the minor		21
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**Human Services**

Human services education prepares students to become professionals in the art and science of helping others. The learning objectives of the human services curriculum address the need for professionals trained in applying behavioral science through the compassionate art of assisting people in their recovery and rehabilitation efforts.

The nationally recognized curriculum, approved by the Council of Standards in Human Service Education and the Alcohol and Drug Abuse Division of the Colorado Department of Health, provides coursework in assessment, diagnosis, and intervention. Specifically, the training covers counseling and applied psychotherapy theory involving individuals, couples, families, and groups; addiction intervention theory and techniques; domestic violence counseling; and nonprofit administration principles. Particular attention is given to racial, gender, socioeconomic class, and cultural issues in the delivery of human services.

The core curriculum may be supplemented with an emphasis in addiction studies, domestic violence counseling, or nonprofit organization administration. Other topics are mental health, case management, correctional services, holistic health, and developmental disabilities. These topics are developed in consultation with the faculty and approved by the chair. Field instruction experiences at community agencies reinforce textbook learning and develop application skills.

Graduates find employment in community health centers, social service agencies, employee assistance programs, addiction centers, and nonprofit public organizations.

## HUMAN SERVICES MAJOR FOR BACHELOR OF SCIENCE

The student must meet the college's graduation requirements for a bachelor's degree, which include the completion of the general studies requirements of the college and the human services professional core courses listed below. Students who major in human services are not required to complete a minor.

Required Courses		Semester Hours
<b>Core Courses for the Major</b>		
HSP 101	Introduction to Human Services and Community Resources	4
HSP 104	Applied Behavior Analysis	4
HSP 202	Small Group Dynamics: Theory and Experiences	4
HSP 203	Introduction to Theory and Techniques in Interviewing and Psychotherapy	4
HSP 204	Family Function, Dysfunction, and Therapy	4
HSP 205	Human Services Practicum I	8
HSP 206	Human Services Practicum II	8
HSP 333	Ethical and Professional Issues in Human Services	2
HSP 432	Psychopathology and the Mental Health Clinician	4
HSP 479	Professional Internship	12
Total		54

### Required Electives within Human Services Department

(Approval of adviser required)

Select 16 hours from the following:

HSP 111	Introduction to Developmental Disabilities	4
HSP 147	Addictive Experiences: Sex, Drugs, Rock and Roll	3
HSP 201	Principles of Nonprofit Organization Administration	4
HSP 211	Individual Programming for the Developmentally Disabled	3
HSP 321	Organizational Stability of Nonprofits	4
HSP 322	Conflict Resolution and Decision Making	2
HSP 323	Contemporary Diagnostic and Treatment Programs in Corrections	4
HSP 341	Alcoholism Family Counseling: Advanced Topics	3
HSP 343	Addictive Behaviors	3
HSP 345	Crisis Intervention and Legal Issues	4
*HSP 349	Multicultural Issues in Human Services	4
HSP 350	Domestic Violence: Patterns of Relationship Abuse	3
HSP 360	Domestic Violence: Perpetrators of Abuse	2
HSP 361	Financial Accountability and Organizational Control in Nonprofit Organizations	4
HSP 365	Treatment of Adult Survivors	1
HSP 375	Holistic Health and High-Level Wellness	4
HSP 402	Fundraising and Proposal Writing for Nonprofit Organizations	4
HSP 420	Child Abuse and Neglect	2
HSP 425	Counseling the Gay or Lesbian Client	2
HSP 428	Gender Issues in Treatment and Recovery	1
HSP 429	PTSD Counseling	1
HSP 431	Human Resource Development in Nonprofit Organizations	4
HSP 436	Advanced Intervention Techniques	4
HSP 449	Contemporary Issues in Human Services: Variable Topics	1-4
HSP 450	Legal Liability in the Helping Professions	1
HSP 454	Youth, Drugs and Gangs	2
HSP 465	Group Facilitation and Group Counseling	4
HSP 468	Supervisory Techniques for Health Care	4
Total		16

Electives outside the Human Services Department . . . . . 17

\*Meets the multicultural requirement for graduation.

## HUMAN SERVICES MINOR

The minor consists of a minimum of 24 semester hours, 8 of which must be upper-division. The student must present a proposal of selected courses from the human services curriculum to the chair for consideration and approval.



**NONPROFIT ORGANIZATION AND ADMINISTRATION AREA OF EMPHASIS**

The nonprofit organization administration emphasis provides both degree-seeking and career professionals with the academic background and management skills to become effective managers in a variety of nonprofit settings. In today's competitive world of nonprofit organizations with limited resources, nonprofit managers must have solid administrative knowledge and skills if their organizations are to succeed.

The curriculum of the nonprofit administrative emphasis area consists of six courses, a single field practicum, and a professional internship for a total of 44 credit hours. The nonprofit organization administration curriculum, combined with the human services core curriculum, totals 70 hours.

<b>Required Courses</b>		<b>Semester Hours</b>
HSP 101	Introduction to Human Services and Community Resources	4
HSP 104	Applied Behavior Analysis	4
HSP 201	Principles of Nonprofit Organization and Administration	4
HSP 202	Small Group Dynamics: Theory and Experiences	4
HSP 203	Introduction to Theory and Techniques in Interviewing and Psychotherapy	4
HSP 204	Family Function, Dysfunction, and Therapy	4
HSP 205	Human Services Practicum I	8
HSP 321	Organizational Stability of Nonprofits	4
HSP 333	Ethical and Professional Issues in Human Services	2
HSP 361	Financial Accountability and Organizational Control in Nonprofit Organizations	4
HSP 402	Fundraising and Proposal Writing for Nonprofit Organizations	4
HSP 431	Human Resource Development in Nonprofit Organizations	4
HSP 432	Psychopathology and the Mental Health Clinician	4
HSP 468	Supervisory Techniques for Health Care	4
HSP 479	Professional Internship	12
Total		70

**DOMESTIC VIOLENCE COUNSELING AREA OF EMPHASIS**

Domestic violence is a growing societal problem which may be addressed through competent counseling by trained professionals who understand the dynamics involved. An emphasis area in domestic violence counseling provides the students with a broad knowledge base through the core classes in human services, and with knowledge and skills essential for working with perpetrators of abuse as well as victims of abuse.

The courses included in this emphasis area are based on the standards established by the State Commission on Educational Standards in Domestic Violence Counseling. Once the student has completed the required courses, application may be made to the agency of employment for certification as a provider of domestic violence counseling. Included in the emphasis area are many of the courses required for certification as a substance abuse counselor. These classes have been designated because of the close relationship between domestic violence and substance abuse.

<b>Required Core:</b>		<b>Semester Hours</b>
HSP 101	Introduction to Human Services and Community Resources	4
HSP 104	Applied Behavior Analysis	4
HSP 202	Small Group Dynamics: Theory and Experiences	4
HSP 203	Introduction to Theory and Techniques in Interviewing and Psychotherapy	4
HSP 204	Family Function, Dysfunction and Therapy	4
HSP 205	Human Services Practicum I	8
HSP 206	Human Services Practicum II	8
HSP 333	Ethical and Professional Issues in Human Services	2
HSP 349	Multicultural Issues in Human Services	4
HSP 432	Psychopathology and the Mental Health Clinician	4
HSP 479	Professional Internship	12
Total		58

**Required Courses for Area of Emphasis:**

HSP 106	Pharmacology of Drugs and Alcohol	3
HSP 347	Counseling the Substance Abuser	4
HSP 358	The Resistive Client	1
HSP 350	Domestic Violence: Patterns of Relationship Abuse	3

HSP 360	Domestic Violence: Perpetrators of Abuse	2
HSP 365	Treatment of Adult Survivors	1
HSP 428	Gender Issues in Treatment and Recovery	1
HSP 450	Legal Liabilities in the Helping Professions	1
Total		16
Electives (select in consultation with an adviser):		
Within the Human Services Department - select eight hours from the following:		
HSP 322	Conflict Resolution and Decision Making	2
HSP 343	Addictive Behaviors	3
HSP 420	Child Abuse and Neglect	3
HSP 425	Counseling the Gay or Lesbian Client	2
HSP 429	PTSD Counseling	1
HSP 436	Advanced Intervention Techniques	2
HSP 454	Youth, Drugs and Gangs	4
Total		8
To complete the 120 semester hours required for the degree, five hours of additional electives are required. These hours may be taken either within or outside the Human Services Department. Some suggested electives from other departments:		
WMS 101	Introduction: Women in Transition	3
WMS 218	Assertiveness Training	3
WMS 234	Stress Management	1
WMS 331	Women and the Law	3
PSY 221	Human Development	3
PSY 285	Psychology of Sexuality	3
Total		5
General studies requirements		
Total		120

## The Center for Addiction Studies

Housed in the School of Professional Studies with its academic courses in the Human Services Department, the Center for Addiction Studies offers two programs:

1. Counselor training program in drugs, alcohol and addictive behavior counseling (38 hours of prescribed coursework); and
2. Bachelor of science degree in human services with emphasis on drug, alcohol, and addictive behaviors.

Each student in the center has an individually tailored program leading to the college degree and state certification as a drug/alcohol counselor, as well as a counselor for other addictive behaviors such as smoking, gambling, and food disorders.

In addition to classroom instruction, the drug, alcohol, and addictive behavior counselor training program uses metro Denver area facilities for experiential training of students. Many course offerings are outreach or community-oriented. Graduates attain understanding, skills, and attitudes necessary to function as professional addiction counselors. Individuals interested in these programs should contact the center for further information at (303) 556-2951.

## BACCALAUREATE PROGRAM

Drug, Alcohol, and Addictive Behaviors Area of Emphasis

### Emphasis Courses

(Includes HSP Core and Drug/Alcohol Counselor Training Program courses)

HSP 101	Introduction to Human Services and Community Resources	4
HSP 104*	Applied Behavior Analysis	4
HSP 106*	Pharmacology of Drugs and Alcohol	3
HSP 202*	Small Group Dynamics: Theory and Experience	4
HSP 203*	Introduction to Theory and Techniques in Interviewing and Psychotherapy	4
HSP 204*	Family Function, Dysfunction, and Therapy	4
HSP 248*	Addictions Practicum I	6
HSP 249*	Addictions Practicum II	6
HSP 333	Ethical and Professional Issues in Human Services	2

HSP 343*	Addictive Behaviors	3
HSP 347*	Counseling the Substance Abuser	4
HSP 358	The Resistive Client	1
HSP 432	Psychopathology and the Mental Health Clinician	4
HSP 479	Professional Internship	12

\*Denotes 38 hours drug/alcohol counselor training program

Total hours for training program	38
Total	61

#### Required Electives within Human Services Department

(Approval of adviser required)

Select 16 hours from the following:

HSP 111	Introduction to Developmental Disabilities	4
HSP 201	Principles of Nonprofit Organization and Administration	4
HSP 211	Individual Programming for the Developmentally Disabled	3
HSP 321	Organizational Stability of Nonprofits	4
HSP 322	Conflict Resolution and Decision Making	2
HSP 323	Contemporary Diagnostic and Treatment Programs in Corrections	4
HSP 341	Alcoholism Family Counseling: Advanced Topics	3
HSP 345	Crisis Intervention and Legal Issues	4
HSP 349	Multicultural Issues in Human Services	4
HSP 350	Domestic Violence: Patterns of Relationship Abuse	3
HSP 360	Domestic Violence: Perpetrators of Abuse	2
HSP 361	Financial Accountability and Organizational Control in Nonprofit Organizations	4
HSP 365	Treatment of Adult Survivors	1
HSP 375	Holistic Health and High Level Wellness	4
HSP 402	Fundraising and Proposal Writing for Nonprofit Organizations	4
HSP 420	Child Abuse and Neglect	2
HSP 425	Counseling the Gay or Lesbian Client	2
HSP 428	Gender Issues in Treatment and Recovery	1
HSP 429	PTSD Counseling	1
HSP 431	Human Resource Development in Nonprofit Organizations	4
HSP 436	Advanced Intervention Techniques	4
HSP 449	Contemporary Issues in Human Services	1-4
HSP 450	Legal Liability in the Helping Professions	1
HSP 454	Youth, Drugs and Gangs	2
HSP 465	Group Facilitation and Group Counseling	4
HSP 468	Supervisory Techniques for Health Care	4
Total	16	

Electives outside the Human Services Department . . . . . 10

Note: HSP 147, Addictive Experiences: Sex, Drugs, Rock and Roll, is for non-Drug/Alcohol majors and will not count as an elective within the Human Services Department.

### HOLISTIC HEALTH AND WELLNESS EDUCATION MULTI-MINOR

The multi-minor may be arranged through the Human Services Department and includes the required courses listed under the holistic health and wellness education multi-minor in this *Catalog*.

### CASE MANAGEMENT PROGRAM

The program in case management is jointly administered and offered by the Human Services and Sociology departments. The purpose of the program is to train individuals interested in performing the functions of a case manager.

Required Courses	Semester Hours	
HSP 111	Introduction to Developmental Disabilities	4
HSP 211	Individual Programming for the Developmentally Disabled	3
SWK 302	Case Management in Social Welfare Services	4
SWK 378	Social Welfare Policy	3
Total	14	

## Military Science (Army ROTC)

The Military Science Department offers two Army ROTC programs leading to a commission in the active Army, Army Reserve, or Army National Guard. Class work is conducted on the Auraria campus.

**Four-Year Program.** The standard four-year program consists of two phases, the basic and advanced courses. The basic course, normally completed during the freshman and sophomore years, is composed of courses in the areas of military science, officer career development, leadership theory, and management. The advanced course is normally completed during the junior and senior academic years. Subject areas include leadership techniques, methods of instruction, tactics and unit operations, military law, history, national strategy, and Army policies. Completion of a six-week advanced camp in the summer is required prior to commissioning, with attendance at this camp usually between the junior and senior academic years.

**Two-Year Program.** An abbreviated two-year program consists of the same courses offered in the advanced course. However, both undergraduate and graduate students may become qualified for this program through the successful completion of a six-week summer basic camp.

Students should contact a professor of military science for specific requirements and options available based on each student's status at the time of program entry. Students who are veterans of military service, or have participated in Junior ROTC or similar organizations, may have a portion or all of the basic course requirements waived by a professor of military science.

### SCHOLARSHIPS

Students selected for a U.S. Army scholarship receive full tuition at Metropolitan State College of Denver. It also pays a flat rate for books, laboratory fees, and \$100 a month for up to 10 months a year. Students enrolled on campus full-time may compete for two- and three-year scholarships. All scholarships are open to both men and women, regardless of current involvement in ROTC.

### COURSE CREDIT

Army ROTC course credit for graduation varies with each school. Students should contact the dean of their school to clarify the number of semester hours that will be accepted toward their degree program.

### GRFD GUARANTEED RESERVE FORCES DUTY

This program provides a guarantee that the student's obligation upon commissioning will be fulfilled as a member of the Army Reserves or Army National Guard instead of active duty.

### PROGRAM OF STUDY

#### Four-Year Program

#### Semester Hours

The following courses or an approved substitute are required during the first two years:

MIS	101*	Introduction to Military Science I	2
MIS	102**	Introduction to Military Science II	2
MIS	201*	Introduction to Leadership and Management I	3
MIS	202**	Introduction to Leadership and Management II	3

The following courses are required during the final two years of the program:

MIS	301*	Control Aspects of Small Unit Operations I	3
MIS	302**	Control Aspects of Small Unit Operations II	4
MIS	305	Summer Practicum (advanced camp academic credit is optional)	5
MIS	401	Seminar in Officer Development I	3
MIS	402	Seminar in Officer Development II	3

\*Fall semester

\*\*Spring semester

Students desiring a commission through the ROTC program must consult with a professor of military science regarding required courses taught by other departments in the following subjects:

Management  
 Advanced Composition  
 Human Behavior  
 National Security Studies  
 American Military History  
 Foreign Language (Army scholarship requirement)

## Nursing and Health Care Management

The purposes of the programs in the Nursing and Health Care Management Department are to stimulate the personal and professional development of health care workers, to stimulate awareness of health care trends and issues, and to prepare health care professionals to cope with the future problems of health care delivery in a rapidly changing society.

The Department of Nursing and Health Care Management offers two baccalaureate majors: bachelor of science degree with a major in nursing and bachelor of science degree with a major in health care management. Health services courses are offered for non-health majors and health majors.

Students desiring to enter programs in the Nursing and Health Care Management Department seek academic advising from a faculty member in the department prior to registration for classes. Students are responsible for keeping themselves informed of the latest program changes. Up-to-date program materials are available in the Nursing and Health Care Management Department.

Metropolitan State College of Denver's undergraduate degree program in health care management prepares competent individuals for direct entry into management within the health care field. By combining courses in health care management with other disciplines such as marketing, computer information systems and management science, accounting, and economics, the program gives students a strong foundation in management as it specifically relates to health care. Students lacking work experience in a health care facility in the U.S. are required to do 100 hours of volunteer work in a U.S. health care facility selected in consultation with a faculty adviser. The 100 hours must be completed no later than the semester in which HCM 301 (Health Care Organization) is completed.

Health managers are employed in a variety of facilities and organizations: hospitals, nursing homes, health departments, educational institutions, health maintenance organizations, wellness programs, industrial health programs, the insurance industry, and governmental agencies at local, state, and national levels. All general requirements of the college for a bachelor of science degree must be met prior to graduation.

### EDUCATIONAL GOALS AND OUTCOMES

The baccalaureate health care management program has established the following outcomes for all graduates. The health care management graduate:

1. Effectively manages health delivery systems, maximizing quality and quantity of services and human resources in the face of limited fiscal support.
2. Views health delivery as having multiple interdependent components within an environmental context.
3. Initiates and effectively manages change in a rapidly evolving health care environment.
4. Identifies the effects of law on the role of managers in health delivery systems and the challenge of managing within a legal and ethical framework.
5. Uses research and information science methodologies to solve management problems in health delivery systems.
6. Applies basic economic and fiscal principles in the management of health delivery systems.
7. Accepts accountability for continued learning by acquiring knowledge and skills that meet the changing needs of self, client, management, and society.

### ASSESSMENT METHODOLOGY

The student's administrative performance will be evaluated during the practicum experience (HCM 451), based on previously agreed-upon objectives. The program exit evaluation will be a combined effort of the student, a faculty member, and preceptor.

### HEALTH CARE MANAGEMENT MAJOR FOR BACHELOR OF SCIENCE

Required Courses		Semester Hours
HCM 301	Health Care Organization	3
HCM 302	Management Principles in Health Care	3
HCM 303	Health Care Jurisprudence	3
HCM 330	Management Issues and Health Policy	3
HCM 402	Human Resource Management in Health Care	3
HCM 403	Financial Management in Health Care	3
HCM 404	Health Care Economics	3
HCM 450	Health Care Management Pre-Practicum	2
HCM 451	Health Care Management Practicum	6
Total		29

Required Support Courses

ACC 201	Principles of Accounting I	3
ECO 202	Principles of Economics-Micro	3
MKT 300	Principles of Marketing	3
	Approved statistics course	3
	Approved research course	3
	Approved computer course	3
<i>Total</i>		47

**MINOR**

The student selects a minor with approval of the faculty. Students who have an associate degree in a health occupation may substitute up to 24 hours of selected, approved associate degree major courses in place of a minor toward the bachelor’s degree. Course credit achieved through standardized examination by diploma nurse students is equivalent to associate degree, health occupation credit. This credit will be accepted in the same manner as associate degree major course credit for up to 24 hours.

Health care management majors who desire to work in institutions providing care to the elderly are encouraged to take the gerontological services minor.

**MINOR IN HEALTH CARE MANAGEMENT**

Required Courses

Semester Hours

HCM 301	Health Care Organization	3
HCM 302	Management Principles in Health Care	3
HCM 303	Health Care Jurisprudence	3
HCM 402	Human Resource Management in Health Care	3
HCM 403	Financial Management in Health Care	3
-or-		
HCM 404	Health Care Economics	3
Subtotal		15

Required Support Courses

ACC 201	Principles of Accounting I	3
	Approved computer course	3
<i>Total</i>		21

**HOLISTIC HEALTH AND WELLNESS EDUCATION MULTI-MINOR**

The multi-minor may be arranged through the Nursing and Health Care Management Department and includes the required courses listed under the holistic health and wellness education multi-minor on page 189 of this *Catalog*.

**Health Education Services**

This group of courses is designed to meet special needs of non-health majors as well as health majors. Effort is made to provide students with content relevant to individual needs. Students must consult a faculty adviser in the selection of appropriate general studies courses. The first two courses listed apply to the General Studies Program.

HES 105	Dynamics of Health* (meets social sciences general studies requirement)	3
HES 204	Introduction to Nutrition* (meets natural sciences general studies requirement)	3
HES 307	Parental Health Care Issues	3
HES 308	Maternal and Child Nutrition	3
HES 310	Nutrition and Aging	3
HES 320	Nutrition and Sports Performance	3
HES 360	Ethical Decision Making in Health Care	3
HES 380	Clinical Pathophysiology	4
HES 382	Health Care Counseling	3

\*Required in multi-disciplinary minor in health and wellness education.

**Nursing**

The purposes of the Baccalaureate Registered Nurse Program are to provide the diploma and associate degree nurse graduate with a broadened educational base for improvement of nursing practices, preparation for meeting future health care needs of society, preparation for graduate education in nursing, and opportunity for continuous personal growth and professional development.

## EDUCATIONAL GOALS AND OUTCOMES

The Baccalaureate Registered Nurse Program has established the following exit behaviors for all graduates:

The student will be able to:

- demonstrate, through nursing practice, a perception of individuals as living, open systems influenced by their biological, psychological, sociological, and cultural environment as they strive for high-level wellness
- use discriminatory judgment in applying the nursing process of assessing, analyzing, planning, implementing, and evaluating to help clients prevent illness and maintain and promote high-level wellness
- collaborate with clients and interdisciplinary teams both as a consumer and as a provider of care, striving to achieve optimum health care delivery within an ethical framework
- act as a resource person in a variety of settings
- act as a change agent when change is indicated
- assume responsibility for clinical teaching to promote high-level wellness
- demonstrate a systematic approach to the investigation of health care problems and use the results of scholarly research to promote high-level wellness
- accept accountability for clinical practice and continued learning by acquiring knowledge and skills that meet the changing needs of self, clients, professional nursing, and society

## ADMISSION REQUIREMENTS

In order to qualify for admission to the Baccalaureate Registered Nurse Program at Metropolitan State College of Denver, the student must:

1. Be a graduate from a state-approved associate degree or diploma program in nursing.
2. Be currently licensed as a registered nurse in Colorado.
3. Have at least one year of full-time clinical nursing experience or its equivalent within the last three years. Half of the program can be started while the nurse is obtaining the clinical experience. An RN refresher course with clinical supervision may be accepted when work experience has not been within the last three years. A new RN who has had recent experience as an L.P.N. may qualify for individual evaluation of clinical experience.\*
4. Have completed a minimum of 30 semester hours in general studies in order to enter NUR 311. Completion of the general studies component is necessary for graduation. Approved general studies courses taken at other institutions or at Metro State will be accepted by the college regardless of when they were taken, providing the grade earned is at least a "C."
5. Complete the following General Studies requirements:  
English 101 and 102, six semester hours of natural science, three semester hours of mathematics, a psychology course, and a sociology course. ANT 348 may be taken concurrently with NUR 311. Students lacking these credits are encouraged to take the College Level Examination Program (CLEP) examinations. Please check with the Academic Assessment and Support Center for further information.  
Students must consult with a faculty adviser in the selection of general studies courses.
6. Be certified in Basic Cardiac Life Support.
7. Complete employer evaluation form letter.\*
8. Carry nurses' malpractice/liability insurance coverage in the amount of \$1,000,000/\$3,000,000.
9. Qualify for the Colorado Statewide Nursing Articulation Model, which facilitates academic progress. Students who do not qualify under the articulation agreement must complete the ACT (American College Testing) and PEP (Proficiency Examination Program) examinations. These examinations may be completed before or during NUR 311. Twenty-four semester hours credit is awarded.

Work obligations of students are recognized by the provision of day and evening classes. It is the responsibility of the student to establish realistic academic work loads (in light of work and home obligations) that permit them the time needed to satisfactorily meet the course and program requirements. All students are strongly urged to seek academic advising prior to registration each semester.

\*These admissions requirements are being revised. Please see department chair for current guidelines.

**REQUIREMENTS FOR GRADUATION**

1. All general requirements of the college for a bachelor of science degree must be met prior to graduation.
2. Students may take a maximum of five years to complete the upper-division program in nursing course requirements (NUR prefix courses only).
3. Students must have passed the nursing program entry examinations.

**NURSING MAJOR FOR BACHELOR OF SCIENCE**

<b>Required Courses</b>		<b>Semester Hours</b>
NUR 311	Transitions in Nursing . . . . .	3
NUR 355	Leadership . . . . .	3
NUR 370	Assessment . . . . .	4
NUR 385	Clinical Teaching Methods . . . . .	3
NUR 420	Research . . . . .	3
NUR 440	Community Health Nursing . . . . .	5
NUR 441	Community Health Nursing: Application . . . . .	4
NUR 485	Nursing Process: Application . . . . .	5
Total . . . . .		30

<b>Support Courses</b>		
ANT 348	Cultural Diversity in Health and Illness . . . . .	3
HES 360	Ethical Decision Making in Health Care . . . . .	3
HES 380	Clinical Pathophysiology . . . . .	4
HES 382	Health Care Counseling . . . . .	3
HCM 303	Health Care Jurisprudence . . . . .	3
HCM 404	Health Care Economics . . . . .	3
A computer course and		3
A statistics course . . . . .		3-4
Total semester hours required . . . . .		25-26

**Prerequisite**

PEP examinations or exempted per Colorado statewide articulation model . . . . . 24

**Nursing Electives**

NUR 351	Nursing Diagnosis . . . . .	1
NUR 410	Critical Care Nursing . . . . .	4
NUR 476	Nursing Theories . . . . .	2

**HOLISTIC HEALTH AND WELLNESS EDUCATION MULTI-MINOR**

The holistic health and wellness education multi-minor offers an area of concentration for students who recognize the increased emphasis on wellness in several professional fields and/or for health conscious individuals who wish to establish a self-enhancement program. The multi-minor is designed to complement a major chosen by a student that is relevant to the student's career goals. The student arranges for the minor through one of the following departments: human performance, sport and leisure studies, human services, nursing and health-care management, philosophy, psychology, sociology, or teacher education division.

The multi-minor comprises 24 hours of study as outlined below:

<b>Required Courses</b>		<b>Semester Hours</b>
HES 105	Dynamics of Health . . . . .	3
HES 204	Introduction to Nutrition . . . . .	3
HSW 375	Holistic Health and High Level Wellness . . . . .	4
HSL 150	Skills and Methods: Teaching Physical Fitness . . . . .	2
PHI 322	Personal Knowledge and Professional Growth . . . . .	3
PSY 275	Introduction to Holistic Health . . . . .	3
Electives* . . . . .		3
Total . . . . .		21

\*Practical experience is an integral part of this minor and contract major. Students are urged to enhance their education through fieldwork. This can be achieved through practicums, internships, and cooperative education offerings in one of the above listed departments or by using these elective hours.



**GERONTOLOGICAL SERVICES MINOR**

This interdisciplinary minor emphasizes the knowledge and skills that entry-level professionals use in working with older adults, and the management of resources that are provided in this rapidly expanding field of service. This applied, interdisciplinary curriculum complements a variety of academic majors and professionally oriented programs on campus. The minor requires that a practicum, or field experience involving older adults be taken after all core courses have been completed, unless such a requirement has been met, either by the major, or through previous experience. The minor is administered by Health Care Management.

<b>Required Courses</b>		<b>Semester Hours</b>
SOC 104	Introduction to Gerontology .....	3
PSY 327	Adulthood and Aging .....	3
SWK 303	Social Services for Adults and the Aging .....	4
LES 233	Advocacy and Social Action Programs for the Aged .....	3
SPE 476	Communication and the Elderly .....	3
HCM 302	Management Principles in Health Care .....	3
HES 452	Internship in Gerontology (or an approved equivalent) .....	3
Total .....		22

Electives: Upon advisement, the following courses may be taken to substitute for previously taken core courses or for specific career objectives.

SOC 304	Contemporary Issues in Gerontology .....	3
PSY 227	Death and Dying .....	3
LES 307	Health and Movement Problems in the Aging Adult .....	3
SWK 302	Case Management in Social Welfare Services .....	4
URS 471	The Urban Elderly: Prisoners of Space .....	3

## COURSE DESCRIPTIONS

### Accounting

#### **ACC 101-3 Accounting for Non-Business Majors (3 + 0)**

Prerequisites: Minimum performance standard scores on the reading, writing and mathematics preassessment placement tests.

This course is designed for non-business majors who need a basic understanding of accounting information. The course is designed to communicate an understanding of what accounting information is, what it means, how it is used, and its limitations. The course surveys both financial and managerial accounting with an emphasis on using accounting information for decision making and problem solving. Business majors cannot use this course to fulfill the School of Business Accounting requirement. (General Studies Course—Level II, Social Sciences)

#### **ACC 201-3 Principles of Accounting I (3 + 0)**

Prerequisites: A college level mathematics course

Fundamental principles of accounting with emphasis on the double entry system; theory and practice in transaction analysis; familiarization with the basic financial statements.

#### **ACC 202-3 Principles of Accounting II (3 + 0)**

Prerequisite: ACC 201

Continuation of ACC 201 emphasizing partnerships and corporations. An introduction to branch accounting, cost accounting, and financial statements for management analysis.

#### **ACC 309-3 Income Tax I (3 + 0)**

Prerequisite: ACC 202

A study of federal income tax laws with an emphasis on personal income taxation, including such topics as gross income, gains and losses, and deductions.

#### **ACC 310-3 Income Tax II (3 + 0)**

Prerequisite: ACC 309

Continuation of ACC 309 with an emphasis on the taxation of organizational tax entities, including partnerships, corporations, and subchapter "S" corporations.

#### **ACC 311-3 Volunteer Income Tax Assistance (VITA) (3 + 0)**

Prerequisite: ACC 309

This tax course involves the preparation of state and federal income tax returns for low-income and elderly taxpayers. Students do actual preparation at various sites in the Denver area.

#### **ACC 320-3 Governmental Accounting (3 + 0)**

Prerequisite: ACC 202

A study of the accounting used in a municipality with reference to state and federal governments. Review of municipalities' budgets and municipalities' annual reports. Orientation in the concepts of budgetary control as a matter of law and public administration theory.

#### **ACC 330-3 Introduction to Accounting Systems (3 + 0)**

Prerequisites: ACC 202 and CMS 201

Analysis of principles and types of tools available for the design and implementation of an accounting system. Use of case studies and various media to illustrate the manual and computer-related accounting system problems arising in various organizations and situations.

#### **ACC 340-3 Cost Accounting (3 + 0)**

Prerequisites: ACC 202 and MTH 131

Fundamentals of cost behavior, analysis of variance for materials, labor, and overhead. Includes budgeting, absorption and direct costing, job order, and process cost systems.

#### **ACC 341-3 Cost Accounting II (3 + 0)**

Prerequisites: ACC 340, CMS 201, and CMS 332

This course applies cost accounting concepts and procedures to particular business decisions. Topics covered include capital budgeting, linear programming, regression analysis, measurement of organizational performance, variance analysis, budgeting, transfer pricing, activity-based costing, and just-in-time production methods. Computer applications are an integral part.

#### **ACC 351-3 Intermediate Accounting I (3 + 0)**

Prerequisite: ACC 202

In-depth study of accounting theory and practice with emphasis on current and long-term assets and current liabilities.

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### **ACC 352-3 Intermediate Accounting II (3 + 0)**

Prerequisite: A grade of "C" or better in ACC 351

Continuation of ACC 351. In-depth study of accounting theory and practice with emphasis on stockholders' equity and special problems.

### **ACC 365-2**

#### **(FIN 365) Electronic Spreadsheets on the Microcomputer (2 + 0)**

Prerequisite: FIN 330

This course teaches the student how to create and use electronic spreadsheets (Lotus 1-2-3) on the microcomputer. Credit will be granted for only one of these courses.

### **ACC 409-3 Tax Procedure and Research (3 + 0)**

Prerequisite: ACC 309

An in-depth study of tax procedure from preparation of the various returns to audit by the IRS. Also, the tools used in tax research are explained and illustrated. A research paper dealing with a major tax problem is required of each student.

### **ACC 410-3 Tax Planning (3 + 0)**

Prerequisite: ACC 309

A portion of this course is devoted to the federal estate and gift tax laws with emphasis placed upon the accountant's role in estate planning. The remainder is devoted to the various planning techniques which can often be utilized to reduce an individual's personal income taxes.

### **ACC 420-3 Auditing (3 + 0)**

Prerequisites: ACC 352

This course includes the study of professional ethics, legal liability, audit objectives, procedures and documentation, and auditors' reports.

### **ACC 430-3 Advanced Auditing (3 + 0)**

Prerequisite: ACC 420

This course is a continuing study of the underlying theory of auditing, with a concentration on professionalism, auditing standards and procedures, the public accounting environment, and internal auditing. The course includes special emphasis on current developments in auditing.

### **ACC 451-3 Advanced Accounting I (3 + 0)**

Prerequisite: ACC 352

This course includes coverage of reporting requirements of partnerships, SEC regulated companies, not-for-profit organizations, and financially distressed entities. Full disclosure issues are addressed, including interim and segment reporting requirements and accounting for changing prices. International accounting topics include accounting for foreign currency transactions and hedging transactions, foreign operations disclosure requirements, and harmonization of international accounting standards. Fraudulent financial reporting issues, accountants' legal liability, and the codes of ethics of the various accounting organizations are analyzed.

### **ACC 452-3 Advanced Accounting II (3 + 0)**

Prerequisite: ACC 352

This course is a comprehensive study of mergers and acquisitions focusing on the preparation of consolidated financial statements. The additional complexities inherent in consolidating investments in foreign subsidiaries are addressed in depth.

## **Aerospace Science**

### **AES 110-6 Aviation Fundamentals (6 + 0)**

Corequisites: AES 171 and MTR 141 (recommended)

Fundamentals of aviation for the beginning student. Includes a study of the airplane and its components, aerodynamics, basic aircraft systems, the airport environment, air-traffic control procedures, Federal Aviation Administration (FAA) regulations, the basic elements of air navigation (including radio navigation), and a review of aviation weather. Prepares students for the FAA private pilot written examination.

### **AES 120-3 Fundamentals of Air Traffic Control (3 + 0)**

Prerequisite: AES 110

Introduces air-traffic services, procedures, communications, recordkeeping, regulations, emergencies, and air-space constructions.

### **AES 150-2 Private Flight (1 + 2)**

Prerequisites: AES 110, 171, MTR 141; or evidence of having passed the FAA written examination

Prepares students to meet the requirements for a private pilot's certificate, which includes a minimum of 35 hours of flight time (approximately 20 dual and 15 solo). Course credit is contingent on student obtaining the FAA private pilot's license.

**AES 171-3 Single-Engine Flight Simulation I (2 + 2)**

Corequisite: AES 110 (recommended)

Covers basic flight instruments, radio navigation, aviation weather, aircraft performance (including weight and balance), crew coordination, and decision making. The fundamentals of instrument attitude flight (scanning, interpreting, and controlling) are learned in the flight simulator. Radio navigation is introduced, including VOR, DME, ADF, and transponder operation.

**AES 176-3 Single-Engine Flight Simulation II (2 + 2)**

Prerequisite: AES 171, or private pilot certificate, or permission of the instructor

Reviews attitude instrument flight and radio navigation with wind correction. VFR cross-country flights are planned and flown using VOR, DME, ADF, and localizer nav aids. Flight planning includes the use of weather data and performance and loading data for complex, single-engine airplanes. Introduces holding patterns and VOR/NDB approaches. Emphasizes crew coordination and decision making.

**AES 180-6 Commercial/Instrument Ground (6 + 0)**

Prerequisites: AES 110, MTR 141, or permission of instructor

Studies aeronautics, regulations, meteorology, and instrument procedures in preparation for the FAA commercial and instrument written exams.

**AES 205-3 Aviation History and Future Development (3 + 0)**

Covers the growth and development of aviation through gliders and balloon flights to the modern jets and space age. Includes the effects of wars and inventions of internal combustion engines and turbojets on the progress of aviation. Discusses significant personnel, flights, and aircraft in tracing the advancement of general, commercial, and military aviation. Includes future developments in the aviation field.

**AES 210-3 Fundamentals of Aviation and Space Technology (3 + 0)**

An introductory survey course for non-aerospace science majors. Includes basic aeronautics, meteorology, navigation, rules of flight, high-speed aerodynamics, physiology of flight, human beings in space, history of aviation, and career opportunities.

**AES 215-3 Avionics for Aviators (3 + 0)**

Prerequisites: AES 110, MTH 131, PHY 125

Provides a working knowledge of basic electrical circuits, COMM, VOR/LOC, MKR, BCN, ILS/GLD, SLP, DME, XPDR/MODE C, radar, Loran C, antennas, and ELTS. Applies a user's systems-management approach, with emphasis on safety and precautions.

**AES 222-3 Flight Dispatcher/Load Planning (3 + 0)**

Prerequisite: AES 110

Prepares the student to work as a dispatcher for an airline. Regulations required for operations are a vital area of the course. Covers methods of decision making, safety, and weather conditions relating to dispatch decisions.

**AES 250-3 Instrument Flight I (1 + 4)**

Prerequisite: private pilot certificate or permission of instructor

Provides flight training required to prepare for FAA instrument rating. The rating is required for course completion.

**AES 271-3 Instrument Flight Simulation I (2 + 2)**

Prerequisite: private pilot certificate or permission of instructor

IFR cross-country flights are planned and flown in the simulator, using radio navigation fundamentals. Flights include ATC clearances, radio aids for determining position, holding patterns, and approaches.

**AES 275-3 Instrument Flight Simulation II (2 + 2)**

Prerequisites: AES 180, 271, or permission of instructor

A continuation of AES 271, introducing more complex flight planning, clearances, en route flight, and approaches. Includes inflight route changes and missed approaches.

**AES 300-3 Aircraft Systems and Propulsion (3 + 0)**

Prerequisites: AES 110 or FAA private pilot certificate, and PHY 125 or permission of instructor

Introduces aircraft nomenclature, design, features, systems, and their components. Covers the theory, components, instrumentation, and operation of internal combustion and turbojet engines, as well as fuel, electrical, hydraulic, and pneumatic aircraft systems.

**AES 320-3 National Airspace Operations (3 + 0)**

Prerequisite: AES 110

Examines each element of the National Airspace System and the requirements for operation within the system. Social/political/environmental factors, as well as technological developments and economic forecasts, are studied as the basis for justifying facilities, automation, and electronic improvements throughout the system. Discusses system demand and FAA regulations as they apply to the control and use of the system, both in the near and long term.

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### **AES 321-3 Aviation Economics and Regulations (3 + 0)**

Prerequisite: junior status or permission of the instructor

Examines growth and contemporary organization of trunk and supplemental airlines, as well as the changing role of governmental regulatory agencies, as they affect the carriers. Labor unions and the general economy are considered.

### **AES 322-3 Aviation Law and Risk Management (3 + 0)**

Prerequisite: AES 321 or permission of instructor

Provides the middle manager with an understanding of liability problems and aviation insurance coverage. FBO, manufacturer, and operator liability cases are reviewed. Includes an overview of fundamental aviation law, insurance risks, and contract terminology.

### **AES 323-3 Commuter Airline Management (3 + 0)**

Prerequisites: AES 321 and junior or senior status, or permission of instructor

Covers the integration of local air transportation with the National Air Transportation System; forecasts for growth of the commuter industry; interfaces with domestic, trunk, supplemental, and regional service air carriers; airport ground facilities and equipment needs; terminal area airspace problems; equipment; and finance considerations.

### **AES 324-3 Airline Planning and Management (3 + 0)**

Uses current airline growth to study the planning, management, and marketing techniques that shape an air transportation company's airplane equipment, route network, and schedule. These processes are applied to a simulated Rocky Mountain region airline.

### **AES 352-3 Commercial Flight (1 + 4)**

Prerequisite: AES 250 or permission of the instructor

Provides the flight training required to prepare for the FAA commercial pilot certificate. The certificate is required for course completion.

### **AES 353-3 Aerodynamics (3 + 0)**

Prerequisites: AES 300, PHY 125

Studies basic principles of aerodynamics, including airfoil shapes and aerodynamic forces, airplane performance, stability and control, strength limitations, and application of aerodynamics to specific flight situations. Included are flight performance with air flow in sub-, trans-, and supersonic envelopes.

### **AES 355-3 FAA Instructor Certification - Ground (3 + 0)**

Prerequisites: AES 180 and FAA commercial/instrument certificate, or permission of instructor

Prepares the student for taking the following FAA written tests: Fundamentals of Instruction (FOI), Flight Instructor—Airplane (single and multiengine), Ground Instructor—Basic and Advanced. Emphasizes the practical aspects of flight instruction.

### **AES 357-2 Ground Instructor Practicum (0 + 4)**

Prerequisite: FAA commercial/instrument certificate, advanced or instrument ground instructor certificate, or permission of instructor

Provides student practice as aviation instructors in advanced single-engine flight simulators. Covers all aspects of flight planning and preparation, setup of simulators, cockpit management, and IFR and VFR flight procedures, and navigation.

### **AES 371-3 Multi-Engine Flight Simulation I (1 + 4)**

Prerequisite: FAA commercial certificate with instrument rating or permission of instructor

Introduces multiengine aircraft operations, such as IFR cross-country flight. Introduces complex weight and balance computations and use of performance charts. Normal and emergency procedures are studied in the twin-engine simulator. Aeronautical decision making and cockpit resource management are developed.

### **AES 385-3 Human Factors and Physiology of Flight (3 + 0)**

Prerequisite: junior status or permission of instructor

Studies human factors and physiological effects and problems of flight from the standpoint of general aviation, as well as more advanced space flight.

### **AES 387-3 Aircraft Accident Investigation (3 + 0)**

Prerequisites: junior or senior status or permission of instructor, AES 300

Examines aircraft accident/incident investigation, analysis, and reporting with structural, systems, organization, and human factors considered; covers problems in report writing and includes laboratory and field investigation under the supervision of NTSB and/or FAA personnel.

### **AES 404-3 Aircraft Performance (3 + 0)**

Prerequisites: AES 110, PHY 125, junior status

Examines performance of jet- and propeller-powered aircraft. Flight profiles are studied, with emphasis on aircraft capabilities, limitations, and determination of speeds, power, or thrust settings for various conditions of flight. Weight and balance performance charts are reviewed.

**AES 410-3     Advanced Air Traffic Control (1 + 2)**

Prerequisite: AES 120 or permission of instructor

Introduces advanced ATC radar topics, with emphasis on hands-on application in the simulator lab. Covers aircraft separation, identification and speed control, flight progress strip usage, emergency procedures, and the elements necessary for the safe operation of the ATC system.

**AES 413-4     Flight Engineer Duties and Responsibilities (4 + 0)**

Prerequisites: junior or senior status, AES 353, 404, and the FAA commercial certificate with instrument rating

Corequisite: AES 414

Provides a working knowledge of B-727 operating procedures, including external, pre-flight engine start, and in-flight procedures. Also provides instruction in irregular and emergency procedures and in-flight engineer duties and responsibilities as set forth in FARs.

**AES 414-4     B-727 Systems (4 + 0)**

Prerequisites: junior or senior status, AES 352 or FAA commercial certificate and instrument ratings

Corequisites: AES 353, 404, 413

Provides operational knowledge of the various B-727 systems. Includes power plant, fuel, electrical, hydraulic, pneumatic, and air conditioning systems; pressurization, avionics, instruments, flight controls, fire protection, and ice and rain protection.

**AES 420-3     Airport Planning (3 + 0)**

Prerequisites: AES 321, junior status; or permission of instructor

Exposes students to the dynamics of a planning process. This process includes data gathering, data analysis, site selection, airport layout, and airport financing. The problems of noise and air pollution are addressed in depth.

**AES 421-3     Airport Management (3 + 0)**

Prerequisites: AES 321, 420, junior status; or permission of instructor

Studies the modern airport and the factors involved in its management. Various management functions of administration, finance, capital finance, operation, maintenance, and public relations are analyzed.

**AES 423-3     FBO and Aircraft Marketing (3 + 0)**

Prerequisite: senior status or permission of instructor

A study of fixed-base operations. Local facilities are used as models for learning financing, construction, equipment, staffing, and operating costs, as well as marketing techniques in sales and closing in light and medium class aircraft. Includes field trips and guest lectures from industry.

**AES 424-3     Air Cargo (3 + 0)**

Prerequisite: junior or senior status

An overview of the air cargo industry, including the history of development; air shipments economy; review of legislation and regulatory agency trends; cargo aircraft now in use; air freight forwarding; and current air-freight terminal operations problems.

**AES 437-3     Advanced Navigation Systems (3 + 0)**

Prerequisite: permission of instructor

A follow-up to AES 110. Further develops dead reckoning skills and introduces celestial concepts as a basis for study of the advanced navigation systems: Inertial, Loran C, Omega, GPS (global positioning system), and various types of radar.

**AES 450-1     Flight Multi-Engine (1 + 1)**

Prerequisites: AES 352 or FAA commercial pilot rating (Student must have at least a second-class FAA medical certificate.)

Covers multiengine aircraft operations. A minimum of 10 hours of dual flight time is required. The FAA multiengine rating must be obtained to receive credit for the course.

**AES 451-1     Flight Instructor (1 + 1)**

Prerequisites: AES 352, 370, 470, second-class FAA medical certificate

Provides the fundamentals of flight instruction and the basic aeronautical knowledge necessary for the flight instructor certificate. Fifteen hours of dual flight time is required, and the flight-instructor certificate must be obtained to receive course credit.

**AES 452-1     Flight Instructor-Instrument (1 + 1)**

Prerequisites: AES 352, second-class FAA medical certificate

Provides basic aeronautical knowledge and experience required for instrument flight instructors. Ten hours of dual flight time is required and the FAA rating must be obtained to receive course credit.

## 196 COURSE DESCRIPTIONS

### **AES 453-1 Flight Instructor-Multi-Engine (1 + 1)**

Prerequisites: AES 452, second-class FAA medical certificate

Provides the basic aeronautical knowledge and experience relative to multiengine flight instruction required for multiengine flight instructors, as well as the fundamentals of flight instruction. Fifteen hours of dual flight time is required. The FAA rating must be obtained to receive course credit.

### **AES 455-1 Flight Helicopter (1 + 1)**

Prerequisites: AES 352, permission of instructor, second-class FAA medical certificate

Studies include helicopter systems, aerodynamics, power plants, flight characteristics, and operations. The FAA rating must be obtained to receive course credit.

### **AES 457-1 Airline Transport Pilot (1 + 2)**

Prerequisites: AES 352, first-class medical eligibility as required in FAA regulations (part 61.151), permission of instructor

Completion of credit for this course requires 1,500 hours of flight time, 500 of which is cross-country, 100 is night flying, and 75 is instrument flight. Course involves knowledge of navigation, weather, FARs, radio communications, and weight distribution on aircraft and loading.

### **AES 458-4 Turbojet Flight Engineer or Type Rating (2 + 4)**

Prerequisites: FAA flight engineer written examination and permission of instructor

For students with access to type rating or flight engineer training, such as at an airline, and consists of ground school for B-727, DC-8, or other airplanes. Approximately 15 hours of second officer or "type" training and a flight check in the airplane or an FAA-approved simulator is completed at an external facility.

### **AES 459-2 Flight Instructor Practicum (0 + 4)**

Prerequisites: AES 357, FAA commercial/instrument certificate, CFI, advanced or instrument ground instructor certificate, or permission of instructor

Provides student practice as a flight instructor in advanced single- and twin-engine flight simulators. Using the capabilities of the flight simulator's computers, covers all aspects of flight planning and preparation, setup of simulators, cockpit management, IFR flight procedures and navigation, and emergency procedures.

### **AES 460-3 Space Flight (3 + 0)**

Prerequisite: PHY 125, MTH 131, AES 300; or permission of instructor

Covers the fundamental laws of astrophysics as well as basic concepts of the universe, astronautics, re-entry, propulsion, and launch vehicles. Includes investigation of space flight, covering such topics as crewed flight, uncrewed flight, space stations, space planes, and space policy. Concludes with computer simulation. Student teams design and build a space station using the latest aerospace techniques. The design project stresses real-world constraints and enhancement of interpersonal skills.

### **AES 471-3 Turboprop Flight Simulation (1 + 4)**

Prerequisite: AES 371 or FAA commercial pilot certificate with instrument and multi-engine ratings

Introduces twin-engine turboprop aircraft operations. Skill is developed in complex weight- and balance-computation and use of performance charts. Studies normal and emergency procedures for turboprop multiengine airplanes. Develops aeronautical decision-making and cockpit resource management skills. Teaches regional air carrier operations.

### **AES 476-3 Aerospace Education (3 + 0)**

Prerequisite: permission of instructor

Provides background in aircraft propulsion and principles of flight required to teach aerospace courses in elementary and secondary schools. Acquaints the student with aeronautical terms, the forces acting upon aircraft in flight, and elementary navigation.

### **AES 477-2 Methods of Teaching Aerospace Education (2 + 0)**

Prerequisite: AES 476 or permission of instructor

Surveys techniques and methods used in applying basic aerospace fundamentals to elementary, secondary, and industrial classrooms. Uses special aerospace media, such as instrument flight simulators, models, radio navigational aids boards, and mockups.

### **AES 478-2 Curriculum Development in Aerospace Education (2 + 0)**

Prerequisites: AES 476, 477, permission of instructor

Discusses specific objectives and educational implications of aerospace education. Students select a special field of emphasis such as mini-courses for elementary schools, aerospace courses for secondary schools, or adult education courses for industry.

**AES 486-3 Aviation Safety (3 + 0)**

Prerequisites: senior status and completion of all 300-level AES courses

Presents the principles of aviation accident prevention and aviation operations safety with specific practices, procedures, methods, and organization. Covers the history of aviation mishap experience with legal ramifications, along with those methods used that have proven useful in preventing aircraft mishaps. Human factor, contemporary investigation organization and sources of assistance, analysis, analysis of aerodynamics application, fatigue, and stress are presented, applying inferential reasoning as a method of developing critical thinking.

**AES 491-3 Aviation Management Problems and Job Targeting (3 + 0)**

Prerequisites: aerospace science major and senior status, or permission of instructor

Develops the student's management solving skills and personal marketing plan to effectively pursue employment. Current aviation management problems are researched and solutions are developed through group problem-solving techniques. Personal marketing plan preparation helps define goals, identify skills, prepare credentials, and practice interviewing. Guest lecturers from aviation industry highlight the features of their businesses.

## African American Studies

**AAS 101-3 Introduction to African American Studies (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
A survey of African American studies—the many facets of the black experience in this country and the discipline of African American studies. Emphasizes the black perspective. (General Studies Course—Level II, Social Science; Multicultural)

**AAS 108-3 Readings in African American Studies (3 + 0)**

A self-paced course based on selected readings in books, magazines, and newspapers on African American studies.

**AAS 113-3 (HIS 194) Survey of African History (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
Surveys the major developments on the African continent from ancient times to the modern period. Focuses on political and cultural developments in African civilizations from ancient Egypt to the present. This course may be taken only under one prefix: AAS or HIS. (General Studies Course—Level II, Historical; Multicultural)

**AAS 200-3 (SOC 200) Social Movements and the Black Experience (3 + 0)**

Prerequisite: AAS 101, SOC 101, or permission of instructor

Analyzes and interprets the nature, cause, and consequence of black social movements in the U.S., ranging from the slave period to the present. Particular attention is given to the civil rights movement of the 1950s and 1960s. This course may be taken only under one prefix: AAS or SOC.

**AAS 213-3 (HIS 295) West African Civilizations (3 + 0)**

Prerequisites: satisfaction of ENG 101 and the Level I Communication requirement

Surveys histories and cultures of West Africa from A.D. 1000 to the modern period. Focuses on political, cultural, and economic developments among West African peoples and states. This course may be taken only under one prefix: AAS or HIS. (General Studies Course—Level II, Historical; Multicultural)

**AAS 220-3 (PSC 220) Politics and Black People (3 + 0)**

Prerequisites: satisfaction of Level I Mathematics requirement and either ENG 101 or the Level I Communication course requirement

Examines black politics as a vehicle for positive change for black people in this country. Realities and the challenges, both historical and current, are emphasized. This course may be taken only under one prefix: AAS or PSC. (General Studies Course—Level II, Social Science; Multicultural)

**AAS 230-3 (ANT 235) African Peoples and Cultures (3 + 0)**

Examines traditional cultures of African peoples. Gives added understanding of culture and people in relation to human problems and experiences. This course may be taken only under one prefix: AAS or ANT.

**AAS 313-3 Readings in African History (3 + 0)**

Prerequisite: AAS 113 or permission of instructor

Provides the opportunity for students to explore important writings in a selected subject area of African history. Students advance their knowledge of the materials and information related to the field of African history.



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### AAS 324-3

#### (ENG 324) African American Literature (3 + 0)

Prerequisites: six semester hours of English above 102 or permission of instructor, and satisfaction of Level I General Studies course requirements

Studies literature by black Americans. Considers works in the context of the historical and social conditions of the time at which they were written. This course may be taken only under one prefix: AAS or ENG. Suitable for non-English majors. (General Studies Course—Level II, Arts and Letters; Multicultural)

### AAS 330-3

#### (SOC 314) The Black Community (3 + 0)

Prerequisites: AAS 101 or AAS/SOC 200, or permission of instructor, and satisfaction of Level I General Studies course requirements

Relates fundamental concepts and theories of sociology and African American studies to the study of the black community through an analysis of the educational, political, religious, economic, and family dimensions. Emphasizes local, national, and international black communities. Classic and contemporary black community studies are examined. This course may be taken only under one prefix: AAS or SOC. (General Studies Course—Level II, Social Science; Multicultural)

### AAS 340-3

#### (PSC 340) Contemporary Africa (3 + 0)

Focuses on the political, social, and economic highlights of post-independence Africa. Africa's relations with the outside world and the question of South Africa are also examined. This course may be taken only under one prefix: AAS or PSC.

### AAS 355-3

#### (SOC 344) The Black Family (3 + 0)

Prerequisites: AAS 101 or SOC 101, and satisfaction of Level I General Studies course requirements

Provides an in-depth exploration of the black family as a social institution. Emphasizes the historical roots of the black family and how the African influence is enmeshed in the functioning of the family in modern society. Examines the factors responsible for the ability of the black family to meet the challenge of a changing society. This course may be taken only under one prefix: AAS or SOC. (General Studies Course—Level II, Social Science)

### AAS 357-3

#### (HIS 357) African American History I (3 + 0)

Prerequisites: HIS 121, 122, or permission of instructor

Moving from the background of African culture and the slave trade, this course traces the distinctive role of the people of African heritage in the U.S. to 1876. This course may be taken only under one prefix: AAS or HIS.

### AAS 358-3

#### (HIS 358) African American History II (3 + 0)

Prerequisites: HIS 121, 122, or permission of instructor

Continues a study of the role of the people of African heritage in the U.S. from 1876 to the present. Emphasizes an understanding of the historical tradition that gives rise to current dilemmas facing America. This course may be taken only under one prefix: AAS or HIS.

### AAS 370-3

#### (PSY 370) Psychology of Racism and Prejudice (3 + 0)

Prerequisites: PSY 101, AAS 101, and three hours of coursework at the 200-level or above in AAS, CHS, ICS, NAS, PSY, or WMS; or permission of instructor

Examines the origins, nature, and transmission of prejudice from a psychological perspective. Topics include racism, sexism, classism, and homophobia. Theoretical orientations, research, and perspectives on change are addressed.

### AAS 391-3

#### (PSC 391) African Politics and Government (3 + 0)

Prerequisites: AAS 113, 230, or permission of instructor

Surveys present-day political systems in Africa and examines internal and external factors that have contributed to their emergence. This course may be taken only under one prefix: AAS or PSC.

### AAS 440-3

#### (PSC 440) South African Politics (3 + 0)

Prerequisites: AAS 113, 391, or permission of instructor

Presents an in-depth study of the South African political system and its historical development and contemporary operation. This course may be taken only under one prefix: AAS or PSC.

### AAS 449-3 Contemporary Issues in African American Studies (3 + 0)

Prerequisites: AAS 101 and junior or senior status

Provides an in-depth study of selected issues that significantly impact the black people in the U.S. Topics vary and the course may be repeated for credit with the permission of the department chair.

**AAS 460-3****(PSY 460) Black Psychology (3 + 0)**

Prerequisites: six hours in African American studies and six hours in psychology, or permission of instructor  
Examines the major concepts and models in psychology as they apply to blacks. New directions in black psychology are explored, as well as the theories, writings, and research of leading black psychologists. This course may be taken only under one prefix: AAS or PSY.

**AAS 485-3 Research Seminar in African American Studies (3 + 0)**

Prerequisite: six hours of upper-division courses in African American studies  
Provides the opportunity for refining research skills. Students participate in planned seminar sessions and conduct in-depth research on selected topics under close supervision of a faculty member. (Senior Experience)

## Air Force Reserve Officer Training Corps—Aerospace Studies

**AFR 103-1 The Air Force Today (1 + 0)**

One 1-hour lecture and one 1½-hour lab per week. This course deals with the Air Force in the contemporary world through a study of the total force structure, strategic offensive and defensive forces, general purpose forces, aerospace support forces, and the development of communication skills.

**AFR 104-1 The Air Force Today (1 + 0)**

A continuation of AFR 103-1. One 1-hour lecture and one 1½-hour lab per week.

**AFR 203-1 Development of Air Power I (1 + 0)**

One 1-hour lecture and one 1½-hour lab per week. This course is a study of air power from balloons and dirigibles through the jet age; a historical review of air power employment in military and nonmilitary operations in support of national objectives; a look at the evolution of air power concepts and doctrine; and an introduction to the development of communication skills.

**AFR 204-1 Development of Air Power II (1 + 0)**

A continuation of AFR 203-1. One 1-hour lecture and one 1½-hour lab per week.

**AFR 301-1 Air Force Management and Leadership I (3 + 0)**

Two 1½-hour seminars plus one 1½-hour lab per week. An integrated management course emphasizing concepts and skills required by the successful manager and leader. The curriculum includes individual motivational and behavioral processes, leadership, communication, and group dynamics, providing the foundation for the development of the junior officer's professional skills (officership). Course material on the fundamentals of management emphasizes decision-making and the use of analytic aids in planning, organizing, and controlling in a changing environment. Organizational and personal values (ethics), management of change, organizational power, politics, managerial strategy, and tactics are used throughout the course to enhance the learning and communication process.

**AFR 302-3 Air Force Management and Leadership II (3 + 0)**

Two 1½-hour seminars plus one 1½-hour lab per week. A continuation of AFR 301-3. Basic managerial processes are emphasized, while group discussions, case studies, and role-playing as learning devices are employed. Emphasis on communicative skills development is continued.

**AFR 402-3 National Security Forces in Contemporary American Society I (3 + 0)**

Two 1½-hour seminars and one 1½-hour lab per week. This course is a study of U.S. National Security Policy, examining the formulation, organization, and implementation of national security policy and civil/military interaction. It also includes blocks of instruction on the military profession/officership, the military justice system, and communication skills. The course is designed to provide future Air Force officers with the background of U.S. National Security Policy so they can effectively function in today's Air Force.

**AFR 402-3 National Security Forces in Contemporary American Society II (3 + 0)**

Two 1½-hour seminars and one 1½-hour lab per week. A continuation of AFR 401-3. Special themes include defense strategy and conflict management, formulation/implementation of U.S. defense policy, and organizational factors and case studies in policy making, military law, uniform code of military justice, and communication skills.

## Anthropology

**ANT 101-3 Physical Anthropology and Prehistory (2 + 2)**

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

Covers the basic concepts and methods of physical anthropology and archaeology. Explores the position of humans in nature, human and cultural evidence of the past, and modern diversity. Surveys the discipline of anthropology and its subdivisions. Laboratory includes firsthand experience in identifying fossil hominids, lithic technology, and human variation. (General Studies Course—Level II, Natural Science)

## 200 COURSE DESCRIPTIONS

### **ANT 131-3 Introduction to Cultural Anthropology (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
Provides a comparative perspective on human behavior and thought by exploring world cultures in the domains of kinship, social organization, language, ecological adaptation, economics, and religion. Applied aspects of anthropology are also investigated. (General Studies Course—Level II, Social Science)

### **ANT 210-3 Human Evolution (3 + 0)**

Prerequisite: ANT 101 or permission of instructor

An intense look at Darwin's century and the ideas that have contributed to our understanding of human evolution. The hominid fossil record is presented as living history in light of what fossils reveal about the behavior and social organization of the populations they represent.

### **ANT 233-3 Cross-Cultural Communication (3 + 0)**

Prerequisites: ANT 131, satisfaction of Level I mathematics course requirement, ENG 101 or the Level I Communication course requirement

Designed to help the nonspecialist gain an understanding of culturally conditioned behavior as it relates to intercultural relations among people of different nations. The course will move from the fundamentals of anthropological linguistics to viewing the causes of communication interference and failure across cultures. (General Studies Course—Level II, Social Science)

### **ANT 235-3**

#### **(AAS 230) African Peoples and Cultures (3 + 0)**

Examines traditional cultures of African peoples. Gives added understanding of culture and people in relation to human problems and experiences. Credit will be granted for only one prefix: ANT or AAS.

### **ANT 236-3**

#### **(CHS 200) Living Culture and Language of the Mexican and Chicano (3 + 0)**

Prerequisite: CHS 100 or 102

Traces the fusion of cultures and dialects of the Spanish-speaking Southwest into elements that characterize Chicano intracultural and intercultural diversity. Credit will be granted for only one prefix: ANT or CHS.

### **ANT 264-3 Archaeology (3 + 0)**

Examines the methods archaeologists use to discover and interpret the material remains of human behavior from the past.

### **ANT 271-3 Archaeological Field Research (1 + 4)**

Prerequisites: ANT 264 or equivalent, permission of instructor

Includes archaeological field investigations that may consist of survey, mapping, testing of sites, and/or excavations. Course may be repeated for up to a maximum of six hours. No more than three credit hours may be applied toward a major or minor in anthropology.

### **ANT 311-3 Human Variation (3 + 0)**

Prerequisite: ANT 101 or permission of instructor

Examines the varied forms and features of humanity that can be grouped and understood in terms of their adaptive costs and benefits. Considers modern appreciation of human variation based on understanding the processes that have developed differing human populations. Surveys and analyzes the fundamental features of these processes.

### **ANT 315-3 Primate Studies (3 + 0)**

Prerequisite: ANT 101 or permission of instructor

Analyzes the behavior and structure of living primates through observation and the use of recent contributions from the field and laboratory. Resulting interpretations assist in understanding human behavior and human development.

### **ANT 325-3 Doing Anthropology (3 + 0)**

Prerequisite: ANT 131 or permission of instructor

An application of the special ethnographic skills related to the collection, management, interpretation, and analysis of cultural information. Includes examination and practice of participant observation and focused ethnography.

### **ANT 330-3 Exploring World Cultures: Variable Topics (3 + 0)**

Prerequisite: ANT 131 or permission of instructor

An exploration of selected non-Western cultures. Using films and various ethnographic procedures, the student learns how culture is a living thing shaped by the people who carry it. May be repeated under different topics.

**ANT 331-3 Ethnography of North American Indians (3 + 0)**

Prerequisites: ANT 131 or permission of instructor, and satisfaction of Level I General Studies course requirements

Studies the nature and consequences of distinctive Indian cultures that occupied North America at the time of European contact. Includes analyses of the many different aspects of social organization and environment that made up the unique cultures called American Indian. (General Studies Course—Level II, Social Science)

**ANT 334-3 Native Americans in Historical Perspective (3 + 0)**

Prerequisite: ANT 131 or permission of instructor

A survey of the response of Native American societies to the overrunning social, economic, and political structures of EuroAmerica. Broad areas of cultural change are covered, and the fundamental issues of land, economic development, and cultural integrity are studied.

**ANT 335-3 Vanishing Cultures and Peoples (3 + 0)**

Prerequisite: ANT 131 or permission of instructor

Examines how industrial civilization is completing its destruction of technologically simple tribal cultures. Intense contextual and comparative analysis of the cultures undergoing drastic modification enhances awareness of the fundamental right of different life styles to coexist and develops analytical skills to help understand cultural changes.

**ANT 339-3 Understanding Cultures (3 + 0)**

Prerequisite: ANT 131 or permission of instructor

Explores cultural norms and the enormous influence they have over the kinds of behavior found in any society. Using contemporary theories of anthropology, the course expands on the means to both understand and mitigate cross-cultural differences.

**ANT 346-3 Social Organization and Evolution (3 + 0)**

Prerequisite: ANT 131 or permission of instructor

An intensive look at forms of social organization, with a focus on kinship, arranged in evolutionary sequence from the hunting-and-gathering band to the complicated social network of a complex society.

**ANT 348-3 Cultural Diversity in Health and Illness (3 + 0)**

Prerequisites: permission of instructor and satisfaction of Level I General Studies course requirements

Prepares students to understand the many different viewpoints and concepts related to health and illness in other cultures. Emphasizes the need and means to provide culturally appropriate health care. (General Studies Course—Level II, Social Science)

**ANT 361-3 Archaeology of North America (3 + 0)**

Prerequisite: ANT 101 or permission of instructor

A study of the prehistory of North America, emphasizing the peopling of the New World, earliest Indian cultures, and later regional developments.

**ANT 362-3 South American Archaeology (3 + 0)**

Prerequisite: ANT 101 or equivalent, or permission of instructor

Focuses on the origins and developments of prehistoric South American cultures, starting with the first people to arrive in South America and culminating in the conquest of the Incas by the Spanish. Coverage ranges from the Andean highlands to the tropical jungles of the Amazon.

**ANT 366-3 Ancient American Civilizations (3 + 0)**

Prerequisite: ANT 101 or equivalent, or permission of instructor

Concentrates on the study of the emergence, culmination, and fall of Central and South American civilizations. The cultural situation of precivilization America is presented at the beginning of the course. The contributions of American civilizations to our culture is stressed.

**ANT 368-3 Practical Archaeology (3 + 0)**

Prerequisite: ANT 264 or equivalent, or permission of instructor

Emphasizes the practical application of selected archaeological methods and techniques through lectures and demonstrations. Students become acquainted with various field and laboratory equipment and work with archaeological material. Active class participation is expected. The application of computers in archaeological work is discussed.

**ANT 440-3 Recent Issues in Anthropology: Variable Topics (3 + 0)**

Prerequisite: permission of instructor

Examines current issues related to new discoveries and ongoing or completed work in archaeology, cultural anthropology, or physical anthropology. Each section addresses different areas of anthropology and may be repeated under different topics.

## 202 COURSE DESCRIPTIONS

### **ANT 471-3 Advanced Archaeological Field Research (1 + 4)**

Prerequisite: permission of instructor

Advanced archaeological field research, including survey design, map-making, transit survey, sampling strategies, artifact conservation, student supervision of excavations and survey, field sample preparation, computer coding of artifact types and distribution, archival research, site recording, and report writing. Course may be repeated for up to a maximum of six hours. No more than three credit hours may be applied toward a major or minor in anthropology.

## **Art**

The following Art courses are listed numerically by area:

### **NON-MAJORS COURSES**

#### **ART 103-3 Basic Photography Methods (0 + 6)**

Students will learn black and white film development and printing, basic photographic problem solving dealing with technical and aesthetic concerns. Oriented to non-Art majors.

#### **ART 104-3 Art Appreciation Survey (3 + 0)**

Prerequisites: ENG 101, 102, and minimum performance standard scores on reading and writing pre-assessment placement tests

This course is an introduction to the design principles, materials, and techniques used by artists. A variety of art forms, from different cultures and historical periods will also be analyzed as social, political, and religious documents. Oriented to non-art majors. (General Studies Course—Level II, Arts and Letters)

### **CORE ART COURSES**

#### **ART 110-3 Basic Drawing I (0 + 6)**

This course is an introduction to media and material customarily used in drawing and graphics. It stresses development of skills, drawing vocabulary, sensibilities, and perceptions necessary in visual communication.

#### **ART 111-3 Basic Drawing II (0 + 6)**

Prerequisite: ART 110

This course is a continuation of ART 110 with further emphasis on drawing fundamentals, the challenges of media and techniques, and conceptualization.

#### **ART 120-3 Design Processes and Concepts I (0 + 6)**

This course is a visual exploration of the basic elements and principles of two dimensional design, using a variety of media, with emphasis on conceptual process.

#### **ART 121-3 Design Processes and Concepts II (0 + 6)**

Prerequisite: ART 120

This course is a continuation of ART 120 with further visual exploration of the basic elements and principles of three-dimensional design, using a variety of media and tools, with emphasis on conceptual processes.

### **LEVEL 3 GENERAL STUDIES REQUIRED COURSES**

#### **ART 401-3 Modern Art History: Theory and Criticism (3 + 0)**

Prerequisites: ART 202 and 202 or permission of instructor; satisfaction of all Level I and Level II General Studies course requirements, and senior standing

A seminar for advanced students involving the reading and discussion of modern writing about the visual arts. Extensive use of the library facilities and written critical essays will be required. (Senior Experience)

#### **ART 475-3 Senior Experience Studio: Portfolio Development and Thesis Exhibit (0 + 6)**

Prerequisites: ART 401 or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, and senior standing in the Art Department

In this studio course, the student will present finished work in a senior thesis show, produce a slide portfolio, and write a concise statement about the intention and methodology of producing the body of work. This class is to be taken in the senior year in the art department with the corequisite ART 401. (Senior Experience)

## **ART HISTORY**

#### **ART 200-3 World Prior to 1880 (3 + 0)**

Prerequisite: ENG 101, 102

This survey of art from both Western and non-Western traditions examines art produced prior to 1880 as the manifestation of the beliefs, aesthetic systems, and social structures of specific cultures and historical periods.

#### **ART 201-3 Survey of Modern Art: Impressionism to 1960 (3 + 0)**

A survey of modern art that traces the roots of contemporary art theory and techniques back to Impressionism, showing a development of these ideas through abstract expressionism.

**ART 202-3 Survey of Contemporary Art: 1960 to the Present (3 + 0)**

Prerequisite: ART 201

A survey of contemporary art that traces the development of contemporary art from the period following abstract expressionism to the present with emphasis on art in America.

**ART 300-3 Art Nouveau (3 + 0)**

Prerequisite: ART 201

A study of the first modern theories of design as they developed out of the concepts of "Art for Art's Sake." These ideas are traced through an in-depth study of furniture, painting, sculpture, pottery, and architecture from the period 1880-1916.

**ART 301-3 Art of the Decade (3 + 0)**

Prerequisite: ART 202

Art of the Decade traces specific thematic trends of the present to their roots in the immediate past. Emphasis is placed on current art theory.

**ART 302-3 Art of Africa, Oceania, and the Americas (3 + 0)**

Prerequisites: ENG 101, 102

This course is an introduction to the major art forms produced by selected cultures in Africa, the Pacific Islands, and North and Central America. The historical, religious, social, and political content of the artworks will be studied.

**ART 303-3 History of Art Between World Wars (3 + 0)**

Prerequisite: ART 201

An in-depth study of art, architecture, and design in the transitional period between World War I and World War II.

**ART 304-3 African Art (3 + 0)**

Prerequisites: ENG 101 and 102

This course examines the visual arts in selected regions of the African continent. It is cross-listed with African American Studies.

**ART 307-3 History of Photography (3 + 0)**

Prerequisite: ART 202

Study of the development of the photographic process and the history of the photographic image from the earliest experiments through contemporary photographic concerns.

**ART 309-3 Art and Cultural Heritage (3 + 0)**

Prerequisites: satisfaction of Level I General Studies course requirements and at least junior standing

This course studies artists of African, Asian, and Native American ancestry and their contributions to American art. A brief introduction to the artistic legacy of Africa, Asia, and the Americas is followed by a study of American artists whose creative activity reflects their varied cultural heritage's. (General Studies Course—Level II, Social Science; Multicultural)

**ART 395-3****(WMS 395) Women's Art/Women's Issues (3 + 0)**

Prerequisites: WMS 101, ART 104 or ART 200, or permission of instructor and satisfaction of Level I General Studies course requirements

This course develops an understanding of women artists and their work from the perspectives of feminist scholarship in art and art history. (General Studies Course—Level II, Arts and Letters)

**FINE ARTS****ART 210-3 Beginning Life Drawing (0 + 6)**

Prerequisite: Core or permission of instructor

Literal and interpretive investigations of the human figure will use a variety of media and applications. Anatomical studies will be included.

**ART 212-3 Human Anatomy for Artists (0 + 6)**

Prerequisites: ART 111 and 210

A comprehensive study of human anatomy as a studio drawing experience.

**ART 215-3 Beginning Painting (0 + 6)**

Prerequisites: ART 110, 111, 120, 201, and 202

This course will explore the materials and techniques of painting, including composition and method.

## 204 COURSE DESCRIPTIONS

### **ART 220-3 Beginning Photography (0 + 6)**

Prerequisites: ART 111, 121

Introduction to photography: materials, techniques, and concepts of picturing. Exploration and usage of basic light-sensitive materials and introduction to ideas about the art of picture making in relation to special course projects.

### **ART 225-3 Beginning Printmaking (0 + 6)**

Prerequisites: ART 111, 121 and 202

A beginning printmaking class introducing the student to collography, art blueprint, silk screen, and intaglio.

### **ART 230-3 Beginning Sculpture (0 + 6)**

Prerequisites: ART 111, 121

A foundation course to introduce the knowledge and skills needed for personal expression, communication of ideas, and creation of utilitarian objects. Materials, hand and power tools, and techniques for manipulation of three-dimensional form and space are utilized.

### **ART 310-3 Intermediate Drawing (0 + 6)**

Prerequisites: ART 111, 121, 202

Drawing skills development is coupled with a greater emphasis on ideation.

### **ART 314-3 Drawing the Human Head (0 + 6)**

Prerequisites: Core

Students will draw the human head objectively and subjectively. A variety of media and techniques, with literal and inventive explorations of anatomy and surface forms used.

### **ART 315-3 Intermediate Painting (0 + 6)**

Prerequisites: ART Core and ART 215

This course will continue the development of methods of painting through exploration of materials, techniques, and pictorial compositional assignments.

### **ART 317-3 Intermediate Life Drawing (3 + 0)**

Prerequisites: Core and ART 210

The student will redefine traditional drawing skills, extend media and techniques in reference to the human form.

### **ART 318-3 Watermedia (0 + 6)**

Prerequisites: Core or permission of instructor

Painting procedure emphasizing methods, processes and techniques. The development of personal forms and images.

### **ART 320-3 Intermediate Photography (0 + 6)**

Prerequisites: ART 202 and 220

Introduction to the extended personally directed project. Problems given to broaden technical skills. Aesthetic and historical issues introduced.

### **ART 323-3 Color Photography (0 + 6)**

Prerequisite: ART 220

Basic color photography course: Students will have introduction to color materials. Film and print development will be taught. Students will work to produce a body of color photographs.

### **ART 325-3 Intermediate Printmaking (Lithograph) (0 + 6)**

Prerequisites: ART 202 and 225

Black and white and colored lithographic prints are developed through traditional and contemporary techniques.

### **ART 326-3 Intermediate Printmaking (Intaglio) (0 + 6)**

Prerequisites: ART 202 and 225

Various intaglio techniques are explored to allow the student to develop a unique personal expression.

### **ART 327-3 Intermediate Printmaking (Silkscreen) (0 + 6)**

Prerequisites: ART 202 and 225

Silk-screen printing in which students are taught to use silk-screen as a means to search for a personal and unique aesthetic image.

### **ART 330-3 Intermediate Sculpture (0 + 6)**

Prerequisite: ART 101 and 230

Creative approach to the problems of three-dimensional design in sculpture. Construction in metals, wood, and plastics.

**ART 378-3 Video Art (0 + 6)**

Prerequisites: ART 111, 121 and ART 202 or permission of instructor

This course will serve as an introduction to small format video systems and their operation. Upon completion of the course, students will be familiar with half inch VHS and three-quarter inch systems. Students will learn basic production which is directed toward creative self-expression. Virtuosity will be emphasized through the application of strong ideas.

**ART 409-3 Advanced Life Drawing (3 + 0)**

Prerequisites: Core, ART 210, ART 317

The student will continue experimentation with the figurative idiom and determine a personal approach to a body of figurative work.

**ART 410-3 Advanced Drawing I (0 + 6)**

Prerequisite: ART 310

A concentrated studio approach to drawing that explores diverse media and image within the context of contemporary idioms.

**ART 411-3 Advanced Drawing II (0 + 6)**

Prerequisite: ART 410

Continued experimentation with the contemporary idioms of ART 410; designed to encourage individual probing and development.

**ART 412-3 Advanced Drawing III (0 + 6)**

Prerequisite: ART 411

Continued experimentation with the contemporary idioms of ART 411; designed to encourage the student to explore visual ideas and systems creatively. A supportive climate for individual directions.

**ART 415-3 Advanced Painting I (0 + 6)**

Prerequisites: ART Core and ART 315

This advanced course will continue the development of methods of painting through exploration of materials, techniques, and pictorial composition assignments.

**ART 416-3 Advanced Painting II (0 + 6)**

Prerequisite: ART 415

This advanced course will continue the development of methods of painting through exploration of materials, techniques, and pictorial composition.

**ART 417-3 Advanced Painting III (0 + 6)**

Prerequisite: ART 416

This advanced course will continue the development of methods of painting through exploration individualized painting problems.

**ART 418-3 Advanced Watermedia (0 + 6)**

Prerequisites: Core and ART 318

This course includes both transparent and opaque watermedia and mixed media techniques and approaches. Students will have some choice concerning which media they want to explore most fully.

**ART 419-3 Computer Graphics III (0 + 6)**

Prerequisite: ART 341

This course in computer graphics laboratory will cover such areas as drawing, painting, video, bookmaking, sound, and animation as they relate to the fine arts.

**ART 420-3 Advanced Photography I (0 + 6)**

Prerequisite: ART 320

Advanced photography: Extended projects emphasizing personal vision and approach to photographic media. Technical problems will be solved.

**ART 421-3 Advanced Photography II (0 + 6)**

Prerequisite: ART 420

Advanced photography course dealing with archival processing. Production of a cohesive body of work with writing about concepts and ideas involved in the work. Research project about photographer's specific work or a photography monograph.

**ART 422-3 Advanced Photography III (0 + 6)**

Prerequisite: ART 421

Advanced photography course: Production of a portfolio or book of original photographs. Production of slide sets of original work. Presentation and conceptual ideas stressed.



## 206 COURSE DESCRIPTIONS

### **ART 423-3 Advanced Color Photography (0 + 6)**

Prerequisite: ART 323

Continuation of Color Photography 323.

### **ART 424-3 Photography Assistantship (0 + 6)**

Prerequisites: ART 220 and ART 320 or permission of instructor

This studio course allows the photography student to put into use the basic skills learned in previous courses and to learn at an intense pace the fine tuning of those skills by demonstrating and critiquing. Students will learn to run laboratories, mix special chemicals, and further enhance oral skills by developing teaching strategies.

### **ART 425-3 Advanced Printmaking I (0 + 6)**

Prerequisite: ART 325 or ART 326 or ART 327

Advanced work in silk screen, lithography, and/or intaglio in which the student is directed toward unique individual expression.

### **ART 426-3 Advanced Printmaking II (0 + 6)**

Prerequisite: ART 425

A further opportunity for the advanced student to develop a unique individual expression in printmaking, with professional control in his chosen area of emphasis.

### **ART 427-3 Advanced Printmaking III (0 + 6)**

Prerequisite: ART 426

A course for art majors emphasizing printmaking which allows students to develop their individual printmaking aesthetic and hone their craftsmanship.

### **ART 430-3 Advanced Sculpture I (0 + 6)**

Prerequisite: ART 330

Further development of knowledge and skills acquired in ART 330. Addition of techniques leading to casting in various metals.

### **ART 431-3 Advanced Sculpture II (0 + 6)**

Prerequisite: ART 430

This course is designed to develop the individual's ability to express her or his ideas and concepts in various sculptural media.

### **ART 432-3 Advanced Sculpture III (0 + 6)**

Prerequisite: ART 431

A continuation of ART 431.

## **DESIGN**

### **ART 240-3 Beginning Advertising Design (0 + 6)**

Prerequisites: ART 111 and ART 121

An introduction to the utilization of the letter form as a compositional element. Offers specific instruction relating to the rendering of Roman, sans-serif, and calligraphic alphabets.

### **ART 334-3 Illustration (0 + 6)**

Prerequisites: Core and ART 240, or permission of instructor

This course will provide opportunities to conceptualize, explore a variety of illustrative techniques and acquire skills necessary for production of professionally executed projects.

### **ART 340-3 Intermediate Advertising Design (0 + 6)**

Prerequisites: ART 202, ART 240 or permission of instructor

An introductory course in advertising design, illustration, and visual communication. Includes instruction relating to the preparation of art work for reproduction.

### **ART 341-3 Computer Graphics I (0 + 6)**

Prerequisite: ART 240

This introductory computer graphics course covers the basic functions of the graphics computer as well as explorations of commercial art and fine art applications.

### **ART 344-3 Color Theory and Practice (0 + 6)**

Prerequisite: Art Core Program or permission of instructor

This studio course investigates the interaction of color through various color systems that will permit students from any discipline to have a working knowledge of color hues and properties of color.

**ART 376-3 Artist's Hand Bookmaking Workshop (0 + 6)**

Prerequisites: ART 111, ART 121 and ART 202

This studio course will deal with the book as an art object. Structure, craft, and conceptual ideas will be taught. Students will build various traditional and nontraditional book types and provide display methods for books in an exhibition context. Hand paper making will be demonstrated.

**ART 440-3 Advanced Advertising Design I (0 + 6)**

Prerequisite: ART 340

Continuation of ART 340 with emphasis on the production of finished work for the preparation of a graduate portfolio.

**ART 441-3 Advanced Advertising Design II (0 + 6)**

Prerequisite: ART 440

A continuation of ART 440.

**ART 442-3 Advanced Advertising Design III (0 + 6)**

Prerequisite: ART 441

A continuation of ART 441.

**ART 451-3 Computer Graphics II (0 + 6)**

Prerequisite: ART 341

This course in computer graphics laboratory will cover such areas as layout and typography, design, illustration, and animation as they relate to advertising design and commercial art.

**CRAFTS****ART 260-3 Beginning Ceramics (0 + 6)**

Prerequisites: ART 111, ART 121

Introducing clay as a working medium. The instruction includes exploration of a variety of hand building methods, introduction to ceramic technology and preparing ware for glazing and firing.

**ART 265-3 Beginning Metalwork and Jewelry Making (0 + 6)**

Prerequisites: ART 111, ART 121

Design quality as a fundamental part of good craftsmanship is emphasized through the basic techniques involved in working nonferrous and precious metals. Course includes basic fabricating techniques, simple stone setting, and lost wax casting.

**ART 280-3 Beginning Art Furniture (0 + 6)**

Prerequisites: ART Core

This course will develop the skills necessary to assemble and craft basic small object art furniture, and provide an introduction to aesthetic and conceptual understanding of the discipline.

**ART 360-3 Intermediate Ceramics (0 + 6)**

Prerequisites: ART 202, ART 260

A continued study of ceramic art and technique with emphasis upon competent use of the potter's wheel and extension of hand building processes. Exploration of ceramic processes at low and high temperature with emphasis on glaze testing, formulation, and usage.

**ART 361-3 Mold Making Workshop (0 + 6)**

Prerequisite: One semester of college-level ceramics or permission of instructor

An introduction to making molds from three-dimensional objects. Students will learn to make several types of plaster molds useful for reproducing originals in slipcast clay or cast paper.

**ART 365-3 Intermediate Metalwork and Jewelry Making (0 + 6)**

Prerequisites: ART 202, ART 265

A continuation of ART 265, extending the content to include a variety of basic metal forming techniques: repousse, raising, block forming, forging, matting, and die forming.

**ART 380-3 Intermediate Art Furniture (0 + 6)**

Prerequisites: ART Core and ART 280

This course will develop the skills necessary to assemble and craft basic fine art furniture, and further ones aesthetic and conceptual understanding of the discipline.

**ART 460-3 Advanced Ceramics I (0 + 6)**

Prerequisite: ART 360

Offers an opportunity to extend the student's knowledge of ceramic processes including further experience with varieties of wheel thrown forms and with combinations of wheel-thrown and hand built forms.

**ART 461-3 Advanced Ceramics II (0 + 6)**

Prerequisite: ART 460

To promote awareness of the technical and aesthetic possibilities inherent in ceramic processes and to develop a sense of responsibility toward the material. The problems to be approached will be formulated by students in consultation with the instructor.

**ART 462-3 Advanced Ceramics III (0 + 6)**

Prerequisite: ART 461

Advanced studio work in ceramics with emphasis on refining the student's individual skills and extending the range of expression available through better technical understanding.

**ART 465-3 Advanced Metalwork and Jewelry Making I (0 + 6)**

Prerequisite: ART 365

A continuation of ART 365, extending the content to include advanced jointery processes through which inherent aesthetic and structural potential are recognized. Student's aesthetic growth and professionalism to be stressed.

**ART 466-3 Advanced Metalwork and Jewelry Making II (0 + 6)**

Prerequisite: ART 465

A continuation of ART 465, extending the content to include photo etching and various advanced surface embellishment techniques. Student aesthetic growth and professional maturity considered essential at this level.

**ART 467-3 Advanced Metalwork and Jewelry Making III (0 + 6)**

Prerequisite: ART 466

It will be a continuation of ART 466. A further opportunity for the advanced jewelry student to develop a unique expression and professional control. Portfolio preparation for postgraduate opportunities will be emphasized.

**ART 474-3 Low Fire Ceramic Workshop (0 + 6)**

Prerequisite: One semester of college-level ceramics or permission of instructor

A workshop in low fire ceramic materials and processes. Students will explore oxidation firing, raku and sagger firing processes and effects. Offered summer sessions only.

**ART 476-3 Advanced Art Furniture I (0 + 6)**

Prerequisites: Art Core, Art 280, and Art 380

This course will develop the skills necessary to design and craft fine art furniture, and provide a comprehensive aesthetic and conceptual understanding of the discipline.

**ART 477-3 Advanced Art Furniture II (0 + 6)**

Prerequisites: Art Core, Art 280, Art 380, and Art 476

This course will develop the skills necessary to design and craft fine art furniture of exhibition quality, provide a comprehensive aesthetic and conceptual understanding of the discipline, and encourage stylistic maturity.

**ART 478-3 Advanced Art Furniture III (0 + 6)**

Prerequisites: Art Core, Art 280, Art 380, Art 476, and ART 477

This course will expand the skills necessary to design and craft fine art furniture of exhibition quality, and develop stylistic maturity. Portfolio development and preparation will be required upon completion of art furniture sequence.

**ART EDUCATION LICENSURE****ART 338-4 Introduction to Art Education (3 + 2)**

Prerequisites: 27 semester hours of Art Major (including core) coursework, or permission of instructor.

This lecture course will introduce historical, philosophical, social, and educational concepts which have influenced the development of art education in the United States. The current status of art education, within the context of general education, will be assessed, and a field experience required.

**ART 437-2 Art Methods for the Classroom Teacher K-6 (0 + 4)**

Prerequisites: EDU 212, EDU 264, EDU 364, and ART 104

This studio course for elementary education students will combine practical studio experiences in art with art education theory and philosophy.

**ART 438-4 Art Methods/Materials K-12 (1 + 6)**

Prerequisites: EDS 221, ART 338, or permission of instructor

This lecture/studio course, preparing K-12 Art Specialists, is designed to create and implement visual art curriculum through theoretical approaches to and experimental activities in methodology of art education. Field experience is required.

**ART 439-3 Integrating the Arts for Gifted and Talented (2 + 2)**

Prerequisites: One course selected from the following disciplines: music, dance, theater, visual arts or creative writing and permission of instructor

This course will present a variety of integrated arts curricula appropriate for gifted learners by studying theoretical concepts and practical applications that stimulate the creative process. Field experience is required.

**Astronomy****AST 104-3 Introduction to Astronomy (2 + 2)**

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

A brief introduction to observational astronomy, followed by a survey of the physical processes and models that describe the evolution of planets, stars, galaxies, and modern cosmology. This course is taught in both the lecture and self-paced mode. (General Studies Course—Level II, Natural Science)

**AST 105-4 General Astronomy I (3 + 2)**

Prerequisite: high school algebra or equivalent

Introduces the methods and results of modern astronomy (solar system, stars, galaxies, and cosmology) at an elementary level.

**AST 106-4 General Astronomy II (3 + 2)**

Prerequisite: AST 105

A continuation of AST 105.

**AST 304-3 Modern Cosmology (3 + 0)**

Prerequisites: AST 104 or PHY 100 or equivalent, and satisfaction of Level I General Studies requirements

Designed for nonmajors. Covers the large-scale structure of the universe and such topics as gravitational theories, neutron stars, pulsars, black holes, big bang universe, steady state theory, and cosmological tests. (General Studies Course—Level II, Natural Science)

**Athletics****ATH 100-1-2 Varsity Sports (1 + 1) or (2 + 2)**

Offers the serious athlete the opportunity for refinement of the skills involved in each sport. Emphasizes an understanding and application of skills of the individual sport in intercollegiate competition, team cooperation, and school spirit. Interested students are encouraged to contact the individual sport coach with resume, current statistics, and letters of recommendation from previous coaches.

**Biology****BIO 100-3 Human Biology for Nonmajors (3 + 0)**

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

Familiarizes the student with the principles of the living world, the basic form and function of the human body, and how these two relate to each other. Basic variations of life forms and the interrelationships of the human body to the surrounding world are the main thrusts of the course. Does not apply to a biology major or minor. (General Studies Course—Level II, Natural Science)

**BIO 101-3 Ecology for Nonmajors (3 + 0)**

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

Familiarizes the student with the fundamentals of human ecology of North America. Classical concepts of ecology and modern environmental pressures are brought together to give both a background to and a discussion of existing environmental problems. This course does not apply toward a biology major or minor. A field trip to the Denver Museum of Natural History is required outside of class. (General Studies Course—Level II, Natural Science)

**BIO 106-3 Pharmacology of Drugs and Alcohol (3+0)**

Prerequisite: BIO 100 or permission of the instructor

The second of two biological courses designed for students enrolled in the human services drug/alcohol program. Biochemistry, pharmacology, neurology, pathology, and nutrition will be emphasized with emphasis on alcohol addiction. Open to biology students by permission.

## 210 COURSE DESCRIPTIONS

### **BIO 108-4 General Introduction to Biology (3 + 3)**

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

Serves as the foundation for all other professional biology courses (for majors, minors, paramedical, premedical, and other biology students). Emphasis is on cellular and molecular biology, energy systems, genetics, evolution, and ecology. Offered in lecture, laboratory, and self-paced laboratory formats. (General Studies Course—Level II, Natural Science)

### **BIO 123-1 Understanding Medical Terminology (Self-Paced) (1 + 0)**

Uses an audiovisual system to teach the meanings of 350 Latin and Greek word parts (elements) and how they can be combined to interpret and understand 10,000 complex medical terms.

### **BIO 210-5 General Botany (3 + 4)**

Prerequisite: BIO 108 or equivalent

An introductory survey of the plant kingdom with an emphasis on evolutionary theory, life cycles, anatomy and morphology, and vascular plant physiology.

### **BIO 220-5 General Zoology (3 + 4)**

Prerequisite: BIO 108 or equivalent

An introduction to the principles of zoology. Covers structure and function, classification, environmental requirements, and economic importance of the various groups of the animal kingdom. The laboratory will entail comprehensive examination of representatives of major taxa.

### **BIO 231-4 Human Anatomy and Physiology I (3 + 3)**

Prerequisite: BIO 108 or permission of instructor

The first of two courses addressing the structure and function of the human body. Topics include tissue anatomy, the musculoskeletal system, and neurophysiology. Course content and level are designed for allied health science students and for human performance, sport and leisure studies majors.

### **BIO 232-4 Human Anatomy and Physiology II (3 + 3)**

Prerequisite: BIO 231 or permission of instructor

The second of two courses addressing the structure and function of the human body. Topics include endocrinology, circulation, and the respiratory, digestive, urinary, and reproductive systems. Course content and class level are designed for allied health science students and for human performance, sport and leisure studies majors.

### **BIO 240-4 General Microbiology (3 + 2)**

Prerequisites: BIO 108, plus one year of high school chemistry, or one semester of college chemistry, or permission of instructor

An introduction to the microbial world, including discussions of bacteria, blue-green algae, fungi, protozoans, and viruses.

### **BIO 301-3 Microtechnique (1 + 6)**

Prerequisite: BIO 210, or 220, or permission of instructor

A laboratory course designed to familiarize the student with the techniques involved in the preparation of microscope slides. The student will learn how to fix, dehydrate, embed, section, and mount specimens from both plant and animal tissues.

### **BIO 305-4 Cell and Molecular Biology (3 + 3)**

Prerequisites: BIO 108, two additional semesters of biology and CHE 310 (Organic Chemistry may be taken concurrently), or permission of instructor

Studies the chemical bases and interrelationships of cellular structure as related to cellular function.

### **BIO 314-5 Plant Physiology (3 + 4)**

Prerequisite: BIO 210 or permission of instructor

A comprehensive survey of the internal chemical changes within plants and how these changes control growth and development. Discussions include water relations, transpiration, food transportation uptake, photosynthesis, respiration, plant movements, flowering, dormancy, and senescence.

### **BIO 315-2 Plant Hormones (2 + 0)**

Prerequisite: BIO 210 or permission of instructor

A study of the roles of the natural hormones such as auxins, gibberellins, cytokinins, and abscisic acid in the growth and development of vascular plants. The use of synthetic substances (growth regulators) such as weed killers and growth retardants is also discussed.

### **BIO 316-4 Plant Anatomy and Morphology (2 + 4)**

Prerequisite: BIO 210 or permission of instructor

A survey of cell types, tissue systems, and the anatomical structure of stems, roots, and leaves of vascular plants. The development and evolutionary history of vascular plants is also discussed.

**BIO 318-4 Vascular Plant Taxonomy (2 + 4)**

Prerequisite: BIO 210 or permission of instructor

A collection and identification of vascular plants of Colorado. Lectures include plant terminology, characteristics of major plant families, and uses of the plants. Laboratories consist of identification of the plants in the field and on herbarium mounts.

**BIO 321-4 Histology (2 + 6)**

Prerequisite: BIO 220, or 231, or 232, or permission of instructor

A comprehensive study of the microscopic structure and appearance of body tissues and of the tissue composition of body organs, mainly as seen in mammals. Emphasizes the laboratory. Correlations are drawn between structure and function. Laboratory drawings are required.

**BIO 322-5 Comparative Vertebrate Anatomy (3 + 6)**

Prerequisite: BIO 220 or permission of instructor

Presents the history of the vertebrate body through laboratory observations of representative vertebrates and through evolutionary and functional interpretations of the changes in vertebrate organ systems from fish to mammals.

**BIO 325-4 Arthropod Zoology (3 + 3)**

Prerequisite: BIO 220 or permission of instructor

A survey of the major classes of arthropods. The arachnids, crustacea, diplopoda, chilopoda, and insects are covered in much greater detail than is possible in a general zoology course. The subarthropods are covered briefly.

**BIO 327-4 Parasitology (3 + 3)**

Prerequisite: BIO 220 or permission of instructor

A study of the structure, function, taxonomy, and life cycles of parasites that are important to human beings, domestic animals, and the economy, or that illustrate parasitological principles.

**BIO 330-3 Advanced Human Biology for Non-Majors (3 + 0)**

Prerequisites: BIO 100, or 231, or 232, or permission of the instructor, and satisfaction of Level I General Studies course requirements

A continuation of BIO 100. Addresses the more complex aspects of human body functions and how the body deals with insults such as bombardment of microorganisms, various dietary practices, pollution, and socio-economic challenges. Topics include immunity, AIDS, genetics, stress, cancer, and aging. (General Studies Course—Level II, Natural Science)

**BIO 334-3 Endocrinology (3 + 0)**

Prerequisites: BIO 108 and two additional semesters of biology, or permission of instructor

A survey of the major human endocrine organs and their hormones. Topics include normal anatomy and physiology of each gland, cellular mechanisms of hormone action, and endocrinopathies.

**BIO 335-4 Immunology (3 + 3)**

Prerequisites: BIO 108, junior or senior status, or permission of instructor

A study of the humoral and cell-mediated immune response. Topics include immunobiology, immunochemistry, hypersensitivity, autoimmune diseases, and theories of antibody formation.

**BIO 336-4 Animal Physiology (4 + 0)**

Prerequisite: BIO 220 and CHE 181, or permission of instructor

A lecture course for science majors on physiological adaptations and acclimation to environmental challenges—especially with respect to temperature, moisture, and oxygen availability.

**BIO 340-4 Microbial Physiology (3 + 3)**

Prerequisites: BIO 240 and CHE 310 (may be taken concurrently), or equivalent, or permission of instructor

A detailed study of the organization and structure of bacterial cells. Emphasizes biosynthesis, polymerization, and assembly of bacteria.

**BIO 355-4 Urban Ecology (3 + 3)**

Prerequisites: BIO 108 or one semester of chemistry, physics, or earth science, or permission of instructor, and satisfaction of Level I General Studies course requirements

An analysis of the urban ecosystem and the factors involved: water, transportation, solid wastes, energy, land, political institutions, economics, social patterns, communications, recreation, shelter, nutrition, and population. Field trips to key environmental locations in the greater metropolitan Denver area and field trip reports are required. (General Studies Course—Level II, Natural Science)

**BIO 360-3 General Genetics (3 + 0)**

Prerequisites: BIO 108 and two additional semesters of biology, one year of chemistry strongly recommended, or permission of instructor

A study of classical genetics and the molecular basis of heredity.

## 212 COURSE DESCRIPTIONS

### **BIO 412-4 Algology (2 + 4)**

Prerequisite: BIO 210

A survey of algae, with emphasis upon the freshwater forms of the U.S. Evolutionary theory, ecology, life cycles, and anatomy and morphology are discussed. The laboratory stresses culturing techniques and taxonomy.

### **BIO 416-4 Mycology (2 + 4)**

Prerequisite: BIO 210 or 240

A survey of the fungi with emphasis on the lower fungi, imperfects, and plant pathogenic ascomycetes. Culture techniques, identification, life cycles, and economic importance are stressed.

### **BIO 422-3 Protozoology (2 + 2)**

Prerequisite: BIO 360

A study of the structure, function, taxonomy and identification, ecology, and life cycles of primarily free-living protozoans.

### **BIO 425-4 Entomology (3 + 3)**

Prerequisites: BIO 220 and junior or senior status, or permission of instructor

A study of the structure, physiology, and evolution of the insects. The internal, as well as external structure of the insects, is considered and the importance of these structures on the insects is developed both in lecture and laboratory.

### **BIO 427-3 Herpetology (2 + 3)**

Prerequisites: BIO 220 and 454 or 455, or permission of instructor

A survey of the characteristics, taxonomy, evolutionary trends, and environmental adaptations of amphibians and reptiles. Identification of Colorado species is emphasized in the laboratory. Current literature readings are assigned. At least one weekend field trip is required.

### **BIO 428-4 Ornithology (3 + 3)**

Prerequisite: BIO 220 or permission of instructor

Survey of the life of birds, especially as related to their evolutionary origins, adaptations for flight, and exploitations of various ecological niches. Includes consideration of behavior, physiology, and classification. Required field trips may include one weekend trip.

### **BIO 429-3 Mammology (2 + 3)**

Prerequisites: BIO 220 and 454 or 455, or permission of instructor

A survey of taxonomic, physiologic, and anatomic characteristics of modern orders of mammals. Illustrative environmental adaptations and major evolutionary trends will be discussed. The laboratory will include study-skin preparation and identification of representative mammalian species.

### **BIO 444-4 Virology (3 + 3)**

Prerequisites: BIO 240 and 360, or permission of instructor

A survey of the interactions of viruses and their hosts is presented. The emphasis is on bacterial and animal host forms.

### **BIO 445-5 Pathogenic Microbiology (3 + 4)**

Prerequisite: BIO 240 or permission of instructor

A comprehensive study of human bacterial pathogens. The emphasis is on etiology, pathogenesis, and epidemiology of human diseases. Laboratory studies involve isolation and identification.

### **BIO 447-3 Microbial Genetics (3 + 0)**

Prerequisites: BIO 240 and 360, or permission of instructor

A study of current information on the mechanisms of microbial inheritance and expression of genetic information, intended to develop perspectives relative to the evolution of the field, applications to higher organisms, and directions in current research.

### **BIO 451-3 Microbial Ecology (3 + 0)**

Prerequisites: BIO 240 and six hours of upper-division microbiology courses, permission of instructor, satisfactory completion of all Level I and II General Studies course requirements, senior status

A detailed study of microbial ecology, emphasizing population interactions, quantitative ecology, habitat ecology, and biochemical cycling. Discusses the biotechnological aspects of microbial ecology. (Senior Experience)

### **BIO 454-4 Plant Ecology (4 + 0)**

Prerequisites: BIO 210 and senior status, or permission of instructor and satisfaction of all Level I and II General Studies course requirements

Proceeds from a study of concepts (matter and energy, food webs, nutrient cycles, succession) to a discussion of populations, communities, and biomes. Emphasizes the interrelationships and interdependence of living things with each other and with their nonliving environment. This course, in lecture/seminar format, is approved for Senior Experience credit. The self-paced format can be used for biology major or minor requirements, but not for Senior Experience credit. (Senior Experience)

**BIO 455-4 Animal Ecology (2 + 4)**

Prerequisite: BIO 210 and 220, or permission of instructor

A detailed discussion of population dynamics, intra- and interspecific interactions, niche segregation, species diversity, speciation, and distributional patterns. Appropriate readings from current literature are required.

**BIO 456-2 Field Methods in Plant Ecology (0 + 4)**

Prerequisite: BIO 454

Covers sampling methods, data analysis, vegetative mapping, report writing, and data presentation. Includes weekly field trips to various plant communities.

**BIO 481-4 Vertebrate Embryology (2 + 6)**

Prerequisite: BIO 220 or permission of instructor

Survey of events, evolutionary patterns, and control mechanisms in early embryonic development of various classes of vertebrates, from fertilization through early organ formation. Laboratory includes the study of living fish embryos. Lab drawings are required.

**BIO 485-3 Evolution (3 + 0)**

Prerequisites: BIO 360 or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, senior status

Develops awareness and understanding of organismic evolution as the foundation of biological thought. The major features of evolution, variation, natural selection, adaptation and speciation, and their significance to the origin and evolution of major plant and animal groups are investigated. A research paper and an oral presentation are required. (Senior Experience)

## Chemistry

**CHE 101-3 Chemistry and Society (3 + 0)**

Prerequisite: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

A general studies course designed for nonscience majors. Introduces basic concepts of chemistry through a discussion of the role of chemistry in modern society; provides a broad, qualitative understanding of chemical principles and their application to environmental issues. (General Studies Course—Level II, Natural Science)

**CHE 110-5 Principles of Chemistry (4 + 2)**

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

This course is a study of the fundamentals of chemistry including both theoretical and laboratory principles. A survey of atomic structure, periodicity, bonding, nomenclature, stoichiometry, gas laws, and solution chemistry is provided for those students with no background in these areas. (General Studies Course—Level II, Natural Science)

**CHE 180-4 General Chemistry I (4 + 0)**

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests and high school chemistry; and either three years high school math or college algebra. Completion of CHE 180 and 185 with a passing grade is required to receive general studies credit.

A comprehensive study of the facts, concepts, and laws of chemistry designed to meet the requirements of students majoring in such areas as chemistry, medicine, medical technology, biology, and physics. (General Studies Course—Level II, Natural Science)

**CHE 181-4 General Chemistry II (4 + 0)**

Prerequisites: CHE 180 and minimum performance standard scores on reading, writing, and mathematics preassessment placement tests (completion of CHE 181 and 185 with a passing grade is required to receive general studies credit)

A continuation of CHE 180, providing a comprehensive study of the facts, concepts, and laws of chemistry. Designed to meet the requirements of students majoring in such areas as chemistry, medicine, medical technology, biology, and physics. (General Studies Course—Level II, Natural Science)

**CHE 185-2 General Chemistry Laboratory (1 + 3)**

Prerequisite: CHE 180

Corequisite: CHE 181

Completion of CHE 180 and 185 with a passing grade and/or CHE 181 and 185 with a passing grade is required to receive general studies credit. This course introduces basic laboratory techniques and will reinforce/explore concepts introduced in CHE 180 and 181. A one-hour recitation will be utilized to discuss theoretical and procedural aspects of laboratory experiments.

**CHE 210-5 Introduction to Organic and Biological Chemistry (4 + 2)**

Prerequisite: CHE 110

A study of the elements of organic and biological chemistry. Satisfies requirements for professional health-related areas such as nursing, as well as careers in science and mathematics.



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### **CHE 230-3 Inorganic Chemistry (2 + 2)**

Prerequisites: CHE 180, 181, 185

Introduces and reviews such topics as bonding and reactivity of inorganic substances, acid-base concepts, descriptive chemistry of the main group, and transition elements/coordination chemistry. Lab deals with synthesis and characterization of inorganic compounds.

### **CHE 250-3 Introduction to Occupation Health & Safety (3 + 0)**

Prerequisite: CHE 180, 181, 185

Introduces occupational health and safety issues. Includes an historical perspective of the development of various health agencies and the impact of the Occupational Safety and Health Act of 1970. Investigates recognition, evaluation, and control of hazards in the work environment.

### **CHE 270-4 Introduction to Criminalistics (3 + 2)**

A study of basic principles and analysis of microevidence, drug analysis, dactyloscopy, firearms examination, serology, hair and fiber analysis, and soil and glass analysis.

### **CHE 275-3 Arson and Explosives (3 + 0)**

Prerequisite: CHE 110

Includes a study of the chemistry of fires and explosions. Covers arson-scene evidence collection and preservation techniques, as well as techniques for analyzing the residues collected.

### **CHE 276-1 Field Testing and Laboratory Analysis of Drugs (1 + 0)**

Prerequisite: CHE 110

Introduces the theory and practice of using a drug-testing kit to screen for controlled substances.

### **CHE 300-3 Analytical Chemistry (3 + 0)**

Prerequisites: CHE 180, 181, 185

Corequisite: CHE 301

Studies the fundamentals of analytical chemistry, including principles of gravimetric, volumetric, potentiometric, and spectrophotometric analyses.

### **CHE 301-2 Analytical Chemistry Laboratory (0 + 4)**

Prerequisites: CHE 180, 181, 185

Corequisite: CHE 300

Studies of laboratory methods in analytical chemistry, including techniques of gravimetric, volumetric, potentiometric, and spectrophotometric analyses.

### **CHE 305-3 Environmental Chemistry (3 + 0)**

Prerequisites: CHE 180, 181, 185, 310

Studies the sources, reactions, transport, effects, and fates of chemical species in water, soil, air, and biota environments.

### **CHE 310-4 Organic Chemistry I (4 + 0)**

Prerequisites: CHE 180, 181, 185; satisfaction of Level I General Studies course requirements

Introduces the nomenclature, structure, synthesis, reactions, properties, identification, and mechanisms of aliphatic and aromatic organic compounds. (General Studies Course—Level II, Natural Science)

### **CHE 311-3 Organic Chemistry II (3 + 0)**

Prerequisite: CHE 310

A continuation of CHE 310. A study of the nomenclature, structure, synthesis, reactions, properties, identification, and reaction mechanisms of the major families of organic compounds not covered in CHE 310.

### **CHE 312-2 Organic Chemistry Laboratory I (0 + 4)**

Prerequisites: CHE 180, 181, 185; satisfaction of Level I General Studies course requirements

Prerequisite or corequisite: CHE 310

A laboratory course emphasizing organic synthesis and the purification and identification of organic compounds. Gives students the opportunity to use both classical and instrumental techniques to solve laboratory problems. (General Studies Course—Level II, Natural Science)

### **CHE 313-2 Organic Chemistry Laboratory II (0 + 4)**

Prerequisites: CHE 310 and 312

Prerequisite or corequisite: CHE 311

A continuation of CHE 312; a qualitative organic analysis course in which both classical and instrumental techniques are emphasized.

### **CHE 319-4 Survey of Physical Chemistry (4 + 0)**

Prerequisites: CHE 300, MTH 141, PHY 201

A survey of the principles of thermodynamics, equilibrium, atomic and molecular structure, electrochemistry, kinetics, quantum mechanics, and spectroscopy.

**CHE 320-1 Survey of Physical Chemistry Lab (0 + 3)**

Prerequisites: CHE 300, MTH 141, PHY 201

Provides laboratory experience in physical chemistry. Includes experiments demonstrating aspects of the gas laws, equilibria (phase and chemical), electrochemistry, and various forms of calorimetry. Acquaints students with computer-assisted data acquisition, strongly encouraging the use of personal computers for preparation of lab reports.

**CHE 325-4 Physical Chemistry I (4 + 0)**

Prerequisites: MTH 242, PHY 201 or 231; CHE 300

A comprehensive study of the principles of gas dynamics, thermodynamics, phase relationships, solution properties, and electrochemistry.

**CHE 326-4 Physical Chemistry II (4 + 0)**

Prerequisites: PHY 202 or 233; CHE 325

A comprehensive study of the principles of quantum mechanics, quantum chemistry and spectroscopy, statistical mechanics, and kinetics.

**CHE 328-2 Physical Chemistry Laboratory I (0 + 4)**

Corequisite: CHE 325

A laboratory study of the basic principles of thermodynamics and its applications.

**CHE 329-2 Physical Chemistry Laboratory II (0 + 4)**

Corequisite: CHE 326

A laboratory study of the basic principles of quantum mechanics, spectroscopy, and kinetics.

**CHE 340-1 Chemical Literature Search (1 + 0)**

Prerequisites: CHE 300, 301, 312

Students learn how to perform in-depth chemical literature searches utilizing handbooks, biological abstracts, Beilstein, primary literature, and chemical abstracts. Both manual and computer-assisted searches performed.

**CHE 350-3 Occupational Safety (2 + 2)**

Prerequisites: one year of chemistry, human physiology

Covers the principles of accident control, facility inspections; measurement and evaluation of physical hazards such as radiation and noise; ergonomics; handling of hazardous materials; fire control; and personal protective equipment. Includes elements of a comprehensive safety program.

**CHE 360-4 Crime Scene Investigation I (3 + 2)**

Prerequisite: CHE 270

Designed for field investigators seeking a minor in criminalistics. Includes identification; individualization; collection and preservation of physical evidence; approach, processing, and investigation of crime scenes; establishing identity; trace evidence; impressions evident; blood; and other biological evidence.

**CHE 361-4 Crime Scene Investigation II (3 + 2)**

Prerequisites: CHE 270, 360

This course is a continuation of CHE 360 for field investigators seeking a minor in criminalistics. Course materials include specialized instruction in the following topics: drugs and toxicology; arson and explosives; sexual assault investigation; burglary investigation; motor vehicle investigation; and homicide investigation.

**CHE 370-4 Criminalistics I (3 + 2)**

Prerequisite: CHE 311

Introduces the theory and practice of physical evidence analysis. Topics include firearms, fingerprints, hairs and fibers, numbers restoration, shoe prints, arson, and paints.

**CHE 371-4 Criminalistics II (3 + 2)**

Prerequisite: CHE 370

A continuation of CHE 370, introducing the theory and practice of chemical evidence analysis. Topics include controlled substances, toxicology, and serology.

**CHE 380-3 Personal Computers for Science (3 + 0)**

Prerequisites: CHE 180, 181, 185; CSI 101 or CMS 101

Covers the use of existing software on IBM and IBM-compatible personal computers, including MS DOS, desktop publishing, spreadsheet manipulation, database management, and graphics.

**CHE 389-1-3 Science and Public Policy: (Variable Topics) (3 + 0)**

Prerequisites: any lower-division science course and ENG 101, or permission of instructor

Provides a working familiarity with the technical issues that influence major public policy decisions. Covers both policy issues and relevant technologies and examines their interconnections. Course content varies according to current topics, such as health, environment, and energy.

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### **CHE 401-3 Advanced Organic Chemistry (3 + 0)**

Prerequisite: CHE 311, 319, or 326

An integrated study of techniques for the investigation of organic reaction mechanisms and a survey of the nature of important organic reaction intermediates.

### **CHE 402-3 Synthetic Organic Chemistry (3 + 0)**

Prerequisites: CHE 311, 313; 319 or 326

Provides a unified approach to classical and modern synthetic chemistry, including aspects of thermodynamics, kinetics, mechanism, and stereochemistry.

### **CHE 410-3 Instrumental Analysis (3 + 0)**

Prerequisites: CHE 300, 301, 310; CHE 319 or 326

Presents the theory and practice of instrumental methods of analysis. Includes such topics as electronics, atomic and emission spectroscopy, UV-VIS spectroscopy, fluorescence and phosphorescence spectrophotometry, emission and absorption spectroscopy, infrared spectrometry, Raman spectroscopy, NMR spectroscopy, chromatography, and electroanalytical methods.

### **CHE 411-2 Instrumental Analysis Laboratory (0 + 6)**

Prerequisites: CHE 300, 301, 310, 311; 319 or 326

Corequisite: CHE 410

A study of instrumental methods, employing electromagnetic radiation, magnetic resonance, mass spectrometry, chromatography, and electrochemistry.

### **CHE 415-4 Instrumentation and Analysis in the Occupational Environment (3 + 2)**

Prerequisite: CHE 410

Describes the instruments used to sample and analyze potential occupational hazards while providing experience in the calibration and use of direct-reading field-sampling instruments.

### **CHE 420-3 Evaluation and Control of Air Quality (2 + 2)**

Prerequisite: CHE 415

A continuation of CHE 415. Presents concepts and techniques of sampling, evaluation, and control of airborne hazards. Includes principles of ventilation.

### **CHE 425-3 Principles of Occupational Health and Safety (3 + 0)**

Prerequisite: CHE 420

Examines application of the general principles of recognition, evaluation, and control of occupational hazards in solving field programs.

### **CHE 430-3 Advanced Inorganic Chemistry (3 + 0)**

Prerequisite: CHE 319 or 326

Covers atomic and molecular structure, bonding and bond energies, coordination theory, x-ray crystallography, solvent systems, and periodic relationships of the elements.

### **CHE 431-4 Biochemistry I (4 + 0)**

Prerequisite: CHE 310

Introduces the chemistry of living systems, with emphasis placed on intermediary metabolism and bioenergetics. Stresses applications to the related fields of human physiology, medicine, and nutrition.

### **CHE 432-3 Biochemistry II (3 + 0)**

Prerequisite: CHE 431

Continuation of Biochemistry (CHE 431). Course theme and emphasis is current biochemical research results. Topics covered include enzyme catalysis, biosynthesis, membrane biochemistry, genetic engineering, molecular basis of cancer, genetic transposition, neurochemistry, biochemical detoxification, molecular basis of inherited diseases, and selected topics in human nutrition.

### **CHE 435-1 Biochemistry Laboratory (0+3)**

Prerequisite: CHE 431

Introduces basic techniques and instrumentation of biochemical research and offers opportunities for independent work in both the library and the laboratory.

### **CHE 450-3 Occupational Toxicology (3 + 0)**

Prerequisites: CHE 431 and MTH 320, or permission of instructor

Discusses toxic substances, with an emphasis on modes of contact and entry of toxic agents, recognition of physiological effects, occupational diseases, toxic dosage, and exposure limits.

### **CHE 465-4 Chemistry Work Experience/Cooperative Education (0 + 40)**

Prerequisites: CHE 301, 311

Provides laboratory field experience for students majoring or minoring in chemistry. Requires 600 hours of work experience.

**CHE 470-7 Criminalistics Internship I (0 + 21)**

Prerequisite: CHE 371

Provides laboratory internship experience for criminalistics majors.

**CHE 471-7 Criminalistics Internship II (0 + 21)**

Prerequisite: CHE 470

Provides laboratory internship experience for criminalistics majors.

**CHE 475-8 Occupational Health and Safety Internship (0 + 24)**

Prerequisites: senior status and approval by the internship coordinator

A one-semester internship with a local industry. Provides field experience for occupational health and safety majors.

**CHE 495-3 Senior Experience in Chemistry (3 + 0)**

Prerequisites: senior status; CHE 181, 300, 311; either CHE 319 or 325; and satisfaction of Level I and II General Studies course requirements

A capstone experience for students seeking a major in chemistry. Consists of library research in conjunction with a chemistry faculty member, concluding with the submission of a significant paper on some area of chemistry; presenting the paper to the Chemistry Department; and completing four American Chemical Society examinations.

## Chicano Studies

**CHS 100-3 Introduction to Chicano Studies (3 + 0)**Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
Introduces interdisciplinary analysis of the Chicano experience in the U.S. Incorporates research in history, the arts, sociology, anthropology, political science, education, medicine, and engineering to provide better academic skills in a competitive national and international atmosphere. (General Studies Course—Level II, Social Science; Multicultural)**CHS 101-3****(HIS 191)****History of Meso-America: Pre-Columbian and Colonial Periods (3 + 0)**

Prerequisites: CHS 100, minimum performance standard scores on reading and writing preassessment placement tests

Examines indigenous cultures of Meso-America during the pre-Columbian period, with a focus on social, artistic, scientific, and engineering artifacts before and after the conquest of Mexico and the Southwestern U.S. by Spain. Credit will be granted for only one prefix: CHS or HIS. (General Studies Course—Level II, Historical; Multicultural)

**CHS 102-3****(HIS 192)****History of the Chicano in the Southwest: Mexico and U.S. Periods (3 + 0)**

Prerequisites: CHS 101 or permission of instructor; minimum performance standard scores on reading and writing preassessment tests

A study beginning with the Mexican War of Independence (1810) and concluding with an in-depth study of the historical development of the contemporary Chicano world. Credit will be granted for only one prefix: CHS or HIS. (General Studies Course - Level II, Historical; Multicultural)

**CHS 200-3****(ANT 236)****Living Culture and Language of the Mexican and Chicano (3 + 0)**

Prerequisite: CHS 100 or 102

Traces the fusion of cultures and dialects of the Spanish-speaking Southwest into elements that characterize Chicano intracultural and intercultural diversity. Credit will be granted for only one prefix: CHS or ANT.

**CHS 201-3****(ENG 241)****Survey of Chicano Literature (3 + 0)**

Prerequisite: CHS 100 or permission of instructor

Reviews major literary genres associated with Chicano creative expression, including the poetry, drama, and the novel. Credit will be granted for only one prefix: CHS or ENG.

**CHS 202-3****(ENG 242)****Chicano Poetry and Drama (3 + 0)**

Prerequisite: CHS 201 or permission of instructor

An intensive study of Chicano poetic and dramatic arts as it attempts to create a new reality. Provides a basic approach to poetry and drama as a craft through production. Credit will be granted for only one prefix: CHS or ENG.

**CHS 211-3 The Chicano in Aztlan (3 + 0)**

Prerequisite: CHS 100 or permission of instructor

Focuses on three major motifs associated with the socio-historical development of the Chicano in the Southwest: land, farm labor, and urban enclave.

## 218 COURSE DESCRIPTIONS

### **CHS 212-3 (HIS 282) Mexico: Independence to Revolution, 1810-1910 (3 + 0)**

Prerequisite: CHS 101/HIS 191

Describes the social, political, cultural, and economic development of the Mexican people during the 19th century. Provides an analysis of how race, class, gender, regionalism, and foreign intervention influenced Mexican history throughout the era.

### **CHS 213-3 (HIS 283) Mexico: Revolution to the Present, 1910-1990s (3 + 0)**

Prerequisites: CHS 101/HIS 191, CHS 212/HIS 282, or permission of instructor

Traces the social, political, cultural, and economic effects of the 1910 Revolution on 20th century Mexico. Describes the influence of the U.S. government and citizens on Mexico's history.

### **CHS 301-3 (HIS 383) The Mexican Revolution (3 + 0)**

Prerequisite: CHS 100 or permission of instructor

Traces the social, political, and economical forces that contributed to the Mexican Revolution (1910-1920). Provides a critical analysis of how leaders, women, the Mexican masses, and the U.S. influenced revolutionary events.

### **CHS 310-3 (SOC 313) The Chicano Community (3 + 0)**

Prerequisites: CHS 100 or permission of instructor; satisfaction of Level I General Studies course requirements

An in-depth study of the history of community organizations, the process by which they came about, and information about organizations and their functions in the community. Credit will be granted for only one prefix: CHS or SOC. (General Studies Course—Level II, Social Science; Multicultural)

### **CHS 320-3 (CJC 372) Chicano and the Law (3 + 0)**

Prerequisite: CHS 102 or permission of instructor

Offers a better understanding of the laws and the legal system and how they relate to individual and community rights. Credit will be granted for only one prefix: CHS or CJC.

### **CHS 321-3 (SOC 347) The Chicano Family (3 + 0)**

Prerequisites: CHS 100 or permission of instructor; and satisfaction of all Level I General Studies course requirements

A study of the Chicano family as a social institution in its varying manifestations as it transmits knowledge for existence in a multicultural world. Credit will be granted for only one prefix: CHS or SOC. (General Studies Course: Level II, Social Science)

### **CHS 330-3 (EDU 312) Education of Chicano Children (3 + 0)**

Prerequisite: CHS 200

Presents the Chicano perspective on current public education policy and its implementation in the schools. Examines learning and teaching differences in students and teachers. Credit will be granted for only one of these courses.

### **CHS 340-3 (ENG 348) The Chicano Novel (3 + 0)**

Prerequisite: CHS 201 or permission of instructor

Deals with origins, themes, and techniques that characterize the Chicano novel, while providing an in-depth study of the best examples of literary production in both Spanish and English. Credit will be granted for only one of these courses.

### **CHS 341-3 (ENG 349) Chicano Folklore of the Southwest (3 + 0)**

Prerequisite: CHS 200 or permission of instructor

Accents the study of oral and written folklore as a genre in Chicano history and culture. Focuses on tales, traditions, belief, and humor as a means to gain insight into what is culturally specific. Credit will be granted for only one prefix: CHS or ENG.

### **CHS 346-3 La Chicana (3 + 0)**

Prerequisite: CHS 100 or permission of instructor

Provides an in-depth analysis of the history and roles of Mexican-American women. Surveys the representation of La Chicana in Chicano studies and women's studies and articulates her contributions to Chicano society as well as to the dominant culture.

**CHS 380-3 Topics in Chicano Studies (3 + 0)**

Prerequisites: CHS 100 or permission of instructor; and satisfaction of Level I General Studies course requirements

Facilitates in-depth study of selected topics in Chicano studies.

**CHS 401-3 The Chicano Movement (3 + 0)**

Prerequisite: CHS 100, 310 or permission of instructor

Provides a perspective on the Chicano civil rights movement. Discusses the social conditions, civil rights issues, and direction of the movement in contemporary society.

**CHS 420-3****(ENG 413) Seminar: Carlos Castaneda (3 + 0)**

Prerequisite: junior or senior status or permission of instructor

A serious and detailed analysis of major literary figure Carlos Castaneda and the scope of his production. Credit will be granted for only one prefix: CHS or ENG.

**CHS 485-3 Research Experience in Chicano Studies (3 + 0)**

Prerequisites: six hours of upper-division courses in Chicano studies or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, and preferably senior status

Enhances the development of research skills, theory construction, and application of theory to the discipline of Chicano studies. Requires an in-depth research project and a research paper on a selected topic. Emphasizes critical understanding of the literature and the writing of a research paper. Designed primarily for Chicano studies majors and minors. (Senior Experience)

## Chinese

**CHI 111-3 Basic Conversational Chinese I (3 + 0)**

This course presents the essentials of elementary Chinese through a conversational approach.

**CHI 112-3 Basic Conversational Chinese II (3 + 0)**

Prerequisite: CHI 111 or equivalent, or permission of instructor

This course is a continuation of CHI 111.

## Civil Engineering Technology

**CEN 110-3 Civil Technology (3 + 0)**

Prerequisite: MTH 111 (may be taken concurrently)

A cross section of topics in contemporary engineering disciplines, with emphasis on the tools of engineering problem solving. Includes discussion of the problem, the influencing factor, the analysis, and the creative design process itself.

**CEN 120-4 Technical Drawing I (2 + 4)**

An introductory course in technical drawing. Covers the use of instruments, lettering, geometric construction, sketching, and orthographics.

**CEN 121-4 Technical Drawing II (2 + 4)**

Prerequisite: CEN 120

A continuation of CEN 120. Includes advanced study in orthographic projection, dimensioning, sectioning, and tolerancing.

**CEN 210-4 Structural Drawing (2 + 4)**

Prerequisite: CEN 121

Covers study and preparation of necessary drawings of structural members and connections, including engineering layout and detail drawing.

**CEN 215-3 Mechanics I/Statics (3 + 0)**

Prerequisite: MTH 141 (may be taken concurrently)

Examines principles of statics, studies of vectors, their resolution and composition, forces and moments, force systems and their resultants. Also covers force systems in equilibrium, static friction, centroids, moments of inertia, and radii of gyration of areas. Shear and moment diagrams are studied.

**CEN 221-3 Architectural Drawing (1 + 4)**

Prerequisite: CEN 121

Introduces architectural working drawings, including the development of plans, sections, elevations, and details.

## 220 COURSE DESCRIPTIONS

### **CEN 310-3 Construction Methods (3 + 0)**

Prerequisite: junior status

Provides a basic understanding of the methods used by a general contractor to determine earthwork costs. Introduces the application of engineering fundamentals for the analyses of heavy earth-moving equipment, as well as to the basic concepts of CPM.

### **CEN 311-3 Construction Estimating (3 + 0)**

Prerequisite: junior status

Provides a basic understanding of the methods used to prepare a building and/or bridge construction cost estimate. Prepares the student to do a quantity survey utilizing plans and specifications, with emphasis on concrete.

### **CEN 312-3 Engineering Economy (3 + 0)**

Prerequisite: junior status

Examines the "time value of money" as a basis for evaluating economic alternatives required in engineering decision-making.

### **CEN 313-3 Mechanics of Materials (3 + 0)**

Prerequisites: CEN 215, MTH 241 (MTH 241 may be taken concurrently)

Theory of strength of materials; stresses and strains in members subjected to tension, compression, and shear; flexural and shearing stresses beams; deflection of beams; column analysis; principal stresses, and introduction to indeterminate structures.

### **CEN 314-1 Mechanics of Materials—Lab (0 + 1)**

Prerequisites: CEN 215, 313 and MTH 241 (CEN 313 should be taken concurrently)

This is a laboratory course to accompany the lecture course.

### **CEN 316-3 Mechanics II/Dynamics (3 + 0)**

Prerequisites: CEN 215, MTH 241 (MTH 241 may be taken concurrently)

Covers the principles of dynamics: kinematics, the study of the geometry motion of a body without reference to the forces that cause the resulting motion; and kinetics, the study of the relation existing between the forces acting on the body, the mass of the body, and the motion of the body.

### **CEN 317-3 Introduction to Structural Analysis (3 + 0)**

Prerequisite: CEN 313

Presents first principles of structural analysis applied to statically determinate and indeterminate structures.

### **CEN 318-3 Fluid Mechanics I (3 + 0)**

Prerequisite: CEN 316

Covers physical properties of fluids, hydrostatics, kinematics, and dynamics of fluid flow, flow measurements, flow in pipes and open channels, dynamic force, and momentum.

### **CEN 319-3 Fluid Mechanics II (3 + 0)**

Prerequisite: CEN 318

Includes the study of the hydrologic cycle, rainfall and runoff, water losses, snowmelt, groundwater, unit hydrograph, floods and flood routing, streamflow records, frequency and duration, and water resources planning.

### **CEN 320-3 Advanced Technical Drawing (1 + 4)**

Prerequisite: CEN 120, 121, or permission of instructor

Designed to develop advanced skills in technical drawing.

### **CEN 332-3 Environmental Impact Statements (3 + 0)**

Prerequisite: junior status or permission of instructor

A study of the physical and legal requirements of the environmental impact assessment process. Includes information research and preparation of an environmental impact statement.

### **CEN 333-3 Environmental Technology Processes (3 + 0)**

Prerequisite: CHE 180

Covers the fundamentals of environmental sanitation, including an overview of disease transmission and control; hygienic disposal of wastes; air, ground, and water pollution abatement and control. Includes field trips to control facilities and agencies.

### **CEN 412-3 Concrete Design I (3 + 0)**

Prerequisite: CEN 317

An introduction to the fundamental principles of reinforced concrete design.

### **CEN 413-3 Soils Mechanics (2 + 2)**

Prerequisites: CEN 313, 318

Covers soil properties and soil characteristics, as well as methods of sampling and analysis. Variations in behavior under different loading conditions are analyzed.

**CEN 414-3 Concrete Design II (3 + 0)**

Prerequisite: CEN 412

A continuation of the fundamentals introduced in Concrete Design I, with an emphasis on the analysis and design of concrete structural members, based on the latest editions of the American Concrete Institute Building Code requirements for reinforced concrete.

**CEN 415-3 Highway Engineering (3 + 0)**

Prerequisite: CEN 412

A specialized course in requirements, functional characteristics, and system characteristics of highway design. Develops design methods, procedures, and analysis for pavement design, roadway alignment, and user information for freeways, city arterials, and rural roadways.

**CEN 440-3 Steel Design I (3 + 0)**

Focuses on the analysis and design of structural steel members, based on the latest edition of the AISC design requirements and specifications for structural steel.

**CEN 441-3 Steel Design II (3 + 0)**

Prerequisite: CEN 440

A continuation of the fundamentals introduced in Steel Design I, with emphasis on the analysis and design of structural steel members, connections, and composite members, based on the latest AISC design requirements and specifications for structural steel.

**CEN 450-3 Water Supply and Treatment (3 + 0)**

Prerequisites: CEN 319, 333

A study of water supply systems, including sources of supply, potability, quantity requirements, treatment plant design, and plant operation.

**CEN 451-3 Wastewater Treatment and Disposal (3 + 0)**

Prerequisite: CEN 450

Consists of studies in sanitation, with emphasis on liquid- and solid-waste disposal. Includes fundamentals of collection, treatment, plant design, and plant operation.

**CEN 460-3 Senior Seminar (3 + 0)**

Prerequisites: CEN 317; 318 may be taken concurrently; satisfaction of Level I and Level II General Studies course requirements and senior status

A capstone course required for all graduating seniors in civil engineering technology. Reviews and assesses the fundamental principles of civil engineering technology. A minimum grade of "C" is required for graduation. (Senior Experience)

## Computer Information Systems and Management Science

**CMS 101-3****(CSI 101) Introduction to Computers (3 + 0)**

This course is designed for students who wish to use a microcomputer in their academic pursuits and their career. The student will learn how to use a personal computer with application software featuring wordprocessing, spreadsheets, file management, graphics, electronic communications, and thesaurus/spelling checker. This course also reviews the historical, societal, ethical, and technological aspects of computers.

**CMS 108-3****(CSI 108) The Computer: A Modern Communication Tool (3 + 0)**

This course presents the personal computer as a modern communication tool. Students are introduced to communications using symbols and icons through the use of a graphical user interface (GUI) supporting the desktop metaphor such as Microsoft Windows or its equivalent. All of the embedded applications and tools within the GUI will be covered. The use of the Information Highway in the form of the Internet and the services it provides will be covered in depth.

**CMS 111-1 Computer Literacy and DOS (self-paced) (0 + 2)**

This is a self-paced course in computer literacy and the use of DOS (Disk Operating System). Computer literacy deals with the basic nomenclature of the computer. The DOS portion focuses on gaining hands-on expertise in fundamental DOS commands, such as formatting and copying disks, setting up directory structures, and creating batch files. The primary learning vehicles are videotapes, text-based tutorials, and hands-on exercises.

**CMS 112-1 Word Processing with WordPerfect (self-paced) (0 + 2)**

Prerequisite: CMS 111 or equivalent experience

This is a self-paced course in the use of the WordPerfect word processing program on a personal computer. It covers fundamental skills such as creating, editing, and printing a document; creating form letters and merge files; and embedding graphics in documents. The primary learning vehicles are videotapes, text-based tutorials, and hands-on exercises.



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### **CMS 113-1 Spreadsheets with Lotus 1-2-3 (self-paced) (0 + 2)**

Prerequisite: CMS 111 or equivalent experience

This is a self-paced course in the use of Lotus 1-2-3. It covers fundamental skills such as creating a spreadsheet, using the Lotus command structure, creating graphics, and creating macros. The primary learning vehicles are videotapes, text-base tutorials, and hands-on exercises.

### **CMS 201-3 Principles of Information Systems (3 + 0)**

Prerequisites: Computer literacy as evidenced by a previous course in high school or college involving computers or by appropriate work experience involving computer usage.

This course is an introduction to business information systems which includes: (1) computer hardware and software; (2) usage of computer software productivity tools for data management and analysis; and (3) information systems structure, management, and analysis and design. Note: This course is primarily intended for students with majors in the School of Business.

### **CMS 211-3 Business Problem Solving: A Structured Programming Approach (2 + 2)**

Prerequisite: CMS 201

This is a problem-solving course in which the tools of structured design are used to design computerized solutions to business problems. Procedural programming languages are used to implement these designs. Emphasis is placed on the implementation of the three logic constructs in procedural languages: sequence, selection and iteration. Students will be required to develop, test, and debug programs in one or more procedural languages, using a variety of hardware and operating system platforms.

### **CMS 223-3 Word Processing (3 + 0)**

Prerequisite: Typing skill of at least 40 wpm

This course is designed to give students in-depth hands-on experience with word processing software and to acquaint the students with other aspects of the "electronic office."

### **CMS 305-3 Fundamentals of Systems Analysis and Design (3 + 0)**

Prerequisite: CMS 201

Systems analysis focuses on the study of existing information systems, problem definition, data collection, and new system requirements. System design focuses on improving the information system, selecting alternate solutions, determining the best solution, and documenting that solution.

### **CMS 306-3 File Design and Data Base Management (3 + 0)**

Prerequisite: CMS 305

The course covers the current status of data base system implementation. Functional characteristics, such as file design, are examined in detail. Guidelines are developed that will aid in evaluation of vendor-supplied data base management systems or specification of an in-house system.

### **CMS 309-3 Operating Systems and Control Language (3 + 0)**

Prerequisite: CMS 214 or permission of instructor

This course covers computer operating systems, other systems software, and machine-dependent principles involved in the use of computers. Emphasis is placed on IBM System/370 architecture. OS/370 Job Control Language is used to run jobs.

### **CMS 311-3 Structured COBOL (3 + 0)**

Prerequisite: CMS 211

This is a course in computer programming using comprehensive COBOL syntax in teaching problem solving in a business systems environment. Problems are selected to illustrate structured systems development for a comprehensive business system which requires the implementation of COBOL syntax and techniques for their solution.

### **CMS 312-3 BASIC Programming and Graphics for Computers (3 + 1)**

Prerequisite: CMS 201

This course covers the use of graphical presentation of business information. Programs are written using the graphics extensions to standard programming languages, line graphs, bar charts, pie charts, and other graphics presentations will be created and their value explored. High level graphics languages will also be studied.

### **CMS 313-3 Implementing Business Systems in UNIX Using C (3 + 0)**

Prerequisites: CMS 201, CMS 305, proficiency in a programming language, junior standing

A study of the UNIX operating system environment and its importance to the development of business information systems. The UNIX operating system is rapidly becoming the standard for multi-user computer systems. Systems will be implemented using C, a powerful programming language associated with UNIX that is used for the development of most applications in this environment.

**CMS 314-3    Advanced Assembler Languages (3 + 0)**

Prerequisite: CMS 214

This is an advanced course in computer programming which uses the IBM 370 and its basic assembly language (BAL) to explore programming concepts. Topics include: buffered I/O; the Assembler as a prototypical computer program; organization of the object modules and load-modules; the influence of data structures on code optimization; standard macros and macro writing; dump reading; design and implementation of a disassembler program; floating point arithmetic; and debugging techniques.

**CMS 322-3    Analysis of Computer Hardware and Software (3 + 0)**

Prerequisite: CMS 305

A study of various computer systems (both hardware and software) in relation to information system requirements. Comparisons of costs, capabilities, and software support will be made.

**CMS 323-3    Telecommunication Systems (3 + 0)**

Prerequisite: CMS 305

This course is a study of the transmission of data, voice, and video including: transmission systems and associated hardware and software; types of networks; introduction to the OSI model, LANs and WANs; and applications of networks.

**CMS 324-3    Computer Auditability and Control (3 + 0)**

Prerequisite: CMS 305 and ACC 202

A study of the fundamentals of preventing and/or detecting attempts to compromise computer systems. Basic principles of creating systems that augment successful computer security and control are discussed.

**CMS 325-3    Automated Office Systems (3 + 0)**

Prerequisite: CMS 201

This course presents an overview of the electronic equipment available for use in business systems. Some of the technologies are word processing, telecommunications, phototypesetting, and local area networks.

**CMS 326-3    Systems Development with Fourth Generation Languages (3 + 0)**

Prerequisite: CMS 201

This course will explain what a 4GL is, describe the kinds of 4GLs, discuss their capabilities and limitations, decide when and where a 4GL use is appropriate, explain the methods of rapid systems development, explain the reasons for user resistance to fourth generation languages, and use a leading 4GL on a PC workstation to rapidly develop a typical business system.

**CMS 327-3    Micro Based Software (3 + 0)**

Prerequisite: CMS 201

A study of microcomputer based software including advanced concepts of word processing, electronic spreadsheets, database management software, and the introduction of other relevant software packages used in a microcomputer environment. Hands-on experience is included.

**CMS 328-3    LAN and WAN Systems for Business (3 + 0)**

Prerequisite: CMS 323

Presents the technology, architecture, and interconnection of Local Area Networks and Wide Area Networks. The advantages and disadvantages of each technology will be discussed so that well-informed decisions can be made regarding the design of communication networks.

**CMS 329-3    Micro User Operating Systems (3 + 0)**

Prerequisite: CMS 201 and basic computer knowledge

Involves the hands-on use of Advanced DOS, Microsoft Windows, and Novell Netware on IBM/compatible microcomputers.

**CMS 330-3    Principles of Quantitative Management Systems (3 + 0)**

Prerequisites: MTH 131, 132

Covers the application of statistical inference and translation of quantitative data into information that can be used in business decision making. Covers the topics of index numbers, learning curves, confidence intervals, tests of hypotheses, quality control, and regression and correlation analyses, etc., in the context of production and operations management skills needed by American industry.

**CMS 331-3    Business Forecasting Methods (3 + 0)**

Prerequisite: CMS 330

A study of linear and multiple regression, time series forecasting, index number calculation, and analysis.

**CMS 332-3    Quantitative Decision-Making (3 + 0)**

Prerequisite: CMS 330

Designed to develop the student's ability to use basic theory and management science techniques. Includes construction of payoff tables, Bayesian Statistics, inventory and production control, and linear programming methods.

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### **CMS 340-3 Simulation of Management Processes (3 + 0)**

Prerequisite: CMS 332

A study of computer simulation techniques as applied to resources allocation problems in the business environment.

### **CMS 361-3 Introduction to Artificial Intelligence for Business (3 + 0)**

Prerequisites: CMS 201 and proficiency in a programming language

An introduction to the field of applied artificial intelligence/expert systems and its importance in the business environment. Topics include human intelligence and business problem solving, knowledge representation strategies, expert systems design, the knowledge engineering process, robotics, voice recognition systems, and the future of applied artificial intelligence/expert systems in business and industry.

### **CMS 405-3 Advanced Systems Analysis and Design Seminar (3 + 0)**

Prerequisites: CMS 306 and CMS 322

A business information systems problem will be analyzed. A complete technical design document will be prepared utilizing the steps of the System Life Cycle: Definition and Design. The design document will be used as a basis for systems development in CMS 407.

### **CMS 406-3 Advanced Data Base Systems (3 + 1)**

Prerequisites: CMS 306 and CMS 327 or advanced programming language course; senior standing

This course provides an in-depth understanding of data base management systems. Several commercially available data base systems are examined and compared. Data definition and data manipulation languages will be discussed and the opportunity to design and implement a data base is provided.

### **CMS 407-3 Systems Development and Implementation (3 + 1)**

Prerequisites: CMS 405 and an advanced programming language, senior standing

This course is designed to provide a realistic environment for a student to develop and implement a system from a design. The student will write programs, convert data, test, and produce a working system.

### **CMS 416-3 Advanced Programming Seminar (3 + 0)**

Prerequisite: CMS 311 or CMS 314

Major business-related projects will be analyzed, coded, and tested.

### **CMS 439-3 Case Studies in Management Science (3 + 0)**

Prerequisites: CMS 327 and CMS 332, senior standing

This course involves a study of the implementation of management science models and their interrelationship to other factors in an information system.

### **CMS 441-3 Management Information Systems (3 + 0)**

Prerequisites: CMS 305, CMS 332, MGT 300

This course involves a review of management systems, structures, and functions, and an introduction to managerial decision making styles. The course includes development of the nature and form of information processing systems, databases, and delivery systems. Decision Support Systems and Expert Systems will be discussed as components of Management Information Systems.

## **Computer Science**

Computer Science courses use the CSI prefix and are taught through the Department of Mathematical and Computer Sciences.

### **CSI 101-3 (CMS 101) Introduction to Computers (3 + 0)**

This course is designed for students who wish to use a microcomputer in their academic pursuits and their career. The student will learn how to use a personal computer with application software featuring wordprocessing, spreadsheets, file management, graphics, electronic communications, and thesaurus/spelling checker. This course also reviews the historical, societal, ethical, and technological aspects of computers.

### **CSI 102-2 BASIC Programming (2 + 0)**

Prerequisite: One year of high school algebra or permission of instructor

This is an introductory computer programming course in which the major elements of the BASIC language are taught. Students will write computer programs to solve programs selected from mathematics and other sciences, and run the programs on interactive terminals.

### **CSI 108-3 (CMS 108) The Computer: A Modern Communication Tool (3 + 0)**

This course presents the personal computer as a modern communication tool. Students are introduced to communications using symbols and icons through the use of a Graphical User Interface (GUI) supporting the desktop metaphor such as Microsoft Windows or its equivalent. All of the embedded applications and tools within the GUI will be covered. The use of the Information Highway in the form of the Internet and the services it provides will be covered in depth.

**CSI 130-4 Introduction to Structured Programming (4 + 0)**

Prerequisites: CSI 101 and MTH 111 or their equivalents

Introduction to Structured Programming is the first course in the computer science core sequence. Students will learn a modern structured programming language and the basic skills needed to analyze problems and construct programs for their solution. The emphasis of the course is on the techniques of algorithm development and programming style, including top-down design and structured programming methods. Students are also introduced to the fundamentals of software engineering and the software development life-cycle.

**CSI 222-3 The C Programming Language (3 + 0)**

Prerequisites: CSI 130 or MTH 151 or previous knowledge of a programming language, and MTH 111

The course presents a study of the C programming language and its applications in computing with emphasis on the design and development of efficient algorithms. C is one of the currently more popular programming languages because it is particularly well suited to the development of systems software. This course may not be applied for credit toward the computer science major or minor.

**CSI 230-4 Advanced Programming and Data Structures (4 + 0)**

Prerequisite: CSI 130 with a grade of "C" or better, or permission of instructor

This course, a continuation of CSI 130, further emphasizes the concepts of the software development cycle and introduces the concept of an abstract data type (ADT). The topics covered include linked-lists, records and files, recursion, and a variety of data representation methods. Further topics in software engineering and programming style as well as algorithms for sorting and searching are included.

**CSI 240-4 Computer Organization and Assembly Language (4 + 0)**

Prerequisite: CSI 130 with a grade of "C" or better or permission of instructor

This course is a study of the internal organization of computing machinery and the hardware elements essential to the computation process. Various forms of computer organization are studied and analyzed. The vehicle for exploration of the computer hardware is Assembly language, which provides specific instructions for the direct manipulation of the memory registers and control flags associated with virtually all modern computers.

**CSI 261-4 Computer Programming for Educators (4 + 0)**

Prerequisites: CSI 101 and a course in trigonometry or equivalent

This course is an introduction to computer programming designed specifically for K-12 educators. The course is designed to prepare students to use computer programming as a tool for teaching, and to teach beginning programming in the schools. Students will learn BASIC and LOGO in a structured programming environment.

**CSI 306-4 Computer Architecture and Systems Programming (4 + 0)**

Prerequisites: CSI 230 and CSI 240 with grades of "C" or better, or permission of instructor

In this course, computer organization concepts are extended to include advanced architectural concepts. These concepts include set associative caches, advanced pipelining concepts for superscalar and superpipelined processors, bus interface concepts, microprogramming concepts, parallel architectures, multiprocessing architectures, memory organization architectures, interrupt architectures, and bus data transfer concepts. Supporting systems programming topics are also covered as a basis for studying operating systems.

**CSI 310-4 Discrete Mathematics (4 + 0)**

Prerequisites: MTH 241 and CSI 230 with a grade of "C" or better, or permission of instructor

Discrete mathematical structures including sets, digraphs, Boolean algebra, relations, finite state automata, regular languages, and error correction codes are covered along with their applications to areas of computer science.

**CSI 312-4 Organization and Structure of Operating Systems (4 + 0)**

Prerequisites: CSI 306 with a grade of "C" or better, or permission of instructor

This course is an introduction to the design, development, and implementation of modern computer operating systems including network systems. The topics covered include input/output processors, interrupt handling, system resource management, multitasking, communication between machines and processes, and computer system security.

**CSI 321-4 Principles of Programming Languages (4 + 0)**

Prerequisites: CSI 230 and CSI 310 with grades of "C" or better or permission of instructor

This course traces the evolution of programming languages and identifies and analyzes the contributions made by several significant languages and their successors. Specific issues of programming language implementation such as creation of activation records for block-structured languages and static and dynamic scoping as methods for defining program object visibility are studied in depth. All four of the modern programming language paradigms (procedural, functional, object-oriented, and logical) will be reviewed. The design, evaluation, and implementation of programming language processors such as interpreters, compilers, and translators are studied.

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### **CSI 328-4 Object-Oriented Software Development (4 + 0)**

Prerequisite: CSI 230 with a grade of "C" or better, or permission of instructor

This is an upper division software development class that focuses on the object-oriented programming paradigm. Object-oriented analysis, design, and development will be explored in some depth with emphasis on object definition, abstraction, polymorphism, encapsulation, and inheritance. Abstract class definitions are developed for a number of common objects and data structures, and derivative classes and subclasses are developed from these definitions. Students will develop a thorough understanding of an object-oriented programming language such as C++ or Smalltalk.

### **CSI 330-4 Foundations of File Structures (4 + 0)**

Prerequisites: CSI 230 and CSI 240 with grades of "C" or better or permission of instructor

This course explores the fundamental concepts associated with external storage media and the methods of organization, storage, and retrieval of data on peripheral devices. Various file structuring schemes are compared and contrasted in order to develop an in-depth understanding of the most efficient methods for given situations. Students will gain experience with internal storage management and a wide variety of sequential and random access methods of file organization and structure.

### **CSI 331-4 Fundamentals of Database Systems (4 + 0)**

Prerequisites: CSI 310 and CSI 330 with grades of "C" or better, or permission of instructor

This course is the second in a two course series on the external organization and retrieval of information. It builds on the base laid in CSI 330, Foundations of File Structures, by extending the capabilities of the students into the area of developing database management systems. Students will study the three principal models for database organization (relational, hierarchical, and network). They will also be introduced to the major issues in database management systems development and operation. The emphasis will be on the relational model because of its widespread popularity among computer users. Examples will be constructed using the object-oriented paradigm.

### **CSI 351-4 Computer Graphics (4 + 0)**

Prerequisites: CSI 230 with a grade of "C" or better, MTH 141, and either MTH 214 or MTH 314, or permission of instructor

This course is a survey of graphics hardware and software. The topics covered include raster scan displays, windowing transformation, algorithms for vector generators, clipping, area fill, space transformations in two and three dimensions, perspective viewing methods, and graphical input. Other topics will be chosen from hidden surface processing, curve and surface modeling, fractals and animation. Programming projects will be done using a standard graphics function library. This is a course in the principles of computer graphics; it is not a course in using existing commercial software for artistic design or drafting. Students wanting design or drafting courses should consult offerings of the Art Department.

### **CSI 412-4 Foundations of Artificial Intelligence (4 + 0)**

Prerequisite: CSI 321 with a grade of "C" or better or permission of instructor

This course includes a study of the theoretical foundations of artificial intelligence, including the algorithms and techniques and programming languages used to design and implement intelligent systems. The topics covered include search strategies, resolution theorem proving, rule-based deduction, expert systems architecture, plan generating systems, analysis of languages, and machine learning. LISP and PROLOG, the most commonly used AI programming languages, will be covered and used for programming assignments.

### **CSI 419-4 Software Development and Engineering for Technical Writers (4 + 0)**

Prerequisite: COM 261 or permission of instructor

This course entails the comprehensive study of the software development process. Each phase of the software development process is studied in depth. Special emphasis is made on the documentation intensive phases of requirements definition, specifications, development, and design methodologies. Students will participate as documenters on teams that will exercise the complete software life-cycle on selected projects. This course may not be applied for credit toward the computer science major or minor.

### **CSI 421-4 Software Development and Engineering (4 + 0)**

Prerequisites: CSI 330 with a grade of "C" or better, COM 261, PHI 336, and senior standing or permission of instructor

This course entails the comprehensive study of the software lifecycle. Each of the currently identified phases associated with the software life-cycle is studied in some depth. Special emphasis is placed upon the early phases of requirements definition, specifications development, and design methodologies. Student teams will exercise the software life-cycle on selected projects. (Senior Experience)

### **CSI 430-4 Advanced Data Structures and Algorithm Analysis (4 + 0)**

Prerequisites: CSI 310, CSI 330 with grades of "C" or better, and MTH 321, or permission of instructor

This course continues the study of data structures begun in CSI 230. Extensive concentration is placed on the concept of the abstract data type (ADT). A wide variety of abstract data types are studied including linear and non-linear ADT's. The emphasis is on the design, analysis, and evaluation of efficient algorithms for a wide variety of common computing problems.

**CSI 452-1-4    Advanced Computing: Variable Topics (1-4 + 0)**

Prerequisite:    Permission of instructor

This course will include further topics in computer science and its applications. Topics will be chosen from analysis of algorithms, compiler design, simulation, artificial intelligence, or other chosen by the instructor. This course may be repeated for credit under different titles.

**CSI 459-2        Computer Science Senior Practicum (2 + 0)**

Prerequisites:    CSI 421 with a grade of "C" or better and permission of instructor

In this course, the senior computer science student will develop a significant software artifact using a high-level programming language and good software engineering practices. The project will be developed under the supervision of the computer science faculty and may be individually motivated or in support of the research or work of some member of the Metro State faculty or of another organization. The purpose of the course is to demonstrate general competency in computer science and software engineering. Students and faculty participating in this course will meet on a regular basis to report and review progress.

**Criminal Justice and Criminology****CJC 100-3        Tell Us About the Law (3 + 0)**

A citizen's look at the complex legal society in which we live. An introduction to the various courts, legal agencies, and legislative bodies that are available to each citizen in his or her attempt to live harmoniously in today's urban environment.

**CJC 101-3        Introduction to the Criminal Justice System (3 + 0)**

Examines the United States criminal justice system: its problems and reaction to prevailing social forces. Surveys the continuum of criminal justice from police, through the courts, to corrections to provide a background for more in-depth study in later courses.

**CJC 110-3        Evolutionary Legal Concepts in Criminal Justice (3 + 0)**

Reviews the evolution of crucial legal tools and concepts in the criminal justice process. Covers common and statutory law, trial and appellate court, grand and trial jury, police and citizen, prosecutor and defense attorney, legal insanity, and other areas, with emphasis on their historical impact.

**CJC 201-3        Introduction to Private Security (3 + 0)**

An introduction to security and loss prevention in proprietary and governmental institutions. Provides an overview of the historical, philosophical, and legal basis of private security and its role in modern society. Pertinent operational aspects of resources protection are also included.

**CJC 210-3        Substantive Criminal Law (3 + 0)**

Prerequisite:    CJC 101

Covers common law and statutory crimes, definitions and distinctions between criminal and civil law, assigned criminal law reading, federal and state reports, and (Colorado criminal code) sections.

**CJC 212-3        Evidence and Courtroom Procedures (3 + 0)**

Prerequisite:    CJC 101

Surveys the nature, kinds, and effect of evidence; rules governing admissibility; testimony of lay and expert witnesses; taking and use of confessions; limitations on search and seizure; hearsay rules and exceptions; becoming an effective witness; and direct- and cross-examination techniques.

**CJC 214-3        Criminal Procedure (3 + 0)**

Prerequisite:    CJC 210

A survey of the procedural law governing criminal cases from arrest through final appeal.

**CJC 215-3        Municipal Law (3 + 0)**

Prerequisite:    CJC 110 or enrollment in area of emphasis I

Examines the municipal laws and codes relevant to the urban society; the origins and enactment of municipal codes; common challenges to the legality of municipal authority; enforcement modalities; and creative horizons in municipal law of the future.

**CJC 220-3        Law Enforcement Operations (3 + 0)**

An in-depth examination of the complexity and multidimensional aspects of police work in modern America. Reviews the role and function of the police within the occupational, social, political, and organizational context.

**CJC 310-3        Logic and the Law (3 + 0)**

Prerequisites:    CJC 101, 110, 210

Explores the public purpose behind the law, basic legal research, and statutory and case law in relation to definiteness and validity of statements, vocabulary, and semantic origin. Also covers character traits, contemporary ethics, and implications and consequences of various courses of legal action.

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### **CJC 312-3 Constitutional Law (3 + 0)**

Prerequisite: CJC 101

Examines the U.S. Constitution and the function of the U.S. Supreme Court in interpreting that document. Includes readings of decisions in the areas of speech, religion, civil rights, privacy, and other fundamental rights, with special emphasis on cases affecting criminal justice.

### **CJC 314-3 Juvenile Law (3 + 0)**

Prerequisite: CJC 110

An analysis of the social-legal operation of the juvenile court, substantive and due process rights of minors; and the legal reasoning underlying juvenile law operating at all levels of government.

### **CJC 320-3 Criminal Justice Administrative Behavior (3 + 0)**

Prerequisite: CJC 101 or enrollment in area of emphasis IV

A comprehensive analysis of criminal justice institutions, their problems, management, and administration. Reviews roles and values in management, administrative alternatives, and the role of the manager as an agent of change. A critical evaluation of past and present approaches to problem solutions is included.

### **CJC 325-3 Criminal Justice Delivery of Services and Decision-Making (3 + 0)**

Prerequisite: CJC 320 or permission of instructor

Reviews and analyzes the techniques of decision making for the assessment of probable outcomes of criminal justice policies. Emphasizes factors influencing policy making and the management of the decision process, as these impact the delivery of criminal justice services.

### **CJC 328-3 Classification and Treatment of the Offender (3 + 0)**

Prerequisite: CJC 101 or enrollment in area of emphasis II

Covers criminal offender classification concepts, principles, and techniques. Topics also include interview, case diagnosis, use of testing programs as classification aids, reception and diagnostic centers, principles of the treatment process, and treatment approaches.

### **CJC 329-3 Probation and Parole (3 + 0)**

Prerequisite: CJC 328

Traces the history, development, principles and operation of probation and parole. Covers selection, supervision, prediction of success, experimental programs, and current trends. Preparation of a presentence investigation report is required.

### **CJC 334-3 Counseling Skills for Corrections Personnel (3 + 0)**

Prerequisites: CJC 328, 329, or permission of instructor

An introduction to the special problems and needs of the adult offender. Covers theory and practice techniques that are effective in assessing and creating a positive counseling milieu for the offender both within and outside the prison setting. Also includes the development of skills for successful counseling of the offender.

### **CJC 335-3 Seminar in Delinquency Causation, Prevention and Control (3 + 0)**

Prerequisite: CJC 101 or permission of instructor

Explores the nature and causes of delinquency and crime, personality, and societal processes. An introduction to the typological analysis of juvenile delinquency and an examination of the concepts of prevention, control, and prediction.

### **CJC 340-3 Criminal Behavior and Criminal Careers (3 + 0)**

Prerequisite: CJC 335

Examines the incidence of characteristics of criminal behavior, including biological, psychological, social, and cultural links to deviant and antisocial behavior. Also covers the development of criminal self-conceptions. A research document (typology) employing statistical and qualitative analysis linking the bio-psychosocial aspects of criminal behavior is required. Course includes library research.

### **CJC 341-3 Criminal Justice and the Social Structure (3 + 0)**

Prerequisites: CJC 110

Analyzes criminal justice systems in relation to social power, class structure, ecological patterns, and subcultural developments and processes of change in the community and in the criminal justice structure. Includes an evaluation of the ambivalence in the social processes of law enforcement, courts, and corrections, and the problems of professionalization.

### **CJC 345-3 Behavior Development and Treatment Plans (3 + 0)**

Prerequisite: CJC 340

Covers basic behavior modification principles and techniques for paraprofessional correctional workers and probation officers. Provides step-by-step instruction plus critical ethical and legal issues.

### **CJC 350-3 Criminal Investigation (3 + 0)**

Prerequisite: CJC 212 or permission of instructor

The history, purpose, techniques, and evidentiary uses of criminal investigation.

**CJC 351-3 Drug Abuse: Legal Issues and Treatment (3 + 0)**

Prerequisites: junior or senior status or permission of instructor

An intensive study of the legal problems of illicit drug trafficking, control of drug abuse, and alternative approaches. Emphasis on major judicial decisions and administrative procedures used by criminal and civil authorities. The behavior of the addict, the impact of international conventions, and prognosis for future criminal justice system responses.

**CJC 370-3 Civil Law for Criminal Justice Administration (3 + 0)**

A study of the concepts found in civil law with an emphasis on civil liability commonly occurring in criminal justice. Designed to help persons in criminal justice and related fields to plan for and prevent civil liability or to deal with it when necessary.

**CJC 371-3 (WMS 331) Women and the Law (3 + 0)**

Prerequisite: WMS 101 or permission of instructor

Examination of women's legal rights under the U.S. legal system and Colorado law. Deals with family law, Equal Employment Opportunity Acts, housing, credit and finance, welfare, social security, abortion, prostitution, rape, and the ERA. Credit will be granted for this course only once.

**CJC 372-3 (CHS 320) Chicano and the Law (3 + 0)**

Prerequisite: CHS 102 or permission of instructor

Offers a better understanding of the laws and the legal system and how they relate to individual and community rights. Credit will be granted for this course only once.

**CJC 385-3 Corporate Security Management (3 + 0)**

Prerequisites: CJC 101, 201

An in-depth examination of the role, techniques, and strategies of corporate security management; the role of management; OSHA regulations; and institutional security.

**CJC 405-2-3 Criminal Justice Professional Seminar (Variable Title) (2 - 3 + 0)**

Prerequisite: permission of department chair or senior status

A variably titled course focusing on the synthesis of concepts and skills. Designed to provide the criminal justice professional theory and criminal justice policy implementations. May be repeated under different titles.

**CJC 410-3 Advanced Jurisprudence (3 + 0)**

Prerequisites: CJC 210, 212, 312, or enrollment in area of emphasis IV

An analysis and synthesis of legal concepts, nature of law and justice, selected models of legal reasoning, and the evolution of common law and civil law systems. Includes a comparative study of current Anglo-American and European juristic thought. Emphasizes modern realism and criminal justice.

**CJC 430-3 Penology (3 + 0)**

Prerequisite: CJC 110

Covers the history and development of the American system of prisons; the inmate and the prison community; custody, discipline, treatment, and prison programs for reformation and re-education; and alternatives to incarceration.

**CJC 431-3 Correctional Law (3 + 0)**

Prerequisites: CJC 101, 210, 214, 312, or senior status

Analyzes constitutional rights and limitation of rights of criminal offenders in the correctional setting. The effects of court rulings on correctional administrators, staff, agencies, and operations are discussed and reviewed.

**CJC 440-3 Criminal Justice Planning, Policy Analysis, Evaluation and Budgeting Systems (3 + 0)**

Prerequisite: CJC 320 or senior status as CJC major

Covers the comprehensive examination of the planning processes within the criminal justice system; the methodologies of program evaluation, the tools and techniques of policy analysis and formulation and fiscal management within criminal justice agencies; and the preparation of budget documents and management of the politics of the budget process.

**CJC 441-3 Special Topics in Law Enforcement (3 + 0)**

Prerequisite: senior status

An examination of selected problems, philosophies, and practices affecting criminal justice agencies. Provides a critical evaluation of contemporary standards in the administration of criminal justice programs and their role in fulfilling societal objectives and expectations. Explores problems in-depth, with emphasis on comprehensive reading, observation, and logical problem solving.



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### **CJC 442-5 Practicum in Corrections (3 + 4)**

Prerequisite: permission of instructor or enrollment in area of emphasis II

Incorporates various aspects of the correctional system through individual workshops to further develop skills in administrative and human resource management.

### **CJC 443-3 Comparative Criminal Justice (3 + 0)**

Prerequisite: CJC 101 or enrollment in area of emphasis IV

Survey of nationwide and worldwide criminal justice philosophies and practices, contemporary studies of criminal justice organizations, and legal systems in major Western and emerging nations.

### **CJC 461-3 Special Topics in Criminal Justice Administration (3 + 0)**

Prerequisite: junior or senior status or enrollment in area of emphasis IV

Examines criminal justice administrative roles and objectives, current problems related to employee relations, retention and recruitment, professionalism, policy, discipline, continuing criminal activity, official misconduct, and corruption.

### **CJC 462-3 Special Topics in Corrections Administration (3 + 0)**

Prerequisites: senior status and permission of instructor

An in-depth study of corrections problems, procedures, or proposals selected in consultation with and approved by a department faculty member. Provides a meaningful learning experience for the student in an area in which student input can make a contribution. When possible, the study involves work with a correctional agency, in addition to research and writing.

### **CJC 465-3 Ethics for the Criminal Justice Professional (3 + 0)**

Prerequisites: CJC major or minor, senior status, satisfaction of all Level I and Level II General Studies course requirements

An in-depth analysis of ethical issues confronting the modern criminal justice professional. Examines current issues in the light of classical and contemporary standards. Students are required to demonstrate an understanding of the symbiotic nature of ethics, morality, and legality through thoughtful application of written and oral skills in the resolution of policy implementation and role conflict. (Senior Experience)

### **CJC 466-1-15 Youth Advocacy Initiatives (0 + 3-45)**

Prerequisite: permission of department chair

Designed to broaden the educational experience of youth advocacy students by giving them an opportunity to work with practitioners in the field. Students are assigned to juvenile institutions, shelter care programs, social services, and division programs, both federal and state. Provides experience and training in the fundamentals of evaluation, treatment, and dynamic relationships in assigned settings. Students may register twice for this course in different areas of interest, but for no more than 15 hours total credit.

### **CJC 467-5 Research Seminar in Criminal Justice Administration (3 + 4)**

Prerequisite: senior status (must be arranged during junior year)

Covers the application of research methods to the criminal justice administrative process; the tools, techniques, and methods of research; and writing the research report.

### **CJC 475-3 Crime Prevention and Loss Reduction (3 + 0)**

Prerequisite: CJC 101, 201, or permission of instructor

An in-depth analysis of the concept, techniques, and strategies of crime prevention and loss reduction, with emphasis upon the selection and implementation of comprehensive prevention systems and loss-reduction strategies.

## **Economics**

### **ECO 201-3 Principles of Economics—Macro (3 + 0)**

Prerequisites: Satisfaction of the Level I mathematics requirement and either ENG 101 or the Level I communications course

This course provides an introduction to the principles of economics emphasizing an analysis of the economy as a whole. Topics include the methods used in economics, national income accounting, income determination, and an analysis of monetary and fiscal policies used by government to combat inflation and unemployment. (General Studies Course—Level II, Social Science)

### **ECO 202-3 Principles of Economics—Micro (3 + 0)**

Prerequisites: Satisfaction of the Level I mathematics requirement and either ENG 101 or the Level I communications course

This course constitutes an introduction to the principles of economics with an emphasis on individual economic units. Topics include consumer choice, production theory, theory of the firm, problems of economic efficiency, and problems of economic concentration. (General Studies Course—Level II, Social Science)

**ECO 301-3 Intermediate Microeconomic Theory (3 + 0)**

Prerequisites: ECO 201, 202

Production, price and distribution theory. Value and distribution theories under conditions of varying market structures. Topics include consumer theory, competitive, oligopoly and monopoly pricing and output behavior, pricing or factors of production and welfare theory.

**ECO 302-3 Intermediate Macroeconomic Theory (3 + 0)**

Prerequisites: ECO 201, 202

A survey of major aggregate economic models. Emphasis is on the role of consumption, investment, and government decisions on aggregate economic activity. Topics include an analysis of consumption and investment decisions, income determination models, monetary and fiscal policy and economic growth.

**ECO 310-3 Money and Banking (3 + 0)**

Prerequisite: ECO 201

The study of money as a policy variable affecting economic activity. Money is examined both in its role in exchange and as an instrument of economic policy. The Federal Reserve System, money supply, money demand and their respective effects on macroeconomic activity are stressed.

**ECO 315-3 Econometrics (3 + 0)**

Prerequisites: ECO 201, 202 and MTH 121 or CMS 330 or permission of instructor

Application of mathematical techniques to problems in economics. Emphasis is on application rather than computational methods of mathematical rigor. The problems of acquiring, measuring, and using economic data are examined.

**ECO 320-3 Economic History of the U.S. (3 + 0)**

Prerequisites: ECO 201, 202

Historical trends in American economic organizations and institutions and their development from colonial times to present. Topics include problems of national and regional industrial development, economic stability, and trends in income distribution.

**ECO 325-3 Labor Economics (3 + 0)**

Prerequisite: ECO 202

The study of the topics related to the supply of labor, the allocation of labor among uses, the extent and incidence of unemployment, and the determination of wages. Concentration is on application of economic theory to understand the behavior of labor and problems of labor markets.

**ECO 335-3 Urban Economic Analysis (3 + 0)**

Prerequisite: ECO 202

Analysis of the structure of urban economic activity and the economic aspects of urban problems. Particular emphasis is on urban poverty, location and differential growth rates of cities, urban transportation problems, housing problems, and selected problems in local government finance.

**ECO 345-3 Environmental Economics (3 + 0)**

Prerequisite: ECO 202

An economic analysis of the causes and consequences of environmental degradation and of public policy measures designed to preserve, protect and enhance human environments.

**ECO 350-3 Managerial Economics (3 + 0)**

Prerequisites: ECO 201, ECO 202

Deals with the application of economic theory to the decision-making process faced both by private and public enterprise. The major emphasis is to provide the theory and tools essential to the analysis and solution of those problems which have significant economic consequences, both for the firm and the society at large.

**ECO 355-3 The International Economy (3 + 0)**

Prerequisites: ECO 201, 202

Fundamental economic concepts for understanding international economic relationships. Topics include international trade theory, capital movements, international monetary institutions, balance of payments adjustments and the impact of trade policies on economic development and growth.

**ECO 415-3 Mathematical Economics (3 + 0)**

Prerequisite: ECO 315 or permission of instructor

Mathematical analysis of economic theory. Topics include a wide range of mathematical techniques applied to economic topics such as theory of choice, externalities and public goods, general equilibrium, growth, and stability.

**ECO 425-3 Economics of Collective Bargaining (3 + 0)**

Prerequisites: ECO 201, 202

An examination of the economic aspects and effects of labor unions and collective bargaining. Topics include models of union behavior, bargaining theories, industrial wage differentials, economic consequences of public unionism and the impact of trade unions on employment, output and inflation.

## 232 COURSE DESCRIPTIONS

### **ECO 430-3 Public Finance (3 + 0)**

Prerequisites: ECO 201, 202

An analysis of the effects of taxation, government expenditures, fiscal policy and public debt on resource allocation and income distribution. Topics include taxation, pricing of public services, intergovernmental fiscal relations, and macroeconomic issues in public finance.

### **ECO 440-3 Industrial Organization and Public Policy (3 + 0)**

Prerequisites: ECO 201, 202

An examination of the structure, conduct, and performance of American industries. Questions of public policy in dealing with problems created by industrial concentration including the regulation of public utilities are examined. Industries are measured against the yardstick of the public interest.

### **ECO 445-3 International Trade and Finance (3 + 0)**

Prerequisites: ECO 355 and FIN 310

General equilibrium analysis provides foundations for examination of the gains from international trade, the composition of international transactions, and determination of real national income and its distribution among factors of production. This theoretical framework is then applied to a host of economic problems. The alternative approaches to balance of payments equilibration are then explored in depth.

### **ECO 450-3 Business and Economic Forecasting (3 + 0)**

Prerequisites: ECO 201

The general approaches to predicting macroeconomic activity, and how these techniques are implemented into the management decision process. Topics include data acquisition, quantitative techniques, business cycle theories and macroeconomic forecasting, industry and sales forecasting.

### **ECO 455-3 Comparative Economic Systems (3 + 0)**

Prerequisites: ECO 201, 202

An institutional and theoretical analysis of alternative economic systems. Topics include an analysis of the theoretical Marxian system as well as a comparison of capitalism, socialism, and communism.

### **ECO 460-3 History of Economic Thought (3 + 0)**

Prerequisites: ECO 201, 202, senior standing, and satisfaction of all Level I and Level II General Studies course requirements

Survey of the development of economic thought from ancient to modern times. Topics include the classical school from Smith through Mill; Marxian economics; the marginalists and institutional economics. (Senior Experience)

### **ECO 465-3 Advanced Monetary Theory (3 + 0)**

Prerequisite: ECO 302

An analysis of monetary models and money as a policy determinant and its place in national and international economies. Topics include the importance of interest rates, the effectiveness of monetary and fiscal policy, examination of portfolio balance models, and disequilibrium international models.

### **ECO 470-3 Law and Economics (3 + 0)**

Prerequisites: ECO 201, ECO 202

This course focuses on the interactions between economics and the law. Topics explored include the effect of economic theory on the development of common law, the effect of legal analysis on economic institutions, economic analysis of law, and selected topics in negotiation.

## Education

### SECONDARY EDUCATION COURSES

#### **EDS 221-3 Processes of Education in Urban Secondary Schools (3 + 0)**

Corequisite: EDS 222

Includes an analytical assessment of teaching/learning processes, with special emphasis on urban secondary schools. Special emphasis will be placed on the roles that the teacher as a decision-maker must play in such schools to meet the educational needs of learners from multicultural and diverse backgrounds.

#### **EDS 222-2 Field Experiences in Urban Secondary Schools (1 + 2)**

Corequisite: EDS 221

Provides the prospective teacher with an opportunity to apply coursework to making appropriate decisions in multicultural urban secondary schools.\* Focuses on learning about learners, their schools, and their communities. Weekly seminars address the decisions teachers make to meet the diverse educational needs of the student.

\*A school must have a sizable minority student population.

**EDS 268-1 Portfolio Development Workshop (1 + 0)**

Students learn to identify, analyze, discuss, and document learning gained through experience. Students integrate prior experiential learning with current educational needs and goals. Basic principles of adult learning and developmental theory are introduced as they apply to the student's experience. Students will prepare a prior-learning portfolio. Those who are interested may develop this portfolio into an application for credit for prior learning.

**EDS 320-3 Educational Psychology Applied to Teaching (3 + 0)**

Prerequisites: EDS 221, 222, or permission of instructor and satisfaction of Level I General Studies course requirements

Emphasis on meeting the developmental needs of children and adolescents, allowing the beginning teacher to develop teaching skills predicated on the role of a teacher as a decision-maker in diverse environments. (General Studies Course - Level II, Social Science)

**EDS 321-3 Secondary School Curriculum and Classroom Management (3 + 0)**

Prerequisites: EDS 221, 222; EDS 320 may be taken concurrently with EDS 321

Corequisite: EDS 322

Prospective teachers will convert theoretical instruction in teaching methodologies into practical applications in simulated classroom environments. A variety of models of instruction and approaches to classroom management are studied. From these, prospective teachers develop a range of lessons and techniques to meet the educational needs of diverse learners. In addition, self, peer, and instructor review and assessment of student experiences will be used to promote competence and improve decision-making processes for teaching.

**EDS 322-2 Field Experience in Teaching, Materials Construction, and Classroom Management (1 + 2)**

Corequisite: EDS 321

Integrates the content, theory, and conceptual aspects of academic and professional teacher education with experience in secondary schools. Focuses on developing technical skills to facilitate student learning. Prospective teachers apply the principles of teaching and classroom management to make appropriate decisions for diverse groups of learners. A weekly seminar is held to discuss each student's experiences and assess progress toward developing student competencies.

**EDS 429-6, 8, 12 Student Teaching and Seminar: Secondary 7-12 (1 + 12.5, 17.5, 27.5)**

Prerequisites: completion of all requirements of the teaching major and the Secondary Education Program A supervised 6-, 8-, or 12-week field experience in an accredited public or private secondary school, providing increasing responsibility for the teaching, supervising, and evaluating of an identified group of learners, grade levels 7-12. Regularly scheduled observations/seminars by appointed college supervisors are part of the field experience requirement. Unless your program specifically requires 6 or 8 credits, you should sign up for 12 credits.

**EDUCATIONAL TECHNOLOGY****EDT 361-2 Introduction to Educational Technology (1 + 2)**

Prerequisite: EDU 364 is a prerequisite or corequisite of EDT 361 for students in elementary education. This course is designed to prepare prospective teachers to make decisions regarding the role of technology in early childhood through 12th grade classrooms. Prospective teachers will become proficient in the selection, operation, and uses of various technologies such as, but not limited to, Computer Assisted Instruction (CAI) and Computer Managed Instruction (CMI) to meet the educational needs of diverse groups of learners.

**ELEMENTARY EDUCATION****EDU 100-1 Orientation to Education as a Profession (1 + 0)**

Assesses and advises students according to their prior learning and needs. Content includes assessment of interests, prior learning, and present competence in relation to Metro State's expectations, and individual and group advisement. Required entry-level course for students seeking Early Childhood Licensure, major or minor.

**EDU 212-3 Elementary Education in the United States (3 + 0)**

Provides an understanding of elementary education within the context of the preschool through 12th grade perspective from a variety of philosophical, historical, sociological, and psychological contexts. Special emphasis on the roles that the teacher as decision-maker in diverse contexts must play in the schools to meet the educational needs of learners from diverse socioeconomic backgrounds.

**EDU 234-3 Urban Early Childhood Education (3 + 0)**

Corequisite: EDU 235

Introduces the historical and philosophical foundations of early childhood education, as well as current social and educational issues and trends. Emphasizes the knowledge, attitudes, and decision-making skills essential for continued academic work and field experience in an urban, multicultural, early-childhood setting that serves youngsters from birth through age eight.

## 234 COURSE DESCRIPTIONS

### **EDU 235-2 Urban Early Childhood Education Field Experience (1 + 2)**

Corequisite: EDU 234

A laboratory experience that provides guided observation and/or participation in Metro State's Child Development Center ensuring practical application of the instruction received in the companion course (EDU 234 Urban Early Childhood Education). Emphasizes observation skills; interactions with children of differing ages and from diverse ethnic, cultural, and economic backgrounds; and implementation of developmentally appropriate activities in the daily program of an urban early childhood center.

### **EDU 236-2 Expressive Arts for the Young Child (2 + 0)**

Considers the facilitation of children's creative expression and problem-solving in music, movement, art, drama, literature, and other forms. Emphasizes ways to create a developmentally appropriate curriculum and maintain a classroom environment that allows creative expression and encourages the creative or gifted child.

### **EDU 264-3 Urban and Multicultural Education (3 + 0)**

Prerequisites: EDU 212 and satisfaction of the Level I math requirement, and ENG 101 or the Level I communication requirement, or permission of the instructor

Designed as an interdisciplinary course to acquaint the student with cultural and ethnic variations, human relations, and the school as a social institution. (General Studies Course—Level II, Social Science; Multicultural)

### **EDU 312-3 (CHS 330) Education of Chicano Children (3 + 0)**

Prerequisite: CHS 200

Presents the Chicano perspective on current public education policy and its implementation in the schools. Examines learning and teaching differences in students and teachers. Credit will be granted for the course only once.

### **EDU 334-4 Administration of Early Childhood Programs (4 + 0)**

Prerequisites: EDU 234, 235, PSY 180 or equivalent

Provides an overall view of program administration and specific concepts applicable in a variety of early childhood settings: preschools, child care, infant/toddler care, and after-school programs. Examines personnel management, program development, fiscal administration, marketing, and fund-raising.

### **EDU 335-3 Assessment and Measurement in the Early Childhood Classroom (3 + 1)**

Prerequisite: PSY 180

Emphasizes the foundations for assessing and measuring child growth and learning in the early childhood classroom, with emphasis on techniques and procedures appropriate for use with pre-reading children. Informal and observational methods of assessment will be stressed, along with more traditional teacher-made and standardized tests.

### **EDU 337-3 Language Arts and Social Studies Curricula for Early Childhood Education (3 + 0)**

Prerequisite: PSY 180

Covers the theoretical approach to and various influences on the acquisition and development of language and literacy in the early childhood years and the introduction and integration of social studies concepts in early childhood years and childhood classrooms. Students design, implement, and evaluate developmentally appropriate language arts and social studies curricula.

### **EDU 342-3 Curriculum Methods and Materials for Teaching the Mentally Retarded K-12 (3 + 0)**

Prerequisite: EDU 341 or permission of the instructor

An intensive study of the curriculum sequence and content for mildly, moderately, and severely retarded children, based on instructional or performance objectives.

### **EDU 346-3 Introduction to the Education of the Gifted and Talented (3 + 0)**

Prerequisite: SED 360

Focuses on the history, myths, and characteristics of gifted and talented students as learners. Presents procedures for identification and service models, as well as teaching and learning models for appropriate curriculum.

### **EDU 351-3 Perspectives in Bilingual-Bicultural Education (3 + 0)**

An introductory course in bilingual and multicultural education, with emphasis on the linguistically and culturally diverse learner. Acquaints the student with historical perspectives, philosophical frameworks, legal implications, subject matter methodologies, and current issues that affect these educational programs.

### **EDU 363-4 Family Life Education (4 + 0)**

Prerequisites: EDU 235, PSY 180

Provides a basis for teaching family life education in the schools. Emphasizes working with adolescents and their parents, strengthening family relationships, and providing information on resources for family life.

### **EDU 364-4 Curriculum and Management: Pre-Primary-6 (3 + 2)**

Prerequisites: EDU 212 or 234, PSY 180, EDU 264

Provides opportunity to analyze instructional and management methods in the elementary school and to develop a curriculum unit to be used in a field setting. Focuses on methods, discipline systems, and multicultural education integrations based on the teacher as a decision maker.

**EDU 407-3 Designing and Implementing Programs for Adult Learners (3 + 0)**

Prerequisite: PAR 205, HSP 202, or permission of instructor

Prepares students to develop, implement, and evaluate programs for the growing population of adult learners. Emphasizes a practical design process and teaching techniques that are particularly appropriate for the adult learner. Provides the experience of implementing and evaluating a program.

**EDU 410-4 Language Arts and Social Studies Curriculum: Pre-primary—6 (3 + 3)**

Prerequisites: EDU 212, 264, 364, PSY 180

Provides the opportunity to understand, research, develop, and use multicultural, integrated-curriculum concepts, methods, and materials pertinent to the teaching of language arts and social studies in the elementary school, observing different learning styles and capacities. Develops teacher decision-making skills through instruction and clinical experience with a variety of concepts, methods, materials, and assessment to a diverse group of learners.

**EDU 412-4 Science and Math Curriculum: Pre-primary-6 (3 + 3)**

Prerequisites: EDU 212, 264, 364, PSY 180, MTH 161, and SCI 280

Focuses on current methods and curricula in elementary school mathematics and science. Examines the developmental and cultural attributes of students in respect to instruction in math and science. Develops teacher decision-making skills through instruction and clinical experience with a variety of concepts, methods, and assessment pertinent to the teaching of math and science to a diverse group of students.

**EDU 419-6, 8, 10 Student Teaching and Seminar: Elementary (K-6) (1 + 12.5, 17.5, 22.5)**

Prerequisites: successful completion of the secondary education requirements, teaching major, approval of the department chair, satisfaction of all Level I and Level II General Studies course requirements, senior status

A supervised full-time field experience in an accredited public or private elementary school, providing increasing responsibility for the teaching, supervision, and direction of learners (K-6). A biweekly seminar is part of the field experience requirement. (Senior Experience)

**EDU 431-3 Parents as Partners in Education (3 + 0)**

Prerequisite: PSY 180 or permission of instructor

Focuses on the need for parents to be partners in the education of their children and emphasizes planning and activities that encourage parents to be involved. Covers the history of parent education, the family, communication skills, parent-teacher conferences, the exceptional child, child abuse, and rights and responsibilities of children, teachers, and parents.

**EDU 433-2 Science and Mathematics for the Young Child (2 + 0)**

Prerequisites: PSY 180, EDU 364

Emphasizes the application of methods teachers of young children use to build appropriate knowledge and conceptual foundations for science and mathematics. Students make decisions regarding planning, implementing, and evaluating lessons and activities appropriate for the teacher through third grade.

**EDU 436-4 Cultural Influence on the Socialization of Children (4 + 0)**

Prerequisite: PSY 180 or permission of instructor

Examines the socialization of children, using a multidisciplinary approach, including anthropology, psychology, sociology, biology, and education. Emphasizes the study of human attachment, modeling, and social learning theory. From this base, the student analyzes the effects that cultural and socialization patterns have on the family and individual's development. Offered fall semester.

**EDU 437-3 Planning a Developmentally Appropriate Early Childhood Classroom (3 + 0)**

Prerequisite: EDU 337 or 364

Students learn how to organize, schedule, sequence, and integrate available resources to plan and implement developmentally appropriate early childhood programs. Content areas include planning, classroom organization, management, curriculum security, and learning effective teaching techniques.

**EDU 438-3-6 Teaching Practicum in Pre-primary Early Childhood Education (1 + 5, 12.5)**

Prerequisites: EDU 335, 337, or consent of instructor; satisfaction of all Level I and Level II General Studies course requirements, senior status

Corequisites: EDU 437, PSY 180

Guided participation and teaching in a preprimary school or center to prepare students to take charge of a class. Students learn classroom planning, organization, and management. (Senior Experience)

**EDU 439-6-8-10 Student Teaching and Seminar: Early Childhood (Preschool through Third Grade) (1 + 12.5, 17.5, 22.5)**

Prerequisites: completion of major and teacher licensure coursework, satisfaction of all Level I and Level II General Studies course requirements, senior status

Requires assignments in an accredited public or private school as follows: one assignment in either Pre-K or K and one assignment in either first, second, or third grades for a total of 13 weeks. Both field experiences provide increasing responsibility for the teaching, supervision, and direction of a group of learners. (Senior Experience)

## 236 COURSE DESCRIPTIONS

### **EDU 442-3 Methods and Materials for Teaching the Gifted (3 + 0)**

Prerequisite: EDU 346 or permission of instructor

Corequisite: EDU 443

Presents strategies for teaching the intellectually gifted child in the content areas.

### **EDU 443-1 Field Experience in Gifted and Talented (0 + 2)**

Prerequisite: EDU 346 or permission of instructor

Corequisite: EDU 442

Offers an opportunity to gain hands-on experience in a school setting that serves gifted students.

### **EDU 444-2 Teaching Thinking Skills to the Gifted (2 + 0)**

Prerequisite: EDU 346 or permission of instructor

Focuses on methods for teaching gifted students to be creative and divergent thinkers.

### **EDU 451-4 Development of Methods and Materials for the Bilingual/Bicultural Classroom (4 + 0)**

Prerequisites: EDU 351 and proficiency in Spanish

Designed to help students identify appropriate instructional materials in the areas of language arts, math and science, social studies, and the fine arts. Emphasizes planning, implementing, and evaluating curriculum for the linguistically and culturally diverse student with alternatives in approaches and methodology. Includes field experience in a bilingual classroom.

### **EDU 452-3 Practicum in Bilingual/Bicultural Education (1 + 4)**

Prerequisites: EDU 451, proficiency in Spanish

Considers bilingual/bicultural techniques and their development and implementation in a bilingual/bicultural classroom. Requires six hours per week in a bilingual school or community setting.

### **EDU 465-3 Current Issues in Education: Variable Topics (3 + 0)**

Prerequisite: advanced students in education

An in-depth examination of selected current topics and issues in education. Topics vary, but all are of current importance, requiring the study of recent writings, research, and legislation. May be repeated for credit under a different topic.

### **EDU 469-1-6 Professional Practicum (0 + 2.5-15)**

Prerequisites: completion of student teaching or permission of college supervisor of student teaching; satisfaction of all Level I and Level II General Studies course requirements, senior status

A five-week field experience designed cooperatively by the student and a designated Metro State supervisor. Experiences range from remedial work to internships in education-related organizations. Students may elect variable credit in consultation with their adviser. (Senior Experience)

## **SPECIAL EDUCATION COURSES**

### **SED 338-3 Teaching Students with Learning and Behavior Disorders (3 + 0)**

Prerequisite: SED 360 or permission of instructor

The psychological, social, and academic needs of students with mild/moderate impairments (learning disabilities, mental retardation, and behavior disorders) are surveyed across the developmental continuum. Emphasizes instructional approaches.

### **SED 340-3 Educational Exceptionality and Human Growth (3 + 0)**

Prerequisites: EDU 100, 212, SED 360

Examines various handicapping conditions and their effects on normal growth and development.

### **SED 341-3 Diagnosis and Evaluation of Exceptional Students (3 + 0)**

Prerequisites: SED 360, 338, or permission of instructor

Focuses on the selection, use, and interpretation of formal and informal instruments for assessment of handicapped students' abilities. Emphasizes diagnostic-prescriptive teaching.

### **SED 343-3 Field Experience in Special Education (1 + 4)**

Prerequisites: SED 360, 338, or permission of instructor

Provides a four-hour-per-week field experience in public or private schools and/or institutional settings. Students also meet for one hour per week at the college.

### **SED 344-3 Counseling Parents of Exceptional Children (3 + 0)**

Prerequisites: SED 340, 341, 342, 343, or permission of the instructor

Explores techniques in counseling, group therapy, and transactional analysis as methods for promoting adjustment within the structure of the family with an exceptional child.

### **SED 349-3 Education of the Learning Disabled (3 + 0)**

Prerequisites: SED 360 or permission of instructor

An introduction to the education of the learning-disabled child. Characteristics, identification, and educational implications are explored.

**SED 360-3 The Exceptional Learner in the Classroom (3 + 0)**

Prerequisite: PSY 180

Provides a survey of various exceptionalities and includes information about child abuse. Addresses educational strategies and curriculum modification for mainstreaming.

**SED 420-3 Language Development and Learning Disabilities (3 + 0)**

Prerequisite: SED 360 or permission of instructor

Surveys the nature and educational treatment of language disorders in learners with disabilities. Emphasizes oral and written language development, as well as the facilitation/remediation of common problems associated with learning disabilities.

**SED 425-3 Classroom Management for Exceptional Students (3 + 0)**

Prerequisite: SED 360 or permission of instructor

Explores the use of systematic behavioral assessment and intervention strategies with exceptional students. Practical application for management plans for both regular and special education classrooms is covered.

**Electronics Engineering Technology****EET 100-2 Electronics for Non-Majors (2 + 0)**

Prerequisite: elementary algebra

Emphasizes the aspects and applications of electronics useful to persons who are not technically oriented.

**EET 106-3 Applied Technical Mathematics (3 + 0)**

Prerequisite: high school algebra or permission of instructor

Designed to assist the student majoring in technology by providing background and understanding in applied mathematics.

**EET 110-4 Circuits I (4 + 0)**

Corequisites: MTH 111 or MTH 140, EET 111

Covers DC circuit analysis, including mesh analysis, nodal analysis, Thevenin conversion, Norton conversion, power, magnetism and magnetic circuits, capacitance, and inductance.

**EET 111-1 Circuits I Laboratory (0 + 2)**

Corequisite: must be taken concurrently with EET 110

An introduction to electrical laboratory procedures and the measurement of basic direct current parameters. Supplements theoretical studies and aids in understanding of basic principles.

**EET 112-4 Circuits II (4 + 0)**

Prerequisites: EET 110, EET 111, MTH 140 (or MTH 112 Corequisite)

A continuation of EET 110, using trigonometry and complex algebra. Studies include single-time constant circuits, phasors and the "J" operator, RLC circuits with sinusoidal, steady-state sources, impedance and admittance, AC formulations of classic network theorems, complex network equations, complex power, frequency response, transformers, and two-port network models.

**EET 113-2 Circuits II Laboratory (0 + 4)**

Corequisite: must be taken concurrently with EET 112

Designed to aid the understanding of alternating current circuits with various combinations of resistance, inductance, and capacitance.

**EET 200-3 Electric Circuits and Machines (3 + 0)**

Prerequisites: MTH 112 or MTH 140, PHY 202 or PHY 233

An introductory course in electric circuits for non-EET majors. Covers DC and AC circuits, generators, motors, transformers, elementary electronic devices, and circuits.

**EET 214-4 Electronics I (3 + 2)**

Prerequisite: EET 112 or EET 113

A study of semiconductor diode and bipolar junction transistor devices and circuits.

**EET 215-4 Electronics II (3 + 2)**

Prerequisite: EET 214 or EET 301

A study of junction and MOS field-effect transistors, thyristors, and elementary op amps. Also covers frequency response to cascaded amplifiers.

**EET 231-4 Digital Logic and Telecommunications (3 + 2)**

An introduction to computer hardware circuits and telecommunications for non-EET majors. Includes lecture and lab with memory circuits and other digital logic devices.



## 238 COURSE DESCRIPTIONS

### **EET 232-3 Digital Circuits I (2 + 2)**

Prerequisite: EET 112 or EET 200

Covers the analysis and design of logic circuits, using Boolean algebra and Karnaugh maps. Combinational logic circuits (adders, comparators, decoders, encoders, multiplexers, parity generators) are studied. Flip-flop circuits are also used in analysis and design.

### **EET 234-2 Technical Programming Applications (2 + 0)**

Prerequisite: EET 112

Introduces the student to digital computers and their usefulness for solution of technology problems using high-level languages. Emphasizes problems from the field of electronics technology.

### **EET 235-3 Advanced Technical Programming (3 + 0)**

Prerequisites: EET 234, and EET 214

An advanced-level programming course using the C language and UNIX. Methods of solving circuit and electronics problems using the computer are studied.

### **EET 280-3 Cooperative Education (1 + 6)**

Prerequisites: Formal admission to Co-op Education Program and permission of department chair

A seminar course allowing working student to share work experience and to report on particular projects.

### **EET 301-4 Industrial Electronics (3 + 2)**

Prerequisite: EET 112 or EET 200

Covers the application of transistors, op amps, and other electronics devices, both analog and digital. Not for EET majors.

### **EET 302-3 Digital IC Design (2 + 2)**

Prerequisites: EET 234, 333; and either EET 212 or 215

A course on the design of IC and ASIC digital circuits.

### **EET 311-4 Circuit Analysis with Laplace (4 + 0)**

Prerequisites: EET 112, EET 113, and MTH 241

An advanced-level circuit analysis course using calculus and Laplace transforms.

### **EET 312-4 Advanced Analog Electronics (3 + 2)**

Prerequisites: EET 215 and 311

An advanced analog electronics course with emphasis on the operational amplifier. Topics include power supplies, active filters, amplifiers, nonlinear circuits, and simulation.

### **EET 333-3 Digital Circuits II (2 + 2)**

Prerequisite: EET 231 or EET 232

A continuation of EET 232. Sequential logic circuits (counters and shift registers), semiconductor memories, A/D and D/A interfacing, and PLDs are studied.

### **EET 336-3 Microprocessors (2 + 2)**

Prerequisites: EET 333, and one high-level computer language (BASIC, C, PASCAL, etc.)

Covers microprocessor hardware and software, including assembly language programming.

### **EET 341-3 Electric Machines (2 + 2)**

Prerequisite: EET 215 or EET 301

A study of motors and generators and their applications.

### **EET 342-3 Electric Power Distribution (3 + 0)**

Prerequisite: EET 215 or EET 301

A study of distribution techniques and equipment employed in electric power distribution and control.

### **EET 343-3 Power Generation Using Solar Energy (2 + 2)**

Prerequisites: EET 214 and EET 234

Examines the application of solar power generation, using photovoltaic cells, wind machines, and thermal engines.

### **EET 362-3 Analog and Digital Communications (3 + 0)**

Prerequisite: EET 215 or EET 301

An introduction to communications systems. Includes information theory, channel capacity, A/D and D/A techniques, modulation (AM, FM, and digital), noise sources, quantization, and transmission lines including, Smith Charts.

### **EET 363-3 Electromagnetic Fields (3 + 0)**

Prerequisites: EET 311 and EET 362

Covers mathematical concepts of static and dynamic electromagnetic fields. Includes planewave propagation in lossless and lossy media, waveguide propagation, and radiation principles.

**EET 364-3     Communications Laboratory (0 + 6)**

Prerequisite: EET 362

Covers the fundamentals of analog and digital communication. Includes experiments on modulation, noise, transmission lines, antennas, fundamental communication systems, lasers, and fiber optics.

**EET 367-3     Measurements for Communications Systems (1 + 4)**

Prerequisites: EET 234, EET 362, and EET 364

Involves measurements on communications circuits, including SNR, noise figure, impedance, admittance, phase, power, frequency, spectrum analysis, and fields at high frequencies.

**EET 371-3     Control Systems Analysis (3 + 0)**

Prerequisite: EET 311

An analysis of classical linear continuous-time control systems. Includes the Laplace transform, Bode plots, stability, transient response, steady-state response, and the design of PID, lag, and lead compensators.

**EET 372-1     Control Systems Laboratory (0 + 2)**

Prerequisites: EET 312 and EET 371

A laboratory course in the analysis and design of control systems, using the classical approach.

**EET 373-2     Process Control Systems (2 + 0)**

Prerequisites: two years of high school algebra

An introductory course in the applications of PID controllers in the process control industry.

**EET 374-2     Programmable Logic Controllers (2 + 0)**

Prerequisites: two years of high school algebra

Covers the application of programmable logic controllers (PLC) and their programming, using ladder diagrams.

**EET 380-3     Cooperative Education II (1 + 6)**

Prerequisites: formal admission to Co-op Education Program, and permission of department chair, and EET 280

A continuation of EET 280.

**EET 402-3     Hardware Description Language (3 + 0)**

Prerequisites: EET 333 or EET 231, EET 233 or CSI 222

Covers the use of a hardware description language (HDL) to design large IC circuits.

**EET 403-3     Analog IC Design (2 + 2)**

Prerequisites: EET 302 and EET 312

Examines the design of IC and ASIC analog circuits.

**EET 404-3     Introduction to IC Fabrication (2 + 2)**

Prerequisites: CHE 110 or 120, PHY 233 or 202

An introduction to the basics of IC fabrication methods and techniques.

**EET 410-1     Senior Project I (0 + 2)**

Prerequisites: ENG 102, COM 261, EET 312, EET 336; satisfaction of all Level I and Level II General Studies course requirements, and senior status

Provides the opportunity to plan design projects in consultation with faculty advisers. Interfacing with industry is encouraged. (Senior Experience)

**EET 411-2     Senior Project II (0 + 4)**

Prerequisites: SPE 101, completion of EET 410 with a grade of "C" or better, satisfaction of all Level I and Level II General Studies Course requirements, senior status

A continuation of Senior Project I. Students complete their designs and build, test, and demonstrate them. Written technical reports and oral presentations on projects are required. (Senior Experience)

**EET 432-3     Digital Filters (2 + 2)**

Prerequisites: EET 234, EET 311, MTH 241

An introduction to digital filters as applied in digital signal processing and sampled data control systems.

**EET 433-3     Data Communications (2 + 2)**

Prerequisite: EET 333 or EET 231

Covers methods of local and distant digital communications systems, including standards and hardware used for transmitting digital data either synchronously or asynchronously.

**EET 434-3     Interface Techniques (2 + 2)**

Prerequisites: EET 333, EET 336

Covers interfacing techniques with computers, peripherals, and other digital circuits.

## 240 COURSE DESCRIPTIONS

### **EET 437-3     Microcontrollers (2 + 2)**

Prerequisite: EET 336

Provides the opportunity for learning to design microcontrollers.

### **EET 462-3     Advanced Communications Systems (3 + 0)**

Prerequisite: EET 362

Covers the analysis and design of advanced communication systems, including HF, VHF, UHF, microwave, spread spectrum, optical, video, and satellite systems.

### **EET 463-3     Space and Satellite Communications (2 + 2)**

Prerequisite: EET 362

Covers the application of basic communications, power, and microwave theory to space and satellite communication systems.

### **EET 464-3     Communication Circuit Design (3 + 0)**

Prerequisite: EET 363

Covers the analysis and design of radio frequency electronic circuits for communication transmission and reception.

### **EET 471-4     Digital Control Systems Design (4 + 0)**

Prerequisite: EET 371

Includes the design of digital control systems, using classical and modern control theory. State variable feedback control laws and observers are designed.

### **EET 473-3     Robotics (3 + 0)**

Prerequisites: EET 214 or EET 301, MTH 241

Covers analysis and design of robots. Includes robot kinematics, inverse kinematic, kinetics, sensors, actuators, and industrial applications.

## **English**

### **ENG 101-3     Freshman Composition: The Essay (3 + 0)**

Prerequisites: A score of 3.0 on the Writing Placement Exam or a "C" or better in CCD's ENG 100 course.

ENG 101 is a course in the process of writing and revising shorter, college-level essays. Classes include lecture, discussion, workshop and conference methods. By the close of the semester, students will demonstrate their ability to generate, organize, and present writing for the appropriate audience. (General Studies Course—Level I, Composition)

### **ENG 102-3     Freshman Composition: Analysis, Research, and Documentation (3 + 0)**

Prerequisite: ENG 101 or its equivalent

ENG 102 is a course in the process of writing extended essays supported by research. The course includes an introduction to library use, research techniques, and conventions of documentation as well as practice in critical reading, thinking, and writing across the disciplines. Students can expect to do a series of shorter writing assignments leading to the longer, documented paper. Those sections of ENG 102 listed as "Research and Word Processing" include hands-on instruction on the use of the computer in research and writing. (General Studies Course—Level I, Composition)

### **ENG 107-3     English Usage and Grammar (3 + 0)**

For students wishing an intensive review of current usage practices in English: spelling, punctuation, capitalization, and grammar. Focuses particularly, but not exclusively, on those practices recognized and accepted as Standard Edited English. This course stresses the practical applications of usage and grammar in contrast to the theoretical content of ENG 202. Suitable for non-English majors.

### **ENG 110-3     Introduction to Literature (3 + 0)**

Prerequisite: Minimum performance standard scores on the reading and writing preassessment placement tests

This is a course in the general appreciation and understanding of literary genres, including fiction, drama, and poetry. It is recommended for the general studies requirement. (General Studies Course—Level II, Arts and Letters)

### **ENG 111-3     Introduction to Fiction (3 + 0)**

Prerequisite: Minimum performance standard scores on the reading and writing preassessment placement tests

This course is a critical introduction to selected short fiction, with an emphasis on twentieth-century British and American writings. (General Studies Course—Level II, Arts and Letters)

**ENG 112-3 Introduction to Drama (3 + 0)**

Prerequisite: Minimum performance standard scores on the reading and writing preassessment placement tests

This is a course in drama appreciation: a study of 6-10 plays representing different genre and periods, presented within the framework of a modern perspective. The course has exercises in multiple sensory drama experience. It is recommended for General Studies and required for the dramatic literature minor. (General Studies Course—Level II, Arts and Letters)

**ENG 114-3 Literature of Popular Interest (3 + 0)**

Prerequisite: Minimum performance standard scores on reading, writing and math preassessment placement tests

Courses which have an appeal at a given time will be offered under this general title. The specific course or courses will be designated by a descriptive title, such as science fiction, detective fiction, tales of terror. May be repeated for credit under different titles for elective credit.

**ENG 131-3 Introduction to Shakespeare (3 + 0)**

Prerequisite: Minimum performance standard scores on the reading and writing preassessment placement tests

This course is a multi-sensory introduction to Shakespeare especially designed for a general audience. (General Studies Course—Level II, Arts and Letters)

**ENG 201-3 The Nature of Language (3 + 0)**

This course is an overview of the dynamic, contemporary linguistic insights into grammars, language acquisition, social dialects, sound and meaning systems, and systematic bases for language change. It is also an examination of myths and illusions about human and animal languages. It is primarily for majors in humanities and social sciences, but especially appealing to science majors, because of the examination of the regular systems underlying natural languages.

**ENG 202-3 Systems of English Grammar (3 + 0)**

This course is an intermediate study of the principles of English grammar through an examination of basic principles of syntactic theories. It covers a selection of principles from structural linguistics and introduces students to the basics of generative transformational syntactic theory. It is also an analysis of structures and discussion of several theories underlying systematic language study: sentence patterns, parts of speech, form class paradigms, function class groups, phrases, clauses, sentences; introduction to morphology, phrase structure grammar, early theory generative-transformational syntax. This is not a course in English usage.

**ENG 210-3 Introduction to Literary Studies (3 + 0)**

Prerequisite: ENG 101 or permission of instructor

An entry-level course introducing students to academic literary study, its concepts, traditions, critical approaches, and controversies. Students will be required to read and write about literature drawn from a variety of cultures, both contemporary and historical, and written by men and women of diverse backgrounds.

**ENG 211-3 World Literature: Beginnings to 1600 (3 + 0)**

Prerequisite: ENG 210 or permission of instructor

The study of literature in translation from the pre-Homeric era to 1600, created by men and women of diverse backgrounds.

**ENG 212-3 World Literature: 17th Century to Present (3 + 0)**

Prerequisite: ENG 210 or permission of instructor

The study of continental and third-world literature in translation, written after 1600.

**ENG 221-3 American Literature: Beginnings through the Civil War (3 + 0)**

Prerequisite: ENG 210 or permission of instructor

An introduction to characteristic American modes of expression such as oral tales, diaries, and narratives as well as essays, fiction, drama, and poetry created by men and women of diverse backgrounds.

**ENG 222-3 American Literature: Civil War to Present (3 + 0)**

Prerequisite: ENG 210 or permission of instructor

An introduction to characteristic American modes of expression such as oral tales, diaries, and narratives as well as essays, fiction, drama, and poetry created by men and women of diverse backgrounds.

**ENG 231-3 British Literature: Beginnings to 1785 (3 + 0)**

Prerequisite: ENG 101 or permission of instructor

The literature of England from the old English period through the 18th century, including poetry, drama, prose fiction, and essays.

**ENG 233-3 British Literature: 1785 to Present (3 + 0)**

Prerequisite: ENG 101 or permission of instructor

The literature of England from the Romantic period through the present, including poetry, drama, prose fiction, and essays.

## 242 COURSE DESCRIPTIONS

### ENG 241-3

#### (CHS 201) Survey of Chicano Literature (3 + 0)

Prerequisite: CHS 100 or permission of instructor

This course reviews the major literary genres associated with Chicano creative expression, including poetry, drama, and the novel. Credit will be granted for only one of these courses. Suitable for non-English majors.

### ENG 242-3

#### (CHS 202) Chicano Poetry and Drama (3 + 0)

Prerequisite: CHS 201 or permission of the instructor

This course is an intensive study of Chicano poetic and dramatic arts as it attempts to create a new reality. The course will also equip the student with a basic approach to poetry and drama as a craft through production. Credit will only be granted for only one of these courses. Suitable for non-English majors.

### ENG 251-3

#### Intermediate Composition (3 + 0)

Prerequisite: ENG 102 or permission of instructor

Examination of rhetorical strategies used in writing effective nonfiction prose. Exercises and discussion on production and evaluation of, essays, critical analyses, and documented papers. Editing techniques and manuscript form conventions. Appropriate for non-English majors.

### ENG 252-3

#### Introduction to Creative Writing (3 + 0)

Prerequisite: ENG 102 or permission of instructor

Lectures, group discussions, and exercises in writing fiction, poetry, and drama.

### ENG 301-3

#### Modern English Language Studies (3 + 0)

Prerequisite: ENG 201 or 202 or permission of instructor

An experience in discovery: The patterns of sounds, words, and sentences of English are mastered through a transformational/generative grammar approach. Other grammars are also introduced. Recommended for humanities and social science majors.

### ENG 302-3

#### History of the English Language (3 + 0)

Prerequisites: ENG 201 or permission of instructor

A study of both the internal history (sounds and inflections) and the external history (the great political, social, and cultural influences) which have combined to make the English language what it is today, including an analysis of regional and dialectal speech.

### ENG 303-3

#### Semantics (3 + 0)

Prerequisites: Completion of Level II General Studies lower division literature course (Eng 110, 111, 112, or 131), or ENG 201 (The Nature of Language), or permission of instructor; satisfaction of Level I General Studies course requirements

Students will study the origins of meaning in natural language, examination of significant linguistic units that carry meaning, and the formal/informal systems used to account for meaning. The course surveys symbolic, historical, and pragmatic elements associated with semantics and deals systematically with basic concepts, theories, and analytical techniques in contemporary linguistics. It is especially recommended for majors in pre-law, communication, law enforcement, psychology, philosophy, teaching, and related disciplines. (General Studies Course—Level II, Arts and Letters)

### ENG 310-3

#### Studies in Chaucer, Shakespeare, and Milton (3 + 0)

Prerequisite: Six semester hours of English beyond ENG 102

A study of major works by Chaucer, Shakespeare, and Milton, designed to give the student a thorough understanding of these principal influences on the English literary language heritage.

### ENG 321-3

#### Development of American Drama (3 + 0)

Prerequisite: Six semester hours of English above 102, or permission of instructor

A study of the development of dramatic literature in the United States from 1714 to the present and of its importance to American literature and culture.

### ENG 323-3

#### Development of the American Novel (3 + 0)

Prerequisite: Six semester hours of English above 102, or permission of instructor

A study of developing practice and theory together with critical evaluation of the American novel from the early nineteenth century to the 1940s.

### ENG 324-3

#### (AAS 324)

#### African American Literature (3 + 0)

Prerequisites: Six semester hours of English above 102, or permission of instructor and satisfaction of Level I General Studies course requirements

A study of the various forms of literature produced by black Americans. The works are considered in the context of the historical and social conditions of the time at which they were written. Credit will be granted for only one of these courses. Suitable for non-English majors. (General Studies Course—Level II, Arts and Letters; Multicultural)

**ENG 331-3 Development of British Drama: Mysteries to Melodrama (3 + 0)**

Prerequisite: Six semester hours of English above 102

The study of representative plays from the Medieval period to the present and of their importance to literature and culture.

**ENG 333-3 Development of the British Novel (3 + 0)**

Prerequisite: Six semester hours of English above 102

A study of developing practice and theory together with critical evaluation of the British novel through the nineteenth century.

**ENG 340-3 Development of Modern Poetry (3 + 0)**

Prerequisite: Six semester hours of English above 102, or permission of instructor

A study of the theory, prosody, and poetry of the twentieth century.

**ENG 341-3 Masterpieces of Continental Literature (3 + 0)**

Prerequisite: Six semester hours of English above 102, or permission of instructor

Major works by European writers from the classical period to the present. May be repeated for credit if different content is specified.

**ENG 342-3 The English Bible as Literature (3 + 0)**

Prerequisites: Completion of Level II General Studies lower-division literature course (ENG 110, 111, 112, or 131), or permission of instructor; satisfaction of Level I General Studies course requirements

A study of the English Bible with emphasis on the literary forms and the cultural traditions of the Old and New Testaments. Suitable for non-English majors. (General Studies Course, Level II—Arts and Letters)

**ENG 343-3 Classical Mythology (3 + 0)**

Prerequisites: Completion of Level II General Studies lower-division literature course (ENG 110, 111, 112, or 131), or permission of instructor; satisfaction of Level I General Studies course requirements

A study of Greek and Roman myths, their parallels in other mythologies, and their occurrence in literature and criticism. By tracing the modifications of various myths from their most ancient forms to today's poems, the course will acquaint students with the continued vitality of mythology. (General Studies Course—Level II, Arts and Letters)

**ENG 344-3 Myth, Symbol, and Allusion in Literature (3 + 0)**

Prerequisite: Six semester hours of English above 102

A course introducing students to mythic and biblical themes and symbols as they appear in literature, primarily poetry, both ancient and modern, written by men and women of diverse backgrounds.

**ENG 346-3 Children's Literature (3 + 0)**

Prerequisites: Completion of Level II General Studies lower-division literature course (ENG 110, 111, 112, or 131), or permission of instructor; satisfaction of Level I General Studies course requirements

A study of all levels and types of children's literature for the student who is interested in literature per se, and for the student who is planning to become a teacher. An introduction to types and varieties of literature for reading to children as well as reading by children. (General Studies Course, Level II—Arts and Letters)

**ENG 347-3 Young Adult Literature (3 + 0)**

Prerequisite: Six semester hours of English above 102, or permission of instructor

This course provides a critical survey of young adult literature, including the contemporary young adult novel, current poetry and drama, and multicultural/ethnic literature. It also focuses on censorship, book selection, nonsexist books, and nonfiction, and presenting/teaching young adult literature. This course is recommended for reading, English and secondary education students.

**ENG 348-3****(CHS 340) The Chicano Novel (3 + 0)**

Prerequisite: CHS 201 or permission of instructor

This course deals with origins, themes and techniques which characterize the Chicano novel. It is an in-depth study of the best examples of literary production in both Spanish and English. Credit will be granted for only one of these courses. Suitable for non-English majors.

**ENG 349-3****(CHS 341) Chicano Folklore of the Southwest (3 + 0)**

Prerequisite: CHS 200 or permission of instructor

This course accents the study of oral and written folklore as a genre in Chicano history and culture. Its focus is upon tales, traditions, belief and humor as a means to gain insight into what is culturally specific. Credit will be granted for only one of these courses. Suitable for non-English majors.

**ENG 351-3 Advanced Composition (3 + 0)**

Prerequisite: Six semester hours of English at the 200-level or above or permission of instructor

A study of the theoretical and ethical bases of persuasive writing and practice in the principles and techniques which effect constructive persuasion in a pluralistic society. Suitable for non-English majors.

## 244 COURSE DESCRIPTIONS

### **ENG 352-3 Creative Writing Workshop (Fiction, Poetry, or Drama) (3 + 0)**

Prerequisite: ENG 252 or permission of instructor

Group discussions and supervised projects in writing imaginative literature. May be repeated for credit for each of the genres.

### **ENG 353-3 Techniques of Critical Writing (3 + 0)**

Prerequisite: Six semester hours of English above 102, or permission of instructor

Methods and practice in writing critical responses to art forms, including literature, theater, and film. The course provides experience in writing journalistic and academic criticism. Suitable for non-English majors.

### **ENG 362-3 Teaching Composition in Secondary Schools (3 + 0)**

Prerequisite: ENG 351 or permission of instructor

Analysis, evaluation, and application of the major systems of teaching composition, techniques of correction and revision, and motivation for writing.

### **ENG 363-3 Teaching Communication (3 + 0)**

Prerequisite: Six semester hours of English at the 200 level or above or permission of instructor

A course designed to equip persons to teach communications and communication skills at the secondary school level; to analyze communication networks, problems, roles, and interaction in various instructional environments; to facilitate and implement effective communication in teaching and learning. Recommended for anyone responsible for improving communication and communication skills.

### **ENG 364-3 Teaching Creative Writing in the Secondary Schools (3 + 0)**

Prerequisite: Six semester hours of English at the 200 level or above or permission of instructor

This course equips persons to teach creative writing skills in the secondary schools. The course covers the theories, techniques, and major genres, in order to prepare a variety of effective instructional strategies and materials appropriate to diverse cultural groups and individual learning styles.

### **ENG 367-3 Writing Tutor (3 + 0)**

Prerequisites: ENG 101, ENG 102, and permission of instructor

A course designed to familiarize students with principles and practices of teaching writing in a tutorial setting. Communications and English majors or minors or students who have a special interest in writing are preferred.

### **ENG 370-3 Literature and the Law (3 + 0)**

Prerequisite: One upper-division course in the Humanities or Social Sciences or one literature course; or permission of instructor

This course will examine questions about law, justice, and morality through an examination of selected pieces of European, English, and American literature.

### **ENG 382-3 Creative Writing Studio (Variable Topics) (3 + 0)**

Prerequisite: ENG 351 or 352 as advised, or permission of instructor

Specialized studios highlighting a particular creative writing craft, incorporating lectures, selected textual studies, group discussions, and supervised individual projects. May be repeated for credit under different titles.

### **ENG 401-3 Linguistic Studies (Variable Topics) (3 + 0)**

Prerequisite: Any one of the following: ENG 201, 301, 302, 303

Theories and applications: the seminar topics range over the extensive research in linguistic studies from grammars to stylistics and from sidewalk linguistics to speech acts. Individualized projects. May be repeated for credit under different titles.

### **ENG 411-3 Advanced Studies in Literature (3 + 0)**

Prerequisite: Six semester hours of English above 102, or permission of instructor

The study of selected works chosen as representative of an important "school" or group within a period. May be repeated for credit under different titles.

### **ENG 412-3 Selected Themes in Literature (3 + 0)**

Prerequisite: Six semester hours of English above 102, or permission of instructor

A study of literary works selected as significant expressions of a theme, idea, or mode. The works studied are not necessarily restricted to a particular period or country. May be repeated for credit under different titles.

### **ENG 413-3**

#### **(CHS 420) Major Authors (3 + 0)**

Prerequisite: Six semester hours of English above 102, or permission of instructor

The course traces in representative works the artistic and intellectual development of one or two important writers. May be repeated for credit under different titles.

**ENG 414-3 Modern Continental, British, and American Drama (3 + 0)**

Prerequisite: Six semester hours of English above 102, or permission of instructor

A comprehensive survey of the important dramatic works of the last hundred years with emphasis on trends and developments. Plays by German, Scandinavian, Russian, Italian, Spanish, French, British, and American playwrights are included.

**ENG 431-3 Shakespeare: Comedies, Histories, Sonnets (3 + 0)**

Prerequisite: Six semester hours of English above 102, or permission of instructor

Selected comedies, and histories including *The Taming of the Shrew*, *A Midsummer Night's Dream*, *The Merchant of Venice*, *As You Like It*, *Twelfth Night*, *The Tempest*, *Richard II*, *I & 2 Henry IV*, *Henry V*; and selected sonnets.

**ENG 432-3 Shakespeare: Tragedies and Ethical Problem Plays (3 + 0)**

Prerequisite: Six semester hours of English above 102, or permission of instructor

Selected tragedies and problem plays, including *Romeo and Juliet*, *Julius Caesar*, *Hamlet*, *Othello*, *King Lear*, *Macbeth*, *Antony and Cleopatra*, *Measure for Measure*, *Troilus and Cressida*, *Cymbeline*.

**ENG 452-3 Advanced Creative Writing: Fiction, Poetry, or Drama (3 + 0)**

Prerequisites: Satisfaction of all Level I and Level II General Studies course requirements, senior standing, and ENG 352, or permission of instructor

This capstone course provides individual instruction for independent projects in writing fiction, poetry, or drama; and instruction in submitting work for publication or production. It may be repeated for credit with permission of instructor. (Senior Experience)

**ENG 461-3 Theories and Techniques in Literary Criticism (3 + 0)**

Prerequisites: Satisfaction of all Level I and Level II General Studies course requirements, senior standing, and permission of instructor

This capstone course, a requirement for English majors with a literature emphasis, studies major critical theories from the ancients to the contemporary deconstructionists, with emphasis upon theoretical understanding and practical application—the writing of critical essays. (Senior Experience)

**ENG 463-6 Composition Teaching Workshop (6 + 0)**

Prerequisites: Completion of ENG 102 and ENG 361 (or equivalents) or permission of instructor

This is an intensive workshop in the process of writing, composition theory and practice, development of writing skills, forms and evaluation of composition, teaching techniques, and writing practices. It is for pre-service and in-service teachers.

**ENG 464-3 Teaching English in Secondary Schools (3 + 0)**

Prerequisites: Satisfaction of all Level I and Level II General Studies course requirements, senior standing, and permission of instructor

In this capstone course, students preparing to teach English in middle, junior, and senior high schools will examine and prepare materials, media, and techniques; plan and teach assigned lessons; prepare and present lesson and unit plans; evaluate teaching and materials; and examine ways to promote their professional development. (Senior Experience)

**ENG 465-3 Teaching Composition in Elementary School (3 + 0)**

Prerequisites: ENG 351, junior standing, or permission of instructor

This course incorporates the writing process, developmental growth and fluency of K-6 writers, writing skills and assessment, sequential composition curricula, and techniques and materials for teaching composition. Students will develop and demonstrate composition lessons and activities.

**ENG 466-3 Teaching Literature and Language K-6 (3 + 0)**

Prerequisites: Satisfaction of all Level I and Level II General Studies course requirements, senior standing, and completion of ENG 302 and ENG 346.

This capstone course focuses on the comprehension and teaching of literature, language, and language arts for K-6 students, with emphasis on the elements, characteristics, and types of literature and on the forms, functions, and uses of language, grammar, and usage. Students will prepare, present, and evaluate lessons and activities representative of the curriculum. (Senior Experience)

## Finance

**FIN 225-3 Personal Money Management (3 + 0)**

Prerequisite: Sophomore standing

This is a survey course oriented to the identification and solution of personal financial problems. The subject matter ranges from the determination of one's financial condition to estate planning, including controlling credit usage, making major purchase decisions, buying insurance, making investments, and planning retirement. (Credit will be granted for only FIN 225 or FIN 315. Business students should take FIN 315.)



**FIN 301-3 Financial Markets and Institutions (3 + 0)**

Prerequisite: Junior standing

This course provides a framework for understanding our financial environment, including markets, institutions, and securities. Each type of market and how financial institutions utilize it, its internationalization, and recent events that have affected it are studied.

**FIN 310-3 International Money and Finance (3 + 0)**

Prerequisite: Junior standing

This course covers the basics of the foreign exchange market, the balance of payments, parity conditions in international finance, foreign exchange risk and forecasting, the financing of international activities, and international capital flows. The course will focus on the financial management of the multinational firm.

**FIN 315-3 Personal Financial Planning (3 + 0)**

Prerequisite: Business major with junior standing

This course is an introduction to the field of personal financial planning for business students. The student will study money management, investments, insurance, employee benefits, retirement planning, and estate planning as they relate to individual and family financial planning. (Credit will be granted only for FIN 225 or FIN 315. Business students should take FIN 315.)

**FIN 330-3 Managerial Finance (3 + 0)**

Prerequisites: ACC 202, ECO 201, ECO 202 and junior standing

This is a study of the dynamic environment of financial management using the following analytical skills: financial analysis, forecasts, cash and capital budgeting, operating and financial leverage, the cost of capital, and dividend policy.

**FIN 342-3 Principles of Insurance (3 + 0)**

Prerequisite: Junior standing

This course explores the underlying principles of insurance, and the need for insurance in a progressive, dynamic society. It includes an introductory examination of insurable risks, uses of insurance, as well as a study of the important coverages that are currently available.

**FIN 343-3 Property and Liability Insurance (3 + 0)**

Prerequisites: FIN 342 and junior standing

This course is an examination and study of the principles and uses of property and liability insurance. It also includes types of property and liability insurance, products selection, classification of property and liability risks, and organization and regulation of property and liability insurers.

**FIN 344-3 Life and Health Insurance (3 + 0)**

Prerequisites: FIN 342 and junior standing

This course is an examination and study of the principles and uses of life and health insurance. It also includes types of life and health risks, and organization and regulation of life and health insurers.

**FIN 345-3 Retirement Planning and Employee Benefits (3 + 0)**

Prerequisite: Junior standing

This is a study of the principles of retirement planning and employee benefits, including the determination of financial needs at retirement. The various employee benefits and retirement plans for employees and self-employed persons will be studied.

**FIN 346-3 Risk Management (3 + 0)**

Prerequisites: FIN 342 and junior standing

This course is an analysis of risk identification and evaluation, measurement of protection, and methods of handling risk. It also includes insurance buying, loss financing, and international insurance exposures.

**FIN 360-3 Investments (3 + 0)**

Prerequisites: FIN 330 and junior standing

This course is a survey of the organization and regulation of security markets; security analysis and valuation; and principles of portfolio management from the viewpoint of the individual investor.

**FIN 365-2****(ACC 365) Electronic Spreadsheets on the Microcomputer (2 + 0)**

Prerequisite: Junior standing

This course teaches the student how to create and use electronic spreadsheets (Lotus 1-2-3) on the microcomputer. Credit will be granted for only one of these courses.

**FIN 380-3 Real Estate Practice and Law (3 + 0)**

Prerequisite: Junior standing

This course surveys the principles and practices of real estate. Subject areas treated include the nature and description of real estate, real property interests and ownership, finance, appraisal, contract and agency law, and real estate investment.

**FIN 381-3     Advanced Real Estate Practice and Law (3 + 0)**

Prerequisites: FIN 380 and junior standing

This course builds upon the material covered in FIN 380 by providing expanded, in-depth coverage of the topics as well as introducing some new topics to provide a broad coverage of the field of real estate.

**FIN 382-3     Real Estate Finance (3 + 0)**

Prerequisites: FIN 380 and junior standing

This course is designed to provide the student and real estate professional with a basic understanding of the instruments, methods, procedures, institutions, and money markets involved in the financing of real property. There is special emphasis on the mathematics of real estate financing and practical problems.

**FIN 385-3     Intermediate Finance (3 + 0)**

Prerequisites: Junior standing, FIN 301, FIN 330

This is an advanced, integrated study of the theory, concepts, and techniques encompassed by financial markets, institutions, and investments as applied in managerial finance. Computer usage is required, especially spreadsheet applications, such as Lotus 1-2-3.

**FIN 400-3     Management of Financial Institutions (3 + 0)**

Prerequisites: FIN 301 and senior standing

The purpose of this course is to provide an integrated approach for the financial management of financial institutions. With this objective, the course concentrates on providing the theoretical framework and techniques of financial management, recognizing the rapid changes taking place in the institutional environment.

**FIN 410-3     International Financial Management (3 + 0)**

Prerequisites: FIN 310, FIN 330, ECO 355, and senior standing

The purpose of this course is to provide a conceptual framework to analyze business financial decision making in the international setting. All the traditional areas of corporate finance are explored, especially working capital management, capital budgeting, cost of capital and financial structure, and evaluation and control of operations. These topics are examined under conditions of multiple currencies, frequent exchange rate changes, varying rates of inflation, differing tax systems, multiple money markets, exchange controls, segmented capital markets, and political risks.

**FIN 450-3     Analysis of Financial Statements (3 + 0)**

Prerequisites: FIN 330 and senior standing

An in-depth study of current financial reporting practices; analysis and interpretation of corporate financial statements, utilizing text and selected cases.

**FIN 460-3     Security Analysis and Portfolio Management (3 + 0)**

Prerequisites: FIN 360 and senior standing

This course is designed to provide students with a comprehensive understanding of security analysis and portfolio management. The focus of the course is on selecting the appropriate securities and managing the portfolio to meet the investor's objectives.

**FIN 465-3     Small Business Consulting (3 + 0)**

Prerequisite: Senior standing

Students work in teams under the guidance of the instructor with selected small businesses in the community providing assistance on specified business problems. The course provides an opportunity for students to apply their classroom knowledge and problem-solving skills to make recommendations tailored to the specific needs of the business.

**FIN 470-3     Special Topics in Finance (3 + 0)**

Prerequisites: Senior standing and approval of the Finance Department chair

This is an in-depth study of selected topics in finance not available in the curriculum. Typically, this course will focus on current issues or developments in finance, and the content will vary. The course may be repeated with a different title.

**FIN 475-3     Seminar in Personal Financial Planning (3 + 0)**

Prerequisites: FIN 342, FIN 345, FIN 360, ACC 309 or ACC 410, and senior standing

This is a senior-level integrative course for finance majors concentrating in personal financial planning. It brings together the various aspects of financial planning with heavy emphasis on case studies.

**FIN 484-3     Real Estate Appraisal (3 + 0)**

Prerequisites: FIN 380 and senior standing

This course is designed to teach the student various methods of estimating real property value. The primary emphasis will be to apply these methodologies to single family residences, but some coverage is provided on commercial real estate.

**FIN 485-3 Commercial and Investment Real Estate (3 + 0)**

Prerequisites: FIN 380, FIN 382, and senior standing

This course studies real estate as an investment medium, the techniques used in evaluating and comparing the investment quality of property, the pros and cons of exchanging, and certain tax factors relevant to real estate investment.

**FIN 495-3 Financial Strategies and Policies (3 + 0)**

Prerequisites: Senior standing, FIN 385, and completion of all business core courses

This is an integrated, case study approach to financial management. Emphasis is on presentation of analyses and recommendations for strategies and policies. This is the capstone and assessment course for finance majors. Proficiency in personal computer word processing and spreadsheet applications is necessary.

**First-Year Seminar****XXX 119-3 First-Year Seminar (3 + 0)**

Analyzes the first-year college student's experience through social, psychological, and educational frameworks. Uses readings as multiperspective models of living in the world and the objects of inquiry. After close examination and class discussion, students write either reaction, review, or short research papers, using the personal voice to demonstrate their increasing awareness about how the issues affect them. Students build a body of writing that reflects their evolving role in academic life. Through written assignments, collaborative projects, oral presentations, and experiential learning, students make a more successful transition into college, achieving greater success while there. (Multicultural)

**French****FRE 101-5 Elementary French I (5 + 0)**

This is a beginner's course, with emphasis on pronunciation, speaking, and understanding, supplemented by grammar, reading, and writing.

**FRE 102-5 Elementary French II (5 + 0)**

Prerequisite: FRE 101 or one or two years of high school French

This course is a continuation of FRE 101. (General Studies Course, Level I—Communications)

**FRE 111-3 Basic Conversational French I (3 + 0)**

This course covers the essentials of the French language through a conversational approach.

**FRE 112-3 Basic Conversational French II (3 + 0)**

Prerequisite: FRE 111 or equivalent, or permission of instructor

This course is a continuation of FRE 111.

**FRE 180-1-15 International French Year I (1-15 + 0)**

This is a variable-credit course designed for first-year students learning French in a study-abroad setting. Recognizes approved study-abroad educational experience in French speaking, comprehension, reading, and writing.

**FRE 201-3 Intermediate French I (3 + 0)**

Prerequisites: FRE 101, 102 or equivalent

This course is a first-semester course of a two-semester intermediate French language sequence specifically designed to strengthen grammatical skills and proficiency in speaking, understanding, reading, and writing. It introduces students to a sampling of social, cultural, and literary topics central to the understanding of France and French-speaking people.

**FRE 202-3 Intermediate French II (3 + 0)**

Prerequisites: FRE 101, 102 or equivalent

This course is a continuation of FRE 201, designed to continue strengthening grammatical skills and proficiency in speaking, understanding, reading, and writing. It presents further examples of social and cultural topics central to an understanding of France and French-speaking people.

**FRE 211-3 French Reading and Conversation (3 + 0)**

Prerequisite: one year of college French or equivalent, or permission of instructor

This course builds oral proficiency at intermediate and advanced levels through a variety of personalized interactional activities that are based on readings appropriate to each stage of linguistic development.

**FRE 280-1-15 International French Year II (1-15 + 0)**

Prerequisites: one year of college French or equivalent

This is a variable-credit course that recognizes second-year study of French language and culture in an approved study-abroad setting.

**FRE 301-3 Introduction to Advanced French Studies (3 + 0)**

Prerequisites: FRE 201, 202, or permission of instructor

This is a transitional course that develops the critical, linguistic, and analytical skills required to pursue French studies at the advanced level. The texts are chosen to acquaint students with French sociocultural and literary issues.

**FRE 311-3 Survey of French Literature I (3 + 0)**

Prerequisites: FRE 301 or permission of instructor, satisfaction of Level I General Studies course requirements

This introduction to French literature from the Middle Ages to the Enlightenment gives an insight into French literary, historical, and cultural development through selected reading and discussion in French. (General Studies Course—Level II, Arts and Letters)

**FRE 312-3 Survey of French Literature II (3 + 0)**

Prerequisites: FRE 301 or permission of instructor, satisfaction of Level I General Studies course requirements

This introductory course in 19th- and 20th-century French literature emphasizes the evolution of literary style and content from Romanticism to contemporary literary schools. Readings and discussion are in French. (General Studies Course—Level II, Arts and Letters)

**FRE 315-3 French Phonetics: Theory and Practice (3 + 0)**

Prerequisite: two years of college French or equivalent, or permission of instructor

This course covers the essential facts of French phonology. It is aimed at improving students' pronunciation and articulation and introducing them to the field of linguistics.

**FRE 331-3 Advanced French Composition and Grammar (3 + 0)**

Prerequisites: FRE 201, 202 or equivalent, or permission of instructor

This course reinforces and further develops writing skills, enabling the student to combine accuracy with imagination and inventiveness in writing French.

**FRE 332-3 Advanced Conversation (3 + 0)**

Prerequisite: FRE 201 or 202 or equivalent, or permission of instructor

This course, which broadens the student's skills in French conversation, covers more advanced structures of the language, as well as other aspects of grammar and idiomatic expressions.

**FRE 355-3 French Historical Perspectives (3 + 0)**

Prerequisites: FRE 301 or permission of instructor, and satisfaction of Level I General Studies course requirements

This survey chronologically presents major political, societal, and cultural movements that have molded France and the French throughout history. (General Studies Course—Level II, Historical)

**FRE 356-3 Contemporary Socio-Cultural Issues (3 + 0)**

Prerequisites: FRE 301 or permission of instructor, and satisfaction of Level I General Studies course requirements

This course provides in-depth presentation and analysis of recent social, cultural, political, and economic issues important to an understanding of contemporary France. (General Studies Course—Level II, Social Science)

**FRE 380-1-15 International Advanced French (1-15 + 0)**

Prerequisite: junior or senior status in French or equivalent

This course recognizes upper-division study in language, culture, and literature in a study-abroad setting. It uses a variety of methods and includes reading, writing, and discussion seminars in French.

**FRE 452-3 Modern French Theater (3 + 0)**

Prerequisites: three years of college French or equivalent, or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, senior status

This course is a sampling of the French dramatists who have not only contributed to literary development but who also have had an impact on society and culture. Theater analysis techniques are stressed. (Senior Experience)

**FRE 453-3 The French Novel (3 + 0)**

Prerequisites: three years of college French or equivalent or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, senior status

This course is a sampling of 19th- and 20th-century French novels that are studied in depth using several literary analysis techniques. (Senior Experience)

**FRE 475-3 Senior Seminar in French Studies (3 + 0)**

Prerequisites: senior status, at least two courses at the FRE 300-level

This course is an intense thematic seminar. It emphasizes either a comparative study of a literary topic or a multidisciplinary approach to a cultural topic.

## Geography

### GEG 100-3 World Regional Geography (3 + 0)

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

A survey course presenting the study of the formation, behavior, and interaction of social, political, cultural, and economic regions throughout the world. (General Studies Course—Level II, Social Science)

### GEG 110-3 Introduction to Physical Geography (3 + 0)

Prerequisite: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

A survey course providing an understanding of all the elements of the physical environment. Emphasizes the four spheres: the atmosphere (weather and climate), the lithosphere (soils, geology, and landforms), the hydrosphere (oceans, streams, and groundwater), and the biosphere (vegetation and animals). Field trip required. (General Studies Course—Level II, Natural Science)

### GEG 112-1 Orienteering (0 + 2)

Familiarizes students with the reading and interpretation of topographic maps and the use of the compass. Orienteering exercises are conducted in the field.

### GEG 120-3 Introduction to Environmental Science (3 + 0)

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

An introduction to the study of the physical environment and some of the major related issues and problems. Areas of concern include the nature of the environment, climatic factors, resources, agriculture, solid and hazardous waste site location, pollution, global environmental hazards, and energy production. These are studied in relationship to population, land use, environmental ethics, decision making, and environmental management. (General Studies Course, Level II—Natural Science)

### GEG 122-2 Map Use (1 + 2)

An introductory course providing basic information on the use and interpretation of maps, map projections, map scale, map symbols, remote sensing, and geographical information systems.

### GEG 123-3 Weather and Climate (2 + 2)

An introductory course that includes that portion of physical geography dealing with weather and climate. Both world and local patterns are analyzed, as well as short- and long-range aspects of weather dynamics.

### GEG 124-3 Landforms of the U.S. (2 + 2)

A study of the physical features of the Earth's surface and the shape or form of the landscape influenced by interaction between basic earth processes and rock types, structure, climate, and weathering. U.S. and Canadian examples are used to illustrate landforms.

### GEG 130-3 Introduction to Human Geography (3 + 0)

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

An introduction to geographic perspectives, concepts, and methods as they apply to the study of human activities. Emphasizes patterns of human distribution, adjustments to the natural environment, and land use practices. (General Studies Course—Level II, Social Science)

### GEG 140-3 World Resources (3 + 0)

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

A survey of the physical resources of the world, including water, soil, vegetation, energy, and minerals. Includes an analysis of geographic occurrence, extraction, appraisal, utilization, historic changes, and environmental issues. (General Studies Course—Level II, Natural Science)

### GEG 150-1-3 Current Topics in Geography (Variable Topics) (1-3 + 0)

Prerequisite: permission of instructor

The study of an important topic in geography, usually involving a contemporary issue. Course content will vary and the course may be repeated for credit as the course topic changes.

### GEG 202-3 Geography of Colorado (3 + 0)

Prerequisites: satisfaction of the Level I mathematics course requirement and either ENG 101 or the Level I communications course requirement

A study of the physical, economic, and cultural features of Colorado. Major factors include climate, landforms, water, resources, energy and minerals, soil, vegetation, population characteristics, the economy, trends, national and international relationships, regional differences, current issues, and problems. (General Studies Course—Level II, Social Science)

**GEG 210-2 Geography of Latin America (2 + 0)**

Prerequisite: a course in geography or permission of the instructor

A study of the physical, political, and economic geography of Latin American countries. Emphasizes contemporary land-use patterns and use of natural resources.

**GEG 220-3 Geography of the United States (3 + 0)**

Prerequisites: six hours of earth science courses

A survey of the geography of the U.S., including an overview of the physical characteristics, landforms, climate, soil, vegetation, and natural resources. Studies the regions of the U.S., including such factors as population, agriculture, industry, transportation, and cultural factors. Geographic problems and issues are raised.

**GEG 225-3 Introduction to Geographic Information Systems (3 + 0)**

Prerequisites: GEG 122 and MTH 121

An introduction to the theory and practice of creating and using computer-based geographic information systems. Introduces and provides direct experience with the techniques used to develop, manipulate, and display spatial data using computers. The cartographic aspects of environmental decision making in the emerging age of widespread computer usage are stressed.

**GEG 230-3 Geographic Analysis of Social Issues (3 + 0)**

Prerequisite: GEG 130

A geographic analysis of current social issues. Topics include urban spatial problems, such as crowding and crime, drugs and gangs, population growth, environmental perception, resource use, and culturally based land-use patterns. The administration of space, boundaries, territoriality, and spatial learning are discussed.

**GEG 300-3 Historical Geography of the U.S. (3 + 0)**

Prerequisites: six hours of geography or permission of instructor; GEG 130, 220, or HIS 121 recommended

Examines the unique interrelationships between geography and history. Topics include frontiers and boundaries, settlement patterns, environmental perception, sequent occupancy, changing land-use practices, migration, and urban growth. Addresses the interrelationships between different physical environments and cultural landscapes.

**GEG 321-4 Introduction to Cartography (2 + 4)**

Covers the use and interpretation of maps, as well as the tools and construction techniques. Students execute a variety of maps at different map scales and projection and critique their effectiveness.

**GEG 322-3 Intermediate Cartography (1 + 4)**

Prerequisite: GEG 321

Emphasizes the production of monochromatic, multitone, thematic maps, using scribing and photographic techniques. Explores alternative methods of representing relief features, including construction of physiographic block diagrams, pictorial maps, and contour maps.

**GEG 336-3 Geography of Economic Activity (3 + 0)**

Prerequisites: GEG 100 or 130, six additional hours of geography, MTH 121

Investigates the "economic landscape" and analyzes global patterns of spatial interdependence in a systems framework. Spatial economic models are examined through case studies and class exercises. The relationships between human activity and land-use patterns are examined in a world/regional context.

**GEG 340-3 Water Resources (3 + 0)**

Prerequisites: GEG 120 or 140, one of the following: GEG 110, 123, or GEL 101

Analyzes water as a major resource. Includes the study of the hydrologic cycle, competing water uses, current water problems, and approaches to water management. The relationship of water to land use is examined in terms of dams, watersheds, water laws, pollution, and flood control.

**GEG 360-3 Urban Geography (3 + 0)**

Prerequisite: GEG 100, 130, or URS 100

Examines theories of urban development and factors that affect urbanization, such as demographic change, annexation, zoning, and infrastructure development. Models of urban land use are examined in the context of cities in the United States. Students learn how to prepare and analyze census tract maps.

**GEG 361-3 Principles of Land Use (3 + 0)**

Prerequisites: GEG 360 or 336, six hours of geography

Covers basic concepts of land-use planning. Analyzes land-use patterns and existing land-use plans, and interprets land-use maps. Students learn how to collect relevant data, prepare a comprehensive land-use plan, and predict future planning issues.

**GEG 362-3 Population, Resources, and Land Use (3 + 0)**

Prerequisites: GEG 100 or 130, six hours in geography, GEG 140 recommended

Examines the distribution and density of the global population and the relationship of these patterns to world resources and development problems. Analyzes population shifts, including birth, death, migration, and doubling rates. Data analysis and projections are included.

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### **GEG 363-3 Transportation Planning and Land Use (3 + 0)**

Prerequisites: GEG 361, six additional hours of geography

An analysis of transportation systems as they relate to other types of land use. Transportation networks are examined in terms of types, patterns, and densities. Consideration is given to alternative transportation systems as they relate to energy savings, pollution prevention, and the reduction of congestion.

### **GEG 392-2-6 Directed Study in Land Use (0 + 4-12)**

Prerequisites: 15 hours in earth science courses and approval of instructor

Provides an opportunity for upper-division students with good background in earth science to pursue study in a specific topic of interest and value. Requires approval of supervising instructor and department chair and frequent meetings between student and instructor.

### **GEG 420-3 Environmental Policy and Planning (3 + 0)**

Prerequisites: GEG 120 or 140, 361 or 401, junior or senior status

Provides an overview of environmental policy and major environmental laws in the U.S. Major statutes are analyzed in terms of purpose, scope, implementation, compliance requirements, and impact on land use. Case studies are examined in a planning context.

### **GEG 461-3 Urban and Regional Planning (3 + 0)**

Prerequisites: GEG 360, 361 or equivalent

A study of the philosophy and scope of urban and regional planning and the principles and factors of planning and their interrelationships.

### **GEG 462-3 Land Use: Residential (3 + 0)**

Prerequisite: GEG 360 or permission of instructor

Focuses on the spatial patterns and theories explaining the residential mosaic of North American cities. Analyzes housing types, densities, patterns and geographic distribution, and the interrelationships with other aspects of the urban environment.

### **GEG 464-3 Land Use: Recreation (3 + 0)**

Prerequisites: GEG 361, six additional hours, or permission of instructor

A study of the various types of recreation space, such as parks, greenbelts, and wilderness areas. Discusses recreation land as part of the land-use planning process.

### **GEG 471-3 Legal Aspects of Land Use (3 + 0)**

Prerequisite: GEG 361 or permission of instructor

A study of laws, ordinances, and regulations relating to land use; the role of federal, state, and local government in regulating and controlling land use. Makes use of case studies and local issues.

### **GEG 484-3 Remote Sensing (3 + 0)**

Prerequisites: GEG 122 and either 110, 124, or GEL 101, six hours of upper-division geography or geology courses

Analyzes the Earth's surface using high-altitude imagery. Interpretation and application of data are examined using aerial photos, satellite imagery, and multispectral sensing, including infrared and radar. The application of remote sensing techniques to the field of land-use planning and geographical information systems is stressed.

### **GEG 485-3 Advanced Geographic Information Systems (1 + 4)**

Prerequisites: nine hours of geography, GEG 321

Involves the production and manipulation of two- and three-dimensional polygon maps from geocoded databases. Software packages of ARC/INFO and MAP/INFO are stressed.

### **GEG 495-2-15 Internship in Land Use (0 + 6-45)**

Prerequisite: GEG 361 or permission of department chair

An internship experience as performed on the job with a land-use-related company or agency. Provides an approved learning experience under the direction of an earth science faculty member. Qualified supervision is required

### **GEG 496-3 Global Environmental Challenges (3 + 0)**

Prerequisites: satisfaction of all Level I and Level II General Studies course requirements, senior status

Covers the identification of major global environmental problems, including causes and impacts and the interplay of economic, cultural, and political forces. Involves geographic analysis, including location, spatial distribution, density, boundaries, and physical factors such as landforms, soils, and climate. Offered in the spring for seniors and in the fall for teacher education students and teacher relicensure. (Senior Experience)

## Geology

### **GEL 101-4 General Geology (3 + 2)**

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

An introduction to the theories, concepts, and assumptions in geology. Covers internal and surficial processes, their products, and their effects on the environment. Field trip required. (General Studies Course—Level II, Natural Science)

### **GEL 102-3 Geology of Colorado (3 + 0)**

Prerequisites: minimum performance-standard scores on reading, writing, and mathematics preassessment placement tests

Introduces the basic theories, concepts, and assumptions in geology, using the state of Colorado as the focus area. Major geological provinces; mineral resources; common rock-forming minerals; and sedimentary, igneous, and metamorphic rocks are covered. One field trip required. (General Studies Course—Level II, Natural Science)

### **GEL 103-4 Historical Geology (3 + 2)**

Prerequisite: GEL 101

Presents the history of the Earth and the evolution of life on it as seen in rocks and fossils, and theories of the origin of both. Reviews changing geography of the Earth through time, and the reconstruction of past scenes from the rock record. Field trip required.

### **GEL 115-3 Oceanography (3 + 0)**

Prerequisites: minimum performance-standard scores on reading, writing, and mathematics preassessment placement tests

An introductory study of the world's oceans, including historical explorations, physical and biological processes, energy sources, ocean resources, marine provinces, and geology of ocean basins. Emphasizes global distribution, use, and control of ocean resources, and ocean pollution. (General Studies Course—Level II, Natural Science)

### **GEL 120-2 Gemology (1 + 2)**

Describes the history, geography, and areas of occurrence of gemstones, as well as the physical properties of gems. Includes testing methods and instruments.

### **GEL 150-1-3 Current Topics in Geology (Variable Topics) (1-3 + 0)**

Prerequisite: permission of instructor

The study of an important topic in geology, usually involving a contemporary issue. Course content will vary and the course may be repeated for credit as the course topic changes.

### **GEL 201-4 Rocks and Minerals (3 + 2)**

Prerequisite: GEL 101

An introduction to the origin, occurrence, and identification of the common minerals and rocks that make up the Earth's crust. Emphasizes field recognition of the rocks and minerals of Colorado.

### **GEL 202-4 The Stratigraphy and Structure of the Earth (3 + 2)**

Prerequisite: GEL 101; GEL 201 recommended

An introduction to vertical and lateral relationships among strata and the genetic significance of micro and macro structural features.

### **GEL 312-4 Advanced Geomorphology (3 + 2)**

Prerequisites: MTH 121, GEL 101, GEG 110, 124, or permission of the instructor

Provides a detailed examination of the landforms of the Earth and their origins. All surficial and internal processes are included. Extensive use of maps and aerial photographs is made. Field trips required.

### **GEL 315-3 Hydrogeology (3 + 0)**

Prerequisites: MTH 111, 121, and GEL 101

A practical approach to the study of surface and subsurface waters, with emphasis given to chemistry, mode of migration, pollution, and relationships to the geologic environment. Includes methods of exploration, well-log analysis, and field sampling.

### **GEL 342-4 Soil Resources (3 + 2)**

Prerequisites: GEL 201, GEG 124

Examines the materials and processes that combine to produce various soil types. Soil types will be examined in relationship to climate, landforms, vegetation, and geology. The distribution of soil types is examined in relationship to land use patterns.



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### **GEL 344-4 Energy and Mineral Resources (3 + 2)**

Prerequisites: GEL 201 and GEG 140, or permission of instructor

Investigates mineral reserves and resources that serve our industrial society. Includes a detailed examination of the origin, physical character, and distribution of minerals, including metals and nonmetals, and energy resources, including fossil fuels and alternative energy sources.

### **GEL 392-2-6 Directed Study in Geology (0 + 4-12)**

Prerequisites: 15 hours in geology

Provides an opportunity for upper-division students with a strong background in geology to pursue study in a specific topic of interest and value. Requires approval of instructor and department chair and frequent meetings between student and instructor.

### **GEL 400-3 Environmental Geology (2 + 2)**

Prerequisites: GEL 101 or GEG 110; minimum of six additional hours in geology or physical geography or permission of instructor

Explores natural and "human impacted" geologic factors and their effects on the quality of the environment. Environmental hazards, including earthquakes, floods, volcanoes, and mass wasting, as well as resource development and waste disposal, are examined to determine cause-and-effect relationships.

### **GEL 401-3 Environmental Hazards and Planning (3 + 0)**

Prerequisites: GEL 400; GEG 361 recommended

Evaluates environmental hazards relative to various land-use patterns. Includes case studies to examine hazards and prepare model plans and alternatives. Environmental audit procedures and environmental impact statements are studied as part of the planning process.

### **GEL 415-3 Hydrology (3 + 0)**

Prerequisites: GEL 101, 315, MTH 121

Examines surface and subsurface waters with respect to water flow, drainage systems, storage, pollution, and environmental relationships. The hydrologic cycle is studied in relationship to surface water distribution. Techniques and instrumentation for data collection are covered.

### **GEL 495-2-15 Internship in Geology (0 + 6-45)**

Prerequisites: major in land use—geologic emphasis, junior or senior status, 12 upper-division courses in geology, permission of Earth Science Department chair

An internship experience as performed on the job with a geology-related company or earth sciences agency. Must provide an approved learning experience under the direction of a faculty member of the Earth Sciences Department. Qualified supervision required.

### **GEL 496-3 Environmental Field Studies (1 + 4)**

Prerequisites: 12 hours of upper-division courses in geology, physical geography, biology, and/or meteorology or written permission of instructor; completion of all Level I and Level II General Studies course requirements, senior status

A senior-level, capstone course for land-use majors. Students design, conduct, and report on specific environmental field investigations in the Denver area, with the assistance of faculty and environmental professionals. Topics include water resource issues, environmental hazards, alternate energy projects, soils mapping, and waste disposal. Wherever possible, students are paired with an environmental professional. (Senior Experience)

## German

### **GER 101-5 Elementary German I (5 + 0)**

This is an introductory course in German, including pronunciation, grammar, and reading, with emphasis on speaking and understanding.

### **GER 102-5 Elementary German II (5 + 0)**

Prerequisite: GER 101, or one or two years of high school German

This is a continuation of GER 101. (General Studies Course—Level I, Communications)

### **GER 111-3 Basic Conversational German (3 + 0)**

This course covers the essentials of the German language through a conversational approach.

### **GER 112-3 Basic Conversational German (3 + 0)**

Prerequisite: GER 111 or equivalent or permission of instructor

This course is a continuation of GER 111.

### **GER 180-1-15 International German Year I (1-15 + 0)**

This is a variable-credit course for first-year students learning German in a study-abroad setting. It recognizes an approved study-abroad educational experience in German speaking, comprehension, reading, and writing.

**GER 211-3 German Reading and Conversation (3 + 0)**

Prerequisite: one year of college German or equivalent or permission of instructor

This course prepares the student to read and to communicate with ease in German. It emphasizes vocabulary and idiomatic phrases used in everyday language.

**GER 212-3 German Civilization (3 + 0)**

Prerequisite: one year of college German or equivalent or permission of instructor

This course emphasizes the broadening of reading and conversational skills. It introduces the student to various aspects of German civilization, from its geography and history to its philosophical and political thought, arts, music, and modern living.

**GER 231-3 German Vocabulary Building and Grammar (3 + 0)**

Prerequisite: one year of college German or equivalent or permission of instructor

This course is designed to strengthen the student's grammatical background by reinforcing old principles and introducing new, more advanced principles of grammar and to increase vocabulary.

**GER 232-3 German Composition and Free Writing (3 + 0)**

Prerequisite: one year of college German or equivalent or permission of instructor

This course is designed to strengthen the student's writing skill. It exposes the student to various topics of interest through the use of informative films and articles from German newspapers and magazines.

**GER 280-1-15 International German Year II (1-15 + 0)**

Prerequisite: one year of college German or equivalent

This variable-credit course recognizes second-year study of German language and culture in an approved study-abroad setting.

**GER 301-3 Third Year German Conversation (3 + 0)**

Prerequisite: GER 211 or 212 or four years of high school German

This course strengthens conversational ability with more complicated idiomatic and structural elements, using techniques such as skits, debates, and small-group discussions to improve fluency and broaden the scope of communication. Conducted in German.

**GER 315-3 German Phonetics: Theory and Practice (3 + 0)**

Prerequisite: two years of college German or equivalent or permission of instructor

This course covers improvement of pronunciation and speech habits based on an understanding of the phonetics of German. After an introduction to the basic speech mechanism through principles of linguistics, the course offers practice in pronunciation through the declamation of selected texts.

**GER 320-3 German Culture and Civilization (3 + 0)**

Prerequisites: two years of college German or equivalent or permission of instructor and satisfaction of Level I General Studies course requirements

This course is an advanced German conversational approach to the main cultural events that have shaped German lifestyles. Historical events, as well as modern German lifestyles of West and East Germany, Austria, and Switzerland are discussed. The format is reading-discussion, conducted in German. Students are required to give oral presentations. (General Studies Course—Level II, Arts and Letters)

**GER 321-3 Survey of German Literature I (3 + 0)**

Prerequisite: two years of college German or equivalent or permission of instructor

This course provides an insight into German historical and cultural development through selected readings in German literature, from its beginning to the 18th century.

**GER 322-3 Survey of German Literature II (3 + 0)**

Prerequisite: two years of college German or equivalent or permission of instructor

This course covers the history of German literature of the 18th, 19th, and early 20th centuries, including selected readings of principle German authors, lectures on biography and criticism, and recitation. Conducted in German.

**GER 323-3 Contemporary German Writers (3 + 0)**

Prerequisite: two years of college German or equivalent or permission of instructor

After a rapid survey of philosophical, political, economic, and social backgrounds, this course emphasizes works of distinguished contemporary authors. Lectures on biography and criticism are interspersed as convenient. A term paper is assigned. Conducted in German.

**GER 331-3 Advanced German Composition and Grammar (3 + 0)**

Prerequisites: GER 231, 232 or permission of instructor

This course is designed to prepare the student for the demands of the use of literary and scientific German at advanced levels. The student is led into an appreciation of the deeper structures of the language and the functional aspects of grammar in communication.

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### **GER 340-3 German for Business (3 + 0)**

Prerequisite: GER 231 or permission of instructor

This course is for students who plan to do business with people in German-speaking countries. Incorporates specialized language pertaining to marketing, banking, the structure of corporations, and the code of behavior in the business world; the social protection of the gainfully employed; transportation; import; and export. Excellent exercises for reading/comprehension on today's topics are included.

### **GER 341-3 Translation Techniques for Scientific Materials (3 + 0)**

Prerequisite: GER 232 or permission of instructor

This course is designed for the understanding of writings in the field of science. Attention is given to the specialized vocabulary, idioms, and sentence structure in this field. Translations on up-to-date topics are from German into English, facilitating reading and comprehension.

### **GER 351-3 Lessing, Goethe, and Schiller (3 + 0)**

Prerequisite: two years of college German or equivalent or permission of instructor

This survey course covers the history of the German drama. The works selected are read and analyzed. Class periods are devoted to lectures on historical background, biography and criticism, reading, translation of the works for appreciation or alertness, class discussion in German, and oral or written reports.

### **GER 380-1-15 International Advanced German (1-15 + 0)**

Prerequisite: junior or senior status in German or equivalent

This course recognizes upper-division study in language, culture, and literature in a study-abroad setting. It uses a variety of methods and includes reading, writing, and discussion seminars in German.

### **GER 402-3 Advanced German Composition (3 + 0)**

Prerequisite: three hours of third-year college German

This course is an advanced study of the application of vocabulary, idiomatic expressions, and grammatical structures necessary for effective written communication. It includes review and expansion of various grammatical topics, exercises on stylistics, and considerable expansion of the student's vocabulary. Conducted in German.

### **GER 411-3 The German Novel of the 19th and Early 20th Centuries (3 + 0)**

Prerequisites: three hours of third-year college German or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, senior status

This course presents the development of the German novel and short novel, with emphasis on the principal writers of prose fiction of the 19th and early 20th centuries. Reports and discussions of representative works, supplemented with lectures on biography and historical background are required. Conducted in German. (Senior Experience)

### **GER 412-3 German Drama of the Nineteenth and Twentieth Centuries (3 + 0)**

Prerequisites: three hours of third-year college German or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, senior status

This course is a continuation of GER 411. Presents development of the German drama, with emphasis on the dramatists of the 19th and 20th centuries. Principal works of Tieck, Kleist, Hebbel, Ludwig, Hauptmann, and Brecht, supplemented with lectures on biography and historical background, are included. Conducted in German. (Senior Experience)

### **GER 421-3 Advanced Conversation: Present-day Germany (3 + 0)**

Prerequisite: three hours of third-year college German or permission of instructor

This course is designed to help the student develop an understanding of present-day Germany. Recent and current socioeconomic changes and political trends are emphasized. Articles in recent issues of a leading German periodical are used as basis for classroom discussion, student reports, and themes.

## **Health Care Management**

### **HCM 301-3 Health Care Organization (3 + 0)**

Prerequisite: junior status

Corequisite: 100 hours volunteer work in a U.S. health care facility for those students who have had no prior health care experience

Analyzes organizational structure, the nature of health, and health care delivery. Emphasizes the interrelatedness of cultural, economic, political, and social aspects of health care delivery, along with its services and management. Disease origins and epidemiology are explored.

### **HCM 302-3 Management Principles in Health Care (3 + 0)**

Prerequisite: HCM 301 or may be taken concurrently

Provides a general orientation to management practices in the field of health care. Emphasizes management concepts, processes, and theoretical content considered necessary for people who intend to practice in health care management positions.

**HCM 303-3 Health Care Jurisprudence (3 + 0)**

Prerequisite: HCM 301 or may be taken concurrently or permission of instructor  
Examines the legal and ethical issues involved in the management and delivery of health care services. Emphasis is placed on negligence, contracts, confidentiality, labor relations, and current medical/ethical issues.

**HCM 330-3 Management Issues and Health Policy (3 + 0)**

Prerequisites: HCM 301 and 302 or may be taken concurrently or permission of instructor  
Discusses the role of the health manager in relation to health planning, health policy, and other related management issues. The political process as it relates to policy development and health planning will be explored.

**HCM 402-3 Human Resource Management in Health Care (3 + 0)**

Prerequisites: HCM 301 and 302 or may be taken concurrently or permission of instructor  
Analyzes human resource management functions as they affect employee productivity and satisfaction in health care organizations. Stresses functions, structures, laws, and principles that are significant in human resource management.

**HCM 403-3 Financial Management in Health Care (3 + 0)**

Prerequisites: HCM 301, ACC 201, and a departmentally approved computer course or permission of instructor  
Surveys the organizational and operational aspects of fiscal analysis and control of health care institutions. Emphasizes the practical processes involved in the determination and analysis of revenues, costs, rates, working capital levels, budgets, and uses of the computer.

**HCM 404-3 Health Care Economics (3 + 0)**

Prerequisite: HCM 301 and ECO 202 or permission of instructor  
Examines the major economic issues facing the health care industry. Emphasizes the major elements of economic theory from a macro-economic perspective and how these theories are applied in the health service sector.

**HCM 450-2 Health Care Management Pre-Practicum (2 + 0)**

Prerequisites: all 300-level HCM courses, HCM 402, all required support courses (This course must be taken the semester prior to HCM 451.)

A preparatory course required of HCM majors prior to taking HCM 451 Health Care Management Practicum. Students are required to prepare a résumé, develop interview skills, determine placement agency and preceptor, and develop a proposal for the practicum under faculty guidance.

**HCM 451-6 Health Care Management Practicum (1 + 15)**

Prerequisites: HCM 450 plus either HCM 403 or 404  
A capstone course designed to provide the student with an opportunity to integrate and operationalize all previously learned health management knowledge and skills. The student completes a health management project. The management area of study and the practicum setting are mutually agreed upon by the student, the faculty member, and the health facility preceptor. (Senior Experience)

## Health Education Services

**HES 105-3 Dynamics of Health (3 + 0)**

Prerequisites: minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

Investigates contemporary health issues. Emphasizes health issues that most frequently confront the college student. Subjects surveyed are current biological, psychological, sociological, and cultural factors that influence health in a changing society. (General Studies Course—Level II, Social Science)

**HES 200-3 Health Politics and Policy (3+0)**

Prerequisites: permission of instructor  
A basic study of the political issues impacting the planning and implementation of health care policy. Emphasis will be concentrated on the major factors which are dictating health care reform. The changing health care environment and the need for a universal/national health care policy will be considered.

**HES 204-3 Introduction to Nutrition (3 + 0)**

Prerequisites: satisfaction of the Level I math course requirement, ENG 102, and high school chemistry or permission of instructor

A study of essential nutrients and their function in promoting total well-being of the individual. Necessary food requirements are analyzed and ways of satisfying these requirements are identified. (General Studies Course—Level II, Natural Science)

**HES 215-3 Alternative Therapies for Health and Healing (3 + 0)**

Prerequisite: HES 105 or permission of instructor  
This course is designed to acquaint students with a variety of nontraditional health and healing modalities in use in the United States today. It provides the basis for understanding the mechanisms and principles by which therapeutic responses are produced. The student will be required to develop and present a report related to a specific therapeutic modality.

**HES 218-3 AIDS: Acquired Immune Deficiency Syndrome (3 + 0)**

This course is designed to acquaint non-health-related majors with the dynamics surrounding HIV disease. It provides a forum to discuss the biological, psychological, social, cultural, economical, ethical, legal, and political ramifications of HIV disease.

**HES 307-3 Parental Health Care Issues (3 + 0)**

Prerequisite: PSY 325

Prepares the student to provide anticipatory guidance to parents. Emphasizes health maintenance, illness/injury prevention, the management of health problems, and available resources.

**HES 308-3 Maternal and Child Nutrition (3 + 0)**

Prerequisite: HES 204 or permission of instructor

Increases the student's knowledge about the physiological, psychological, sociological, and cultural factors that influence nutritional needs and eating habits of the growing family. Presents nutritional requirements, dietary planning guidelines, and techniques for assessing the nutritional status for the following developmental levels: the pregnant and lactating woman, the infant, the preschool and school-age child, and the adolescent.

**HES 310-3 Nutrition and Aging (3 + 0)**

Prerequisite: HES 204 or permission of instructor

Designed to provide students with knowledge about the physiological, psychological, and socioeconomic changes that accompany aging and their impact on the dietary practices of the aging population. Emphasizes nutritional education relevant to the older citizen. Includes identification of community resources that are available to support older citizens in augmenting their food choices.

**HES 320-3 Nutrition and Sports Performance (3 + 0)**

Prerequisite: HES 204 or permission of instructor

Enables the student, through application of the principles of nutrition, to improve health, fitness, and physical performance within the limits set by genetic endowment and level of training.

**HES 345-3 Dynamics of Disease (3 + 0)**

Prerequisites: completion of all Level I General Studies course requirements and BIO 100 or 108, or permission of instructor

Acquaints non-health-related majors with the dynamics of disease and human body responses to a variety of stressors. Provides a conceptual basis for understanding the mechanisms and principles by which pathological consequences are produced. Students are required to develop and test a hypothesis related to a potential or actual health problem. (General Studies Course—Level II, Natural Science)

**HES 350-3 Intermediate Nutrition (3 + 0)**

Prerequisites: ENG 101 and 102; Level I Mathematics; HES 204; BIO 100 or 108

This course is a continuation of HES 204 Introduction to Nutrition. Digestion, absorption, transport, and metabolism will be examined in relation to human health, fitness, and prevention of disease. Biologic, psychologic, sociologic, and cultural factors will be considered.

**HES 360-3 Ethical Decision Making in Health Care (3 + 0)**

Prerequisite: major in health care related field

Familiarizes nurses and others in health care fields with ethical decision-making models. Teaches them to apply ethical decision-making models to dilemmas in their own clinical practice. Helps them adopt an appropriate, ethical decision-making model in their own clinical practice.

**HES 380-4 Clinical Pathophysiology (4 + 0)**

Prerequisite: BIO 232 or equivalent

Familiarizes the student with the nature of pathophysiology using major conceptual areas, as it evolves from the incipient stage to full development. Pertinent biochemical and metabolic derangements are correlated with the cellular structure of the body by applying systems theory. Background knowledge in normal anatomy and physiology is recommended.

**HES 382-3 Health Care Counseling (3 + 0)**

Prerequisite: registered nurse status or permission of instructor

Designed to prepare students to apply concepts and theories of health care counseling. For teachers, nurses, health educators, and allied health professionals whose primary goal or role is not counseling, although counseling may be an important part of their responsibilities.

**HES 452-3 Internship in Gerontology (3 + 0)**

Prerequisites: all required courses in the gerontology services minor; permission of the Gerontology Minor Curriculum Committee required on course substitutions and on agency placements

Designed for non-health care management students minoring in gerontological services. The internship site must be approved by the Gerontology Minor Curriculum Committee and should be taken after all required courses in the minor have been completed. The course provides an opportunity for students to apply course work to a professional setting serving older persons. Exceptions to policy must be approved by the Gerontology Minor Curriculum Committee.

## History

### **HIS 100-3 American Civilization (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
An entry-level American history course designed to trace the roots of contemporary America. (General Studies Course—Level II, Historical)

### **HIS 101-3 Western Civilization to 1715 (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
Treats the development of the culture and institutions of Western civilization, the earliest civilizations of the Middle East, the transitions of the classical Mediterranean world, and the syntheses of Western Europe in the medieval and early modern periods. (General Studies Course—Level II, Historical)

### **HIS 102-3 Western Civilization since 1715 (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
Treats the history and culture of Western civilization from 1715 to the present: the old regime and revolutions, 19th-century nationalism and liberalism, and the crises of wars and values in the 20th century. (General Studies Course—Level II, Historical)

### **HIS 110-3 American West (3 + 0)**

Treats the growth and development of the Trans-Mississippi West from 1540 to 1900. Emphasizes the economic and social factors that made the West a distinct region.

### **HIS 111-3 Colorado History I (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
Covers the development of Colorado, with primary emphasis on the 19th century. Examines Native American influence; Spanish, French, and U.S. exploration; mining and trapping; and early settlements and pioneer life. (General Studies Course—Level II, Historical)

### **HIS 121-3 American History to 1865 (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
Surveys the European background of American history, the colonial period, the Revolution, the development of the U.S. from Washington through Jackson, the sectional differences of the 1840s and 1850s, and the Civil War. (General Studies Course—Level II, Historical)

### **HIS 122-3 American History since 1865 (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
Covers the immediate background to present-day America, beginning with the Civil War and culminating with World War II. Topics include industrialism, emergence of the U.S. as a world power, Progressivism, the First World War, the Roaring Twenties, and the Great Depression. (General Studies Course—Level II, Historical)

### **HIS 140-3 History of Popular Culture (3 + 0)**

An introductory course on the history of American popular culture. Students learn about the relationship of popular culture (music, movies, television, fast food operation, literature) and society in the 20th century.

### **HIS 151-3 Movies and History (3 + 0)**

Studies the relationship between broad social values and American movies.

### **HIS 153-3 Sports in America (3 + 0)**

Traces the history of modern sports from the 19th century to the present. Explores how American institutions and traditions have shaped sports and how American expectations of sports have evolved over 200 years.

### **HIS 165-3**

#### **(WMS 165) Women in U.S. History (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
Emphasizes women's changing roles in American history from 1607 to the present. Covers the nature of women's work and their participation in the family, church, and reform movements in the colonial and early national period, and the 19th and 20th centuries. The emergence of the modern woman in the 20th century, as well as the re-emergence of the women's movement is discussed. The course stresses both the changes and the continuities over the past 300 years. Credit is granted for only one of these courses. (General Studies Course—Level II, Historical)

### **HIS 191-3**

#### **(CHS 101) History of Meso-America: Pre-Columbian and Colonial Periods (3 + 0)**

Prerequisites: CHS 100 and minimum performance standard scores on reading and writing preassessment placement tests

Studies the indigenous cultures of Meso-America during the pre-Columbian period. Focuses on social, artistic, scientific, and engineering artifacts before and after the conquest of Mexico and the Southwestern U.S. by Spain. Credit is granted for only one of these courses. (General Studies Course—Level II, Historical; Multicultural)

## 260 COURSE DESCRIPTIONS

### **HIS 192-3**

#### **(CHS 102) History of the Chicano in the Southwest: Mexico and U.S. Periods (3 + 0)**

Prerequisites: CHS 101 or permission of instructor, minimum performance standard scores on reading and writing preassessment tests

Begins with the Mexican War of Independence (1810) and concludes with an in-depth study of the historical development of the contemporary Chicano world. Credit is granted for only one prefix: HIS or CHS. (General Studies Course - Level II, Historical; Multicultural)

### **HIS 193-3**

#### **(NAS 193) History of Indigenous/Hispanic Americans (3 + 0)**

Prerequisites: minimum performance standard scores of reading, writing, and mathematics preassessment placement tests.

Traces the development of indigenous and Indo-Hispanic civilization in North America from prehistoric origins to the present. (General Studies Course—Level II, Historical; Multicultural).

### **HIS 194-3**

#### **(AAS 113) Survey of African History (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests  
Surveys the major developments on the African continent from ancient times to the modern period. Focuses on political and cultural developments in African civilizations from ancient Egypt to the contemporary period. Credit is granted for only one of these courses. (General Studies Course—Level II, Historical; Multicultural)

### **HIS 201-3 Contemporary World History (3 + 0)**

Prerequisites: satisfaction of ENG 101 and Level I communication course requirements

Explores the major developments in the 20th century emphasizing political, social, and economic experiences. The issues facing the Third World are examined closely. (General Studies Course—Level II, Historical)

### **HIS 265-3**

#### **(WMS 265) Women of the West (3 + 0)**

Examines women who inhabited the American frontiers from pre-Columbian times through the 20th century. The lives and attitudes of Native American, Hispanic, African American, and native-born and European immigrant women are emphasized. Differences between images and the reality of women's lives are highlighted.

### **HIS 267-3 United States and Vietnam (3 + 0)**

Traces the 1960s conflict in Vietnam to its roots in 19th-century colonialism, conflicting interests in World War II, and the demise of French power in the 1950s. Details U.S. involvement and U.S. strategy from the 1950s until the defeat of South Vietnam in 1975. Attention is also paid to the U.S. homefront and to the effects of the conflict.

### **HIS 277-3 World of Islam (3 + 0)**

Examines major developments associated with the origin, expansion, and evolution of Islam and Islamic civilization from the seventh century to the modern period.

### **HIS 282-3**

#### **(CHS 212) Mexico: Independence to Revolution, 1810-1910 (3 + 0)**

Prerequisite: HIS 191/CHS 101

Describes the social, political, cultural, and economic development of the Mexican people during the 19th century. Also provides an analysis of how race, class, gender, regionalism, and foreign intervention influenced Mexican history throughout the era.

### **HIS 283-3**

#### **(CHS 213) Mexico: Revolution to the Present, 1910-1990s (3 + 0)**

Prerequisites: CHS 101/HIS 191 and CHS 212/HIS 282 or permission of instructor

Traces the social, political, cultural, and economic effects of the 1910 Revolution on 20th-century Mexico. Describes how the U.S. government and citizens have influenced Mexico's history.

### **HIS 295-3**

#### **(AAS 213) West African Civilizations (3 + 0)**

Prerequisites: satisfaction of ENG 101 and Level I communication course requirements

Surveys the history and cultures of West Africa from A.D.1000 to the modern period. Focuses on political, cultural, and economic developments among West African peoples and states. (General Studies Course—Level II, Historical; Multicultural)

### **HIS 301-3 History of Denver (3 + 0)**

Emphasizes the growth and development of Denver. Field trips are used to clarify the city's history. Students are acquainted with agencies interested in preserving the city's history.

**HIS 303-3 Ancient Orient and Greece (3 + 0)**

Prerequisite: satisfaction of Level I General Studies course requirements

Familiarizes the student with the histories and cultures of the Near East and Greece of antiquity, the contributions those societies made to civilization, and their overall significance. (General Studies Course—Level II, Historical)

**HIS 306-3 Rome and the Caesars (3 + 0)**

Prerequisites: HIS 101 or permission of instructor and satisfaction of all Level I General Studies course requirements

Examines the history of Rome from its founding in the eighth century B.C. to its demise in the fifth century A.D. Roman history presents a unique study in the rise and decline of a great civilization, and this course analyzes every aspect of that development. (General Studies Course—Level II, Historical)

**HIS 307-3 Ethnicity in History (3 + 0)**

Although concerned with the general problems involved in the study of ethnicity, this course will concentrate on a wide variety of ethnic groups; the topics will change, depending on student needs and interests. May be repeated for credit as the course title changes.

**HIS 309-3 Native Americans in American History (3 + 0)**

Prerequisites: satisfaction of Level I General Studies course requirements

Examines the history of the cultural contact and confrontation between North American indigenous people and people arriving later. Seeks to integrate ethnohistoric evidence with "traditional" Eurocentric accounts to provide as balanced an account as possible. (General Studies Course Level II—Historical; Multicultural)

**HIS 310-3 American West Seminar (3 + 0)**

Considers various topics relating to the American frontier. Emphasizes the 19th- and 20th-century Trans-Mississippi West.

**HIS 311-3 Colorado History II (3 + 0)**

Concentrates on 20th-century Colorado's political, social, and economic history. The progressive movement, the Ku Klux Klan's rise to power, the depression years, and post-World War II Colorado are covered.

**HIS 312-3 Medieval History (3 + 0)**

Prerequisite: satisfaction of Level I General Studies course requirements

Covers the history and culture of Europe from 325 to 1300. Emphasizes such themes as the transition from ancient to medieval civilization, Latin Christianity, the Carolingian empire, the papacy, and the development of feudal society. (General Studies Course—Level II, Historical)

**HIS 314-3 Renaissance and Reformation (3 + 0)**

Prerequisites: satisfaction of Level I General Studies course requirements

Examines the religious upheaval of the 16th century after studying its political, religious, cultural, and economic roots in the 14th and 15th centuries. Also considered is the immediate and long-range effect of the Reformation upon Western civilization. (General Studies Course—Level II, Historical)

**HIS 321-3 French Revolution and Napoleon 1715-1815 (3 + 0)**

Examines the French Revolution after studying its political, cultural, social, and economic roots in the 18th century. Also considers effects of the Revolution and Napoleon upon France and the major countries of Europe.

**HIS 323-3 19th-Century Europe (3 + 0)**

Covers Europe either as a whole or in interrelated modules, culminating in the tragic climax of World War I. Modules include nationalism and political history; industrialism and social, economic, and intellectual history; and imperialism and diplomatic history.

**HIS 325-3 World War I (3 + 0)**

Prerequisite: junior or senior status

Provides an in-depth examination of the origins, course, consequences, and outcomes of World War I.

**HIS 326-3 Twentieth Century Europe, 1914-1939 (3 + 0)**

Analyzes the internal developments in the major European nations from World War I to 1939. Emphasizes the impact of World War I, the Treaty of Versailles, the Russian Revolution, the rise of fascism, and international relations.

**HIS 327-3 Issues in European History (3 + 0)**

An examination of various problems in European history. Topics vary to accommodate student needs and interests. May be repeated for credit as the course title changes.



## 262 COURSE DESCRIPTIONS

### **HIS 328-3 Modern Germany since 1789 (3 + 0)**

Studies the history and culture of Germany against the background of the transformation from the underdeveloped and politically fragmented Holy Roman Empire in 1789 to the industrial giant and world power of the 20th century.

### **HIS 329-3 Nazi Germany (3 + 0)**

Prerequisite: HIS 102 or permission of instructor

Examines the Hitler regime in theory and practice, in peace and war, and as a case study of a police-state dictatorship in one of the most highly civilized and industrialized nations of the 20th century.

### **HIS 331-3 England to 1714 (3 + 0)**

Prerequisites: HIS 101 or permission of instructor and satisfaction of Level I General Studies course requirements

Studies the institutional and cultural development of the English nation from the earliest times to the death of Queen Anne. (General Studies Course—Level II, Historical)

### **HIS 332-3 England since 1714 (3 + 0)**

Prerequisites: HIS 102 or permission of instructor and satisfaction of Level I General Studies course requirements

Analyzes the social, political, and economic developments that produced modern Great Britain, the British Empire, and the final retreat from power after World War I. (General Studies Course—Level II, Historical)

### **HIS 334-3 Ireland and the Irish (3 + 0)**

A survey course in Irish history and culture from the earliest period of Celtic civilization up to the contemporary period. Explores the various developments in Irish history over the past 3,000 years and attempts to identify those trends that were uniquely Irish and those that were a part of the overall evolution of European civilization.

### **HIS 335-3 Countries/Regions of the World: Variable Topics (3 + 0)**

Examines various historical issues and problems of relationships among members of the world community. Specific countries or regions to be emphasized vary according to student needs and interests. May be repeated for credit as the course title changes.

### **HIS 336-3**

#### **(WMS 336) Women in European History (3 + 0)**

Prerequisites: HIS 101, 102, or permission of instructor

Provides a historical analysis of the role and contribution made by women in the development of Western Civilization from Neolithic times to the present.

### **HIS 337-3 The American Presidency (3 + 0)**

Prerequisite: sophomore status or above

Surveys the history and structure of the American presidency as an institution and probes the lives and administrations of individual presidents. Significant political themes and topics pertaining to the White House's historical political climate are explored.

### **HIS 338-3 Nixon and the Kennedys (3 + 0)**

Employs a life-and-times approach to the study of Richard Nixon, the members of the Kennedy family (with emphasis on John and Robert), and the historical events that shaped the lives of Nixon and the Kennedys or were influenced by their lives. The larger story of modern American history is woven around the lives of these individuals who have played a prominent part in that history. This course examines family backgrounds, childhoods, and public careers.

### **HIS 339-3 The Kennedy Assassination (3 + 0)**

Explores the background of the John Kennedy assassination, the event itself, and the aftermath. Special attention is paid to conflicting theories.

### **HIS 340-1-3 Biography as History: (Variable Topics) (1-3 + 0)**

An in-depth examination of the lives of individuals who personify a major historical issue or theme. May be repeated for credit as the course title changes.

### **HIS 341-3 American Colonial History (3 + 0)**

Focuses on topics and themes in colonial American history that have contributed the most to American culture.

### **HIS 343-3 American Revolution 1763-1787 (3 + 0)**

Analyzes the structure of American society on the eve of the Revolution, the evolution of British imperial policy, and the causes of the Revolution. Military and diplomatic aspects of the era are stressed, as well as the forces that made for a more perfect union.

### **HIS 346-3 Foundations of the American Constitution (3 + 0)**

Examines constitutional thought from the American Revolution to the Civil War. The Constitutional Convention, the Bill of Rights, and the history of the Supreme Court under Marshall and Taney are emphasized.

**HIS 348-3 Early National Period 1790-1840 (3 + 0)**

Examines politics and society during the early republic. Major topics include the development of political parties, the shift from Jeffersonian to Jacksonian democracy, the burgeoning reform movements, the status of the farmer in the trans-Appalachian West, and slavery.

**HIS 351-3 Civil War: Background (3 + 0)**

Studies the forces that produced the American Civil War. As a foundation for understanding those forces, the topics of slavery and the Old South are emphasized.

**HIS 352-3 Civil War: War and Peace (3 + 0)**

Covers the military and nonmilitary history of the Civil War years and examines the period of Reconstruction that followed the end of the war. Seeks to familiarize students with Civil War and Reconstruction historiography.

**HIS 353-3 American Baseball History (3 + 0)**

Examines American baseball as a cultural reflection and catalyst in American life since the 1840s. Drawing on primary and secondary sources, as well as guest lectures, the course will illustrate the place of the sport within American culture.

**HIS 354-3 Shaping of Modern U.S. 1877-1920 (3 + 0)**

Traces the rise of industrialism; the organization of laborers and farmers; the growth of American imperialism; and the spirit of reform in America and resulting social, political, and constitutional adjustments.

**HIS 355-3 American Business History (3 + 0)**

Familiarizes students with the history of American business from the colonial period to the present. Focuses on the relationship of business to society. Topics include the evolution of business strategies and structures, government-business relations, management-labor relations, technological innovations, and other aspects of American economic thought.

**HIS 357-3****(AAS 357) African American History I (3 + 0)**

Prerequisite: HIS 121, 122, or permission of instructor

Moving from the background of African culture and the slave trade, this course traces the distinctive role of the people of African heritage in the U.S. to 1876. Credit will be granted for only one of these courses.

**HIS 358-3****(AAS 358) African American History II (3 + 0)**

Prerequisite: HIS 121, 122 or permission of instructor

Continues a study of the role of the people of African heritage in the U.S. from 1876 to the present. Emphasizes an understanding of the historical tradition that gives rise to current dilemmas facing America. Credit will be granted for only one prefix: HIS or AAS.

**HIS 360-3-4 State and Local History (3 + 0 - 2)**

A research/skill course designed to acquaint students with regional history. Emphasizes student-initiated projects, oral history techniques, and research development.

**HIS 361-3 Preservation/Public History (3 + 0)**

Traces the development of historic preservation in the U.S. and examines the role of the public historian in managing cultural resources.

**HIS 362-3 History of the Legal and Medical Professions (3 + 0)**

Explores the historical, social, cultural, and organizational characteristics of the legal and medical professions.

**HIS 364-3 U.S. The Twenties—The Thirties (3 + 0)**

Covers the intellectual climate of the 20s, domestic and foreign policies from Harding through Hoover, the Great Depression, the New Deal, and U.S. diplomacy on the eve of World War II. This course can be offered as two modules, the '20s and the '30s.

**HIS 366-3 Recent U.S. 1945-1970s (3 + 0)**

Prerequisites: satisfaction of all Level I General Studies course requirements

Covers the U.S. role in the postwar world and the interaction between domestic and foreign policy, with attention to such topics as the Cold War, Crises in Latin America, the Kennedy Years, and Watergate. (General Studies Course—Level II, Social Science)

**HIS 367-3 U.S. Foreign Relations: Variable Topics (3 + 0)**

An examination of various issues, problems, or areas in American foreign policy from colonial origins to the recent past. Topics vary to accommodate student needs and interests. May be repeated for credit as the course title changes.

## 264 COURSE DESCRIPTIONS

### **HIS 368-3 The Court in Crisis (3 + 0)**

Examines the major constitutional developments in the U.S. from World War I to the present. Special attention will be devoted to the Supreme Court's role in advancing civil rights and civil liberties.

### **HIS 369-3 American Military History (3 + 0)**

A study of American military history from the wars of the colonial period through Vietnam. Considers battles, strategy, and organization.

### **HIS 371-3 Chinese History to 1800 (3 + 0)**

Covers the history of China from its prehistoric beginnings to the arrival of the West in 1800, emphasizing the development of Chinese culture, economy, society, philosophy, and politics.

### **HIS 373-3 The Modern Far East (3 + 0)**

Covers the social, political, economic, and cultural history of the Far East from the first contacts with the modern West (1800) to the present.

### **HIS 376-3 Modern Middle East (3 + 0)**

Explores the dynamic history of this volatile region, with special emphasis on the post-World War II period.

### **HIS 380-3 Latin America: Empires (3 + 0)**

Traces and analyzes the political, social, and economic development of the Spanish and Portuguese empires in America from the initial period of exploration and conquest through the institutionalization of the imperial systems.

### **HIS 381-3 Latin America : Republics (3 + 0)**

Prerequisites: satisfaction of all Level I General Studies course requirements

A selective analysis of the problems and solutions of the Latin American republics in their attempts to construct viable nation states. Emphasizes the liberalism of the 19th century and the revolutionary experiences of the 20th century. (General Studies Course—Level II, Historical)

### **HIS 382-3 United States and Latin America (3 + 0)**

Prerequisites: HIS 121, 122 or permission of instructor

Covers the historical development of relations between the U.S. and its hemispheric neighbors, from the original independence movements to the present.

### **HIS 383-3**

#### **(CHS 301) The Mexican Revolution (3 + 0)**

Prerequisite: CHS 100 or permission of instructor

Traces the social, political, and economic forces that contributed to the Mexican Revolution (1910-1920). Provides a critical analysis of how leaders, women, the Mexican masses, and the United States influenced revolutionary events.

### **HIS 384-3 Topics in Popular Culture (3 + 0)**

Examines major trends in popular culture. Topics include American lifestyles, beliefs, and customs. May be repeated for credit as the course title changes.

### **HIS 385-3 American Social History (3 + 0)**

Focuses on significant events, issues, and themes in history that have influenced the development of American society.

### **HIS 386-3**

#### **(WMS 386) Advanced U.S. Women's History (3 + 0)**

Prerequisite: HIS 121, 122, HIS/WMS 165, or permission of instructor

Provides an in-depth examination of issues pertinent to women of the Americas. Themes include pre-Columbian culture, immigration, work, family life, and women's rights.

### **HIS 387-3 History of U.S. Sexual Attitudes (3 + 0)**

Covers the wide-ranging history of American sexuality practices, beliefs, and attitudes from the colonial period to the present. Teaches students to place their attitudes within this historical framework.

### **HIS 388-3 American Environmental History (3 + 0)**

Examines the interactions between humans and plants and animals in North America from pre-Columbian times to the present, as well as U.S. attitudes toward landscapes, cities, and natural phenomena.

### **HIS 389-1-2 Readings in History (1-2 + 0)**

Includes extensive readings in a selected area. Critiques of these works are submitted to the professor who directs the reading. May be repeated for credit as the title changes.

**HIS 398-3 Cooperative Education: History (3 + 0)**

Prerequisite: placement in history internship with Cooperative Education Program

Provides work experience in various areas of public history. Includes student research and special projects for federal and state agencies, preservation organizations, archives, and museums while serving as interns.

**HIS 400-1 Research Techniques (1 + 0)**

Introduces students to specialized research techniques, including research in U.S. public documents, state and municipal archives, and historical research methods. May be repeated for credit as title changes.

**HIS 401-3 Methods of Teaching Social Science: Secondary School (3 + 0)**

Prerequisite: junior or senior status (should ideally be taken the semester before student teaching is done)

Examines the relationship between the social sciences, explores new curricular approaches, and discusses philosophies of teaching social science.

**HIS 411-3****(HON 385) American Culture I (3 + 0)**

Prerequisites: HIS 121, 122, or their equivalent, permission of Metro State Honors Program director, satisfaction of all Level I General Studies course requirements

An upper-division course designed to acquaint the student with a variety of interdisciplinary perspectives on American culture. (General Studies Course - Level II, Historical)

**HIS 412-3****(HON 386) American Culture II (3 + 0)**

Prerequisites: HIS 121, 122, or their equivalent, HON 385, permission of Metro State Honors Program director, and satisfaction of all Level I General Studies course requirements

Applies the theoretical perspectives from American Culture I to contemporary works best representing American life and thought. (General Studies Course - Level II, Historical)

**HIS 432-3 Russia since 1905 (3 + 0)**

Explores major developments in the domestic and foreign policies of 20th-century Russia. Emphasizes revolutions; the social, political, and intellectual changes that have affected Russia; and the role of such personalities as Lenin, Stalin, Khrushchev, and Brezhnev.

**HIS 465-3 World War II 1939-1948 (3 + 0)**

A detailed examination of World War II and the early years of the Cold War. Emphasizes the war in Europe, the impact of Nazi rule, diplomacy among the wartime allies, the collapse of wartime cooperation, the advent of the Cold War, and containment.

**HIS 482-3 Senior Seminar (3 + 0)**

Prerequisites: HIS 101, 102, 121, 122; at least nine upper-division history hours; satisfaction of all Level I and Level II General Studies course requirements; senior status

Covers historiography, research and writing techniques, and philosophies of history. This is a capstone course and is required of history majors. (Senior Experience)

**HIS 484-3 Seminar in American Culture (3 + 0)**

Deals with various topics relating to American society and culture. Emphasizes popular and folk culture.

**HIS 486-3****(WMS 486) History of Feminism and Women's Rights (3 + 0)**

Prerequisites: HIS 121, HIS/WMS 165, WMS 101, or permission of instructor

Examines the history of American feminism from the Age of the Revolution to the present. Through the use of primary and secondary sources, the philosophies and strategies of women's rights activists and organizations are examined. Topics include conditions and intellectual currents in society that facilitated the growth of American feminism, the achievements of the women's rights movement, the forces that opposed women's rights, and the issues for debate within the feminist movements.

*Of the above courses, the following may be repeated if the topics are changed: HIS 307, 327, 335, 340, 367, 384, 389, 398, and 400.*

## Honors

**HON 210-4****(MTH 145) Calculus and Mathematica I (4 + 0)**

Prerequisites: MTH 111, 112; or 140, or equivalent; enrollment in the Metro State Honors Program or permission of the instructor

This course is an introduction to calculus, using the computer software Mathematica. Topics covered include derivatives of algebraic functions, trigonometric functions, and transcendental functions, applications of derivatives, the definite integral, the fundamental theorems of calculus, and applications of integration. This course may be substituted for MTH 141 (Calculus I) wherever MTH 141 is required. Credit will be given toward graduation for only one of MTH 141, 145, or HON 210.

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### **HON 260-4**

#### **(MTH 240) Calculus and Mathematica II (4 + 0)**

Prerequisites: MTH 145, 141, or HON 210; enrollment in the Metro State Honors Program or permission of the instructor

This course is a continuation of the study of calculus begun in Calculus and Mathematica I, using the computer software Mathematica. Topics covered include exponential growth and related differential equations, parametric equations, splines, applications, and techniques of definite integration, series, and approximations. This course may be substituted for MTH 241 wherever MTH 241 is required. Credit is given toward graduation for only one of MTH 240, 241, or HON 260.

### **HON 275-3 The Legacy of Arts and Letters I (3 + 0)**

Prerequisites: ENG 101, the Level I communication course requirement, permission of the Metro State Honors Program director

Studies those works that have had a literary, philosophical, and artistic impact on the image of the self, with strong emphasis on works prior to the 19th century. (General Studies Course—Level II, Arts and Letters)

### **HON 276-3 The Legacy of Arts and Letters II (3 + 0)**

Prerequisites: HON 275, ENG 101, the Level I Communication course requirement, and permission of the Metro State Honors Program director

A continuation of HON 275, this course emphasizes modern works that have had a literary, philosophical, and artistic impact on the image of the self. (General Studies Course—Level II, Arts and Letters)

### **HON 280-3 History of Science (3 + 0)**

Prerequisites: MTH 111; either ENG 101 or satisfaction of the Level I communication course requirements; admission to Metro State Honors Program or permission of the Honors Program director

A comprehensive historical account of the rise of science and scientific thought from the Babylonians to the present. Emphasizes great scientists and how they helped change the world. Topics include astronomy, chemistry, physics, math, and biology. (General Studies Course—Level II, Natural Science)

### **HON 281-3 Development of Experimental Science (3 + 0)**

Prerequisites: MTH 111 and either ENG 101 or satisfaction of the Level I communication course requirements; admission to Metro State Honors Program or permission of the Honors Program director

An in-depth study of great scientific achievement with an emphasis on historical experiments and their significance to the evolution of science. Experiments are performed by the students and collected data from these experiments are used to rediscover scientific laws. (General Studies Course—Level II, Natural Science)

### **HON 295-3 The Art of Critical Thinking (3 + 0)**

Prerequisites: minimum performance standard scores on reading and writing preassessment placement tests, permission of the Metro State Honors Program director

Emphasizes a method of rational investigation called the method of inquiry. Since inquiry includes arguments both inductive and deductive, attention is focused on constructing arguments and evaluating them. The impact of inquiry on effective communication is discussed. (General Studies Course—Level I, Communication)

### **HON 380-3**

#### **(PSC 309) Revolutions and Social Change I (3 + 0)**

Prerequisites: one of the following: HIS 102, SOC 101, ECO 201, PSC 102, or PSY 241; satisfaction of all Level I General Studies course requirements; permission of the Metro State Honors Program director

Examines the phenomenon of revolution. While the multidisciplinary orientation of the course focuses on revolutionary upheavals in the Western and Third World societies, the analytical paradigms explored include sociological, economic, political, and historical dimensions. (General Studies Course—Level II, Social Science)

### **HON 381-3**

#### **(PSC 309) Revolutions and Social Change II (3 + 0)**

Prerequisites: HON 380 and one of the following courses: HIS 102, SOC 101, ECO 201, PSC 102, or PSY 241; satisfaction of all Level I General Studies course requirements; permission of the Metro State Honors Program director

A continuation of HON 380. Explores the socioeconomic and political consequences of major revolutions studied in HON 380 and attempts to explain their impact on contemporary world affairs. (General Studies Course—Level II, Social Science)

### **HON 385-3**

#### **(HIS 411) American Culture I (3 + 0)**

Prerequisites: HIS 121, 122 or their equivalent; permission of Metro State Honors Program director; satisfaction of all Level I General Studies course requirements

Designed to acquaint the student with a variety of interdisciplinary perspectives on American culture. (General Studies Course—Level II, Historical)

**HON 386-3****(HIS 412) American Culture II (3 + 0)**

Prerequisites: HIS 121, 122 or their equivalent; HON 385; permission of Metro State Honors Program director; and satisfaction of all Level I General Studies course requirements

Applies the theoretical perspectives from American Culture I to contemporary works best representing American life. (General Studies Course—Level II, Historical)

**HON 492-3 Senior Honors Seminar (3 + 0)**

Prerequisites: senior status, permission of the Metro State Honors Program director

An intense, interdisciplinary, thematic seminar. Course content varies according to the description of the departments that offer the seminar. HON 492 is an option to HON 495.

**HON 495-3 Senior Honors Thesis (3 + 0)**

Prerequisites: Senior status, permission of the Metro State Honors Council

Constitutes a senior experience, presented as an independent study, in which the student writes an Honors thesis supervised by a Metro State faculty member representing the discipline of the topic. HON 495 is an option to HON 492.

## Hospitality, Meeting, Travel Administration

**HMT 102-3 Principles of Hotel/Restaurant Administration (3 + 0)**

An introductory course in hotel and restaurant operations. Provides the beginner with concepts of hotel/restaurant organization, profit and loss statements, management controls, and marketing concepts.

**HMT 103-2 Principles of Travel Administration (2 + 0)**

An introductory course in travel operations. Introduces the student to the history and concepts of the travel industry. Covers operational concepts, vocabulary, career opportunities, and interrelationships between the travel profession and other hospitality professions.

**HMT 104-2 Principles of Meeting Administration (2 + 0)**

An introductory course in meeting operations, introducing the history and concepts of the meeting industry. Provides an understanding of the operational concepts, vocabulary, career opportunities, and interrelationships between the meeting profession and other hospitality professions.

**HMT 161-4 Kitchen Procedures and Production I (3 + 2)**

An introductory course in quantity and commercial food production and sanitation procedures. Course includes sanitation and health practices, safety, use and care of equipment and tools, basic cooking principles, and recipe and menu development.

**HMT 162-4 Kitchen Procedures and Production II (3 + 2)**

Prerequisite: HMT 161

A continuation of HMT 161. Course covers basic nutrition, stocks and sauces, soups, preparation and cooking of meats, poultry, fish, shellfish, vegetables, potatoes and starches, and preparation of pantry breakfast, dairy and garnish items. Bakery, yeast, and pastry item preparation and baking are included.

**HMT 181-4 Basic Ticketing and Reservations Procedures (4 + 0)**

This course is designed to give the student a basic working knowledge of domestic ticketing, reservation systems and ticket processing through an agency until commissions are received. Students learn manual processes and computer formats.

**HMT 182-2 Travel References and Case Studies (2 + 0)**

Prerequisite: HMT 181 must be taken at the same time or must have been taken prior to taking this course  
This course focuses upon international travel. Students learn international ticketing, itinerary development, and ticketing processing. Students learn both manual and computer techniques.

**HMT 183-4 Cruise Development, Marketing, and Sales (4 + 0)**

This course focuses on the cruise product, cruise development, marketing cruises, and cruise point-of-sale techniques. Students learn cruise conferences, markets, cruise sales tools, cruise reservations and ticketing processes, and group cruise sales techniques. Students learn cruise sales through list selection, individual and group telemarketing, and individual and group sales activities. A guided individual research project will also be required.

**HMT 185-3 Multicultural/Multinational Cultural Adjustment/Readjustment (3 + 0)**

Prerequisite: Minimum performance standard scores on reading, writing, and mathematics preassessment placement test

This course will introduce students to both multicultural and multinational cultural adjustment and readjustment. Concentration will be on environmental and work cultures in other countries and the cultural adjustment and readjustment that is encountered in jobs that are based in the U.S. with travel to other countries. The unique opportunities for those of color will be emphasized. Specific learning modules will be included for those who are African American, of Hispanic origin, and Native American. (General Studies Course—Level II, Social Science; Multicultural)

**HMT 200-3 Externship I (0 + 9)**

Prerequisite: Formal written approval of the HMTA program externship supervisor

A beginning, on-the-job learning experience in the area of emphasis of the HMTA student. A cooperating agency or industry develops a practical as well as academic program of learning and work which, when approved by the HMTA externship supervisor, or the department chair, becomes the student's course outline. Students are expected to meet employee standards of the cooperating agency, as well as the academic standards of the HMTA program. An in-depth paper is required. Maximum credit: 6 semester hours.

**HMT 250-2 Applied Hotel/Restaurant Operations (2 + 0)**

Prerequisite: The student must be anticipating or be currently employed in the industry, or be a student in the HMTA program, or have the instructor's permission

The student learns how classroom theory is actually applied in hotels and restaurants. Guest-lecturers from the hotel and restaurant industries take students through operations. Classes meet in hotels and restaurants.

**HMT 256-3 Hotel Financial Accounting (2 + 2)**

Prerequisites: ACC 201 and HMT 102

A continuation of basic accounting techniques learned in ACC 201; concentrating on specific hotel industry accounting procedures for front office, sales, and payroll. Balance sheets and income statements will also be covered.

**HMT 276-3 Meeting Administration I (2 + 2)**

Prerequisite: Permission of the instructor and basic computer literacy

The first course in meeting planning for majors or for those who believe they may be called on to plan a meeting for their employer or organization. Considers the basics of budgeting, site selection, exhibits, transportation, food and beverage, functions, publicity and audiovisuals for meetings.

**HMT 284-4 Tour Operations (4 + 0)**

An introduction to tour operations, this course provides both knowledge and skill in tour development. Saturday and weekend tours are planned by students through group work. Each student develops his/her own tour as well as planning tour organization, tour marketing, tour management and tour evaluation through a series of up to 17 tour planning group projects.

**HMT 285-3 Travel Agency Accounting (2 + 2)**

Prerequisite: HMT 181

This course is taught on a working office concept with hands-on recording of all types of accounting transactions encountered in a travel agency. Students will set up their own set of books for a travel agency as they learn and apply accounting principles.

**HMT 286-2 Tourism (2 + 0)**

This course introduces students to tourism theories including the tourism multiplier and the tourism account in the balance of payments. State and national tourist offices and their approaches toward developing tourism are also discussed.

**HMT 351-3 Hotel Administration I (3 + 0)**

Prerequisite: HMT 102 or permission of instructor

To develop an awareness of all facets of hotel lodging operations. General hotel organization with in-depth study of individual departments as they relate to administration will be covered.

**HMT 352-3 Hotel Administration II (3 + 0)**

Prerequisite: HMT 351

A continuation of Hotel Administration I (HMT 351). Emphasis on interrelation of hotel departments for maximum guest service and profitability of lodging property. Course brings together all facets of administration, sales, and marketing through effective administrative organization.

**HMT 356-3 Hotel/Restaurant Law (3 + 0)**

Prerequisite: HMT 367, or HMT 352, or permission of instructor

Overview of contemporary hotel and restaurant law as it pertains to the civil rights and legal obligation of hotels and restaurants to guests. Includes responsibilities, liabilities, and rights of hotel keepers and restaurateurs, with study of pertinent and precedent legal cases.

**HMT 357-3 Hospitality Marketing (3 + 0)**

Prerequisite: Junior status or permission of instructor

Application of principles of marketing and advertising to specific needs of the hospitality industry. Students will submit major paper based on field work in their area of emphasis analyzing a particular marketing problem.

**HMT 360-3 Beverage Control (3 + 0)**

Prerequisite: HMT 102 or permission of instructor

A basic course giving students the ability to function as the operator/management of the beverage area of the hospitality industry business. Procurement preparation, and service to final accountability of sales and commodities are covered.

**HMT 361-3 Enology: The Study of Wine (3 + 0)**

Prerequisite: Students must be 21 years old

This course is designed for the student who wishes to learn the basics of wines for personal gratification as well as to serve as a beginning course for the student who expects to have a professional interest in the selection or service of wine. Viticulture, vinification, service, and critical appraisal of wines of the major wine regions of the world will be covered.

**HMT 365-3 Hospitality Property Management (2 + 2)**

Prerequisite: HMT 102, HMT 351, or HMT 366

An examination of the fundamentals of blueprint reading, building, construction safety and utility requirements and mechanical systems as they relate to the hotel/restaurant business.

**HMT 366-3 Restaurant Administration I (3 + 0)**

Prerequisite: HMT 102 or permission of instructor

To develop an awareness of all facets of food and beverage sales as they relate to restaurant operations. The basics of personnel supervision and management will be included. Purchasing, record keeping and accounting will be stressed.

**HMT 367-3 Restaurant Administration II (3 + 0)**

Prerequisite: HMT 366

The culminating course in restaurant administration. It brings together all facets of administration, management and marketing touched on in previous courses. Employer-employee relations, purchasing, sales, and public relations are included with the goal of operating a profitable business.

**HMT 375-3 Promotion Materials: Analysis and Design (2 + 2)**

Focus is on the creative conceptualization and technical production of complex packages of printed materials for meetings, tours, hotels, and restaurants as aids in promotion and marketing. Students learn process theory and applications. Laboratory work is included.

**HMT 376-3 Meeting Administration II (2 + 2)**

Prerequisites: HMT 276 and computer literacy

A professionally oriented course for those preparing for a career as an exposition manager or association meeting planner. Stresses elements of exposition development and management and adult learning theory as applied in association and meeting agendas. A total exposition plan is required.

**HMT 380-2 Risk Management in the Travel Industry (2 + 0)**

Prerequisites: HMT 181, 182, 183 or permission of instructor

Risk Management reviews the major areas of risk in the retail travel agency, airline, corporate travel department, and tour firm. Students learn both insurance and noninsurance approaches toward analyzing, reducing, sharing and eliminating corporate and personal risks through texts, case studies, and hands-on experience.

**HMT 383-2 Inflight Services (2 + 0)**

Inflight Services explores the range of inflight services careers. Students learn the job duties of a flight attendant and of inflight supervisory/management personnel. Safety, security, customer handling, and normal procedures are discussed in detail. The course concludes with approaches toward getting a job in inflight services.

**HMT 384-2 Airport Services (2 + 0)**

Airport Services explores the jobs held by airline employees in public contact positions from arrival and baggage check-in, through aircraft boarding, and including ramp service positions. Job classifications, duties, and requirements are reviewed.

**HMT 385-4 Financial Management in the Travel Industry (4 + 0)**

Prerequisites: HMT 103 and MTH 121 or permission of instructor

Principles of travel industry budgeting are taught in accordance with the Airlines Reporting Corporation and Cruise Lines International Association requirements. Financial ratios and financial management case problems are studied and travel payment systems are reviewed.



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### **HMT 386-2 Incentive Travel (2 + 0)**

Prerequisites: HMT 181 and HMT 182 or permission of instructor

As an introduction to incentive travel, the student will obtain an overview of the incentive travel industry. Business incentive programs will be studied and each student will prepare an incentive travel program for a Colorado company as a group project. Students may expect to spend additional hours undertaking out-of-class projects.

### **HMT 389-2 Cases in Corporate Travel Management (2 + 0)**

Cases relating to major corporate travel management problems are explored in-depth with corporate travel industry guest executives presenting the cases and evaluating the case solutions.

### **HMT 400-3 Externship II (0 + 9)**

Prerequisite: Satisfactory completion of HMT 200 or approved equivalent learning experience

An advanced on-the-job administrative learning experience in the emphasis areas of the HMTA major. An approved plan from a cooperating agency requiring both work and academic learning serves as the course outline. Students meet all requirements as for HMT 200 but on a more rigorous, advanced, and administrative level. A final paper, approved by the HMTA externship supervisor, is required. Maximum credit: six semester hours.

### **HMT 401-1 Externship III (0 + 3)**

Prerequisites: HMT 400 and/or life experience

A supplementary apprenticeship providing an in-depth learning experience in a discrete portion of the student's HMTA area of emphasis, either not covered or only surveyed in previous externship or job experience. Maximum credit: three semester hours.

### **HMT 404-2 Senior Hospitality Research Experience I (2 + 0)**

Prerequisite: Senior status, twelve hours in major emphasis, MTH 121, senior level writing ability, and satisfaction of all Level I and Level II General Studies course requirements

A course designed to provide the approaches and techniques necessary for the senior student to analyze needs, create and develop a major research project, and effectively interpret results and their application to her/his major emphasis area. (Senior Experience)

### **HMT 440-2 Senior Hospitality Research Experience II (2 + 0)**

Prerequisites: HMT 404, satisfaction of all Level I and Level II General Studies course requirements, and senior status

This course is a continuation of HMT 404 and involves completion of the major research project begun in HMT 404. Project completion benchmarks are established. Class oral presentations and discussions of work accomplished are included. (Senior Experience)

### **HMT 450-3 Hospitality Sales (2 + 2)**

Prerequisite: HMT 357 or MKT 300

Both inside and outside retail sales in the hospitality industry are addressed in a typical hospitality sales development process. Moving from individual to group sales, the course then reviews specialized hospitality industry sales jobs including travel agency outside sales, convention sales, association meeting sales and various technical hotel sales positions.

### **HMT 465-3 Hospitality Employee Resource Development (3 + 0)**

Prerequisite: HMT 367, or HMT 352, or permission of instructor

Course addresses specific challenges to personnel administration for the hospitality industry. Subjects include recruitment, training, motivation, morale, personnel administration tools, personal organization, and supervisory skills for organizational productivity.

### **HMT 466-3 Training and Development in Hospitality (3 + 0)**

Prerequisites: Junior or senior status, HMT 465, a minimum of 20 hours of HMT courses and either HMT 352 or HMT 367

A continuation of HMT 465, which is designed to build upon the knowledge and concepts learned in relation to employee resource development. Course includes group dynamics and problem solving combined with the writing and training of excellence standards.

### **HMT 473-3 Principles of Negotiation (2 + 2)**

Prerequisite: Permission of instructor

Basic principles of individual and team negotiation as applied to industry are covered. Emphasis is placed on developing aspiration levels and fall back positions, strategies and tactics of accomplishing the levels, and thorough preparation for the negotiation. Students participate in two negotiating situations.

### **HMT 479-2 Seminar in Meeting; Variable Topics (2 + 0)**

Prerequisite: HMT 376 or permission of instructor

The course considers special problems in meeting administration such as transportation regulatory laws, etc. Emphasis is placed upon problem-solution approaches and prediction. Major paper required.

**HMT 481-4 Tour Management (3 + 2)**

Prerequisites: Junior or senior status, HMT 284, or permission of instructor

The concepts of professional and ethical tour development are taught from a destination development and from a group organizational interest point of view. Tour administration is taught from accounting, marketing, organization, and resource development points of view. Appropriate follow-up is stressed. Students develop, promote, conduct, and evaluate tours based upon their research and marketing.

**HMT 482-4 Marketing in the Travel Industry (4 + 0)**

Prerequisites: HMT 181 and HMT 182

This course is designed to provide an introduction to travel marketing. Concentration will be on the development of an annual marketing plan. Upon completion, the student should be able to perform all basic duties of a travel executive with marketing responsibilities.

**HMT 483-2 Corporate Travel Management (2 + 0)**

Prerequisites: HMT 181, HMT 182, HMT 183 or permission of instructor

Corporate Travel Management provides an overview of the job held by the corporate executive in charge of travel. It describes corporate travel department organization, job duties, and job requirements, and it provides an education in the development of a corporate travel policy, request for proposals, and vendor relationships.

**HMT 484-4 Travel Industry Management (4 + 0)**

Prerequisites: HMT 181, HMT 182, HMT 183 or permission of instructor

A simulation travel agency start-up exercise, including Airline Reporting Corporation (ARC) appointment filing, is followed by learning modules relating to starting or buying and managing retail travel agencies. Travel law and risk management are covered in detail. Tour companies, all-cruise agency, and corporate travel department management approaches are studied as well. The course ends with a complete review of travel agency and corporate travel automation management.

**HMT 485-2 Airline Sales (2 + 0)**

Prerequisites: HMT 181, HMT 182, and HMT 404

Airline Sales is a course designed to introduce students to the field of full-time sales work in the marketing division of major U.S. and international air carriers. It emphasizes the entry-level position of a regional telemarketing airline customer service representative, but explores in detail sales representative jobs with district and regional responsibilities for interline sales, travel agency sales and corporate sales. Both passenger and cargo sales are covered.

**HMT 489-2 Seminar in Travel: Variable Topics (2 + 0)**

Prerequisites: HMT 282 and HMT 404 or permission of instructor

Current travel industry problems are considered in a group situation. Students are encouraged to explore areas and problems in which they feel a need or interest. The course is designed as a culmination of the travel administration major.

## Human Performance, Sport & Leisure Studies

**HPL 101-2 Swim Level I (1 + 2)**

This course is designed for the non-swimmer and novice swimmer. Instruction and practice in basic water skills to make the student water safe and "at home" in the aquatic environment.

**HPL 102-2 Swim Level II (1 + 2)**

Prerequisite: Student must be able to jump into deep water, level off and swim 25 consecutive yard of the front crawl

This course will develop each student's skill level in the crawl, breaststroke, elementary backstroke, side-stroke, back crawl and butterfly. Breathing techniques will be mastered in each stroke. The student's ability to float and tread water will also be a topic of instruction. An understanding and respect for the water and its surroundings will be emphasized in the "safety precautions" portion of the course.

**HPL 103-2 Swim Conditioning (1 + 2)**

Prerequisite: Knowledge and skill in the basic swimming strokes

This course is designed to improve the student's cardiovascular fitness through lap swimming.

**HPL 104-2 Water Exercise (1 + 2)**

A water exercise conditioning program designed to improve and maintain fitness by: improving aerobic capacity; increasing flexibility and range of movement; toning major muscles and controlling weight. Swimming ability is not required for participation.

**HPL 106-2 Lifeguard Training (1 + 2)**

Prerequisites: Student must have strong intermediate swimming skills and must have, or acquire, current American Red Cross Standard First Aid and Adult CPR Certificate (or equivalents)

This course provides the minimum skill training for a person to qualify as a nonsurf lifeguard.

## 272 COURSE DESCRIPTIONS

### **HPL 108-2 Scuba Pool and Lecture (1 + 2)**

Prerequisites: Student must be able to swim a minimum of 200 yards and tread/float for ten minutes  
This course covers basic instruction and skills in both snorkeling and scuba diving. Successful completion of this course will qualify the student for open water certification dives.

### **HPL 109-2 Scuba Open Water Certification (1 + 2)**

Prerequisite: Student must have completed HPL 108 within last six months  
This course covers both basic and advanced instruction and skills for snorkeling and scuba diving. Successful completion of this course will qualify the student for Open Water Diver Certification.

### **HPL 113-2 Ballet Level I (1 + 2)**

This course is designed for adults with minimal or no experience. Basic steps, positions, and movements required in classical ballet will be taught stressing correct placement based on anatomy and physical laws of motion.

### **HPL 114-2 Ballet Level II (1 + 2)**

Prerequisite: HPL 113  
This course is designed for adults with some dance experience. Center work is stressed with more intricate combination pattern. Performance quality within the style is emphasized.

### **HPL 115-2 Ballroom Dance (1 + 2)**

This course provides instruction and practice in ballroom dance with a focus on traditional dances. Dance mixers and ice breakers will also be included in this class.

### **HPL 116-2 Jazz Level I (1 + 2)**

This course is designed to teach fundamental techniques of jazz dance for physical fitness and health, to build endurance, figure control, strength, to aid the student with movement and introduce them to an exciting dance experience.

### **HPL 117-2 Jazz Level II (1 + 2)**

Prerequisite: HPL 116 or permission of instructor  
This course is designed for the student who has a basic jazz background. Isolation warm-ups and center work will be challenged and movement combinations lengthened. Performance quality will be stressed.

### **HPL 118-2 Modern Dance I (1 + 2)**

This course is designed for the student with minimal or no dance experience. A basic movement foundation stressing placement, strength, stretch and coordination will be included to increase physical awareness.

### **HPL 119-2 Modern Dance II (1 + 2)**

Prerequisites: HPL 114, 116, 118, or equivalent, or permission of instructor  
This course is designed for the student with a basic dance background. Placement, centering, strength and coordination will be stressed. Performance quality will be developed.

### **HPL 120-2 Modern Dance and Jazz Dance Level II (1 + 2)**

Prerequisites: HPL 116, 118 or permission of instructor  
This course is designed to bring the student to an intermediate level in jazz and modern dance techniques. This class should not be taken without prior dance experience.

### **HPL 121-2 Improvisation and Choreography (1 + 2)**

This course will explore movement through creative problem solving and is organized into sequences to express a variety of themes.

### **HPL 122-2 Repertory Choreography (1 + 2)**

Prerequisites: Minimum of one semester of HPL 113 and 118 or equivalent experience or permission of instructor  
This course is designed to give the student the opportunity to experience dance at a professional level, participating in regular rehearsals and various other aspects of producing a dance performance.

### **HPL 123-2 Square and Folk Dance (1 + 2)**

Square and folk dance activities provide an opportunity to learn meaningful movement activities, as well as develop lifetime psychomotor skills which can be used to obtain recreational and fitness objectives.

### **HPL 124-2 Tap Dance I (1 + 2)**

This dance course is designed to provide an introduction to tap dance activities, as well as the physical, social and emotional benefits derived from regular participation in such an activity.

**HPL 125-2 Tap Dance II (1 + 2)**

Prerequisite: HPL 124 or permission of instructor

This course is designed to provide advanced techniques and skills in tap dancing. It is designed primarily for the student who has had some previous experience in basic tap dance and wishes to acquire additional skills and proficiency in the activity.

**HPL 126-2 Country Western Dance (1 + 2)**

Country Western Dance offers the opportunity to gain an understanding of various contemporary dances, as well as develop the confidence and motor skills necessary to enhance psychomotor dance performance.

**HPL 132-2 Badminton (1 + 2)**

This is a course intended for the beginner to intermediate player. The course covers individual skills, rules, and strategies.

**HPL 133-2 Golf I (1 + 2)**

This is a course designed for the beginning golfer. The course covers individual skills and rules. Range practice is conducted on the outdoor fields.

**HPL 134-2 Golf II (1 + 2)**

Prerequisite: HPL 133 or adequate playing ability

This course is designed for the student with prior experience in golf. The course will include review of fundamentals and advanced skills. Range practice is conducted on the outdoor fields.

**HPL 135-2 Tennis Level I (1 + 2)**

This course is designed for beginning players who are below 2.5 USTA rating. Skills, strategy and rules at the introductory level are presented.

**HPL 136-2 Tennis Level II (1 + 2)**

Prerequisite: HPL 135 or permission of instructor

This is a course for the player who is above 2.5 USTA rating and/or has had a level I course. Intermediate skills and strategies are presented.

**HPL 137-2 Tennis Level III (1 + 2)**

Prerequisite: HPL 136 or permission of instructor

This is a course for the advanced player above 3.5 USTA rating. In-depth strategy and skill development are presented.

**HPL 138-2 Racquetball Level I (1 + 2)**

This course is designed to introduce the student to racquetball as a recreational sport and develop the skills, knowledge and sportsmanship appropriate to participate in this activity.

**HPL 139-2 Racquetball Level II (1 + 2)**

Prerequisite: HPL 138 or permission of instructor

This course is designed to improve the skills and enhance the strategies of the beginning level player. Time is devoted to the perfecting of shots and shot selection along with court strategy.

**HPL 140-2 Fencing (1 + 2)**

This course is designed to teach the basic fundamentals of beginning fencing.

**HPL 141-2 Ski, Cross-Country or Snowboard (1 + 2)**

This course is taught at a nearby ski area. Lessons are presented by the area's instructional staff in alpine skiing, cross-country skiing, or snowboarding. Instruction for beginners to advanced students is given.

**HPL 142-2 Gymnastics (1 + 2)**

This is a basic course in gymnastics offered to those who desire to learn fundamental skills in either men's or women's Olympic events.

**HPL 145-2 Backpacking and Camping (1 + 2)**

This is a course which combines lectures and a weekend backpacking trip where the student will learn where to go, how to dress, the type of equipment needed, how to feed him/herself and others, as well as learning wilderness ethics.

**HPL 154-2 Volleyball I (1 + 2)**

This course is designed for the beginning player in volleyball. The course covers skills, team play and rules. Intermediate level players may be included.

**HPL 155-2 Volleyball II (1 + 2)**

Prerequisite: HPL 154 or adequate playing experience

This course is designed for students with prior volleyball experience, either from HPL 154 or outside competitive participation.

## 274 COURSE DESCRIPTIONS

### **HPL 157-2 Soccer (1 + 2)**

This course is designed to introduce the beginner to the fundamentals of the game of soccer: kicking, control, passing, dribbling, throw-ins, heading, charging, tackling and goalkeeping, as well as basic strategy and knowledge of the rules and regulations of the game.

### **HPL 158-2 Team Handball (1 + 2)**

Individual skills of Team Handball will be taught and practiced. Offensive and defensive team strategies will be covered in this course.

### **HPL 166-2 Tae Kwon Do Level I (1 + 2)**

This course is designed to introduce the beginning student to the Korean martial art of tae kwon do and how it may relate to personal health, physical conditioning and self defense.

### **HPL 167-2 Tae Kwon Do Level II (1 + 2)**

This course will give the intermediate and advanced martial arts student the opportunity to develop and perform their art for their own enjoyment and for the public.

### **HPL 170-2 Personal Defense (1 + 2)**

This course will teach self defense skills for women and men designed for contemporary urban needs.

### **HPL 175-2 Weight Training Level I (1 + 2)**

This is a course designed to introduce the student, both male and female, to the proper conditioning programs for personal physical development.

### **HPL 176-2 Weight Training Level II (1 + 2)**

Prerequisite: HPL 175 or permission of instructor

This is an advanced course for students with some previous skills and knowledge of weight training designed to explore more techniques of lifting as well as a deeper understanding of muscular hypertrophy.

### **HPL 178-2 Step Aerobics (1 + 2)**

This course is designed for the student with no prior experience in step aerobics. Basic stepping techniques and footwork, muscular endurance, muscular flexibility, and muscular strength will be emphasized. Nutrition, injury prevention, and basics of aerobic conditioning will be covered in lectures.

### **HPL 179-2 Aerobics (1 + 2)**

This course is designed as an introduction to a lifetime exercise program that can help the student develop cardiovascular endurance, muscular strength and endurance, and flexibility. In addition to weekly activity sessions, students will receive basic information regarding healthy lifestyles. Students will be evaluated with both written and physical testing.

### **HPL 181-2 Hip and Thigh Conditioning (1 + 2)**

This course is designed to introduce the students to an exercise program that will develop muscular endurance and muscular strength, as well as flexibility. The course content will also include lectures on nutrition, basic anatomy, physiology, injury prevention and treatment.

### **HPL 182-2 Stretch and Strength (1 + 2)**

This course contains instruction on building strength and stretch, forming long, slender muscles. Proper stretching techniques and positions, along with methods of developing strength are covered. Sports injury prevention is emphasized in this course.

### **HPL 183-2 Walk, Jog, Run (1 + 2)**

This course is designed to introduce the student to the benefits of walking/jogging as an aerobic conditioner and how to use these exercises safely while promoting cardiovascular health.

### **HPL 184-2 Hatha Yoga I (1 + 2)**

This course is designed to introduce the beginning student to the basic concepts and methodologies of Yoga according to the Sutras of Pantanjali and the guidelines of Hatha Yoga Pradipika.

### **HPL 185-2 Hatha Yoga II (1 + 2)**

Prerequisite: HPL 184 or permission of instructor

This is a course for students who are already familiar with the content of Yoga I. Yoga II is an advanced course which utilizes pranayamas, meditation and mudras to achieve the health and wellness benefits of Ayurvedic Medicine.

### **HPL 187-2 Stress Management (1 + 2)**

This course is designed to provide the student with an understanding of the elements of stress-induced conditions, as well as provide a means by which students will become capable of effectively relieving stressful conditions.

**HSL 150-2 Human Performance, Sport and Leisure Studies (1 + 2)**

Courses which human performance and sports and leisure studies majors and minors must take to meet departmental skill requirements in various physical behaviors. These courses also cover methods of teaching and field experience assignments. All HSL 150 courses include a cognitive component with written and reading assignments, testing, and assigned laboratory activities.

**HPS 160-2 Introduction to Human Performance and Sports (1 + 2)**

For human performance and sport majors. A survey course designed to orient prospective teachers to the field of human performance and sports. Lecture, discussion and field experience.

**HPS 162-2 Fundamentals of Movement (2 + 0)**

This course is designed to introduce HPSL majors and minors to the mechanics of human movement through the determination of efficient movement, the study of mechanical principle, and the application of mechanical principle to fundamental skills.

**HPS 164-2 Physical Fitness Techniques and Programs (2 + 0)**

This course is designed to provide the student with skill practice and theory in physical fitness. Major components of muscle strength, endurance, flexibility, and body composition are discussed in detail. Exercise prescription, administration, and leadership skills are discussed.

**HPS 166-2 Swimming/Emergency Water Safety (2 + 0)**

Designed to bring the HPSL major/minor to the American Red Cross Intermediate Swimmer level, and to present the opportunity to achieve the American Red Cross Emergency Water Safety Certificate, which is the minimum prerequisite for the Water Safety Instructor course.

**HPS 202-3 Community Health (3 + 0)**

Designed to provide an in-depth study into health matters involving virtually all citizens for teachers of health education. Emphasis is in promoting community health, preventing disorders and disabilities, environmental health and health services.

**HPS 206-3 Advanced First Aid and Cardiopulmonary Resuscitation (3 + 0)**

This course is designed for the professional and layperson to prepare them for most situations when emergency first aid care or cardiopulmonary resuscitation is needed.

**HPS 210-2 Officiating (1 + 2)**

Prerequisite: HSL 150 in appropriate sport

Courses designed for students who wish to acquire or perfect officiating skills. Field experience assignments will be a required part of the classes. May be repeated for credit as the course title changes.

**HPS 213-3 Activities and Health for the Elementary Child (3 + 0)**

Prerequisite: EDU 212

The course provides prospective early childhood and elementary teachers with a basic background in elementary school physical education and health education programs, including the role of health science in the schools, the contributions of physical education to the school health program, safety education, fundamental motor skills and elements and activities included in a rhythms program. The course is designed for the non-physical education majors and minors and cannot be taken in lieu of HPS 250, HPS 252, and HPS 300.

**HPS 216-3 Water Safety Instructor Certification (2 + 2)**

Prerequisite: Advanced Lifesaving Certification or Lifeguard Training

This course studies the methods of teaching water safety, skill analysis and correction. Course leads to Red Cross Safety Instructor Certification. Field experience assignments will be a required part of the class.

**HPS 244-3 Dance Production (3 + 0)**

Prerequisites: HSL 150 (Repertory Choreography), HSL 150 (Improvisation and Choreography), HSL 150 (Teaching Dance), or permission of instructor

This course is designed to take the dance student through the steps necessary for creating a dance performance. Stage lighting, costumes and makeup, props, management and promotion are part of this course.

**HPS 250-3 Activities for the Young Child (2 + 2)**

Course is designed to acquaint the student with appropriate sports, games, gymnastics, and tumbling skills for the young child. Teaching progressions, safety factors, items of equipment, spotting techniques, and leadership experiences are included.

**HPS 252-2 Rhythms for the Young Child (1 + 2)**

Participation and instruction in the fundamental movements, forms, and patterns of creative dance, rhythms, and singing games for children.

**HPS 258-3 Movement Education (2 + 2)**

Participation and instruction in the problem-solving method of teaching movement exploration. Designed for teachers of preschool and elementary children. Field experience assignments will be a required part of the class.

## 276 COURSE DESCRIPTIONS

### **HPS 272-2 Fundamentals of Coaching (2 + 0)**

Prerequisites: Satisfactory completion of Level I General Studies course requirements

This is an entry level course designed to meet requirements for a three-year Letter of Authorization for Coaching in the State of Colorado. It will provide an introduction to the various technical aspects of coaching. (General Studies Course—Level II, Social Science)

### **HPS 278-3 Care and Prevention of Athletic Injuries (2 + 2)**

Prerequisites: HPS 206 or current Advanced First Aid and CPR Card

A course designed to provide study into recognition, cause, prevention, treatment and various physical therapeutic procedures for sports injuries.

### **HPS 300-3 Health Programs in Human Performance and Sport (3 + 0)**

A course designed to give the prospective professional in human performance and sports a foundation in health and safety education, including content for health and safety instruction, promotion of healthful living, and an understanding of the health services program.

### **HPS 330-3 Anatomical Kinesiology (3 + 0)**

Prerequisite: BIO 231 or acceptable human anatomy course, and satisfactory completion of Level I General Studies course requirements

A study of the musculature of the human body. Analysis of joint movement and muscular involvement in various physical activities will be emphasized. Applications of movement analysis to teaching effectiveness and rehabilitative programs will be discussed. (General Studies Course—Level II, Natural Science)

### **HPS 332-3 Biomechanics (2 + 2)**

Prerequisite: HPS 330 or permission of instructor

Application of the principles of mechanics, physics, and mathematics to the analysis of sport activities. Cinematography, motion analysis, and prediction of performance will be essential aspects of this class.

### **HPS 334-3 Physiology of Exercise (2 + 2)**

Prerequisite: BIO 232, or acceptable human physiology course, HPS 164 Physical Fitness, and satisfactory completion of Level I General Studies course requirements

This course introduces the student to the physiological response of man to exercise as well as the application of these responses to sports medicine, rehabilitation, and general fitness. The laboratory provides experiences that demonstrate the underlying theoretical constructs that govern physiological responses to exercise. (General Studies Course—Level II, Natural Science)

### **HPS 340-3 Methods of Teaching Human Performance and Sports for the Adolescent and Young Child (3 + 0)**

Prerequisite: Junior status

Course is designed to present alternative instructional strategies on a practical application level to potential professionals who will instruct adolescents and young adults in a school setting and the community. A cumulative strategies course established to reach those who shortly will go into their student teaching learning experience or professional field experience in human performance and sports.

### **HPS 346-3 Evaluation and Measurement in Human Performance, Sport and Leisure Studies (3 + 0)**

Prerequisite: Junior status

Students will have the opportunity to learn and apply concepts of measurement and evaluation in human performance, sport and leisure studies.

### **HPS 350-3 Methods of Teaching Human Performance and Sports for Children (3 + 0)**

Prerequisite: Junior status

Methods of teaching (traditional, exploratory, combined), techniques of class control and management, program planning, and organization will be covered in this course. Also included will be professional responsibilities in the total human performance and sports program.

### **HPS 362-2 Trends and Issues in Human Performance and Sports (2 + 0)**

A chronological study of American physical education, human performance and sports from 1840 to the present, as reflected through trends and issues. European history as it relates to American physical education and the development of AAHPERD are included, plus a comparative view of sport, human performance and physical education with English-speaking and Eastern block countries.

### **HPS 370-2 Psychology of Coaching (2 + 0)**

Psychology of coaching various sports. An in-depth study of motivation of the athlete and how the athlete responds under given conditions.

### **HPS 372-3 Science and Art of Coaching and Athletic Administration (3 + 0)**

This course covers principal aspects of coaching pedagogy and the organizational and planning techniques necessary for successful coaching.

**HPS 378-2 Fitness Programs for Special Populations (2 + 0)**

Prerequisite: HSL 150 (Fitness), HPS 164 Physical Fitness Techniques and Programs

Discusses ways to adapt fitness programs to meet the needs of people with special exercise requirements such as diabetes, asthma, emphysema, coronary heart disease and pregnancy.

**HPS 382-3 Mechanisms of Athletic Injury (3 + 0)**

Prerequisites: HPS 278, 330, 334

Corequisite: HPS 334

This course discusses the mechanical and physiological basis of athletic injury; its cause, pathology, and treatment. Emphasis is placed upon those parameters most important in understanding common pathological conditions in athletic injury, as well as knowledge pertinent to the planning of treatment programs.

**HPS 384-3 Evaluation Procedures in Athletic Training (2 + 2)**

Prerequisite: HPS 382

This course familiarizes the athletic training student with the fundamental injury evaluation process, with special attention toward specific injury recognition. Techniques involved in proper palpation, range of motion testing, special functional test, neurological and circulatory assessment will be covered.

**HPS 386-3 Therapeutic Modalities in Sports Medicine (2 + 2)**

Prerequisite: HPS 382

This course will familiarize the athletic training student with the fundamental aspects and components necessary in the application of various therapeutic modalities employed in sports medicine.

**HPS 391-3 Safety Education (3 + 0)**

Provides the student with knowledge about accident prevention in many areas: home, school, physical and recreational activities, traffic and community.

**HPS 399-1-3 Field Experience in Human Performance and Sports (0 + 2-4-6)**

Prerequisite: Approval of instructor

Provides opportunities for students to gain practical experience assisting in the conduct of sports-type and recreation activities with community agencies, schools, and the college. Includes K-12 licensure.

**HPS 420-3 Community Fitness Testing and Program Planning (1 + 4)**

Prerequisites: HPS 334 (HPS 468 suggested)

This course is designed to provide the student with the opportunity to conduct laboratory fitness assessments, evaluate test results, and develop exercise prescriptions. In addition, the student will be expected to become knowledgeable with regard to the promotion and marketing of fitness programs.

**HPS 450-3 Psychology of Motor Learning (3 + 0)**

Prerequisite: Junior status or permission of instructor

This course studies the concepts of motor learning and the deviations which might occur in the typical student. Emphasis will be placed on the various aspects of skill acquisition, perception, and motor control.

**HPS 460-3 Organization, Administration of Human Performance and Sports Programs (3 + 0)**

Prerequisites: Senior status, HPS 160, and satisfaction of Level I and II General Studies course requirements

This course is designed to teach the organizational and administrative policies and procedures for conducting and administering programs in human performance. This is a capstone course and is required of HPSL teaching preparation majors (K-16, K-12, Secondary) and Sport and Allied Fields emphasis area. (Senior Experience)

**HPS 462-3 Adaptive Human Performance and Sports Activities (2 + 2)**

This course is designed to adapt human performance and sport activities to the physically and mentally impaired in school and community settings. The course offers field experiences in selected settings for HPSL majors and minors.

**HPS 466-3 Legal Liability for Physical Educators, Coaches and Administrators (3 + 0)**

Prerequisites: Some coaching and/or formal courses (six hours) in human performance & sport, leisure studies, or health

An elective course designed to inform physical education teachers, coaches, and administrators of the implications and responsibilities of a liability nature involved in school or recreation activity and competitive programs.

**HPS 468-2 Advanced Exercise Assessment Techniques (1 + 2)**

Prerequisite: HPS 334

This course is designed to acquaint the student with the maintenance of exercise laboratory equipment and its use in evaluating physiological capabilities during exercise. Experience with physiological testing using laboratory equipment is given as well as on-site visitations to other laboratory settings.

**HPS 476-3 Therapeutic Rehabilitation in Sports Medicine (2 + 2)**

Prerequisite: HPS 382

This course will familiarize the athletic training student with the fundamental aspects and components of designing and implementing basic therapeutic rehabilitation exercise programs and techniques.



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### **HPS 484-2 Comparative Fitness Programs (2 + 0)**

Prerequisites: HSL 150 (Fitness), HPS 334

This course explores 1) current trends, issues and environments in adult fitness management, 2) comparison of selected popular fitness and evaluation programs, 3) certification programs and employment available for adult fitness personnel. This course will provide opportunities for on-site visitations as well as practical experience with different fitness programs.

### **HPS 487-10 Internship for Athletic Training (1 + 27)**

Prerequisites: Senior status, completion of all courses in major curriculum, 2.75 GPA, and satisfaction of Level I and II General Studies course requirements

This internship is designed for Athletic Training Emphasis majors to provide experience in both a clinical and competitive setting. Graded as Satisfactory/Unsatisfactory. (Senior Experience)

### **HPS 488-10 Internship for Adult Fitness (1 + 27)**

Prerequisites: Senior status, completion of all courses in the major curriculum, 2.75 GPA, and completion of Level I and II General Studies course requirements

This course is designed for adult fitness majors to provide a practical experience in the adult fitness field. Graded as Satisfactory/Unsatisfactory. (Senior Experience)

### **HPS 489-10 Internship for Human Performance (1 + 27)**

Prerequisites: Senior status, major in HPSL, completion of all courses in the major curriculum, 2.75 GPA, completion of Level I and II General Studies course requirements

This course is designed for majors in Human Performance and Sport who are required to have a practical experience in their major emphasis area. Graded as Satisfactory/Unsatisfactory. (Senior Experience)

## **LEISURE STUDIES COURSES**

### **LES 187-3 Introduction to Recreation and Leisure Services (3 + 0)**

This course provides an overview to the leisure services profession, including career opportunities. Philosophy, historical issues, leisure education, and the relationships among governmental, institutional, volunteer, and private agencies are discussed.

### **LES 211-3 Leadership Skills and Techniques in Leisure Services (3 + 0)**

Prerequisites: LES 187 or approval of instructor

This course provides the study and appreciation of leadership techniques used in planning and implementing activities and programs for leisure service delivery systems, including field experiences and observations.

### **LES 215-3 Maintenance of Leisure Service Facilities and Recreation Equipment (3 + 0)**

This course examines maintenance requirements and management procedures needed for leisure service facilities and equipment. Settings which are discussed include recreation centers, parks, open spaces, aquatics, and commercial facilities.

### **LES 221-3 Camping and Outdoor Recreation (2 + 2)**

This course will review history, trends, programs, management, skills, and leadership techniques common to camp and outdoor recreation programs.

### **LES 233-3 Advocacy, Leisure, and the Aging Adult (2 + 2)**

This course studies the impact of advocacy and social action programs representing and providing leisure programs for the aging adult. Discussion will include issues at the local, state, and national levels and their implications to leisure programs. The course will provide an opportunity for students to become involved with local advocacy programs in the community.

### **LES 235-3 Leisure Services for Special Populations (3 + 0)**

This course is designed to address leisure programs for individuals who have special needs in the mental, physical, developmental, or social domains. Included in this course are characteristics of individuals with special needs.

### **LES 307-3 Health and Movement Problems in the Aging Adult (3 + 0)**

Prerequisites: BIO 231, HPS 164 or permission of instructor

This course is designed to acquaint the student with the anatomical and physiological changes that occur with aging and how they affect the health and mobility of the aging adult. Physical activity will be discussed as an intervention procedure that can be used to minimize problems associated with these changes. This course will include an opportunity for on-site observation and involvement.

### **LES 333-3 Introduction to Therapeutic Recreation Services (2 + 2)**

Prerequisite: LES 235

This course is a study of the therapeutic recreation services provided for special populations administered by federal, state and local health care and treatment facilities. Emphasis will be directed toward agency organization, administration and therapeutic leadership. Course includes involvement with various health care facilities in the Denver area.

**LES 343-3 Program Development in Therapeutic Recreation (3 +0)**

Prerequisite: LES 333

This course focuses on applying programming concepts including conceptualization, planning, implementation, and evaluation of comprehensive and specific therapeutic recreation services. Equipment, program modifications, and adaptations are discussed.

**LES 353-3 Techniques in Therapeutic Recreation (2 + 2)**

Prerequisite: LES 333

This course of study will examine assessment tools, techniques, and procedures utilized in therapeutic recreation programs. Students will design individual treatment/program plans and apply various documentation and charting procedures. This course includes involvement in an agency providing therapeutic recreation services.

**LES 359-2 Adaptive Aquatic Programs (1 + 2)**

Prerequisite: Current American Red Cross WSI certification through outside agency or HPS 216

This course acquaints the student with various adaptive aquatic programs and methods of teaching the mentally and/or physically disabled. The course leads to Red Cross Adaptive Aquatic certification.

**LES 383-3 Facilities and Area Design in Leisure Services (3 + 0)**

Prerequisite: LES 215

This course examines the requirements necessary for the planning and design of leisure service facilities and areas including open space, recreation centers, parks, aquatics, sports areas and commercial facilities.

**LES 387-2 Leisure Services Internship Seminar (2 + 0)**

Prerequisite: Second semester junior or permission of instructor

This course prepares the LES major for an internship placement in the leisure services field and includes topics such as goal setting, agency identification, supervisor qualifications, professional certification, ethics, time management, financial issues and agency and personal philosophy.

**LES 393-1-3 Contemporary Issues in Leisure Studies (1-3 + 0)**

This is a variable titled course focusing on a variety of contemporary issues impacting the leisure service industry. This course deals with issues of professional importance to students with an emphasis in various facets of the leisure service field. This course cannot be repeated for credit under a similar title.

**LES 397-3 Practicum in Leisure Services (1 + 4)**

Prerequisites: LES 187, 211, 235

This practicum is a 90-hour, structured, practical experience which will provide a transition from the college class environment to the professional leisure setting for the purpose of allowing students to explore career opportunities. This experience will be under the supervision of an agency professional and Metro State faculty member.

**LES 399-1-3 Field Experience in Leisure Studies (0 + 2-4-6)**

Prerequisite: Approval of instructor

Provides opportunities for students to gain practical experience assisting in the conduct of sports-type and recreation activities with community agencies, schools, and the College. Includes K-12 licensure.

**LES 403-3 Issues and Trends in Therapeutic Recreation (3 + 0)**

Prerequisite: LES 333

This course focuses on contemporary issues impacting the profession in therapeutic recreation and includes topics such as standards of practice, ethical guidelines, credentialing, philosophies, training and competency, reimbursement, and research initiatives.

**LES 411-3 Program Development in Leisure Services (3 + 0)**

Prerequisites: LES 187, 211, 235, and 397

This course prepares students to develop effective recreation programs in diverse settings including urban, public, private, and voluntary agencies.

**LES 413-3 Administration of Leisure Services (3 + 0)**

Prerequisite: LES 187, 211, 235, and 397

This course provides knowledge of the principles and practices required in leisure services agencies. Topics include personnel management, fiscal management, legal aspects, computer application, evaluations, and research.

**LES 415-3 Advanced Techniques in Therapeutic Recreation (2 + 2)**

Prerequisites: LES 353, 397

This course of study will focus on interactive and intervention techniques and leadership roles and functions of therapeutic recreators in individual and group facilitation techniques. This course includes involvement with a clinical/community setting.

## 280 COURSE DESCRIPTIONS

### **LES 455-3 Management of Aquatic Resources (3 + 0)**

Prerequisites: HPS 166, 216

This course emphasizes the development, organization, and management of aquatic programs utilized in a variety of leisure service settings.

### **LES 463-3 Leisure Service Programs for the Older Adult (3 + 0)**

Prerequisite: Junior status

This course studies the role of recreation and leisure services as they relate to understanding the needs of services for the older adult. Emphasis will be on recreation planning in senior centers, skilled nursing facilities, day care centers, and long term care facilities.

### **LES 473-3 Sociology of Athletics in American Society (3 + 0)**

Prerequisites: SOC 101 and junior status

This course will examine and utilize basic sociological concepts to explain the relationship of sport to society. In addition, the course will investigate the impact of sports and athletics in our culture. (General Studies Course -Level II, Social Science)

### **LES 481-3 Grants and Financial Aid Programs in Leisure Services (3 + 0)**

Prerequisites: LES 211, LES 215 or permission of instructor

This course provides the student with an understanding of government and private funding sources, resources to locate funding agencies, and an opportunity to write a grant proposal based on community needs.

### **LES 485-3 Advanced Administration in Leisure Services (3 + 0)**

Prerequisites: LES 413

This course provides intensive opportunities for students to develop administrative skills required in leisure service agencies and includes topics such as development of agency policies and procedures, grant writing, applied research techniques, human resource management, and risk management planning.

### **LES 489-12 Internship for Leisure Studies (1 + 33)**

Prerequisites: Leisure Studies Major, senior status, completion of major core and emphasis area courses, GPA 2.75 required, and satisfaction of Level I and Level II General Studies course requirements

This course is designed for Leisure Studies majors to provide a practical experience in the leisure service industry. Evaluation of course will be assessed as "S" satisfactory or "U" unsatisfactory. (Senior Experience)

## Human Services

### **HSP 101-4 Introduction to Human Services and Community Resources (4 + 0)**

Provides a basic understanding of the roles and functions of the new generalist worker in human services. Examines attitudes and objectives that the student should attain. Introduces the student to the various community resources available in the application of human services programs.

### **HSP 104-4 Applied Behavior Analysis (4 + 0)**

This course will provide the student with an understanding of the scientific method and the application of the principles and technology of behavioral analysis.

### **HSP 106-3 Pharmacology of Drugs and Alcohol (3 + 0)**

Corequisite: HSP Drug and Alcohol or Domestic Violence Major, or permission of instructor

Biochemistry, pharmacology, neurology, pathology and nutrition will be emphasized with a focus on drug/alcohol usage and addiction.

### **HSP 111-4 Introduction to Developmental Disabilities (4 + 0)**

Provides an introduction to the field of mental retardation with some discussion of causes, types, and treatment.

### **HSP 147-3 Addictive Experiences: Sex, Drugs, Rock and Roll (3 + 0)**

How much is too much in the addictive lifestyles in contemporary America? It provides an examination of the balance between theories of addiction and the addictive experiences. It also focuses on the process of developing healthy habits and nonaddictive lifestyles.

### **HSP 201-4 Principles of Nonprofit Organization and Administration (4 + 0)**

This course will provide the student with a general awareness of the basic principles and concerns associated with the administration of nonprofit organizations.

### **HSP 202-4 Small Group Dynamics: Theory and Experiences (3 + 2)**

Theory of group experiences and effectiveness so one can recognize the dynamics of interpersonal interaction, predict dynamics accurately, participate effectively, demonstrate effective leadership skills, and to exercise control of the interaction in a small group situation.

- HSP 203-4 Introduction to Theory and Techniques in Interviewing and Psychotherapy (4 + 0)**  
Familiarizes students with theoretical approaches to psychotherapy, with a primary emphasis on those applications which rely on the dyadic interview process. Students are expected to participate in interviews following formats suggested by selected theoretical approaches.
- HSP 204-4 Family Function, Dysfunction, and Therapy (4 + 0)**  
Prerequisite: HSP 203 or permission of instructor  
Provides a brief review of family functions and the roles of family members, both traditional and changing. Describes theoretical and therapeutic systems in which family theory serves as a guide for the therapist in doing family psychotherapy.
- HSP 205-8 Human Services Practicum I (2 + 12)**  
Prerequisites: HSP 101, HSP 104, HSP 202, HSP 203, HSP 204, or permission of instructor  
Seminar and a 300-hour practicum in a human services institution. Experience and training in the fundamentals of evaluation, treatment, dynamics, relationships, and effective functioning. The student may register twice for this course in an alternate area of emphasis.
- HSP 206-8 Human Services Practicum II (2 + 12)**  
Prerequisites: HSP 101, HSP 104, HSP 202, HSP 203, HSP 204, or permission of instructor  
Seminar and 300-hour advanced practicum in a human services setting. Experience and training in the fundamentals of evaluation, treatment, dynamic therapeutic relationships, and effective functioning. The student may register twice for this course in an alternate area of emphasis.
- HSP 211-3 Individual Programming for the Developmentally Disabled (3 + 0)**  
This course provides students with a basic knowledge for design, implementation and evaluation of programs for the developmentally disabled person. Provides information about the technologies available, assessment models and components of successful educational and vocational environments.
- HSP 248-6 Addictions Practicum I (0 + 12)**  
Prerequisites: HSP 203, HSP 204, and HSP 347  
This internship experience at a cooperating alcohol counseling/treatment center provides the opportunity for trainees to gain meaningful work experience in treatment techniques, and how to apply knowledge learned in previous coursework.
- HSP 249-6 Addictions Practicum II (0 + 12)**  
Prerequisite: HSP 248  
This internship experience at a cooperating drug counseling/treatment center provides the opportunity for trainees to gain meaningful work techniques, and how to apply knowledge learned in previous coursework.
- HSP 311-4 Human Services for Handicapped Persons (4 + 0)**  
Prerequisite: HSP 205 or permission of instructor  
Provides an overview of causes and treatment for the physically handicapped, mentally retarded, emotionally disturbed, and other handicapped children and adults.
- HSP 321-4 Organizational Stability of Nonprofits (4 + 0)**  
Prerequisite: HSP 201 or permission of instructor  
This course will provide an examination of the external and internal forces that effect the functioning of nonprofit organizations. Special emphasis will be placed on the interaction between sociopolitical climate and funding sources, the legislative process and lobbying opportunities, and the impact of the systems, personalities, organizational structures, and programs operating within a nonprofit organization. Students will learn to apply the principles of strategic planning to public and nonprofit organizations.
- HSP 322-2 Conflict Resolution and Decision-Making (2 + 0)**  
This course will focus on the nature, analysis, and management of conflict and the use of decision-making models and negotiating skills in leadership situations.
- HSP 323-4 Contemporary Diagnostic and Treatment Programs in Corrections (4 + 0)**  
Prerequisite: HSP 205, or HSP 206, or permission of instructor  
An analysis of differential diagnosis and treatment methods and techniques in helping juveniles relate their own ability in understanding their interpersonal relationships with self and others in the environment in terms of behavior, emotions, and motivations. Prescribed treatment plans are included.
- HSP 333-2 Ethical and Professional Issues in Human Services (2 + 0)**  
Prerequisite: HSP 205 or HSP 248  
This course surveys ethical, legal, and professional issues facing human services professionals. The course is designed to teach a process of ethical decision-making and to increase awareness of the complexities in the counseling field: codes of ethics, legal considerations, standards of preparation, certification, licensing, and role identity of counselors. A critical-thinking component is included in the course.

## 282 COURSE DESCRIPTIONS

### **HSP 341-3 Alcoholism Family Counseling Advanced Topics (3 + 0)**

Prerequisite: HSP 204 or permission of the instructor

Investigation of diverse issues related to working with substance abusing couples and families. Topics include: the adolescent abuser and family, marital therapy, sex therapy, multiple couple and family treatment, work with the child-centered and single parent family. Emphasis is on the practical application of outlooks and methods covered.

### **HSP 343-3 Addictive Behaviors (3 + 0)**

Prerequisites: HSP 104 and HSP 203

This course provides a detailed study of specific addictive behavior patterns and usual treatment methods. The focus is to help students clarify a theory of addiction, gain knowledge about addictive behaviors and learn current treatment practices utilized in the field. Students will be expected to visit treatment programs.

### **HSP 344-3 Addictions Research Seminar (3 + 0)**

Prerequisites: HSP 343, MTH 190 or equivalent

Designed for Human Services majors in Drugs, Alcohol, and Addictive Behaviors to research their specific area of interest in addictions. In addition, students will learn basic concepts and skills in surveying literature, synthesizing and critically analyzing research articles and methodology utilized in addictions research.

### **HSP 345-4 Crises Intervention and Legal Issues (4 + 0)**

Prerequisites: HSP 203 and HSP 204

Focuses on crises intervention and legal aspects applicable to the field of human services. The coursework is designed to give the student an opportunity for competencies development, and increased understanding of emergency, legal, and therapeutic interventions.

### **HSP 347-4 Counseling the Substance Abuser (4 + 0)**

Prerequisite: HSP 203

A course offering specifically oriented to counseling the substance abuser. Coursework is designed to give the trainee experience in applying fundamentals of individual counseling techniques and client records management.

### **HSP 349-4 Multicultural Issues in Human Services (4 + 0)**

Prerequisites: HSP 203 and satisfaction of Level I General Studies course requirements

The course facilitates cultural diversity understanding in the delivery of human services, especially psychotherapy to people of African, Asian, Hispanic, Native American, white ethnic, and WASP heritage's. Research involving the therapist and client interaction during individual, family, and group psychotherapy is emphasized by examining the affects of racism, sexism, and socio-economic status in the assessment, communication, diagnosis, and treatment process. (General Studies Course—Level II, Social Science; Multicultural)

### **HSP 350-3 Domestic Violence: Patterns of Relationship Abuse (3 + 0)**

Prerequisites: HSP 203 and 204

The exploration of behavior patterns within families where domestic violence occurs is examined through the study of victims, perpetrators and children within the family. Socialization patterns, developmental stages and psychopathological states which impact on violence between partners is explored along with treatment issues and approaches for each person.

### **HSP 358-1 The Resistive Client (1 + 0)**

Prerequisites: HSP 248 and/or junior status, or permission of instructor

This course provides the student with a clear understanding of resistance in the counseling process both from the perspective of the client and of the counselor. Various models are used in overcoming resistance and are presented and demonstrated. This course meets the resistive client mandatory training requirement for the CAC II Level for Colorado Addictions Counselors.

### **HSP 360-2 Domestic Violence: Perpetrators of Abuse (2 + 0)**

Prerequisites: HSP 203 and 204

This course explores and describes the behaviors and attitudes of men who abuse others, the cycle of violence, intergenerational violence and the impact of violence on the lives of perpetrators and victims. Students will learn about diagnostic tools to determine lethality and intervention therapy.

### **HSP 361-4 Financial Accountability and Organizational Control in Nonprofit Organizations (4 + 0)**

Prerequisite: HSP 201 or permission of instructor

The course will include the skills needed to properly manage financial resources and organizational controls in a variety of nonprofit organizations. Topics will include financial record keeping systems and statements, budgeting, tax compliance, cost control, MIG systems, and program accountability and evaluation.

### **HSP 365-1 Treatment of Adult Survivors (1 + 0)**

Prerequisites: HSP 203 and 204

Abuse is defined from different viewpoints, including emotional, sexual, and physical. The process of healing through therapy and support systems for survivors of adult and childhood abuse are studied and therapeutic methodology is explored.

**HSP 375-4 Holistic Health and High-Level Wellness (4 + 0)**

Prerequisite: PSY 275 or permission of instructor

This course will give students the opportunity to explore and evaluate high-level wellness and nontraditional alternatives to the Western medical model. It will emphasize the interrelatedness of stress, diet, exercise, environmental sensitivity, and self responsibility.

**HSP 402-4 Fundraising and Proposal Writing for Nonprofit Organizations (4 + 0)**

Prerequisites: HSP 201 or permission of instructor

This course will provide an examination of the various methods of obtaining funds for nonprofit organizations so they can function effectively. Special emphasis will be placed on writing successful proposals, including budgets and budget narratives.

**HSP 411-2 Understanding the World of the Disabled Adult (2 + 0)**

Prerequisites: HSP 111, HSP 311 or permission of instructor

The course is designed to provide the student with an understanding and awareness of the disabled adult through lectures, sensitivity training and field experiences.

**HSP 420-2 Child Abuse and Neglect (2 + 0)**

Prerequisites: HSP 203 and 204

This course deals with a historical understanding of child abuse, neglect, and sexual exploitation, including definitions, dynamics, effects on the victim, how society intervenes and prevention methods.

**HSP 425-2 Counseling the Gay or Lesbian Client (2 + 0)**

Prerequisite: HSP 203

The rate of abuse of psychoactive substances among gays and lesbians is significantly higher than in the rest of the population. Violence, while under the influence, brings these individuals into counseling. The issue of homosexuality in the greater society must be considered when counseling these individuals. This course addresses the lifestyle patterns of homosexuals and the relationship to substance abuse and violence treatment.

**HSP 428-1 Gender Issues in Treatment and Recovery (1 + 0)**

Prerequisite: HSP 203

The socialization of males and females affects the use/abuse of psychoactive substances. A high percentage of persons in treatment for domestic violence also have underlying substance abuse issues. This class addresses gender related treatment and recovery considerations.

**HSP 429-1 PTSD Counseling (1 + 0)**

Prerequisite: HSP 203

Post Traumatic Stress Disorder (PTSD) occurs among persons who have experienced violence, whether the cause is war, child abuse or domestic violence. Eighty-five percent of persons with PTSD abuse psychoactive substances. This course explores the causes of PTSD, the symptoms and treatment. The relationship of the disorder to substance abuse and violence in the form of domestic disturbances is studied along with intervention and treatment.

**HSP 431-4 Human Resource Development in Nonprofit Organizations (4 + 0)**

Prerequisites: HSP 201 or permission of instructor

This course will provide students with a comprehensive study of the use of human resources in a variety of roles within nonprofit organizations including recruitment, training and development of volunteers, board members, and staff.

**HSP 432-4 Psychopathology and the Mental Health Clinician (4 + 0)**

Prerequisites: Two of the following: HSP 205, HSP 206, HSP 248, HSP 249, or permission of instructor

Provides critical analyses of current definitions of psychopathology and of the prevailing models of mental disturbance. Explores the strengths and problems of current labeling systems and the societal implication of mental health typologies.

**HSP 436-4 Advanced Intervention Techniques (4 + 0)**

Prerequisites: Two of the following: HSP 205, HSP 206, HSP 248, HSP 249, or permission of instructor

An advanced therapeutics course designed for the human services specialist utilizing a symptomatic/multimodality approach.

**HSP 449-1-4 Contemporary Issues in Human Services: Variable Topics (1-4 + 0)**

Prerequisites: Junior status and/or permission of instructor

A variable titled course focusing upon the synthesis of the concepts and skills of the human services professional. Designed to provide the human services professional with an educational forum in which to integrate the theoretical base of the helping services and applied human services practice. May be repeated under different titles.

## 284 COURSE DESCRIPTIONS

### **HSP 450-1 Legal Liabilities in the Helping Professions (1 + 0)**

Prerequisites: HSP 101, 203 and junior/senior status

Laws which relate to the helping professions and their implications for Human Service Professionals are discussed. Students will learn how to address and work with laws relating to confidentiality, client records and legal documents kept on each client, ethical and professional standards, subpoenas, legal actions, search warrants and preparation for court testimony.

### **HSP 454-2 Youth, Drugs and Gangs (2 + 0)**

Prerequisites: HSP 203 and 204

Child abuse, neglect, and substance abuse are underlying issues for gang members. This course explores the reasons youth are attracted to and join gangs and the correlation between psychoactive substances and violence.

### **HSP 465-4 Group Facilitation and Group Counseling (4 + 0)**

Prerequisite: HSP 202 or permission of instructor

Comprehensive experience in facilitating small groups to develop leadership skills and learn techniques of group psychotherapy.

### **HSP 468-4 Supervisory Techniques for Health Care (4 + 0)**

Prerequisites: Two of the following: HSP 205, HSP 206, HSP 248, HSP 249, or permission of instructor

Presentation of basic principles and methods involved in the supervisory process. Supervision is presented as a highly individualized and subjective function involving conscious aims as well as unconscious values, attitudes, and strivings.

### **HSP 479-12 Professional Internship (1 + 33)**

Prerequisites: HSP major with senior status and/or approval of department chair and satisfaction of all Level I and Level II General Studies course requirements

The Professional Internship is the culmination of training for the bachelor's degree in Human Services. The internship is distinguished from work activities in that it is the student's responsibility to demonstrate that some project has been completed above and beyond the usual requirements of a job. (Senior Experience)

## **Industrial and Technical Studies**

### **ITS 101-4 Introduction to Woodworking (2 + 4)**

An introductory course designed to give the student basic information about woods, their selection and use, and to provide the basic skill development in the use of selected woodworking tools, machines and practices. Finishing and preservation of wood will also be studied and utilized.

### **ITS 103-2 Finishing Materials and Processes (1 + 2)**

A study of materials, processes and procedures used in the finishing of industrial products. Includes preparation, abrasives, natural and synthetic coatings, chemical treatments used in the woods, metals, and plastics industries.

### **ITS 113-3 Introduction to Plastics (1 + 4)**

This course is an introduction to the basic manufacturing processes and techniques used in the plastics industries. A variety of forming, casting, and reinforced plastic processes will be examined.

### **ITS 120-2 Introduction to General Metals: Cold Metals (1 + 2)**

A combination lecture/laboratory course covering machine metals, sheet metal and bench metal areas. Emphasis on student designed projects, forming, cutting, and finishing.

### **ITS 122-2 Introduction to General Metals: Hot Metals (1 + 2)**

A combination lecture/laboratory course covering foundry, forging, heat treating, and welding processes. Includes pattern-making, coremaking, cutting, forming, and finishing.

### **ITS 143-2 Industrial Drawing (1 + 2)**

This course is an introduction to industrial drawing through sketching and the use of basic drawing instruments including machines. Topics include: lettering, drawing symbols, pictorial drawing, geometric constructions, orthographic projections, and dimensioning.

### **ITS 150-2 Introduction to Graphic Arts I (1 + 2)**

An introduction to the graphic arts industry. Experiences include layout and design, composition for letterpress, and silk screen.

### **ITS 151-2 Introduction to Graphic Arts II (1 + 2)**

An introduction to the graphic arts industry. Experiences include layout and design, composition, process camera, and darkroom procedures for offset lithography.

### **ITS 166-3 Introduction to Power (1 + 4)**

This course deals with the theory, application, transmission and control of hydraulic, pneumatic and mechanical power systems. Attention also is given to the study of the internal combustion engine.

- ITS 171-2 Consumer Electricity and Electronics: Communication Systems (1 + 2)**  
Prerequisite: PHY 100  
A lecture/laboratory course covering electrical and electronic theory and its practical application pertaining to telephone electronic and light transmission and receiver systems.
- ITS 172-2 Consumer Electricity and Electronics: Control Systems (1 + 2)**  
Prerequisite: PHY 100  
A lecture/laboratory course covering electrical and electronic theory and its practical application pertaining to numerical and electronic control devices used in industrial production.
- ITS 175-2 Consumer Electricity and Electronics: Residential Systems (1 + 2)**  
Prerequisite: PHY 100  
This is a lecture/laboratory course covering an introduction to electrical/electronic theory and its practical application in electronic circuits and in residential distribution control, alarm and information systems.
- ITS 231-2 Art Metal, Silversmith, and Lapidary (1 + 2)**  
Covers the processes of fabrication in gem cutting and mounting, hand wrought, sand casting and investment casting of metals. Also includes metal forming, tooling, spinning, etching, enameling, and powdered metallurgy. Student may specialize in one or more areas.
- ITS 255-3 Introduction to Photography (1 + 0)**  
A first course in photography that contains the essential information to take and make good black and white pictures. Color photography will also be discussed.
- ITS 269-2 Alternate Energy & Transportation (2 + 0)**  
This is a lecture course, designed to take a comprehensive look at the alternate energy sources and systems; it includes a study of modes of powering vehicles by other than fossil fuel and alternatives to private vehicle transportation.
- ITS 281-3 Technology, Society, and You (3 + 0)**  
Prerequisites: Satisfaction of the Level I Mathematics requirement and either ENG 101 or the Level I communication requirement  
This course is designed to focus on the impacts and implications technology has or will have on society. The course presents students with the opportunity to study and develop an understanding of how technology affects people, families, education, economics, politics, and ethics. History and future implications will also be studied. Emphasis will be placed on people's understanding of industrial materials, processes, and control of technology. (General Studies Course—Level II, Social Science)
- ITS 283-2 Manufacturing Organization and Processes (2 + 0)**  
This course is combination lecture/lab course outlining the internal organizational structure, function, and operation of a variety of manufacturing industries. Laboratory experiences will focus on commonly shared processes in raw materials and production of jigs and fixtures.
- ITS 310-4 Advanced Plastics (2 + 4)**  
Prerequisite: ITS 113  
An in-depth study, lecture and lab, of the materials, processes and procedures used in the plastics industries.
- ITS 321-4 Advanced Metalworking (2 + 4)**  
Prerequisites: ITS 120 and ITS 122  
Advanced study and laboratory experience in metal fabrication including sheet and ornamental metal, foundry, welding, and machine. Introduction to the fundamentals of numerical controlled production.
- ITS 341-3 Computer Aided Drafting for Industry (1 + 2)**  
Prerequisite: ITS 143 or permission of instructor  
This course is an introduction to the principles of Computer Aided Drafting (CAD) and an understanding of the DOS (Disk Operating System). The student will learn the menu pages that contain all of AutoCAD's commands and practices. The production of lines, arcs, points, and polygons will be studied.
- ITS 350-4 Advanced Graphic Arts (2 + 4)**  
Prerequisites: ITS 150 and ITS 151  
An in-depth study, lecture and lab, of the methods and processes which produce a number of copies of pictorial, decorative, or typographic arrangements on paper or other surfaces, by offset lithography and screen processes.
- ITS 370-3 Industrial Safety (3 + 0)**  
Prerequisite: Completion of Trade or Technical Associate degree program or permission of instructor  
Industrial safety related to industry and school shops. Includes history, accident facts, liability, psychology, worker performance, industrial methods of operation and sources of information.



**ITS 371-3 Developments in Industrial and Technical Processes (3 + 0)**

Prerequisite: Completion of Trade or Technical Associate degree program or permission of instructor  
An in-depth exploration of the elements common to all trade and technical industries: past standards, current developments, future trends.

**ITS 372-3 Characteristics of Industrial and Technical Personnel Selection, Supervision and Evaluation (3 + 0)**

Prerequisite: Completion of Trade or Technical Associate degree program or permission of instructor  
Deals with the unique characteristics that exist in trade or technical operations including the selection, supervision and evaluation of personnel in industry. A practical study of the career mobility opportunities and future trends in personnel management in industry.

**ITS 380-4 Industrial Safety and Production (2 + 4)**

Prerequisites: ITS 101, ITS 113, ITS 120, and ITS 122  
A combination lecture/laboratory course covering safety practices and procedures and fundamentals of industrial production. Experience is gained in production planning, design, and construction of jigs and fixtures used in mass production.

**ITS 381-2 Industrial Arts for the Elementary School (1 + 2)**

Includes the development of some basic tool skills that classroom teachers may find useful in using the industrial arts to enrich other disciplines. The use of career education as an awareness of occupations is included.

**ITS 403-4 Advanced Wood Processes (2 + 4)**

Prerequisite: ITS 101 or permission of instructor  
This course is a combination lecture and laboratory course surveying and applying the use of industrial cabinet and millwork procedures and materials. The laboratory experiences will focus on specific processes on specific equipment used in the industry. Emphasis will be placed on new materials, hardware, and equipment.

**ITS 420-4 Welding Technology (2 + 4)**

Prerequisite: ITS 122 or permission of instructor  
A combination lecture/laboratory course which includes practical exercises and weldment testing involving the following processes: shielded metal arc, MIG, TIG, oxyacetylene welding, brazing and flame cutting.

**ITS 441-3 Computer Aided Drafting for Industry II (1 + 4)**

Prerequisites: ITS 143 and ITS 341  
This course is a continuation of the principles of Computer Aided Drafting (CAD). Advanced operations of AutoCAD will be used to produce drawings that are consistent with industry standards.

**ITS 471-8 Trade and Technical Practicum (1 + 14)**

Prerequisite: Completion of twelve credits beyond associate degree in a trade or technical program  
An advanced level supervised field experience in an area related to the Technical and Industrial Administration major. The field experience is conducted by an affiliated organization in collaboration with the Industrial and Technical Studies faculty and the student.

**ITS 473-3 Assessment of Trade and Technical Enterprises (3 + 0)**

Prerequisite: Completion of trade or technical associate degree program or permission of instructor  
A study of the methods of assessing specific trade and technical industries and competitive products; techniques of market sampling, product development and promotion; patent law and patent search.

**ITS 474-2 Organizational Structures for Technical Enterprises (2 + 0)**

Prerequisite: Completion of trade or technical associate degree program or permission of instructor  
An examination of organizational structures such as sole proprietorship, partnerships, corporations, and franchises. Attention is given to liability and tax implications.

**ITS 481-3 Curriculum and Methods of Teaching Industrial Arts (2 + 3)**

Prerequisite: ITS 380  
A study of the history, philosophy, and objectives of industrial arts. Development of a course of instruction including unit and lesson plans. Experience in development and execution of appropriate instructional methods. Three clock hours per week must be arranged concurrent with, and by permission of the instructor of one of the Industrial and Technical Studies core courses.

**ITS 483-3 Organization and Administration of Industrial Arts (3 + 0)**

Prerequisite: ITS 380  
Three areas of emphasis are included: (1) Planning and organizing multiple activity facilities and programs, (2) the selection and maintenance of equipment, and (3) the teacher's role in the organization and administration of an effective industrial arts program, including individual courses. Working with advisory committees as a means of program development will be emphasized.

**ITS 484-2 Emerging Technologies (2 + 0)**

Prerequisites: Senior status and ITS 281

This course is designed to study the creation and utilization of adaptive means, including tools, machines, materials, techniques, and systems. Tools and technical systems have enabled humankind to survive and have had an effect on the physical world. This course will discover and explore the very latest technologies that affect our lives.

**ITS 486-2 Research in Industrial Technology (2 + 0)**

Prerequisites: Senior status; ITS majors/minors and TIA majors only

This course provides in-depth research, laboratory experimentation, and/or development of a student-selected and faculty-approved topic in one technical system. The areas of research are: Communications, Manufacturing, and Transportation/Power. The course allows the student the opportunity to further develop problem solving abilities. At the same time, the process enhances the student's knowledge and skills in a technical concentration.

**ITS 487-1-5 Special Studies in Industrial and Technical Studies (0 + 2-10)**

Prerequisite: Permission of Instructor

A study and investigation of a selected topic in the field of industrial and technical studies. Student may repeat this course in an alternate areas of emphasis.

**ITS 496-4 Professional Industrial Internship (1 + 9)**

Prerequisites: Satisfaction of all Level I and Level II General Studies course requirements, senior status, and/or completion of twelve credits beyond Associate's Degree in a trade or technical program. Industrial Design Majors.

The professional internship is the culmination of training for the bachelor's degree in Technical and Industrial Administration. The internship is distinguished from work activities in that it is the student's responsibility to demonstrate that some project has been completed above and beyond the usual requirements of a job. (Senior Experience)

## Intercultural Studies

**ICS 100-3 Introduction to Asian-American Studies (3 + 0)**

This course focuses on the history of Asians in America, their social and psychological adjustment, their involvement in American economic and political systems. The uniqueness of Asian-American cultures will also be examined.

## Japanese

**JPS 101-5 Elementary Japanese I (5 + 0)**

This basic course in Japanese emphasizes pronunciation, speaking, and understanding, supplemented by grammar, reading, and writing.

**JPS 102-5 Elementary Japanese II (5 + 0)**

Prerequisite: JPS 101 or equivalent

As a continuation of JPS 101, this course further emphasizes pronunciation, speaking and understanding based on more complex grammar, reading, and writing activities.

**JPS 201-3 Intermediate Japanese I (3 + 0)**

Prerequisite: JPS 102 or equivalent

This is the first semester of a two semester intermediate Japanese language sequence specifically designed to strengthen grammatical skills and proficiency in speaking, understanding, reading, and writing. The course will also introduce students to a sampling of social, cultural, and literary topics central to the understanding of Japan and the Japanese people.

**JPS 202-3 Intermediate Japanese II (3 + 0)**

Prerequisite: JPS 201 or equivalent

This second course in the JPS 201-202 sequence is designed to continue strengthening grammatical skills and proficiency in speaking, understanding, reading, and writing. It will also present further examples of socio-cultural issues central to Japan and the Japanese people.

## Journalism

**JRN 101-3 Introduction to Journalism and Mass Media (3 + 0)**

Prerequisites: Minimum performance standard scores on the reading, writing and mathematics preassessment placement tests.

This course is a study of the historical development of newspapers and their role in U.S. society, and an exploration of the nature and impact of books, television, radio, magazines, films, public relations, advertising, and technology, and their relationship to journalism. (General Studies Course - Level II, Social Sciences)

## 288 COURSE DESCRIPTIONS

### **JRN 110-3 Beginning Reporting and News Writing (2 + 2)**

Prerequisites: ENG 101 or permission of instructor

This course provides concentration in a lecture and laboratory setting on the development of the basic skills of reporting and news writing, with stress on accuracy, completeness, clarity, speed, and fairness.

### **JRN 120-3 Beginning News Editing (2 + 2)**

Prerequisites: ENG 101 or permission of instructor

This course is an introduction to and intensive practice in the techniques of copy editing and headline and outline writing. Laboratory practice is provided.

### **JRN 210-3 Intermediate Reporting and Newswriting (2 + 2)**

Prerequisites: JRN 210 or permission of instructor

This course allows students to refine the news gathering, interviewing and writing techniques that were learned in Beginning Reporting and Newswriting by introducing them to crime, courts, and government reporting. Laboratory time to perfect writing skills is provided. Students are required to cover events out of class.

### **JRN 220-3 Intermediate News Editing (2 + 2)**

Prerequisites: JRN 120 or permission of instructor

This course provides advanced training in complex problems of copy editing, headline and caption writing, and news judgment with an introduction to page design and photo editing. Included is laboratory time to practice these skills.

### **JRN 270-3 Fundamentals of Public Relations (3 + 0)**

Prerequisites: JRN 210 or permission of instructor

This course is an introductory analysis and practical exploration of the roles and functions of public relations as it relates to an organization's internal and external publics. Development of practical skills include persuasive strategies, media relations, and effective news releases.

### **JRN 310-3 Publication Practicum (0 + 6)**

Prerequisite: JRN 210 or permission of instructor

The student, under supervision, will report and write publishable news and feature stories for Denver-area daily and weekly newspapers and publications including The Metropolitan.

### **JRN 315-3 Contemporary Issues (3 + 0)**

Prerequisites: JRN 210 or permission of instructor

Students will perform in-depth investigation and writing about political, social, or economic issues, wherein each student works independently (but shares the experience with the entire class) on a particular theme or community issue.

### **JRN 340-3 Feature Article Writing for Newspapers (3 + 0)**

Prerequisites: JRN 210 or permission of instructor

Students will study the content and writing style of newspaper features, with numerous assignments in developing feature ideas and producing finished stories.

### **JRN 350-1 Topics in Journalism (1 + 0)**

Prerequisites: JRN 210 and 220 or permission of instructor

This course will provide students with a brief look at a variety of topics in journalism, including specialized areas of reporting and writing techniques. Topics will vary each semester. This course can be repeated for credit.

### **JRN 355-3 Print Media Advertising Sales (2 + 2)**

Prerequisites: ENG 101, JRN 101, MKT 300, 311 or permission of instructor

Students will learn print media advertising sales theory related to analysis construction, placement and effects. Practical experience will include work as a sales agent for a publication.

### **JRN 360-3 Photojournalism I (0 + 6)**

Prerequisites: JRN 110, ART 220 or permission of instructor

This course provides an introduction to photojournalism and techniques used in photography for the print media. Students must have a working knowledge of 35mm cameras and darkroom procedures.

### **JRN 370-3 Public Relations Writing (3 + 0)**

Prerequisites: JRN 270 or permission of instructor

This course applies public relations theory, principles, techniques, and practices to teach students to write specific publications and documents, such as news releases, press kits, public service announcements, newsletters, and other communications materials.

### **JRN 410-3 Advanced Reporting (3 + 0)**

Prerequisites: JRN 120, 210 or permission of instructor

This course is an in-depth look at reporting local governmental issues and at investigative reporting with a special emphasis on the use of documents as a research tool.

**JRN 415-6 The Capitol Reporter: Writing/Reporting (0 + 12)**

Prerequisites: JRN 210 or permission of instructor

Students under the direction of professional editors report on the state legislature, covering committee meetings and floor action in the Senate and House, interviewing senators, representatives, lobbyists, and others to create several stories a week.

**JRN 416-3 The Capitol Reporter: Editing/Design (0+ 6)**

Prerequisites: JRN 210, 360 or permission of instructor

Students under the direction of professional editors help edit and lay out the weekly Capitol Reporter internship newspaper on QuarkXpress computer page design program. Photojournalism, computer graphics, and political cartooning skills may also be used in this course.

**JRN 420-3 Principles of Newspaper and Magazine Design (2 + 2)**

Prerequisites: JRN 110, 220 or permission of instructor

This is an advanced course in layout and design of newspapers, magazines, newsletters, brochures, and other professional publications, including advanced problems in news judgment, photo editing and layout, use of graphics, and editing and headline writing. Students will spend laboratory time designing pages.

**JRN 440-3 Feature Article Writing for Magazines (3 + 0)**

Prerequisites: JRN 340 or permission of instructor

This course includes intensive study in and application of the techniques and marketing requirements for producing and selling feature articles to magazines.

**JRN 450-3 Ethical and Legal Issues in Journalism (3 + 0)**

Prerequisites: JRN 1 or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, and senior status.

This course is an intensive study into ethical dilemmas, and constitutional and legal conflicts in the news media. (Senior Experience)

**JRN 460-3 Photojournalism II (0 + 6)**

Prerequisites: JRN 360 or permission of instructor

This course provides advanced training in photojournalism and techniques used in photography for the print media. Students must have a working knowledge of 35mm cameras and darkroom procedures.

**JRN 470-3 Public Relations Strategic Planning (3 + 0)**

Prerequisites: JRN 370

This course applies public relations theory and techniques to identify, research and solve public relations issues facing institutions and/or community non-profit agencies in one or more comprehensive semester-long projects.

## Management

**MGT 221-3 Legal Environment of Business I (3 + 0)**

This course is designed to present the legal system as it applies to business. The course includes a discussion of fundamental concepts related to the nature and sources of law and to the resolution of disputes. Statutes, regulations and related government agencies that regulate employment, securities, trade, and workplace decisions as well as the law of agency, contracts, organizations, and torts are analyzed. Ethical and international aspects of law are treated where appropriate.

**MGT 250-3 Small Business Management (3 + 0)**

Prerequisite: For non-business majors and business minors only

This course covers the principles of small business management and is designed for non-business majors only. Areas addressed include the positives and negatives of starting a small business, and particularly profiling the target customer, the competition, promotion, location, accounting, legal concerns, franchising, and planning.

**MGT 300-3 Organizational Management (3 + 0)**

Prerequisites: Junior status or permission of instructor

This course examines applications of managerial functions and processes as applied to business and other organizations. Human and organizational behavior are discussed within the organizational environment; production techniques and systems in manufacturing and service, which are relevant to organizational management are covered. Ethical concepts and international implications are interwoven throughout.

**MGT 302-3 Fundamentals of Entrepreneurship (3 + 0)**

Prerequisite: MGT 300

Fundamentals of Entrepreneurship identifies the management skills necessary for starting, buying, or working for a business with high growth potential. Areas addressed include the positives and negatives of starting a business, researching, and developing a business concept; investigating market factors; and planning financial strategies. Students will evaluate business ideas and develop a written feasibility plan.

## 290 COURSE DESCRIPTIONS

### **MGT 321-3 Commercial and Corporate Law (3 + 0)**

Prerequisite: MGT 221 or permission of instructor

This course includes a study of the fundamental legal concepts of property and a study of the Uniform Commercial Code as it applies to secured transactions, commercial paper, and sales. Also examined are business organizations with major emphasis on partnerships and corporations, as well as bankruptcy and estates.

### **MGT 322-3 Legal Environment of Business II (3 + 0)**

Prerequisite: MGT 221 or permission of instructor and junior status

This course provides the student with an understanding of the contemporary legal environment in which business must function. It focuses on the power of government to regulate business and the exercise of that power. Covered are ethics and laws relating to corporations and partnerships; securities, antitrust, employment discrimination, affirmative action, bankruptcy and administrative agencies.

### **MGT 353-3 Human Resources Management (3 + 0)**

Prerequisite: MGT 300

This course provides the student with a broad overview of the contemporary issues, theories, and principles used to effectively manage human resources in organizations. The psychological, social, legal, and economic bases underlying the practices of human resource management are studied. Topics such as recruitment, selection, performance appraisal, and compensation are analyzed.

### **MGT 355-3 Manufacturing and Service Management (3 + 0)**

Prerequisites: MGT 300 and familiarity with Lotus 1-2-3 or comparable software and junior status

This course is an introduction to the activities required to manufacture a product or create a service. Topics include work force issues, bottlenecks, scheduling, quality assurance, materials control, and dealing with capacity and technological change. Manufacturing and service management in the international arena is contrasted with such management in contemporary American organizations. Spreadsheet software is utilized to explain and modify a variety of production and service topics.

### **MGT 400-3 Management Decision Analysis (3 + 0)**

Prerequisite: MGT 300 and senior status

This course focuses on understanding and improving managerial decision making in formally structured organizations. Emphasis is placed on qualitative aspects of decision making in the context of individual, group, and organization dynamics.

### **MGT 402-3 Entrepreneurial Creativity (3 + 0)**

Prerequisite: MGT 302 and senior status

The course will focus on techniques for improving entrepreneurial creativity. Topics include techniques to enhance intuitive creative thinking within the business environment. The emphasis is on the development and implementation of innovative approaches to management and eliciting creative traits from the student to development.

### **MGT 405-3 Purchasing and Materials Management (3 + 0)**

Prerequisites: MGT 355 and senior status

This course investigates the role of purchasing materials management in organizations. It covers the basic conceptual and operational tasks associated with purchasing, including vendor relations and the integration of its activities with engineering, production, marketing, and finance.

### **MGT 442-3 Entrepreneurial Business Planning (3 + 0)**

Prerequisites: MGT 302 and MGT 402 and senior status

This course requires the student to prepare a definitive, comprehensive business plan involving all aspects of a proposed new venture. To attract seed money and growth capital, the student plan must address probable start-up issues involving market analysis, competition, workforce, and capacity planning. Emphasis is on financial viability and business plan packaging to secure financial seed money.

### **MGT 453-3 Organizational Behavior (3 + 0)**

Prerequisites: MGT 300 and senior status

This course applies behavioral science research and theory to industry in order to learn how the needs of the employee might be more effectively integrated with the requirements of the organization.

### **MGT 461-3 Labor/Employee Relations (3 + 0)**

Prerequisites: MGT 300 and MGT 353

This course provides an understanding of the development and application of labor law and the current posture of the law as it relates to labor-management relations. Cases and illustrations are used to demonstrate collective bargaining and methods of securing industrial peace.

### **MGT 462-3 Appraisal and Compensation (3 + 0)**

Prerequisite: MGT 353 and senior status

Installation and administration of complete wage and salary programs, including objectives, policy, organization, control, analyses, job descriptions, job evaluation, job pricing, employee evaluation, and job standards.

**MGT 464-3 Employee Training Development (3 + 0)**

Prerequisites: MGT 300 and MGT 353

This course focuses on the design, implementation, and uses of training and development as a necessary part of increasing the value of employee and manager skills.

**MGT 465-3 Managing Productivity (3 + 0)**

Prerequisites: MGT 355 and familiarity with Lotus 1-2-3 and senior status

This course investigates methods and approaches that are used to improve productivity in organizations. The course focuses on the descriptions and evaluation of these various productivity improvement techniques, including the study of critical situational factors that are important in a manager's attempt to become efficient in resource usage.

**MGT 482-3 International Business (3 + 0)**

Prerequisite: Senior status

The course investigates issues of policy and strategy for companies which operate outside their home country. It is designed to engage students in a variety of multicultural and international perspectives. The course builds upon lecture, discussion, and case studies which require analysis and decision.

**MGT 483-3 Workforce Diversity (3 + 0)**

Prerequisites: Satisfaction of Level I and Level II General Studies course requirements and senior status

This course provides an integrated perspective on the management practices and systems which influence the development and contributions of individuals within a culturally diverse workforce. The focus is on those practices which enhance an organization's effectiveness in the increasingly competitive domestic and global marketplace. (Multicultural; Senior Experience)

**MGT 495-3 Strategic Management (3 + 0)**

Prerequisites: Final semester preceding graduation; computer literate; must have completed all core requirements and must have completed or coregistered in all required business courses, satisfaction of all Level I and Level II General Studies course requirements, and senior status

This is a senior seminar designed to give the student an opportunity to apply acquired business skills to analyzing and solving multifaceted, multinational business problems. Conceptual frameworks address issues in strategy formulation, strategic planning, and organizational implementation of strategies. (Senior Experience)

## Marketing

**MKT 300-3 Principles of Marketing (3 + 0)**

Prerequisite: ECO 202 and junior status

This course is a comprehensive examination of the theory and practice of modern marketing. Of primary interest are the principles, concepts and methods used to facilitate the exchange of goods and services among manufacturers, resellers and consumers. Students will be exposed to the basic decision areas of research, consumer behavior, product, price, distribution and promotion. Some attention is also given to marketing in international environments.

**MKT 301-3 Marketing Research (3 + 0)**

Prerequisites: MKT 300 and CMS 330 (or equivalent statistics course) and junior status

This course will provide the marketing student with a systematic and objective approach to the search for and analysis of information relevant to the identification and solution of marketing problems.

**MKT 304-3 Managerial Communications (3 + 0)**

Prerequisites: ENG 102 and junior status

The various forms of managerial communications within a business environment are studied. Emphasis is placed on interpersonal and written forms of communication with internal and external audiences of a business. Students will be expected to apply the principles learned to written and oral presentation assignments. This course is required for the business core, but may not be used to satisfy requirements for the marketing major or minor.

**MKT 310-3 Retail Marketing (3 + 0)**

Prerequisites: MKT 300 and junior status

This course will familiarize the student with fundamental retailing concepts and practices. Emphasis will be given to a strategic planning approach for developing and managing the retail marketing mix.

**MKT 311-3 Advertising Management (3 + 0)**

Prerequisites: MKT 300 and junior status

The principles of advertising are covered in this course from a business planning framework. The course surveys the advertising field from the marketing-advertising planning framework, discusses the targeting of advertising, types of media, media planning and buying, creative planning and the basic creative formats for each medium. Evaluation of advertising and producing efficient ads are discussed.

## 292 COURSE DESCRIPTIONS

### **MKT 312-3 Promotional Strategy (3 + 0)**

Prerequisites: MKT 300, MKT 311, and junior status

Following the Principles of Advertising, MKT 311, this course provides an in-depth understanding and analysis of promotional strategies and tactics necessary in the management of marketing communications. Students design and execute actual advertising, sales promotion and publicity plans.

### **MKT 314-3 Foundations of Direct Marketing (3 + 0)**

Prerequisites: MKT 300 and junior status

This course will examine the concepts, strategies, and applications involved in direct marketing. Topics include the scope of direct marketing, launching direct marketing programs, planning and market segmentation, developing and managing products and services, promotion and multi-media plans, customer service and response, and performance measures.

### **MKT 316-3 Sales Management (3 + 0)**

Prerequisites: MKT 300 and junior status

This course will provide students with a comprehensive study of problems involved in managing a sales force. Areas covered include organizations, motivation, and performance evaluation. Case analysis is emphasized.

### **MKT 323-3 Advanced Managerial Communications (3 + 0)**

Prerequisite: MKT 304

This course develops listening, speaking, and writing skills as well as managerial communications needed in business. Oral and written reports will relate to the majors of the individual students; listening quizzes will address the functional areas of business; and managerial skills of supervision, planning and conducting meetings, conflict resolution, negotiation skills, leadership, etc. will be stressed.

### **MKT 330-3 Marketing of Services (3 + 0)**

Prerequisites: MKT 300 and junior status

This course will introduce students to the problems and issues that are unique to marketing a service. Current literature related to services marketing will be reviewed. Students will learn how to develop strategies to service firms.

### **MKT 331-3 Consumer Behavior (3 + 0)**

Prerequisites: MKT 300 and junior status

This course analyzes the underlying theories and complex variables influencing consumers and their purchase decision making processes. Marketing strategy implications of consumer behavior concepts are offered.

### **MKT 341-3 Marketing Logistics (3 + 0)**

Prerequisites: MKT 300 and junior status

This course focuses on the task of physical distribution as a marketing function. It provides the student with a review and understanding of the history, types of transportation, storage arrangements and optimization of the physical distribution operation. The evolution of marketing channels and their relationship to physical distribution and the marketing process is also covered in this course.

### **MKT 361-3 Business-to-Business Marketing (3 + 0)**

Prerequisites: MKT 300 and junior status

In this course students will investigate the activities involved in marketing goods and services to businesses, institutions, resellers, and government, with primary emphasis on business-to-business marketing.

### **MKT 371-3 International Marketing (3 + 0)**

Prerequisites: MKT 300 and junior status

Introduces the student to the fundamentals of international scope and complexities of marketing; unique marketing aspects of global enterprise opportunities.

### **MKT 452-3 Seminar in Marketing Management (3 + 0)**

Prerequisites: Twelve completed credit hours of marketing courses plus senior status

This is the culminating course required of all marketing minor students. In this final course, the student will develop and apply marketing strategies and policies in solution to problems related to the consumer and the business environment. Marketing majors may use the course as an elective.

### **MKT 456-3 Marketing Strategy (3 + 0)**

Prerequisites: MKT 300, MKT 301, MKT 311, MKT 331, and senior status or permission of instructor

This is the culminating course for all marketing majors. This final course emphasizes the case approach to the study of marketing problems. Problem areas to be studied include market and profitability analysis, marketing planning, strategy, and control. A spreadsheet package will be used.

## Mathematical Sciences

Computer Science courses are listed under the prefix CSI and are offered through the Department of Mathematical and Computer Sciences.

### **MTH 108-3 Mathematical Modes of Thought (3 + 0)**

**Prerequisite:** One year of high school algebra or the equivalent and an appropriate score on the mathematics preassessment placement test

This course is an introduction to the methods of mathematics for nontechnical students. It includes problem-solving strategies, statistical reasoning, and the nature of mathematics in the curriculum. (General Studies Course—Level I, Mathematics)

### **MTH 111-4 College Algebra (4 + 0)**

**Prerequisite:** An intermediate algebra course or one and one half years of secondary school algebra or equivalent and appropriate score on the mathematics preassessment placement test

The topics covered include equations and inequalities, functions and graphs, exponents and logarithms, and sequences and the binomial theorem. Basic algebraic skills are essential as a prerequisite to this course. (General Studies Course—Level I, Mathematics)

### **MTH 112-3 College Trigonometry (3 + 0)**

**Prerequisite:** MTH 111 or equivalent

The topics covered include trigonometric functions, equations and identities, solution of triangles, and complex numbers.

### **MTH 121-4 Introduction to Statistics (4 + 0)**

**Prerequisites:** Two years of high school algebra or equivalent and an appropriate score on the mathematics preassessment placement test

This course is an introduction to the principles and techniques of descriptive statistics, probability, and statistical inference (estimation and tests of hypotheses). Students will work with data on problems related to their own interest or field of study. Credit will not be given for both MTH 121 and MTH 123. (General Studies Course—Level I, Mathematics)

### **MTH 123-2 Introduction to Probability and Descriptive Statistics (2 + 0)**

**Prerequisite:** One year of high school algebra or equivalent

This course introduces the principles and techniques of probability, descriptive statistics, and probability distributions. It is designed to prepare students to learn the techniques of estimation and inferential statistics in their field of study. This course will not count toward graduation if MTH 121 is also taken.

### **MTH 131-4 Finite Mathematics for the Management and Social Sciences (4 + 0)**

**Prerequisite:** One and one-half years of high school algebra or equivalent and an appropriate score on the mathematics preassessment placement test

This course stresses applications in business and the social sciences. The topics covered include evaluation and graphing of functions, the geometry of straight lines, operations on matrices, solving systems of equations, and an introduction to set theory and probability theory. (General Studies Course—Level I, Mathematics)

### **MTH 132-3 Calculus for the Management and Social Sciences (3 + 0)**

**Prerequisite:** MTH 131 or MTH 111 or MTH 140

This course is an introduction to calculus emphasizing applications in business and social sciences. The topics covered include differentiation, partial differentiation, indefinite and definite integration.

### **MTH 140-4 Pre-Calculus Mathematics (4 + 0)**

**Prerequisites:** This course is designed for students who have had some exposure to college algebra and trigonometry and need a review of precalculus material

This is a course covering the essentials of the algebraic and graphical properties of the polynomial, rational, exponential, logarithmic, and trigonometric functions. It is designed to prepare students for MTH 141 (Calculus I).

### **MTH 141-4 Calculus I (4 + 0)**

**Prerequisites:** MTH 111 and MTH 112, or MTH 140

This is a first course in calculus for science and engineering. The topics covered include derivatives of polynomials and trigonometric functions, applications of the derivative, the definite integral, the fundamental theorem of calculus, and applications of integration.

### **MTH 145-4 (HON 210) Calculus and Mathematica I (4 + 0)**

**Prerequisites:** MTH 111 and MTH 112, or MTH 140, or equivalent, and enrollment in the Honors Program or permission of the instructor

This course is an introduction to calculus using the computer software Mathematica. Topics covered include derivatives of algebraic functions, trigonometric functions, and transcendental functions, applications of derivatives, the definite integral, the fundamental theorems of calculus, and applications of integration. This course may be substituted for MTH 141 Calculus I wherever MTH 141 is required. Credit will be given towards graduation for only one of MTH 141, MTH 145, or HON 210.



**MTH 151-4 Computer Programming: FORTRAN (4 + 0)**

Prerequisite: MTH 112 or MTH 140 or equivalent

This is a first course in computer programming for students in mathematics, science, or engineering, using the FORTRAN language. It includes an introduction to computer applications, program design, testing, and debugging.

**MTH 161-4 Mathematical Concepts for Teachers in Pre-secondary Schools (4 + 0)**

Prerequisites: One and one-half years of high school algebra or equivalent, and an appropriate score on the mathematics preassessment test.

This course is designed to develop a sound background in the concepts underlying the presecondary mathematics curriculum. (General Studies Course—Level I, Mathematics)

**MTH 214-2 Computational Matrix Algebra (2 + 0)**

Prerequisite: MTH 112 or MTH 140 or equivalent

This course is an introduction to computational matrix algebra. The computations will be done by hand and by using the software package MATLAB. The course will include the following topics: matrix operations, determinants, solutions of linear systems of equations, and eigenvalues and eigenvectors. This course will not count towards graduation if MTH 314 is also taken.

**MTH 240-4****(HON 260) Calculus and Mathematica II (4 + 0)**

Prerequisites: MTH 145, or MTH 141, or HON 210, and enrollment in the Honors Program, or permission of the instructor

This course is a continuation of the study of calculus begun in Calculus and Mathematica I, using the computer software Mathematica. Topics covered include exponential growth and related differential equations, parametric equations, splines, applications and techniques of definite integration and series, and approximations. This course may be substituted for MTH 241 Calculus II wherever MTH 241 is required. Credit will be given towards graduation for only one of MTH 240, MTH 241, or HON 260.

**MTH 241-4 Calculus II (4 + 0)**

Prerequisite: MTH 141 or permission of instructor

This is a second course in calculus. The topics covered include exponential and logarithmic functions, anti-derivatives, applications of the integral, and infinite series including Taylor's Series.

**MTH 242-4 Calculus III (4 + 0)**

Prerequisite: MTH 241 or permission of instructor

This course is a continuation of the study of calculus of functions of more than one variable includes the following topics: partial derivatives, definite integrals over plane and solid regions, vectors and their applications, and Green's Theorem and its generalizations.

**MTH 245-4 Calculus and Mathematica III (4 + 0)**

Prerequisites: MTH 240, or HON 260, or MTH 241, and permission of instructor

This course is a continuation of the study of calculus begun in Calculus and Mathematica I and II, using the computer software Mathematica. Topics covered include partial derivatives, definite integrals over plane and solid regions, vectors and their applications, and Green's Theorem and its generalizations. This course may be substituted for MTH 242 Calculus III wherever MTH 242 is required. Credit will be given towards graduation for only one of MTH 242 or MTH 245.

**MTH 253-2 Introduction to Mathematica (2 + 0)**

Prerequisite: MTH 241 or permission of instructor

This course is an introduction to the mathematical symbolic manipulation software package Mathematica and its use in solving problems from calculus and matrix algebra. This course also presents familiar concepts from calculus from a new perspective in order to strengthen the students' mathematical understanding. This course does not count towards the major or minor in Mathematics.

**MTH 310-3 Introduction to Mathematical Proofs (3 + 0)**

Prerequisite: MTH 241 or permission of instructor

This course is designed to introduce the student to mathematical proofs and abstract mathematics with topics in the predicate calculus, induction, well-ordering principle, sets, relations, and functions.

**MTH 311-3 Abstract Algebra I (3 + 0)**

Prerequisite: MTH 310 or permission of instructor

This course is a survey of the principle structures of modern abstract algebra including introductions to the theories of groups, rings, integral domains, and fields. Each structure is introduced by examples, then basic properties are derived, and the appropriate applications are introduced.

**MTH 314-4 Linear Algebra (4 + 0)**

Prerequisite: MTH 310 or CSI 310, or permission of instructor

This course is an introduction to the theory and application of vector spaces, linear transformations, matrix representations, eigenvalues and eigenvectors. A software package will be used in this course.

**MTH 320-3 Biostatistics (3 + 0)**

Prerequisite: MTH 111 or equivalent or permission of instructor

This is a course in the application of statistics to the biological and health sciences. The topics covered include descriptive statistics, statistical inference, and methods.

**MTH 321-4 Probability and Statistics (4 + 0)**

Prerequisite: MTH 241 or permission of instructor

This is a course in the application and theory of the principles of probability and statistics in the sciences and engineering. It includes random variables, probability distributions, sampling, estimation and tests of hypotheses.

**MTH 322-4 Design of Experiments (4 + 0)**

Prerequisite: MTH 321 and either MTH 214 or MTH 314, or permission of instructor

This is a course in the application and theory of statistical methods in the sciences and engineering. It includes analysis of variance, factorial experiments, and regression analysis.

**MTH 324-4 Environmental Statistics (4 + 0)**

Prerequisites: MTH 111 and 121, or permission of instructor

This is a course in inferential statistics, sampling techniques, and quality control as they relate to environmental issues. Students will work with data and problems related to the environmental science field of study. This course does not count towards a major in Mathematics.

**MTH 325-4 Optimization Techniques I (4 + 0)**

Prerequisite: MTH 214 or permission of instructor

This is an introduction to the mathematical programming techniques of operations research. It includes linear programming, network analysis, dynamic programming and game theory.

**MTH 326-4 Optimization Techniques II (4 + 0)**

Prerequisites: MTH 141 and MTH 214 or permission of instructor

This course is a study of mathematical planning techniques and probabilistic techniques of operations research. The topics covered will be selected from: simulation theory, decision theory, inventory theory, Markov chains, queuing theory, nonlinear programming, geometric programming and economic analysis.

**MTH 342-4 Differential Equations (4 + 0)**

Prerequisite: MTH 242 and knowledge of Mathematica or MTH 245 or permission of instructor. Knowledge of Mathematica can be satisfied by MTH 253 or both first and second semester calculus where Mathematica is used: a MTH 141 with Mathematica component or MTH 145, a MTH 241 with Mathematica component or MTH 240.

This course includes a study of first, second, and higher order differential equations and systems, solving using series methods, approximations, and applications in science and engineering.

**MTH 344-4 Partial Differential Equations (4 + 0)**

Prerequisite: MTH 342 and knowledge of Mathematica, or permission of instructor. Knowledge of Mathematica can be satisfied by MTH 253 or MTH 245 or both first and second semester calculus where Mathematica is used: a MTH 141 with Mathematica component or MTH 145, a MTH 241 with Mathematica component or MTH 240.

This is a course in partial differential equations and their solutions. It includes separation of variables techniques, Fourier series, and applications to the heat equation, the wave equation, and the potential equation.

**MTH 347-3 Applied Combinatorial Mathematics (3 + 0)**

Prerequisite: MTH 242 or permission of instructor

This is a problem-solving course. Applied topics will include enumeration, graph theory, block designs, incidence relations, and difference equations.

**MTH 360-3 History of Mathematics (3 + 0)**

Prerequisite: MTH 310 or permission of instructor

This course is an introduction to the history of mathematics, including discussion of problems and the people who formulated and solved them. The course also investigates the impact of historical mathematics on present society.

**MTH 361-3 Methods of Teaching Mathematics (3 + 0)**

Prerequisites: MTH 241, EDS 321, or permission of instructor

This is a course in the methods and techniques of teaching mathematics at the secondary education level.

**MTH 365-3 Foundations of Geometry (3 + 0)**

Prerequisite: MTH 310 or permission of instructor

This course will re-examine Euclidean geometry via Hilbert's axioms. This will allow a coherent approach to projective, Euclidean, non-Euclidean, and other related geometries. It is designed for prospective secondary teachers and others interested in modern geometric theories.

## 296 COURSE DESCRIPTIONS

### **MTH 411-3 Abstract Algebra II (3 + 0)**

Prerequisite: MTH 311 or permission of instructor

This course is a continuation of MTH 311 with emphasis on an in-depth study of the properties of the structures introduced in MTH 311. It includes Sylow theory, ideals and their properties, principal ideal domains, field extensions and finite fields.

### **MTH 415-3 Elementary Number Theory (3 + 0)**

Prerequisite: MTH 310 or CSI 310 or permission of instructor

This course introduces the basic concepts of number theory including the Euclidean algorithm, congruences, number-theoretic functions, and the Chinese remainder theorem.

### **MTH 421-4 Probability Theory (4 + 0)**

Prerequisites: MTH 321 and senior status, or permission of instructor

This is a course in the theory of discrete and continuous probability with applications in the sciences and engineering. The topics covered will include sample spaces, combinatorial probability, random variables, sets of random variables and random sequences, conditional probability, expectation, and special distributions. It also includes beginning analysis of Markov chains. (Senior Experience)

### **MTH 422-4 Stochastic Processes (4 + 0)**

Prerequisite: MTH 421 or permission of instructor

This course is an introduction to random processes with applications in the sciences and engineering. It includes examples and properties of stochastic processes, specifically, it includes discrete and continuous Markov processes, the exponential distribution and Poisson process, and other processes including queuing theory.

### **MTH 429-1 Senior Statistics Project (1 + 0)**

Prerequisites: MTH 321, MTH 322, MTH 421, and permission of instructor

In this course, students will apply the statistical techniques covered in previous coursework to a real world situation. The students will write a report containing a description of the problem, statistical tools used, design of experiments, analysis, and results of the study.

### **MTH 439-1 Mathematics Senior Seminar (1 + 0)**

Prerequisites: Senior status in mathematics and permission of instructor

This course will provide each student a closer examination of selected topics from the required core courses and from four upper-division mathematics courses selected from courses the student has taken. The course will concentrate on allowing the students to increase their theorem-proving and problem-solving skills.

### **MTH 441-4 Advanced Calculus I (4 + 0)**

Prerequisites: MTH 242, MTH 310, and senior status, or permission of instructor

This is the first course of a two-semester sequence which includes a treatment of calculus with emphasis on proofs of theorems. The topics covered will be selected from: structure of the real number system, infinite series, vector calculus, applications of partial differentiation, integration, and function theory. (Senior Experience)

### **MTH 442-3 Advanced Calculus II (3 + 0)**

Prerequisite: MTH 441 or permission of instructor

Continuation of MTH 441.

### **MTH 445-4 Complex Variables (4 + 0)**

Prerequisite: MTH 242 or permission of instructor

This course is an introduction to complex numbers, analytic functions, conformal mapping, contour integrals, and residues and poles.

### **MTH 448-4 Numerical Analysis I (4 + 0)**

Prerequisites: MTH 151 or CSI 130, MTH 314 or MTH 214, MTH 241 or MTH 240, senior status, and knowledge of Mathematica, or permission of instructor. Knowledge of Mathematica can be satisfied by MTH 253 or both first and second semester calculus where Mathematica is used: a MTH 141 with Mathematica component or MTH 145, a MTH 241 with Mathematica component or MTH 240.

This course includes numerical solutions of algebraic and transcendental equations, numerical differentiation and integration, numerical linear algebra, and polynomial interpolation. The use of a computer is an essential part of this course. (Senior Experience)

### **MTH 449-4 Numerical Analysis II (4 + 0)**

Prerequisites: MTH 342 and MTH 448, or permission of instructor

This course includes approximation of functions, non-linear systems, numerical solutions of differential equations, and numerical techniques of integration.

**MTH 459-1 Applied Mathematics Senior Seminar (1 + 0)**

Prerequisite: MTH 342, MTH 448, and permission of instructor

This course will provide a closer examination of selected topics from the required courses in the Applied Mathematics emphasis, allows the students an opportunity to increase their problem solving skills, and further exposes the students to mathematical software.

**MTH 460-1 Seminar in Problem Solving (1 + 0)**

Prerequisites: MTH 310 or MTH 342 or permission of instructor

This is a seminar in mathematical problem solving. Students will investigate factors of problem solving, such as belief systems, control mechanisms, heuristics, and mathematical resources. This investigation will be carried out in the context of working on a collection of problems designed to illustrate these factors. Problems from the William Lowell Putnam National Mathematics Examination are included in this collection.

**MTH 466-3 Topology (3 + 0)**

Prerequisite: MTH 310 or permission of instructor

This course will include topological spaces, functions, mappings and homeomorphisms, continuity, compactness, and metric spaces.

## Mechanical Engineering Technology

**MET 100-3 Materials and Manufacturing Technology (3 + 0)**

Introductory survey course in manufacturing production processes including a study of primary materials and manufacturing processes in the fabrication of industrial products. It relates these to current national, social, industrial, and international issues and problems.

**MET 101-3 Manufacturing Processes (2 + 2)**

Basic fundamentals in the operation of machine tools. This includes measuring tools, benchwork and layout, and tool grinding. The student performs various machining operations using the engine lathe, milling machine, drills, and surface grinders.

**MET 131-3 Principles of Quality Assurance (3 + 0)**

Prerequisite: Intermediate algebra or equivalent

Defines the scope and function of quality assurance, including basic definitions, quality policy and objectives, manuals and procedures, concept of variation, inspection techniques, metrology, acceptance sampling, process control, customer relations, and product audit.

**MET 220-3 Materials of Engineering (2 + 2)**

Prerequisites: CHE 110 or 120 (can be concurrent); MTH 111 or MTH 140

This lecture/laboratory course deals with basic properties of metals and non-metals, and functions which govern their selection and design. Materials covered include ferrous and non-ferrous metals, plastics, ceramics, glass, wood, rubber, and adhesives.

**MET 221-3 Mechanical Drawing (2 + 2)**

Prerequisite: CEN 120 or comparable training or experience

Representation of mechanical components, dimensioning, and tolerancing are worked. The student is also introduced to fluid power diagrams, piping and electrical and electronic diagrams.

**MET 222-3 Computer Aided Drafting for Engineering Technology (1 + 4)**

Prerequisite: MET 221 or permission of instructor

Students will work with a computerized engineering graphics system and will learn to produce, place and edit lines, arcs, points, and polygons. The students will also produce tests, dimensions, inserts, sectioning, and hard copies.

**MET 231-3 Quality Assurance Stat Methods (3 + 0)**

Prerequisites: MET 131 and MTH 121

An emphasis on statistical analysis using fundamental statistical concepts, the use of the theory of probability, the aspects of specifications and tolerances, the concepts of sampling aspects of life testing, and some cost aspects of quality decisions.

**MET 240-3 Welding Processes (2 + 2)**

Prerequisites: MET 101, 220

A basic course to acquaint students with the common welding processes. These include fusion welding with the oxyacetylene and arc processes, brazing of ferrous and non-ferrous metals, oxyacetylene cutting, and introduction to inert gas welding. Provides a technological understanding of advanced welding techniques used in industry.

**MET 300-4 Manufacturing Analysis (4 + 0)**

Prerequisites: MET 101, MET 131, MTH 111 or MTH 140

Presents techniques for solving common manufacturing problems like forecasting, scheduling, load balancing, choice of equipment, allocation of resources, and human factors.

## 298 COURSE DESCRIPTIONS

### **MET 301-3 Fluid Flow I (2 + 2)**

Prerequisites: PHY 202 and MTH 112 or MTH 140

It is an introduction to fluid mechanics with basic definitions developed. Fluid statistics using Pascal's principle are treated. The continuity equation is used for steady and unsteady flow with emphasis given to one-dimensional, incompressible flow applications. Laboratory work includes measuring pressure drop, flow profiles, flowrates, etc., using hydraulic systems.

### **MET 302-3 Fluid Flow II (2 + 2)**

Prerequisites: MET 301 and MET 311

Compressible flow is studied for convergent-divergent nozzles and pipe flow. Fluidics is introduced and dimensional analysis is treated with regard to geometric and kinematic similarity. The laboratory work supports the classroom studies using various gas flow systems.

### **MET 305-3 Heat Power (2 + 2)**

Prerequisites: MTH 141, PHY 201

This energy conversion course combines lecture and laboratory for the manufacturing and industrial student. Emphasis is given to real processes, compression, expansion, and heat transfer, and to safety and efficiency of engines (stationary and mobile).

### **MET 306-4 Statics and Dynamics (4+0)**

Prerequisite: PHY 201

Corequisite: MTH 241

This course studies dynamics, kinematics, and kinetics of particles and rigid bodies with mechanical engineering technology applications.

### **MET 307-3 Machine Design (2 + 2)**

Prerequisites: CEN 313 and MET 220, 221

The art of planning and devising new or improved machines to accomplish specific purposes is studied. The student is introduced to the fundamental principles required to correctly design the separate elements which compose the machine. The economics of design are stressed along with strength and safety considerations.

### **MET 308-1 Statics Laboratory (0 + 2)**

Prerequisite: MET 306

This is a laboratory course in statics designed to accompany MET 306.

### **MET 309-1 Dynamics Laboratory (0 + 2)**

Prerequisite: MET 306

This is a laboratory course in dynamics designed to accompany MET 306.

### **MET 310-3 N/C Computer Programming (2 + 2)**

Prerequisites: MET 101, 221 and MTH 112

Theory and application of computer aided N/C language with programming emphasis on APT, Compact II, and suitable post processors.

### **MET 311-3 Thermodynamics I (3 + 0)**

Prerequisites: MTH 141 and PHY 201

The fundamental laws of thermodynamics are studied. Basic concepts of energy, the thermodynamic system, dimensions and units, and the ideal-gas equation of state are treated. Closed and open systems are studied. Heat engines are introduced. Reversible and irreversible processes are investigated.

### **MET 312-2 Heat Transfer (2 + 0)**

Prerequisites: PHY 202 and MTH 151 (or equivalent)

The three basic mechanisms of heat transmission are studied analytically and experimentally. Heat conduction and convection (free and forced) plus radiant (solar) are treated for both steady-state and transient understandings. The transient study is aided by computer solutions.

### **MET 314-1 Heat Transfer Laboratory (0 + 2)**

Prerequisite: MET 312 (concurrent enrollment preferred)

The laboratory course provides hands-on experience. Conduction and convection experiments are conducted. The student selects and installs thermocouples, calibrates equipment, records transient and steady data, analyzes results and reports findings.

### **MET 321-4 Introduction to Computer Aided Engineering (4 + 0)**

Prerequisites: MTH 112 or MTH 140, either MET 100 or CEN 110

This is an introductory course in computer aided engineering. A computer will be used as a tool for the solution of engineering technology problems. Included will be high level language, spreadsheet techniques, and computer modeling.

**MET 325-3 Tool Design and Production Tooling (2 + 2)**

Prerequisites: MET 220, 221, MTH 112

Drawing analysis for tooling requirements and tooling cost estimates. Design of tooling for turret lathes, automatic screw machines, multiple spindle lathes and production milling machines.

**MET 330-3 Statistical Process Control (3 + 0)**

Prerequisites: MET 131 and 300

This course focuses on statistical process control with emphasis on process capability, troubleshooting, analysis of variance and hypothesis testing.

**MET 331-3 Thermodynamics II (2 + 2)**

Prerequisites: MET 311 and MTH 241

This, the second course in thermodynamics, deals with the consequence of the Second Law. The TDS equations are studied as are entropy and efficiencies of some heat power engines. Standard gas and vapor cycles are investigated. The laboratory work includes various calorimetry, gravimetric and volumetric analyses, nozzles and internal combustion engine tests.

**MET 332-3 Instrumentation Laboratory (2 + 2)**

Prerequisite: MET 301

The student is introduced to standard mechanical tests and measurement techniques, e.g., installing thermocouples, strain gages, positioning static and total probes. ASME and ASTM test codes are studied, as are OSHA standards. Various physical property and system performance tests are set up, conducted and analyzed.

**MET 333-3 Robotics for Manufacturing (2 + 2)**

Prerequisites: MET 310 and EET 200

The course examines robotic components utilized in robots and automated systems. Manufacturing automation is analyzed as the robot is integrated with other flexible automation equipment. The focus is how to apply and design robotic integrated manufacturing systems.

**MET 341-3 Geometric Dimensioning and Tolerancing (2 + 2)**

Prerequisites: MET 131, MET 221

Dimensioning practices used by major U.S. Metal Product Design Agencies are studied. Tolerance of form, tolerances of position, datums, concentricity, symmetry and functional gaging concepts are also treated.

**MET 351-3 Technical Supervision (3 + 0)**

Prerequisite: Junior, senior status

The tasks, responsibilities, skills and problems of first line supervision in industry. Course will utilize case histories. Identification of interface requirements for successful communications and operations between engineers, technicians and management. Provides basic management tools to develop competence in the ability to handle people. Enhances job satisfaction through job competency skill development.

**MET 355-3 Rockets and Stars—A Space Trek (2 + 2)**

Prerequisites: Junior or senior status and satisfaction of all Level I General Studies course requirements

In this course, the exciting vehicle of space is used to carry the student through basic theories and concepts of the natural sciences. Experts on outer-space and space exploration are guest lecturers. Students visit Gates Planetarium, NOAA, Martin-Marietta, etc. (General Studies Course—Level II, Natural Science)

**MET 400-3 Project Engineering (3 + 0)**

Prerequisite: Senior status

The student is introduced to the project or team effort. The need for planning, control and communication is stressed. Critical path methods are used to develop schedules. Figure-of-merit methods are used to select preferred approaches/designs. Technical writing is stressed with an introduction to competitive proposal writing.

**MET 401-3 Advanced Manufacturing Technology (3 + 0)**

Prerequisites: MET 300, 333, EET 200, satisfaction of all Level I and Level II General Studies course requirements and senior status

The course includes micromonitor process control analysis, fiber optics technology, CMOS technology, ultra-precision-controlled devices with artificial intelligence systems, industrial robots, fiber optics, and imagineering—future applications. (Senior Experience)

**MET 404-3 Plant Layout (2 + 2)**

Prerequisites: MET 221 and MET 300

Basic principles of plant layout to meet production needs. Application of materials handling devices to the process. Selection and arrangement of production machinery, product and process layout schemes, techniques of making layouts, and balance and flexibility of operations. Management's role is discussed.

## 300 COURSE DESCRIPTIONS

### **MET 407-3 Computer Aided Design (2 + 2)**

Prerequisites: MET 307, either MET 321 or MTH 151, satisfaction of all Level I and Level II General Studies course requirements and senior status

The student studies combined stresses, gearing, brakes, curved beams, etc., and undertakes the design of a complete machine. This is the second in the two-course machine design series. The analysis includes computer solutions. (Senior Experience)

### **MET 408-3 Computer Aided Manufacturing (2 + 2)**

Prerequisites: MET 300, 310, MTH 151

Computer applications in configuration control, purchasing, vendor ratings, production control, inventory control and final product acceptance documentation are treated.

### **MET 424-3 Cost Estimating for Manufacturing (3 + 0)**

Prerequisites: MET 300, and MTH 151

Manufacturing costs, types of estimates, computer applications to cost estimating, cost estimating controls and cost estimating procedures are studied. ASME approach to realistic cost estimating.

### **MET 428-3 Advanced Energy Technology (2 + 2)**

Prerequisites: MET 312, PHY 201, PHY 202

Global energy flows, sources and uses of energy are studied. Biological energy and ecosystems are introduced from the viewpoint of the engineering technologist. Energy-related environment problems including air and thermal pollution plus radioactivity are treated.

### **MET 448-3 Air Conditioning/Refrigeration (3 + 0)**

Prerequisite: MET 312

Refrigeration cycles are studied. Operation and rating of system components are evaluated with heat flow in condensers, evaporators and cooling towers treated. Control of temperature and humidity along with air handling equipment, ducting, etc., are studied.

## **Meteorology**

### **MTR 140-3 Introduction to Meteorology (3 + 0)**

Prerequisite: Minimum performance standard scores on reading, writing, and mathematics preassessment placement tests

Introductory course in composition, structure and behavior of the atmosphere. This course includes high and low pressure systems, air masses, fronts, clouds and precipitation, local wind systems and tropical storms. (General Studies Course—Level II, Natural Science)

### **MTR 141-2 Aerospace Meteorology (2 + 0)**

Basic meteorological concepts as applied to aerospace are developed. Emphasis on the use of national weather service reports and forecasts which support aviation. Prepares students for FAA private and commercial pilot's written examination.

### **MTR 142-1 Introduction to Meteorology Lab (0 + 2)**

Corequisites: MTR 140 to be taken concurrently and after successful completion of Level I mathematics requirement

This course introduces weather analysis and forecasting. Students will be introduced to basic concepts of atmospheric behavior and the maps and codes used in analysis. Lab exercises will be performed with surface maps, upper air maps, simple thermodynamic diagrams, and weather instruments.

### **MTR 241-3 Meteorological Instrumentation (3 + 0)**

Prerequisite: MTR 140 or MTR 141

This course acquaints the student with various types of meteorological instrumentation used in both operations and research field work. The theory of instrument measurement and the operating principles behind the more common instrument systems will be discussed in detail. The systems include ground based, airborne and remote sensing instruments.

### **MTR 242-3 Use of Radar and Satellites in Meteorology (3 + 0)**

Prerequisite: MTR 140 or MTR 142

This course covers the basic theory of meteorological radars and satellites. The types of radars and satellites utilized in meteorology will be examined and their uses discussed.

### **MTR 340-4 Synoptic Meteorology I (3 + 2)**

Prerequisites: MTR 140 and 142

This is a descriptive course in the 3-dimensional structure of global, synoptic, and regional scale weather systems with an emphasis on upper air dynamics, stability, pressure, wind, temperature, clouds, and precipitation. Extensive use is made of synoptic weather maps, teletype codes, and thermodynamic diagrams. Weather forecasting fundamentals are introduced.

**MTR 341-4 Synoptic Meteorology II (3 + 2)**

Prerequisite: MTR 340

A continuation of MTR 340 Synoptic Meteorology I with emphasis on regional scale weather systems such as snowstorms, windstorms, and thunderstorms. Daily weather maps are used to analyze and understand current weather. Principles of weather forecasting are studied.

**MTR 343-3 Dynamic Meteorology I (3 + 0)**

Prerequisites: MTH 141, PHY 231 and 232, and MTR 341

This course provides a calculus based examination of the thermodynamics of dry and moist air and how it applies to meteorology. Atmospheric stability, thermodynamic diagrams, and convection are mathematically examined.

**MTR 344-3 Physical Meteorology (3 + 0)**

Prerequisite: MTR 343 and CHE 180

This course is a calculus based examination of atmospheric radiation including the global energy budgets, basic radiation laws, absorption process, radiative transfer, and the meteorological implication of radiation. A calculus based examination of cloud particle formation, precipitation processes, weather modification, and cloud physics applications are all presented.

**MTR 345-3 Dynamic Meteorology II (3 + 0)**

Prerequisites: PHY 233 and 234, MTH 241, and MTR 343

This course focuses on the development and study of the laws of conservation of mass, momentum, and energy as they apply to middle latitude synoptic scale weather systems.

**MTR 346-3 Meteorology and Flight Operations (3 + 0)**

Prerequisites: MTR 141 and junior status or permission of instructor

The application of meteorological principles to aviation operations. Concentrates upon stability and turbulence, clear-air turbulence, aircraft icing problems, jet-stream weather and airborne radar.

**MTR 350-3 Hazardous Weather (3 + 0)**

Prerequisites: MTR 140 and satisfaction of Level I General Studies course requirements

This course considers the nature and causes of hazardous weather, the predictability of hazardous weather events, and the economic, sociological and psychological impact of these events. The strategies for the protection of life and property from hazardous weather are also considered. (General Studies Course—Level II, Natural Science)

**MTR 371-3-6 Meteorological Cooperative Education I (0 + 9-18)**

Prerequisite: Employment in a cooperative education position in meteorology

Educational work experience with a consulting meteorologist, meteorological firm or government agency. The learning process is under supervision of meteorology faculty and the meteorologist at the firm or agency.

**MTR 372-3-6 Meteorological Cooperative Education II (0 + 9-18)**

Prerequisites: Employment in a meteorological cooperative education position, and MTR 371

Educational work experience with a consulting meteorologist, meteorological firm or government agency. The learning process is under supervision of meteorology faculty and the meteorologist at the firm or agency.

**MTR 373-3 Meteorological Cooperative Education III (0 + 9)**

Prerequisites: Employment in a meteorological cooperative education position, and MTR 372

Educational work experience with a consulting meteorologist, meteorological firm or government agency. The learning process is under supervision of meteorology faculty and the meteorologist at the firm or agency.

**MTR 421-1 Forecasting Laboratory I (0 + 2)**

Prerequisite: MTR 340

This is a laboratory course in which teams of students will prepare daily weather forecasts for Colorado and the Denver area using the current weather maps and coded data.

**MTR 422-1 Forecasting Laboratory II (0 + 2)**

Prerequisite: MTR 341

This is a laboratory course in which teams of students will prepare daily weather forecasts for Colorado and the Denver area using the current weather maps and coded data.

**MTR 423-1 Forecasting Laboratory III (0 + 2)**

Prerequisite: MTR 340

This is a laboratory course in which teams of students will prepare daily weather forecasts for Colorado and the Denver area using the current weather maps and coded data.

**MTR 424-1 Forecasting Laboratory IV (0 + 2)**

Prerequisite: MTR 340

This is a laboratory course in which teams of students will prepare daily weather forecasts for Colorado and the Denver area using the current weather maps and coded data.



## 302 COURSE DESCRIPTIONS

### **MTR 441-3 Numerical Weather Prediction (3 + 0)**

Prerequisites: MTR 345 and MTH 151

This course presents a mathematical and qualitative examination of quasi-geostrophic theory and its application to the numerical modeling of the atmosphere. The theory behind current primitive equation models and finite difference techniques will be applied to a simple computer model of the atmosphere developed during the class.

### **MTR 442-3 Industrial Meteorology (3 + 0)**

Prerequisite: MTR 345

Interaction between urban and industrial complexes and the atmosphere. Emphasizes composition and behavior of industrial air pollution sources, effects of air pollution and control techniques.

### **MTR 443-2 Meteorology and Media (1 + 2)**

Prerequisite: MTR 341

The student will develop analysis and forecast products for daily briefings, newspaper reports, radio and television presentations. Included are public needs and problems associated with each type of media presentation.

### **MTR 444-3 Climatology (3 + 0)**

Prerequisite: MTR 341

Climatology examines the characteristics, distributions, and causes of global and regional climate. It builds upon a sound physical understanding of energy transport processes in the atmosphere and oceans. These processes are the basis for the study of climate change.

### **MTR 445-1 Consulting Meteorology (1 + 0)**

Prerequisite: MTR 341 or permission of instructor

This course provides a study of the role of the private consultant meteorologist and meteorological companies including specialized meteorological services, forensic meteorology, and consultant-client relationships.

### **MTR 450-3 Mesometeorology and Forecasting (2 + 2)**

Prerequisites: MTR 341 and 421

An advanced course in recognizing, understanding, and forecasting mesoscale phenomena (severe thunderstorms, tornadoes, hailstorms, flash floods, windstorms, snowstorms, etc.) with emphasis on theory, analysis of weather data, and forecast decision making.

## **Military Science (Army ROTC)**

### **MIS 101-2 Introduction to Military Science I (1 + 2)**

An introductory course which presents the basic makeup of the U. S. Army, the special duties and responsibilities inherent in acceptance of a commission, and basic military skills.

### **MIS 102-2 Introduction to Military Science II (1 + 2)**

Prerequisite: MIS 101 unless waived by the instructor

This course continues the development of basic knowledge and skills of military subjects begun in MIS 101.

### **MIS 201-3 Introduction to Leadership and Management I (2 + 2)**

Course continues development of student's basic military skills while examining the role of the leader in formal and informal organizations. Individual motivation, attitude formation, socialization, and interpersonal communications are also covered.

### **MIS 202-3 Introduction to Leadership and Management II (2 + 2)**

Prerequisite: Completion of MIS 201 or instructor approval

This course develops basic management skills in the context of the military organization while refining basic military skills necessary to enter upper division Military Science courses.

### **MIS 203-4 Accelerated Basic Military Science I (3 + 2)**

Prerequisites: Sophomore status and permission of instructor

This course is designed to qualify sophomores who did not complete MIS 101 and 102 as freshmen for the ROTC Advanced Program. It provides basic foundations in leadership, organization, defense policy, military theory, and individual military skills.

### **MIS 204-4 Accelerated Basic Military Science II (3 + 2)**

Prerequisites: MIS 203 and permission of instructor

This is a continuation of MIS 203. It is specifically designed to qualify sophomores who did not attend MIS 101 and 102 as freshmen for upper division Military Science courses.

### **MIS 301-3 Control Aspects of Small Unit Operations I (2 + 2)**

Prerequisite: Permission of instructor

Emphasis is on preparation for the ROTC Summer Advanced Camp. Instruction focuses on the organization, planning, communication, and supervision of small unit tactical operations. The laboratory stresses application of classroom materials and physical conditioning.

**MIS 302-4 Control Aspects of Small Unit Operations II (2 + 2 + 80 hours field training exercise)**

Prerequisites: MIS 301, 303 and permission of instructor

Designed to provide the student with an extensive exposure to advanced camp subject matter. Classroom and field training exercises are used to expose the student to small unit tactics, communications, military skills, and practical leadership experience.

**MIS 305-5 Summer Practicum (0 + 10)**

Prerequisite: Completion of MIS 301 and MIS 302

The primary purpose of the camp is to provide the ROTC cadet with the field experience and knowledge required to develop the managerial and leadership skills essential to the commissioned officer.

**MIS 401-3 Seminar in Officer Development I (2 + 2)**

Prerequisites: Permission of instructor and successful completion of the Army's enrollment eligibility criteria  
This course serves as the first half of the capstone training for the ROTC pre-commissioning program. It stresses command/staff principles and functions, training management, and leadership. A practical exercise laboratory is included.

**MIS 402-3 Seminar in Officer Development II (2 + 2)**

Prerequisites: Permission of instructor and successful completion of the Army's enrollment eligibility criteria  
This course is a continuation of MIS 401. In addition to continued emphasis on previous subject matter, the student is introduced to military law. The student applies classroom material to actual situations during the laboratory.

## Modern Languages

**MDL 130-2 Languages for the Professionals (2 + 0)**

To afford the students a practical knowledge of a foreign language (Spanish, German, French, etc.) in order to facilitate communication and to provide understanding in a specific professional field. May be repeated for credit as the course title changes.

**MDL 170-2 Foreign Languages for Travelers (2 + 0)**

This course presents the basics necessary when traveling in a foreign country. It gives the traveler a minimal command of the basic phrases, salutations, weather, numbers, time, statements of need and desire. May be repeated for credit as the course title changes.

**MDL 496-3 Teaching Foreign Languages in the Secondary Schools (3 + 0)**

Prerequisites: EDS 321 plus nine hours of intermediate and advanced courses in one foreign language, or permission of instructor

A course in methods and materials of instruction in modern foreign languages at the secondary level.

## Music

**MUS 100-3 Introduction to Music (3 + 0)**

Prerequisites: Minimum performance standard scores on the reading and writing preassessment placement tests

This course is nontechnical in nature and designed for students who are not music majors to develop competence in understanding music through guided listening. The elements and sources of music are studied, discussed and demonstrated. (General Studies Course—Level II, Arts and Letters)

**MUS 101-3 Fundamentals of Music Theory (3 + 0)**

The study of the basic principles of musical notation and structure as they relate to scales, keys, intervals, triads, rhythm and meter. Designed for non-Music majors and Music majors with insufficient experience to qualify for Music Theory I. No previous training in music is required.

**MUS 102-3 Basic Music Theory Skills (3 + 0)**

Prerequisite: MUS 101 or a passing score on the Basic Music Theory Skills Placement Examination

Designed to develop music-reading and related aural skills through practice and application of fundamental sight-reading techniques and ear-training procedures and to prepare music students in skills needed for entrance into Music Theory I (MUS 111).

**MUS 111-3 Music Theory I (3 + 0)**

Prerequisite: MUS 102, or a passing score on Music Theory I Placement Examination

Corequisite: MUS 112

The study of the melodic, harmonic, rhythmic, textural, and formal elements of music through analysis and composition. The development of reading and hearing skills as they relate to these elements. Covers diatonic music based on the triad.

## 304 COURSE DESCRIPTIONS

### **MUS 112-1 Music Theory Lab I (0 + 2)**

Prerequisite: MUS 102 or a passing score on Music Theory I Placement Examination

Corequisite: MUS 111

The application of reading and hearing skills to the melodic, harmonic, rhythmic, textural, and formal elements of music through singing and the use of the keyboard. Covers diatonic music based on the triad.

### **MUS 113-3 Music Theory II (3 + 0)**

Prerequisites: MUS 111, 112

Corequisite: MUS 114

Continuation of MUS 111. Covers diatonic seventh chords and elementary chromaticism.

### **MUS 114-1 Music Theory Lab II (0 + 2)**

Prerequisites: MUS 111, 112

Corequisite: MUS 113

Continuation of MUS 112. Covers diatonic seventh chords and elementary chromaticism.

### **MUS 121-3 Music Literature I (3 + 0)**

Prerequisite: MUS 101 or permission of instructor

The study of musical forms, musical terminology, composers and musical styles of the Middle Ages, Renaissance and Baroque periods.

### **MUS 122-3 Music Literature II (3 + 0)**

Prerequisite: MUS 121 or permission of instructor

The study of musical forms, musical terminology, composers and musical styles of the Classical and Romantic periods and the Twentieth Century.

### **MUS 140-3 Vocal Diction (3 + 0)**

An in-depth study of articulation and pronunciation in the English, French, German, and Italian languages. Texts of standard choral and art song literature will be used as the basis for the course.

### **MUS 160-1 Class Instruction for Non-Majors (1 + 0)**

Beginning class instruction in voice, piano, guitar, the standard band and orchestra instruments, improvisation or score reading. Designed for non-music students with no experience reading music or previous training in the area being studied. May be repeated for credit in a different area of study.

### **MUS 161-1 Class Instruction I (1 + 0)**

Prerequisite: MUS 102, or a passing score on the Music Theory I Placement Examination

Class instruction in voice, piano, guitar, the standard band and orchestral instruments, improvisation or score reading. Designed for students with little or no previous training in the area being studied. May be repeated for credit in a different area of study.

### **MUS 162-1 Class Instruction II (1 + 0)**

Prerequisite: MUS 161

Continuation of MUS 161. May be repeated for credit in a different area of study.

### **MUS 171-2 Private Instruction I (1 + 0 + 0.5)**

Prerequisite: Performance of successful private instruction audition

Corequisite: At least one other music course and the major ensemble in the private instruction area being studied

Individual instruction in voice, piano, organ, guitar, the standard band and orchestral instruments or composition. At the end of the semester, the student must perform before a faculty jury committee. May be repeated for credit in a different area of study.

### **MUS 172-2 Private Instruction II (1 + 0 + 0.5)**

Prerequisite: MUS 171

Corequisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of MUS 171. May be repeated for credit in a different area of study.

### **MUS 202-3 Jazz Styles—America's Music (3 + 0)**

The study of the various styles of jazz and their influence upon America's musical, social and ethnic cultures.

### **MUS 211-3 Music Theory III (3 + 0)**

Prerequisites: MUS 113, 114

Corequisite: MUS 212

The study of advanced chromaticism leading to twentieth century techniques. Music of the late nineteenth century, impressionism, and modern schools of composition. Aural recognition of harmonic materials emphasized. Stylistic composition and analysis included.

**MUS 212-1 Music Theory Lab III (0 + 2)**

Prerequisites: MUS 113, 114

Corequisite: MUS 211

Practical theoretical skills applied to the keyboard. Training in sight-singing, rhythmic coordination, firm sense of pitch, and aural recognition of the materials introduced in MUS 113, Music Theory II. Keyboard realization of advanced chromatic harmony and impressionism.

**MUS 213-3 Music Theory IV (3 + 0)**

Prerequisites: MUS 211, 212

Corequisite: MUS 214

Continuation of MUS 211. More emphasis on complete structural forms, and on contemporary music techniques.

**MUS 214-1 Music Theory Lab IV (0 + 2)**

Prerequisites: MUS 211, 212

Corequisite: MUS 213

Continuation of MUS 212. Contemporary music.

**MUS 261-1 Class Instruction III (1 + 0)**

Prerequisite: MUS 162

Continuation of MUS 162. May be repeated for credit in a different area of study.

**MUS 262-1 Class Instruction IV (1 + 0)**

Prerequisite: MUS 261

Continuation of MUS 261. May be repeated for credit in a different area of study.

**MUS 271-2 Private Instruction III (1 + 0 + 0.5)**

Prerequisite: MUS 172

Corequisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of MUS 172. May be repeated for credit in a different area of study.

**MUS 272-2 Private Instruction IV (0.5 + 1)**

Prerequisite: MUS 271

Corequisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of MUS 271. May be repeated for credit in a different area of study.

**MUS 273-4 Performance III (1 + 0 + 1)**

Prerequisites: MUS 172, 111, 112 and successful performance concentration audition

Corequisite: At least one other music course, and the major ensemble in the private instruction area being studied

Continuation of Music 172. For students concentrating in performance only. May be repeated for credit in a different area of study.

**MUS 274-4 Performance IV (1 + 0 + 1)**

Prerequisite: MUS 273 and successful performance concentration audition

Corequisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of Music 273. For students concentrating in performance only. May be repeated for credit in a different area of study.

**MUS 281-1 Ensemble (0 + 2.5)**

Prerequisite: Permission of instructor

Study of large ensemble literature and performance techniques. Preparation of materials for concert performance. Also serves as a reading lab for conducting classes. May be repeated for credit.

**MUS 304-3 Music and the Arts (3 + 0)**

Prerequisites: MUS 100 or equivalent or permission of instructor; and satisfaction of General Studies Level I course requirements

This course is for music majors as well as non-music majors. Stylistic characteristics and the cultural climate of the important art epochs of the western world are studied. Selected examples of music, painting, sculpture, architecture and literature will be examined to discover how the various arts respond to the same socio-cultural environment and how the arts relate to each other in the pattern of cultural history. (General Studies Course—Level II, Arts and Letters)

**MUS 310-3 Counterpoint (3 + 0)**

Prerequisites: MUS 211, 212

Study of modal vocal polyphony (Lassus, Palestrina) of the sixteenth century, and tonal contrapuntal textures of the eighteenth century (J.S. Bach). Composition in two to four independent voices. All contrapuntal techniques studied in historical perspective, including analysis of polyphonic forms.

## 306 COURSE DESCRIPTIONS

### **MUS 315-3 Instrumental and Choral Scoring and Arranging (3 + 0)**

Prerequisites: MUS 211, 212, 341, or 342, or 343 or 345 and 346

The study of the technical capabilities and notation of all the instruments and voices, individually and in ensembles. The transcription of instrumental and choral recordings and the composition of scores for band, jazz band, orchestra, and chorus.

### **MUS 320-3 Topics in Music History and Literature: Variable Title (3 + 0)**

Prerequisite: MUS 322 or permission of instructor

A course designed to study the history and literature of a single musical style or medium. May be repeated for credit under a different title.

### **MUS 321-3 Music History I (3 + 0)**

Prerequisite: MUS 211

A survey of music history and musical style from the music of the early Christian church through the early eighteenth century.

### **MUS 322-3 Music History II (3 + 0)**

Prerequisite: MUS 321

A survey of music history and musical style from mid-eighteenth century up to the present time.

### **MUS 323-3 Composer Series: Variable Title (3 + 0)**

Prerequisite: MUS 322 or permission of instructor

A course designed to study the work of a single composer. May be repeated for credit under a different title.

### **MUS 341-2 String Techniques and Materials (2 + 0)**

Practical instruction in the technique of playing and teaching string instruments. Lecture periods are devoted to the organization of string programs in the public schools.

### **MUS 342-2 Guitar Techniques and Materials (2 + 0)**

Practical instruction in the technique of playing and teaching the guitar.

### **MUS 343-2 Woodwind Techniques and Materials (2 + 0)**

Practical instruction in playing woodwind instruments with emphasis on and acquainting students with techniques and materials necessary in teaching woodwinds.

### **MUS 345-2 Brass Techniques and Materials (2 + 0)**

Practical beginning instruction in playing the brass instruments. Materials for beginning instrumental music in the public schools are studied.

### **MUS 346-2 Percussion Techniques and Materials (2 + 0)**

The study of the methods and materials for teaching beginning percussion in the public schools. Includes practical instruction on the instruments.

### **MUS 348-2 Marching Band Techniques and Materials (2 + 0)**

Prerequisite: Sophomore classification

A study of the organization and administration of the marching band in the contemporary school setting. Particular attention is paid to the "Corps Style" program, contests in the Drum Corps International format, and the traditional precision drill and pageantry formats.

### **MUS 351-2 Basic Conducting (2 + 0)**

Prerequisites: MUS 113 and 114, plus one year of MUS 281 or 381

Detailed fundamental conducting techniques of the basic patterns. Introduction to orchestral and choral scores.

### **MUS 352-3 Choral Conducting and Literature (3 + 0)**

Prerequisites: MUS 351 and a passing score on the Piano Proficiency Examination

The study of choral conducting techniques as they relate to studying, marking, reading, rehearsing, and performing the score.

### **MUS 353-3 Instrumental Conducting and Literature (3 + 0)**

Prerequisites: MUS 351 and a passing score on the Piano Proficiency Examination

The study of instrumental conducting techniques as they relate to studying, marking, reading, rehearsing and performing the score.

### **MUS 365-2 Basic Techniques of Composition (2 + 0)**

Prerequisite: MUS 211 or permission of instructor

The study of the craft of musical composition, from practical, theoretical, and aesthetic points of view, through the discussion and performance of individual writing projects. May be repeated for credit.

**MUS 371-2 Private Instruction V (1 + 0 + 0.5)**

Prerequisite: MUS 272

Corequisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of MUS 272. May be repeated for credit in a different area of study.

**MUS 372-2 Private Instruction VI (1 + 0 + 0.5)**

Prerequisite: MUS 371

Corequisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of MUS 371. A 30-minute junior recital may be substituted for the jury requirement for MUS 372. May be repeated for credit in a different area of study.

**MUS 373-4 Performance V (1 + 0 + 1)**

Prerequisites: MUS 274, 211, 212, 321 and successful performance concentration audition

Corequisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of MUS 272. For students concentrating in performance only. May be repeated for credit in a different area of study.

**MUS 374-4 Performance VI (1 + 0 + 1)**

Prerequisites: MUS 373, 322 and successful performance concentration audition

Corequisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of MUS 373. For students concentrating in performance only. May be repeated for credit in a different area of study.

**MUS 381-1 Ensemble (0 + 2.5)**

Prerequisites: Junior status and permission of instructor

Continuation of MUS 281. Also serves as a reading lab for conducting classes. May be repeated for credit.

**MUS 411-2 Analysis of Music (2 + 0)**

Prerequisites: MUS 211 and 212 and for senior experience credit, MUS 451, satisfaction of all Level I and Level II General Studies course requirements, and senior status

Advanced analytical techniques applied to various musical styles. Traditional methods of analysis along with study of twentieth century methods of analysis of Allen Forte, Edward Cone, and Paul Hindemith. Exceptional musical procedures examined. Contemporary music literature stressed. (Senior Experience)

**MUS 430-3 Fundamentals of Music Education (3 + 0)**

Prerequisite: EDU 212

A course designed to investigate the basic principles of music education with emphasis on the aims and objectives, history, curriculum, philosophy, and career and alternative careers in the field of music education.

**MUS 431-2 Music Methods for Elementary School Classroom Teachers (2 + 0)**

Prerequisite: Junior status

This course will stress activities which elementary school classroom teachers can incorporate into their curriculum to develop musical concepts in the following areas: singing, listening, creative, rhythmic, instrumental, and reading.

**MUS 433-2 Elementary School Music Methods and Materials (2 + 0)**

Prerequisite: A passing score on the Piano Proficiency Examination

Corequisite: MUS 439; Supervised Field Experience: ESMMM

The course is designed for the future elementary school music specialist, or for the individuals who plan to teach music in the elementary school. Emphasis is given to contemporary teaching techniques and materials.

**MUS 434-2 Secondary School Music Methods and Materials (2 + 0)**

Prerequisites: MUS 352 or 353, satisfaction of Level I and Level II General Studies course requirements, and senior status

Corequisites: MUS 439; Supervised Field Experience: SSMMM

Instruction and practice in the methods of teaching and techniques used in organizing and directing secondary school choral groups. (Senior Experience)

**MUS 439-1 Supervised Field Experience (0 + 2)**

Prerequisites: Satisfaction of Level I and Level II General Studies course requirements and senior status

Corequisite: MUS 433 or 434

This course must be taken concurrently with each of the following courses: MUS 433 or 434. The course is designed to provide the music student with supervised experiences working with vocal and instrumental directors in area public schools. May be repeated for credit. (Senior Experience)

## 308 COURSE DESCRIPTIONS

### **MUS 441-3 Piano Pedagogy (3 + 0)**

Prerequisite: Permission of instructor

Study of methods, literature, editions, and techniques used in teaching piano privately and in groups.

### **MUS 442-3 Vocal Pedagogy (3 + 0)**

Prerequisite: MUS 271 (Private Voice III)

Open to juniors, seniors, and advanced special students. A series of lectures, demonstrations, and discussions of the following and similar subjects: psychological and physiological factors in singing; approach to the pupil; methods of some famous teachers; interpretation and materials.

### **MUS 451-2 Advanced Conducting (2 + 0)**

Prerequisites: MUS 351, a passing score on the Piano Proficiency Examination, satisfaction of all Level I and Level II General Studies course requirements, and senior status

The study of advanced conducting techniques as they relate to studying, marking, reading, rehearsing, and performing the score. Instrumental and choral music is studied. (Senior Experience)

### **MUS 471-2 Private Instruction VII (1 + 0 + 0.5)**

Prerequisite: MUS 372

Coresquisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of MUS 372. May be repeated for credit in a different area of study.

### **MUS 472-2 Private Instruction VIII (1 + 0 + 0.5)**

Prerequisite: MUS 471

Coresquisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of MUS 471. May be repeated for credit in a different area of study.

### **MUS 473-4 Performance VII (1 + 0 + 1)**

Prerequisites: MUS 374 or 472, and successful performance concentration audition

Coresquisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of MUS 374. For students concentrating in performance only. May be repeated for credit in a different area of study.

### **MUS 474-4 Performance VIII (1 + 0 + 1)**

Prerequisite: MUS 473; for senior experience credit, the student must also complete MUS 479, satisfaction of all Level I and Level II General Studies course requirements, and senior status

Coresquisite: At least one other music course and the major ensemble in the private instruction area being studied

Continuation of MUS 473. For students concentrating in performance only. A fifty-minute senior recital may be substituted for the jury requirement for MUS 474. May be repeated for credit. (Senior Experience)

### **MUS 479-1 Senior Recital (1 + 0)**

Prerequisites: MUS 473 and for senior experience credit, the student must also complete MUS 474, satisfaction of all Level I and Level II General Studies course requirements, and senior status

A solo performance of not less than 50 minutes in length, required of all students concentrating in performance. Must be approved by means of a recital hearing at least three weeks prior to the performance. Graded pass-fail. (Senior Experience)

### **MUS 495 Senior Project (3 + 0)**

Prerequisites: Permission of the instructor, satisfaction of all Level I and Level II General Studies course requirements, and senior status

A seminar course in which the student prepares a senior project in the area of music theory, history, literature, composition, performance, or pedagogy. In addition to the project which will include a portfolio, the student will prepare a personal résumé. The course will also contain a comprehensive examination which will be used for program assessment purposes. (Senior Experience)

## **Native American Studies**

### **NAS 100-3 Introduction to Native American Studies (3 + 0)**

Prerequisites: Minimum performance standard scores on the reading and writing preassessment placement tests

This course provides an opportunity to study the indigenous population of the United States. The primary focus of the course is on the historical, political, social, and economic relationship between Native Americans and how this culture is imbedded in the American culture. (General Studies Course—Level II, Social Science; Multicultural)

**NAS 193-3****(HIS 193)****History of Indigenous/Hispanic Americans (3 + 0)**

Prerequisites: Minimum performance standard scores on the reading, writing, and mathematics preassessment placement tests

This course traces the development of indigenous and Indo-Hispanic civilization in North America from prehistoric origins to the present. (General Studies Course—Level II, Historical; Multicultural)

**NAS 320-3****(PSC 320)****Native American Politics (3 + 0)**

Prerequisites: NAS 100 or PSC 102 or permission of instructor, and completion of all Level I General Studies course requirements

The focus of this course is to examine Native Americans as political beings. Important questions and strategies for understanding the rise and expansion of Native politicization will be identified. In general, the students will be able to explain why, how, and when movements that demand change emerge. By comparing and contrasting the Native American experience with other powerless groups in society, the students should be able to trace these historical and political factors which led to a change in the movement of insurgency and analyze the specific actions by insurgents which inevitably resulted in the failure or success of those specific actions. (General Studies Course—Level II, Social Science; Multicultural)

**Nursing****NUR 311-3****Transitions in Nursing (3 + 0)**

Prerequisite: Fulfillment of admission requirements to the baccalaureate nursing program; or ANT 348 may be taken concurrently

This course is designed to introduce the registered nurse student to baccalaureate nursing education and to facilitate the transition to the role of the baccalaureate nurse. The course focuses on expanding the nursing assessment and nursing process skills through self assessment of learning needs and critical thinking skills, exploration of the concept of health, and introduction to conceptual basis for the practice of the profession. Students will develop their philosophy of nursing which addresses environment, individual, health, nursing, and nursing practice. Aspects of professionalism such as the evolution of nursing education, the role of professional organizations, and characteristics of autonomy and accountability will be discussed. Systems theory will be presented as an organizing theoretical base for practice.

**NUR 351-1****Nursing Diagnosis (1 + 0)**

Prerequisite: NUR 311 or may be taken concurrently

This course is designed to assist the student in writing nursing diagnostic statements according to national standards. The history and future of nursing diagnosis is examined.

**NUR 355-3****Leadership (3 + 0)**

Prerequisite: NUR 311 or may be taken concurrently

This course is designed to foster development of leadership roles of the nurse in working with individuals and groups striving for high level wellness. These leadership roles also extend to other professionals and paraprofessionals in health care settings. Consideration is given to the influence of bio-psycho-socio-cultural components in the leadership process. Emphasis is placed on the following leadership theories: role, group dynamics, decision, change, and communication.

**NUR 370-4****Assessment (4 + 0)**

Prerequisite: NUR 311 or may be taken concurrently if nursing entry examinations have been completed satisfactorily.

This course is designed to assist the student in synthesizing prior technical skills and biological, psychological, sociological, and cultural knowledge with the new skills to perform a physical assessment. Emphasis is placed on assessment of level of wellness and identification of normal from abnormal states.

**NUR 385-3****Clinical Teaching Methods (3 + 0)**

Prerequisite: NUR 311 or may be taken concurrently

This course is designed to assist the student in developing knowledge and skills in clinical teaching. Emphasis is placed on the role of the nurse as a teacher. Principles of learning, content selection, strategies, teaching materials, and evaluation of teaching are considered. The relationship of perception, communication, and adaptation to teaching and learning are explored. Consideration is given to the biological, psychological, sociological and cultural needs of clients as related to client teaching. Student will prepare a client-centered teaching module.

**NUR 410-4****Critical Care Nursing (4 + 0)**

Prerequisites: NUR 311 or may take NUR 311 concurrently if nursing entry examinations have been completed satisfactorily. Statistics may also be taken concurrently

This course is designed for registered nurses in adult critical care settings desiring intermediate level knowledge and skills. The focus is on theoretical concepts, but clinical application will be addressed. The course is also designed as preparation for certification examination.



## 310 COURSE DESCRIPTIONS

### **NUR 420-3 Research (3 + 0)**

Prerequisites: NUR 311 or may be taken concurrently, and a statistics course prior to or concurrent with NUR 420

This course introduces students to the research process and terminology and acquaints them with a variety of research methodologies for scientific inquiry. Students critique current research studies for applicability of the findings to nursing practice. Students identify researchable problems in nursing practice and health care delivery. Students have experiential learning with steps of the research process.

### **NUR 440-5 Community Health Nursing (5 + 0)**

Prerequisites: ANT 348, HES 360, HES 380, HES 382 and 13 semester hours of upper division nursing courses including NUR 370 and NUR 385. Must be taken concurrently with NUR 441

This course focuses on family theories and public health principles in analyzing the health of individuals, families, and communities as clients. The concepts of risk and prevention in high-level wellness are examined. Principles of ecology and health planning are used to analyze the relationship between environment and human health. Students will integrate the concepts/theories learned in 300-level nursing courses.

### **NUR 441-4 Community Health Nursing: Application (1.5 + 7)**

Prerequisite: Must be taken concurrently with NUR 440

Within a community setting, the student applies knowledge of the nursing program's conceptual framework, public health sciences, family theories, and nursing knowledge to make multidimensional assessments of an individual, family, and community level of wellness. Nursing process is stressed as a problem solving approach with the internal and external environment of these clients. Community resources are identified and utilized to promote high level wellness.

### **NUR 476-2 Nursing Theories (2 + 0)**

Prerequisites: NUR 311, 351, 355, and 385

This course is designed to assist students who plan to continue their education in graduate school. The course provides an introductory examination of nursing theory development and evaluation. Three theories of nursing are analyzed and applied.

### **NUR 485-5 Nursing Process: Application (1.5 + 8)**

Prerequisites: All 300 level nursing courses, NUR 420, NUR 440, NUR 441, satisfaction of all Level I and Level II General Studies course requirements, and senior status

The capstone course in which concepts, theoretical formulations, and processes synthesized at the third and fourth level of programs are put into operation. The student identifies a health problem of a self-selected client population and studies, in a clinical setting, a nursing intervention strategy using the nursing process to assist clients toward high-level wellness. The student spends one and one half hours per week in seminar and seven hours per week for 15 weeks in clinical study. The study may or may not have a specific clinical guide. (Senior Experience)

## Parent Education

### **PAR 205-3 Introduction to Parent Education (3 + 0)**

This course is designed to introduce the student to the field of parent education—its history, scope, methods, and issues raised. The aim of the course is to provide a broad overview of the field, either as a basis for further coursework in parent education or as a brief introduction to an area of growing interest.

### **PAR 307-3 Working with the Contemporary Family (3 + 0)**

Prerequisite: Junior or senior status

This course is designed to familiarize students with the contemporary family: its structures, stresses, strengths, and the legal and political issues which impact it. Students will learn how parent educators can assist today's family and will be given the opportunity to apply course learning's to a specific family situation.

### **PAR 489-3 Parent Education Field Placement (0 + 9)**

Prerequisites: PAR 205 and PAR 307

The field placement is individually designed to meet the needs of the student. It provides opportunities to plan, implement, and evaluate programs and projects in a parent education setting. The program director works closely with students and community agencies in setting up each field placement.

## Philosophy

### **SPECIAL NOTES ON 100-LEVEL PHILOSOPHY COURSES**

All 100-level courses are survey type designed to provide special familiarity with philosophy as a discipline. Some of the skills within this discipline that will be developed are identifying assumptions and implications, recognizing arguments, making distinctions and developing categories, and formulating reasoned evidence. Any of these courses can be taken as a first course in philosophy.

**PHI 101-3 Introduction to Philosophy (3 + 0)**

Prerequisites: Minimum performance standard scores on the reading and writing preassessment placement tests

This course constitutes a survey of the major areas of philosophical inquiry: the enduring questions and alternative answers which continue to be relevant to contemporary living. Problems covered include (1) free will vs. determinism, (2) mind and body, (3) God and religion, (4) knowledge, and (5) ethics. (General Studies Course—Level II, Arts and Letters)

**PHI 103-3 Ethics (3 + 0)**

Prerequisites: Minimum performance standard scores on the reading and writing preassessment placement tests

This course provides a survey of alternative ethical viewpoints with a focus on the principles of moral action. The implications of these ethical positions for moral living will be emphasized through discussion of selected contemporary moral issues. Critical thinking about issues of right conduct will be developed. (General Studies Course—Level II, Arts and Letters)

**PHI 104-3 Introduction to Eastern Religions (3 + 0)**

An introductory survey of the living traditions of some of the major faiths of the Orient including Hinduism, Buddhism, Taoism, Confucianism, Shinto, and Zen.

**PHI 105-3 Introduction to Western Religions (3 + 0)**

An introductory survey of the major religious traditions of the West with primary emphasis on the monotheistic faiths of Judaism, Christianity, and Islam.

**PHI 111-3 Language, Logic and Persuasion (3 + 0)**

Prerequisite: Minimum performance standard scores on the reading and writing preassessment placement tests

An informal logic course providing a nontechnical introduction to critical thinking including the functions of language, the nature of arguments, common fallacies committed in communication, and the art of constructing clear and adequate definitions. (General Studies Course—Level I, Communication)

**PHI 144-3 Logic (3 + 0)**

A general introduction to both informal and formal logic, the systems of rules for judging the validity of deductive and inductive arguments. Included are Aristotelian syllogistic deduction, modern truth-functional deduction, informal fallacies, inductive argumentation, and scientific method.

**SPECIAL NOTES ON 200-LEVEL COURSES**

All 200-level courses are concept/skill-type courses. They are designed to develop such philosophic skills as critical thinking, recognition of issues, reasoned argumentation, knowledgeable judgments, clarity in expression, and familiarity with philosophic resources. Although there are no formal prerequisites for 200-level courses, it is recommended that a student have satisfactorily completed at least 3 hours of 100-level philosophy.

**PHI 204-3 Philosophies of Religion (3 + 0)**

A critical investigation of various dimensions and functions of religion to provide a basis for discussion of man as a religious being and the future of religion.

**SPECIAL NOTES ON 300-LEVEL COURSES**

All 300 level courses are depth-probe type courses. They are designed to provide a rigorous, scholarly study of philosophic methods, problems, and solutions. Primary sources will be used whenever possible and the student will be expected to do maximal work on her or his own, with direction from the instructor. PHI 341, 361, and 381 are variable title courses. The subject matter of these courses is variable in order to provide an opportunity for in-depth study in a number of specific areas. The particular subject matter to be investigated in any given semester will be specified in the title as it appears in the class schedule. It is possible to repeat any of these courses for credit provided the subject matter is not the same as in a course previously taken for credit.

**PHI 300-3 History of Greek Philosophy (3 + 0)**

Prerequisites: PHI 101 or permission of instructor; and satisfaction of Level I General Studies course requirements

This course is a study of the Greek philosophical tradition, its characteristic methods and theories. Special attention will be paid to the Pre-Socratics, Plato, and Aristotle. Original sources will be read in translation. The dialectical progression and structure of Greek philosophical thinking will be recognized. (General Studies Course—Level II, Arts and Letters)

**PHI 302-3 History of Modern Philosophy (3 + 0)**

Prerequisites: PHI 101 or permission of instructor; and satisfaction of Level I General Studies course requirements

This course is a study of modern philosophy from the Renaissance through Kant, showing the dialectical progression and fundamental problems and methods of that philosophy. Original sources will be read in translation. The systematic character of each philosophy will be stressed. (General Studies Course—Level II, Arts and Letters)

## 312 COURSE DESCRIPTIONS

### **PHI 312-3 Philosophy of Language (3 + 0)**

Prerequisites: PHI 101 and three additional hours in philosophy or permission of the instructor

The philosophy of language can plausibly claim to be the most fundamental area of philosophy on the ground that the subject matter of philosophy is thought itself, and this can be studied only through language, its public vehicle. This course surveys major theories in this area.

### **PHI 315-3 Social and Political Philosophy (3 + 0)**

Prerequisite: Two courses in philosophy or permission of instructor

Political and social philosophy is the study of people in societies with particular attention to the abstract claims they have on each other in the form of rights, duties, and privileges, and their demand for justice, equality, and freedom. This study may be concerned either with the conceptual structure of political discourse and with the kinds of arguments used to propose, defend, or criticize political institutions and policies.

### **PHI 318-3 Feminist Philosophy (3 + 0)**

Prerequisites: Two philosophy courses and junior status, or permission of the instructor

A course which examines traditional philosophical questions and positions in metaphysics, epistemology, and philosophy of science and explores how these questions and positions are rethought in 20th Century Feminist Philosophy. Students will be expected to write a project paper in addition to other exams given in the course.

### **PHI 322-3 Personal Knowledge and Professional Growth (3 + 0)**

Prerequisite: Upper-division status or PHI 101

A holistic course emphasizing the different dimensions of the self: physical, cognitive, emotional, ethical, and spiritual. The course will examine different theories of the self and self-growth, and will work on integrating theory and practice of each approach in both one's personal and professional life.

### **PHI 332-3 Metaphysics (3 + 0)**

Prerequisite: Six hours in philosophy

A comprehensive survey of metaphysics, dealing with problems of perennial and contemporary concern, such as, the existence and nature of the soul, free will, God and substance.

### **PHI 333-3 Epistemology (3 + 0)**

Prerequisites: Two courses in philosophy or permission of instructor

The study of knowledge, concerned with what in general can be known, and how specific forms of knowledge can be obtained, including ordinary knowledge of people and things, and knowledge in such special fields as science, logic, metaphysics, religion, ethics, and aesthetics.

### **PHI 335-3 Ethical Theories (3 + 0)**

Prerequisite: Six hours in philosophy

A comprehensive review of the central problems of normative ethics in western philosophy and the major ethical theories of that tradition stretching from Plato in Ancient Greece to John Dewey and John Rawls in the 20th century.

### **PHI 336-3 Business Ethics (3 + 0)**

Prerequisites: Junior status or permission of instructor and satisfaction of Level I General Studies course requirements

This course examines the values and value conflicts inherent in the modern practices of the business world, investigates the major philosophical issues which challenge the conduct of ethics as a rational enterprise, exposes students to major traditions in philosophical normative ethics, and applies those traditions to specific value conflicts in the business world. A critical thinking component is included in the course. (General Studies Course—Level II, Arts and Letters)

### **PHI 339-3 Aesthetics (3 + 0)**

Prerequisites: Two courses in philosophy or permission of instructor

A study of some basic concepts of aesthetics, focused either on a principal figure in the field (e.g. Plato, Kant, Schiller, or Nietzsche) or on a particular set of fundamental issues in aesthetics, e.g. the ontology of the work of art; intentions and originality; form and expression; criticism, aesthetic education, etc. May include an emphasis on a particular art (e.g. poetry, drama, film, jazz, or painting).

### **PHI 340-3 Philosophies of Science (3 + 0)**

Prerequisites: PHI 101 and three additional hours in philosophy or permission of the instructor

An advanced, critical examination of the concepts and problems involved in contemporary science. The nature of scientific method, explanation, and law is covered. Physical, biological, and psychosocial sciences are investigated.

### **PHI 341-3 Eastern Philosophies: (Variable Title) (3 + 0)**

Prerequisite: PHI 104 or permission of the instructor

An in-depth study of particular ancient and modern schools and movements in Eastern philosophy such as: the philosophies of the Vedas and the Upanishads; Yoga, Vedanta; Buddhist philosophies; Confucianism, Taoism, Maoism, Shinto, and Zen.

**PHI 343-3 Philosophy of Law (3 + 0)**

Prerequisite: One upper-division course in the Humanities or Social Sciences, or one philosophy course; or permission of instructor

An examination of the origin of the individual and the idea of law in Greek thought and alterations of these notions in modern thought. The notion of interpretation of an in the law will be examined.

**PHI 344-3 Symbolic Logic (3 + 0)**

Prerequisite: PHI 144

A course in the techniques and metatheory of symbolic logic. Several alternative ways of establishing the validity of arguments will be pursued through to the completeness theorem.

**PHI 351-3 Phenomenology (3 + 0)**

Prerequisite: Nine hours of philosophy including PHI 101 or permission of instructor

A study of two major twentieth century phenomenologists, Husserl, and Heidegger. Different conception of what constitutes concrete experience will be examined.

**PHI 353-3 Philosophy of Mind (3 + 0)**

Prerequisites: Two courses in philosophy or permission of instructor

A study of the nature of mental phenomena, both those that occur in other animals and those that make special human nature, including consciousness, thought, reason, perception, feeling, and will.

**PHI 355-3 Existentialism (3 + 0)**

Prerequisites: PHI 101 and three additional hours in philosophy or permission of instructor

The study of the existentialist movement of the 19th and 20th Centuries. Philosophers and writers include Kierkegaard, Nietzsche, Heidegger, Dostoevsky, Merleau-Ponty, and Sartre. Problems covered include the nature of Being; freedom and responsibility; the other and the body; the moral life; and applications of existentialism to political life; and psychotherapeutic theory.

**PHI 361-3 Religious Studies: (Variable Title) (3 + 0)**

Prerequisites: PHI 101 and PHI 105 or permission of the instructor

An in-depth study of specific religious leaders and thinkers, such as Jesus, Paul, Augustine, Muhammad, Aquinas, Maimonides, Luther, Calvin, Tillich, Barth, Bonhoeffer, and Buber.

**PHI 381-3 Major Philosophers: (Variable Title) (3 + 0)**

Prerequisites: PHI 101 plus five hours of philosophy or permission of the instructor

An in-depth study of specific philosophers such as: Plato, Aristotle, Descartes, Hume, Kant, Hegel, Marx, Engels, Nietzsche, Kierkegaard, Heidegger, Sartre, Merleau-Ponty, Dewey, Wittgenstein and Whitehead.

**SPECIAL NOTES ON 400-LEVEL COURSES**

All 400-level courses are synthesis-type courses. They are designed to enable students to integrate their studies in philosophy and to formulate initially a position of their own. Sometimes 400-level courses are team-taught by several members of the faculty so the student has access to their special expertise in a given field.

**PHI 405-3 Comparative Philosophies (Variable Title) (3 + 0)**

Prerequisites: PHI 101 and junior status (Nine additional hours in philosophy)

The works of two major philosophers will be analytically compared regarding basic assumptions, conclusions, arguments and contemporary relevance. The choice of comparisons is based on student's interest and instructor's judgment.

**PHI 410-3 Senior Seminar (3 + 0)**

Prerequisites: A major in philosophy or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements and senior status

A course centered on a key movement in Twentieth Century Philosophy: Early Analytic Philosophy. The goal of this course is to allow the advanced student majoring in philosophy to engage in intensive study of this topic and the key philosophers who were part of this movement: Russell, Frege, and Wittgenstein. Students will be required to produce a term paper suitable for entry into graduate level work in philosophy. (Senior Experience)

**Physics****PHY 100-4 Introduction to Physics (3 + 2)**

Prerequisites: Minimum performance standard scores on the reading, writing, and mathematics preassessment placement tests and high school algebra or equivalent

This introductory survey course for nonscientists emphasizes the main concepts of physics, including mechanics, properties of matter, heat, sound, electricity, and magnetism, light, modern physics, and relativity. The accompanying laboratory work is designed to illustrate the material discussed in the lectures. (General Studies Course—Level II, Natural Science)

## 314 COURSE DESCRIPTIONS

### **PHY 108-3 Physical Science for Teachers (2 + 2)**

**Prerequisites:** Minimum performance standard scores on the reading, writing, and mathematics preassessment placement tests and high school algebra or equivalent

A course designed to give prospective or active teachers of science a laboratory orientation to the processes and concepts involved in interpreting the physical surroundings. (General Studies Course—Level II, Natural Science)

### **PHY 125-6 Physics of Aviation (5 + 2)**

**Prerequisite:** MTH 111, or MTH 131, or equivalent. Minimum performance standard scores on the reading, writing, and mathematics preassessment placement tests

This is a one-semester course introducing the fundamentals of physics through technological applications, many of which are in aerospace science. Topics include measurement, motion, temperature, heat, properties of fluids, sound, oscillations, waves, and electricity and magnetism. (General Studies Course—Level II, Natural Science)

### **PHY 201-4 College Physics I (4 + 0)**

**Prerequisites:** Concurrent registration with PHY 203 is recommended. MTH 112 or equivalent; and satisfaction of either ENG 101 or the Level I communication requirement. Completion of PHY 201 and PHY 203 with a passing grade is required to receive General Studies credit

This first term of a one-year sequence covers the fundamentals of physics in a basic but thorough manner. The experimental aspects of physics are emphasized in the classroom and in the laboratory. Considerable time is devoted to problem-solving. Course content includes measurement, vectors, kinematics, dynamics, gravitation, energy, momentum, rotational motion, properties of matter, heat, thermal properties of matter, thermodynamics, wave motion and sound. The course is algebra-based. (General Studies Course—Level II, Natural Science)

### **PHY 202-4 College Physics II (4 + 0)**

**Prerequisites:** Concurrent registration with PHY 204 is recommended. PHY 201 and satisfaction of either ENG 101 or the Level I communication requirement. Completion of PHY 202 and PHY 204 with a passing grade is required to receive General Studies credit

The course is a continuation of PHY 201, the algebra-based introductory physics course. Topics include electricity and magnetism, electromechanical devices, AC circuits, geometrical and physical optics, and modern physics. (General Studies Course—Level II, Natural Science)

### **PHY 203-1 College Physics Laboratory I (0 + 2)**

**Prerequisites:** Concurrent registration with PHY 201 is recommended. MTH 112 or equivalent; and satisfaction of either ENG 101 or the Level I communication requirement. Completion of PHY 201 and PHY 203 with a passing grade is required to receive General Studies credit

This course is the first semester of a one-year sequence in laboratory work which emphasizes experimental techniques, procedures, and formal report writing. Laboratory experiments are selected to reinforce or extend the work of the lecture portion of the course. Emphasis is on mechanics. (General Studies Course—Level II, Natural Science)

### **PHY 204-1 College Physics Laboratory II (0 + 2)**

**Prerequisites:** Concurrent registration with PHY 202 is recommended and satisfaction of either ENG 101 or the Level I communication requirement. Completion of PHY 202 and PHY 204 with a passing grade is required to receive General Studies credit

This course is the second semester of a one-year sequence in laboratory work which emphasizes experimental techniques, procedures, and formal report writing. Laboratory experiments are selected to reinforce or extend the work of the lecture portion of the course. Emphasis is on electrical measurements, waves, optics, and modern physics. (General Studies Course—Level II, Natural Science)

### **PHY 231-4 General Physics I (4 + 0)**

**Prerequisites:** Concurrent registration with PHY 232 is recommended. MTH 141 and satisfaction of either ENG 101 or the Level I communication requirement. Completion of PHY 231 and PHY 232 with a passing grade is required to receive General Studies credit

This first term of a one-year introductory calculus-based physics course is suitable for science and engineering students. Topics treated include mechanics, heat and thermodynamics, electricity and magnetism, and light. (General Studies Course—Level II, Natural Science)

### **PHY 232-1 General Physics Laboratory I (0 + 2)**

**Prerequisites:** Concurrent registration with PHY 231 is recommended. Satisfaction of either ENG 101 or the Level I communication course requirement. Completion of PHY 231 and 232 with passing grades is required to receive General Studies credit

This first semester of a one-year sequence in laboratory work emphasizes experimental techniques, procedures, and formal report writing. Laboratory experiments are selected to reinforce or extend the work of the lecture portion of the course. Emphasis is on mechanics. (General Studies Course—Level II, Natural Science)

**PHY 233-4 General Physics II (4 + 0)**

Prerequisite: Concurrent registration with PHY 234 is recommended. MTH 241, PHY 231 and 232, or equivalent and satisfaction of either ENG 101 or the Level I communication course requirement. Completion of PHY 233 and 234 with passing grades is required to receive General Studies credit

As a continuation of PHY 231, this second term of a one year introductory calculus-based physics course is suitable for science and engineering students. Topics treated include electricity and magnetism, circuits, electromagnetic oscillations and waves, physical optics, and geometrical optics. (General Studies Course—Level II, Natural Science)

**PHY 234-1 General Physics Laboratory II (0 + 2)**

Prerequisite: Concurrent registration with PHY 233 is recommended. MTH 141, PHY 231 and 232 or equivalent and satisfaction of either ENG 101 or the Level I communication course requirement. Completion of PHY 233 & 234 with passing grades is required to receive General Studies credit

This second semester of a one-year sequence in laboratory work emphasizes experimental techniques, procedures, and report writing. Laboratory experiments are selected to reinforce or extend the work of the lecture portion of the course. Emphasis is on electrical measurements, waves, optics, and modern physics. (General Studies Course—Level II, Natural Science)

**PHY 281-3 Modern Physics (3 + 0)**

Prerequisite: MTH 241 and one year of physics, or consent of instructor

An introductory course of the modern branch of physics which will cover the special theory of relativity, the basic phenomenology of atomic and nuclear physics, and the basic concepts of quantum mechanics.

**PHY 282-3 Classical Physics (3 + 0)**

Prerequisite: MTH 241 and one year of physics, or consent of instructor

Fundamental principles of mechanics, thermodynamics, electromagnetism, and optics will be reviewed with an emphasis on understanding of physics through problem-solving.

**PHY 308-3 Energy and Environment (3 + 0)**

Prerequisite: PHY 100 or PHY 201 or equivalent

A course in the supply and usage of energy resources and the environmental problems associated with our energy usage.

**PHY 311-3 Methods of Mathematical Physics I (3 + 0)**

Prerequisite: MTH 241

First term of a one-year sequence in mathematical techniques as applied to the equations of physics. Topics covered include vector analysis, coordinate systems, matrices and determinants, infinite series and infinite products, and complex analysis.

**PHY 312-3 Methods of Mathematical Physics II (3 + 0)**

Prerequisite: PHY 311

Continuation of PHY 311. Topics covered include calculus of variations, special functions, integral transforms, linear vector space, and tensor analysis.

**PHY 321-4 Analytical Mechanics (4 + 0)**

Prerequisite: PHY 282 and MTH 342, or consent of instructor

A course in mechanics at the intermediate level. Topics covered include the Lagrange and Hamilton formulations, the two body problem, rigid body motion, and small oscillations.

**PHY 333-4 Electricity and Magnetism (4 + 0)**

Prerequisite: PHY 282 and MTH 342, or consent of instructor

A course in electricity and magnetism at the intermediate level. Topics covered include Maxwell's equations, boundary value problems, electrodynamics and relativity, and electromagnetic radiation.

**PHY 341-3 Thermal Physics (3 + 0)**

Prerequisite: PHY 282 or consent of instructor

A course covering the basic concepts of the three related disciplines of thermodynamics, statistical mechanics, and kinetic theory. The treatment includes both microscopic and macroscopic behavior of various classical and quantum systems of noninteracting particles and spins.

**PHY 362-3 Sound and Music (3 + 0)**

Prerequisite: Satisfaction of Level I General Studies Course requirements

This course will consider the basic nature of sound waves, the ear and hearing, and musical instruments. Although this course is mainly descriptive, some high school algebra will be used. (General Studies Course—Level II, Natural Science)

## 316 COURSE DESCRIPTIONS

### **PHY 371-2 Physics Laboratory I (0 + 4)**

Prerequisite: PHY 281

This is the first term of a one-year sequence in laboratory work at the junior level. Topics included are electrical measurements, electrical measuring systems, and experimental optics.

### **PHY 372-2 Physics Laboratory II (0 + 4)**

Prerequisite: PHY 281

Continuation of PHY 371.

### **PHY 381-3 Quantum Mechanics (3 + 0)**

Prerequisites: PHY 321 and MTH 342, or consent of instructor.

A course in which both wave mechanics and matrix mechanics are developed and applied to selected problems in atomic physics.

### **PHY 451-3 Optics (3 + 0)**

Prerequisite: PHY 282 or equivalent

A course which presents a contemporary treatment of selected topics in optics, such as matrix methods in geometrical optics, the Fourier analysis approach to physical optics, and the interaction of light with matter.

### **PHY 461-2 Computational Physics I (2 + 0)**

Prerequisite: PHY 312 or MTH 344 or equivalent

This course is designed to provide an understanding of the role of the computer in modern theoretical physics by studying the simulation of physical phenomena in various fields of physics.

### **PHY 462-2 Computational Physics II (0 + 4)**

Prerequisite: PHY 461 and satisfaction of all Level I and Level II General Studies course requirements and senior status

This is a course in which the student is assigned an individual advanced level project modeling a physical phenomenon on the computer. (Senior Experience)

### **PHY 463-3 Continuum Physics (3 + 0)**

Prerequisite: PHY 312 or equivalent

A course which presents the basic physical principles of fluid mechanics and elasticity together with their application to various problems in astronomy, physics, geology and medicine.

### **PHY 465-3 Solid State Physics (3 + 0)**

Prerequisites: PHY 341 and PHY 381 or consent of the instructor

A course in which the basic thermal and electrical properties of solids are explained in terms of the Brillouin zone structures of phonons and electrons.

### **PHY 471-2 Advanced Physics Laboratory I (0 + 4)**

Prerequisite: PHY 371

Laboratory work at the advanced undergraduate level and individual student projects are emphasized.

### **PHY 472-2 Advanced Physics Laboratory II (0 + 4)**

Prerequisites: PHY 371; satisfaction of all Level I and Level II General Studies course requirements and senior status

This course focuses on individual student projects in experimental physics at the advanced undergraduate level. (Senior Experience)

### **PHY 481-3 Atomic and Molecular Structure (3 + 0)**

Prerequisite: PHY 381

A course in which quantum mechanical methods are applied to problems in atomic and molecular physics, such as the one-electron atom, atomic and molecular spectra, and particle scattering.

### **PHY 482-3 Subatomic Physics (3 + 0)**

Prerequisite: PHY 481

An introductory treatment of the various concepts and models used to describe nuclear and high energy particle phenomena.

### **PHY 492-1 Physics Senior Seminar (1 + 0)**

Prerequisites: PHY 471 or consent of instructor; satisfaction of all Level I and Level II General Studies course requirements and senior status

Corequisite: PHY 462 or PHY 472 or consent of instructor

This is a course in which graduating seniors report on individual projects to their peers and the department faculty. (Senior Experience)

## Political Science

### **PSC 101-3 American National Government (3 + 0)**

Prerequisites: Minimum performance standard scores on the reading and writing preassessment placement tests

This course explores the American political process with emphasis on the federal government: how it is organized, formal and informal sources of power and influence, political attitudes and behavior of American citizens, civil rights, constitutional evolution, factors of change and stability. (General Studies Course—Level II, Social Science)

### **PSC 102-3 Political Systems and Ideas (3 + 0)**

Prerequisites: Minimum performance standard scores on the reading and writing preassessment placement tests

The course provides ways of looking at political society, the often unsettling realities of politics, and political science as a discipline; searches for the means of understanding, acting, and living in an increasingly complex and interdependent world of decision making and problem solving; and emphasizes the basic ideas, structures, and issues of modern political systems. (General Studies Course—Level II, Social Science)

### **PSC 202-3 Conducting Political Analysis (3 + 0)**

Prerequisite: PSC 101 or 102 or permission of instructor

This course inquires into research methods and deals with how we organize knowledge in the study of politics. It also emphasizes a multidisciplinary approach to political analysis by concentrating on philosophy of science, social science methodology, and historiography.

### **PSC 203-3 Politics in the Media (3 + 0)**

This course is an analysis of current political issues as portrayed in the daily and weekly press and broadcast media. It is designed to provide students with the background and perspective needed for an informed understanding of the often complex and confusing issues confronting the political system.

### **PSC 220-3**

(AAS 220)

### **Politics and Black People (3 + 0)**

Prerequisites: Satisfaction of Level I mathematics requirement, and either ENG 101 or the Level I communication course requirement

Black politics is examined as a vehicle and potential in decision making for positive change for black people in this country. The realities and the challenges, both historical and current, are emphasized. Credit will only be granted for one of these courses. (General Studies Course—Level II, Social Science; Multicultural)

### **PSC 300-3 American State and Local Government (3 + 0)**

Prerequisite: PSC 101 or permission of instructor

The organization, powers, functions, and practical workings of state, county, town, and city governments of the United States. Special attention is given to federal-state relations and to the Colorado state government and constitution.

### **PSC 302-3 Introduction to Public Administration (3 + 0)**

Prerequisite: PSC 101 or 102 or permission of instructor

An introduction to public management as a field of study and professional practice. Topics include: the political environment of public administration, organization theory, decision-making, budgetary processes, inter-governmental relations, and ethics and professionalism in public service.

### **PSC 303-3 Introduction to International Relations (3 + 0)**

Prerequisite: PSC 101 or 102 or permission of instructor

Examination of the modern nation-state in its relations with others: diplomacy, nationalism, power and influence, sources of conflict and cooperation. Reviews theoretical attempts to understand international behavior.

### **PSC 305-3 Political Theory (3 + 0)**

Prerequisite: Satisfaction of Level I General Studies course requirements

Examination of Western political ideas and ideals from Plato through Marx: the hopes and fears, questions and responses, dreams and realities about the state, humanity, justice and politics. An opportunity to relate historical political thinking to modern problems. (General Studies Course—Level II, Arts and Letters)

### **PSC 309-3 Current Topics in Political Science (3 + 0)**

Prerequisite: PSC 101 or 102 or permission of instructor

An in-depth study of an important topic of political science. Topics vary and the course may be repeated for credit as the topics change.

### **PSC 310-3 American Political Parties and Elections and Voting Behavior (3 + 0)**

Prerequisite: PSC 101 or 102 or permission of instructor

The nature and functions of parties in the U.S. political system: their membership, beliefs, and internal organization. Examines campaign methods and financing, and analyzes the American voter and non voter based on the latest research findings.



**PSC 312-3 American Constitutional Law (3 + 0)**

Prerequisite: PSC 101 or permission of instructor

How the basic principles and doctrines of the Constitution have been interpreted, altered, and applied in response to the ever-changing social, economic, and political conditions in the United States.

**PSC 313-3 The American Presidency (3 + 0)**

Prerequisite: PSC 101 or 102 or permission of instructor

The powers and functions of the presidency as the office has changed and evolved, with emphasis on recent experience. Explores styles of presidential leadership, relations with Congress, the bureaucracy, the media, the public, and private interests and the potential for abuse of power and its prevention.

**PSC 314-3 The American Congress and Legislative Process (3 + 0)**

Prerequisite: PSC 101 or 102 or permission of instructor

The powers and functions of the legislative branch of government; relations with the executive branch; interest group influence; constituent relations. Examines internal organization, traditions, power structure, and reform.

**PSC 316-1-3 Readings in Political Science and Public Administration (1-3 + 0)**

This course provides the opportunity for the student to explore important writings in a selected subject area of political science. A self-paced course under the guidance of the instructor. Topics vary and the course may be repeated for credit.

**PSC 320-3****(NAS 320) Native American Politics (3 + 0)**

Prerequisites: NAS 100 or PSC 102 or permission of instructor, and completion of all Level I General Studies course requirements

The focus of this course is to examine Native Americans as political beings. Important questions and strategies for understanding the rise and expansion of Native politicization will be identified. In general, the students will be able to explain why, how, and when movements that demand change emerge. By comparing and contrasting the Native American experience with other powerless groups in society, the students should be able to trace these historical and political factors which led to a change in the movement of insurgency and analyze the specific actions by insurgents which inevitably resulted in the failure or success of those specific actions. (General Studies Course—Level II, Social Science; Multicultural)

**PSC 322-3 Public Policy (3 + 0)**

Prerequisite: PSC 101 or 102 or permission of instructor

An analysis of the ongoing development of government policy, covering the main stages of the policy process: agenda building, formulation, authorization, implementation, and evaluation.

**PSC 323-3 Environmental Politics (3 + 0)**

Prerequisites: PSC 101, 102 or permission of instructor

The class will explore the political and administrative issues in the field of environmental politics. Environmental areas to be reviewed will include environmental theory, organizations, political behavior, assessment, law and decision-making.

**PSC 324-3 Intergovernmental Relations (3 + 0)**

Prerequisite: PSC 101 or permission of instructor

Analysis of the functioning of the American federal system and the changing forms of local-state-federal relationships. Surveys recent efforts to develop theories relating to the administrative processes of intergovernmental relations.

**PSC 326-3 Politics of Budgeting (3 + 0)**

Prerequisite: PSC 302 or permission of instructor

Budget systems analyzed with an evaluation of administrative techniques of budget control. The legal, social and political aspects of governmental budgets and the budgetary process.

**PSC 328-3 Public Personnel Administration (3 + 0)**

Prerequisite: PSC 302 or permission of instructor

The analysis of managing, motivating and developing people in public organizations. Surveys the main elements of personnel administration such as selection, evaluation, promotion, training, productivity, and job classification.

**PSC 331-3 American Foreign and Military Policy (3 + 0)**

Prerequisite: PSC 101 or permission of instructor

The main trends of U.S. foreign and military policy from the end of World War II to the present, with an exploration of the motives and perceptions behind recent policies and actions. Studies the policymaking process and the relationship between foreign policy and domestic policies.

**PSC 332-3 International Law (3 + 0)**

Prerequisite: PSC 303 or permission of instructor

Past and present efforts of nations to regulate their relations and resolve conflicts through the use of existing legal doctrine, or the development of new law in response to new problems, such as the uses of outer space and ocean resources.

**PSC 333-3 International Organizations (3 + 0)**

Prerequisite: PSC 303 or permission of instructor

The theory and practice of international organizations, with emphasis on the United Nations. Past and present attempts of nations to solve problems or achieve security by means of regional and global organizations, such as the Common Market, the World Bank, etc.

**PSC 340-3  
(AAS 340) Contemporary Africa (3 + 0)**

This course focuses on the political, social and economic realities of post independence Africa. Africa's relations with the outside world and the question of South Africa are also examined in this course. Credit will be granted for only one of these courses.

**PSC 352-3 American Political Thought (3 + 0)**

Prerequisite: PSC 101 or permission of instructor

Is there an American political philosophy? A study of some of the significant individuals and ideas that have shaped and are shaping political thinking in America.

**PSC 360-3 Comparative Politics Area Studies (3 + 0)**

Prerequisite: PSC 101 or 102 or permission of instructor

A thorough examination of the political system or systems of a selected foreign nation or geographical region, such as the Soviet Union, Western Europe, or Latin America. Subject matter varies and the course may be repeated for credit.

**PSC 391-3  
(AAS 391) African Politics and Government (3 + 0)**

Prerequisite: AAS 113, 230, or permission of instructor

This course will survey present-day political systems in Africa and examine factors, internal and external, that have contributed to their emergence. Credit will be granted for only one of these courses.

**PSC 402-3 Special Studies (3 + 0)**

Prerequisites: PSC 101 and PSC 102, and satisfaction of all Level I and II General Studies course requirements, and senior status

This course is an in-depth examination of a selected subject within the overall field of political science. It provides students with an opportunity to delve into a subject which the instructor has a special interest or knowledge, but is not specifically covered in any of the existing courses. Course content will vary and may be variable depending on subject. The course may be repeated for credit as the subject matter changes. (Senior Experience)

**PSC 410-3-12 Legislative Internship (0 + 6-24)**

Prerequisite: Permission of Political Science Department

Students are placed in legislative (state or national) staff positions or in campaign offices according to their own interests and goals. The number of credits earned varies according to the amount of time on the job, e.g., a work load of 20 hours per week would earn 6 credits. Students must contact the Political Science Department before enrolling for internship.

**PSC 412-3-12 Government Agency Internship (0 + 6-24)**

Prerequisite: Permission of Political Science Department

Students are placed in government (state or national) agency internships according to their own interests and goals. The number of credits earned varies according to the amount of time on the job, e.g., a work load of 20 hours per week would earn 6 credits. Students must contact the Political Science Department before enrolling for internship.

**PSC 440-3  
(AAS 440) South African Politics (3 + 0)**

Prerequisite: PSC 101 or 102 or permission of instructor

An in-depth study of the South African political system, its historical development and contemporary operation. Credit will be granted for only one of these courses.

## Psychology

### **PSY 101-3 Introductory Psychology (3 + 0)**

Prerequisite: Minimum performance standard scores on the reading, writing, and mathematics preassessment placement tests

This course presents basic concepts, principles, and methods involved in the scientific study and understanding of human behavior. Attention is given to organic bases of human and other animal behavior with emphasis on perception, learning, motivation, maturation, physical and social adaptation, experimental techniques, individuality and personality, conflict and stress, adjustment and mental health, social behavior, and developmental processes. Required course for all Psychology majors and minors. (General Studies Course—Level II, Social Science)

### **PSY 180-4 Developmental Educational Psychology (3 + 2)**

This course focuses on how developmental and educational psychology can be used to better understand and teach children. Emphasis is placed on child development, birth through adolescence. Students will study a variety of theories about learning and the teaching process. Emphasis is on research based approaches to effective teaching. Observation of children is a required part of the class.

### **PSY 211-3 Educational Psychology (3 + 0)**

Prerequisite: PSY 101 or permission of the instructor

This course involves application and examination of various principles of psychology to learning and teaching. There is an examination of effective modes as they apply to classroom management and application of new communications as they may affect the classroom. There is an emphasis on development, from birth to adulthood.

### **PSY 215-3 Cross-Cultural Psychology (3 + 0)**

Prerequisites: PSY 101, satisfaction of English 102 and Level I communication course requirement

This course will critically examine major concepts, theories, models, and research in psychology across cultures. New directions and foci across cultures will be explored and applied to personal development.

### **PSY 216-3 Personality and Adjustment (3 + 0)**

Prerequisites: PSY 101, satisfaction of the Level I mathematics course requirement, and either ENG 101 or the Level I communication course requirement

The course presents application of principles of psychology to assist individuals in understanding factors which influence personality development and provides knowledge useful for personal improvements and adjustments as well as for social and professional relationships. (General Studies Course—Level II, Social Science)

### **PSY 221-3 Psychology of Human Development (3 + 0)**

Prerequisites: PSY 101, satisfaction of the Level I mathematics course requirement, and either ENG 101 or the Level I communication requirement

This course presents the development of behavior from conception through maturity and death and is intended to help the student understand the developmental characteristics of different age groups and the determinants of their individual and collective behaviors. (General Studies Course—Level II, Social Science)

### **PSY 224-3 Parenting Techniques (3 + 0)**

Prerequisite: PSY 101

This course is designed to provide students with practical information related to child rearing techniques. Students will gain an understanding of the role of parents, developmentally appropriate expectations, and how cultural variations influence parenting. Students will learn specific parenting techniques from a variety of approaches including how to implement them in the family. The emphasis is on research-based information.

### **PSY 227-3 Death and Dying (3 + 0)**

Prerequisite: PSY 101

This course will study the individual as he/she copes with own or another's death from infancy through aging. Emphasis will be placed on common causes of death, the stages in the death process, psychotherapy with the dying patient and family members, and psychological interpretations of burial rituals.

### **PSY 231-3 Introduction to Statistics for Social and Behavioral Sciences (3 + 0)**

This course applies basic statistics to measurement, analysis, and interpretation in psychology as well as other social and behavioral sciences covering distributions, probability, central tendency, variability, sampling distributions, and hypothesis testing.

### **PSY 232-3 Inferential Statistics (3 + 0)**

Prerequisite: PSY 231

This course is a continuation of PSY 231. It covers sampling, experimental design, hypothesis-testing, T distribution, analysis of variance, non-parametric statistics, and correlation and regression in the context of behavioral research.

**PSY 241-3 Social Psychology (3 + 0)**

Prerequisite: PSY 101

This course is an introduction to the content and methods of social psychology. Topics include social perception and cognition, social identity, attitudes, love and attraction, prejudice and discrimination, aggression, altruism, person perception, group dynamics and leadership, environmental effects on behavior, and consumer behavior.

**PSY 275-3 Introduction to Holistic Health (3 + 0)**

Holistic health stands for an integration of factors in disease and health with an emphasis on positive health and wellness. This course explores biological, behavioral, cognitive, emotional, social, and spiritual factors in health, the research supporting a holistic perspective, and a practical application of these ideas.

**PSY 285-3 Psychology of Sexuality (3 + 0)**

Prerequisite: PSY 101 or permission of instructor

This course is a survey of human sexual functioning, with the emphasis on psychological components even though an overview of anatomy and physiology is included. A sampling of topics covered: sexual variation and deviation, sexual dysfunction, social-psychological views of liking and loving, sexual identity, legal aspects of sexuality, and erotica and pornography.

**PSY 295-3 Contemporary Issues: (Variable Topics) (3 + 0)**

Prerequisite: PSY 101

Deals with issues of personal importance to students, with an emphasis on applying psychological principles and knowledge to contemporary questions, rather than a mastery of an academic content area in psychology. Course content will vary, and the course may be repeated for credit as the course title changes.

**PSY 300-3 Theories of Personality (3 + 0)**

Prerequisite: PSY 101

Students will learn the major contemporary theories of personality. The course will emphasize neurobiological, behavioral, psychodynamic, cognitive, and humanistic perspectives on human behavior and mental processes. The underlying philosophies and research support for these theories will be examined.

**PSY 305-3****(WMS 305) Psychology of Gender (3 + 0)**

Prerequisite: PSY 101/WMS 101

This course presents a survey of major contemporary approaches to gender, including a range of scientific and theoretical work. A constructionist approach is utilized to synthesize the views. The course then reviews several major areas of application, including relationships, health, violence, workplace, and achievements.

**PSY 310-3 Psychology of Counseling (3 + 0)**

Prerequisite: PSY 101

This course is intended to provide students with a first course in psychological foundations of counseling. It also will provide opportunities for students to investigate and become familiar with a variety of counseling and therapy models.

**PSY 317-3 Multicultural Service Learning (2 + 2)**

Prerequisites: PSY 101 and six additional semester hours in psychology

This course is designed to combine psychological theory and practice around multicultural issues (including not only traditional classifications based on race and ethnicity but also others such as age, gender, socioeconomic level, health status, and sexual orientation). Lectures, readings, and discussions are integrated with a required service learning placement involving 45 hours of volunteer work in a psychological setting with supervision and training as necessary. (Multicultural)

**PSY 325-3 Child Psychology (3 + 0)**

Prerequisites: PSY 101 and satisfaction of all General Studies Level I course requirements

This course covers the major theories of child development and research related to child behavior. A social science emphasis is placed on prenatal, physical, social, cognitive, emotional, language, and psychological development of normal children. (General Studies Course—Level II, Social Science)

**PSY 326-3 Psychology of Adolescence (3 + 0)**

Prerequisites: PSY 101 and satisfaction of all General Studies Level I course requirements

This course covers the major theories of adolescence and research related to adolescent behavior, including emphasis on the physical, social, cognitive and emotional developments of this period. (General Studies Course—Level II, Social Science)

**PSY 327-3 Adulthood and Aging (3 + 0)**

Prerequisite: PSY 101

A developmental study of the adult from young adulthood throughout the remainder of life.

## 322 COURSE DESCRIPTIONS

### **PSY 331-3 Psychological Research Methods I (2 + 2)**

Prerequisite: PSY 231, completion of or concurrent enrollment in PSY 232 is strongly advised

This course will introduce the student to basic methodology concerned with the collection or interpretation of data. Both experimental and field techniques will be surveyed.

### **PSY 332-3 Psychological Research Methods II (2 + 2)**

Prerequisites: PSY 232 and 331

This course is a continuation of PSY 331 with emphasis on experimental and field techniques for both laboratory and field research, conducting experiments, and writing research reports.

### **PSY 340-3 Psychology of Exceptional Children (3 + 0)**

Prerequisite: PSY 221 or 325

This course examines the psychology of atypical children: learning disabled, gifted, mentally retarded, physically handicapped, chronically ill, emotionally disturbed, and neurologically impaired. Historical context, research findings, etiology, assessment, intervention options and prognosis are examined for each exceptionality.

### **PSY 342-3 Issues in Social-Personality Psychology: (Variable Topics) (3 + 0)**

Prerequisites: PSY 101, PSY 216 or PSY 241

An in-depth consideration of specific areas and issues in contemporary social psychology and personality theory. Emphasis will be on exploration of current theory, research, and applications. Course content will vary and the course may be repeated for credit for different topics. Topics considered may include: transpersonal psychology, social learning theory, attitude change, and others.

### **PSY 344-3 Cravings and Addictions (3 + 0)**

Prerequisite: PSY 101

This course offers a multidisciplinary analysis of a broad range of addictive disorders or other drugs and a spectrum of behavioral disturbances including excessive eating, exercise, gambling, and risk taking. Emphasis is placed on contemporary strategies for prevention, early intervention, and treatment.

### **PSY 345-3 Industrial Psychology (3 + 0)**

Prerequisite: PSY 101

A comprehensive survey of industrial and organizational psychology for students preparing for careers in science, social sciences, the humanities, education, and business, as well as psychology. Applications of industrial psychology to human work situations, personnel selection and training, consumer psychology, advertising, and sales are considered.

### **PSY 347-3 Psychology of Violence and Aggression (3 + 0)**

Prerequisites: PSY 101 and three additional hours of psychology coursework

This class provides an overview of the major theoretical perspectives in violence and aggression, as well as application in the following research areas: family violence, criminal violence, gang/cult violence, wartime violence, and more. It concentrates on psychological mechanisms of aggression, the prevailing social norms, and cognitive factors that facilitate the expression of aggression. Remedies are suggested on both the individual and global level.

### **PSY 348-3**

#### **(WMS 348) Psychology of Women (3 + 0)**

Prerequisite: PSY 101 or WMS 101

This course presents the history and development of theories, research, and concepts in the psychology of women, including a focus on mental health and illness, the pathology of women's social roles, biological bases of women's behavior, and feminist psychological theories and research.

### **PSY 350-3 Research Issues: (Variable Topics) (3 + 0)**

Prerequisites: PSY 101 and 231 or permission of instructor

This course presents an in-depth consideration of current areas and issues in experimental psychology, focusing on the scientific investigation of various aspects of human functioning. Course content will vary and may be repeated for credit as the course title changes. Topics may include information processing, stimulus control of behaviors, health psychology, and others.

### **PSY 355-3 Environmental Psychology (3 + 0)**

Prerequisites: PSY 101 and PSY 231

This course surveys empirical and theoretical work on the influence of the physical environment on human behavior and experience and the psychological factors in environmental problems and solutions.

### **PSY 357-3 Cognitive Psychology (3 + 0)**

Prerequisite: Fifteen hours of psychology or permission of instructor

This course examines current research and theory in the areas of attention, memory, perception, pattern recognition, language, decision making, problem solving, and creativity. Information processing and other perspectives are explored.

**PSY 359-3 Theories of Motivation (3 + 0)**

Prerequisites: PSY 101, nine hours of upper division psychology, and BIO 100 or equivalent  
 This course surveys psychological theories of motivation and supporting research. Topics include: needs, drives, homeostasis, escape, avoidance, anger, aggression, cognitive consistency, achievement, power, and altruism. Primarily for psychology majors and minors.

**PSY 362-3 Abnormal Psychology (3 + 0)**

Prerequisites: PSY 101, and any one of the following: PSY 221, PSY 300, PSY 357, or PSY 359  
 Students examine the major theories of abnormal behavior: neurobiological, behavioral, psychodynamic, cognitive, and humanistic. The course provides a description of the behavior patterns defined as abnormal, an explanation about the causes of abnormal behavior, and a realization of how management and treatment strategies stem from notions of causation.

**PSY 370-3 (AAS 370) Psychology of Racism and Group Prejudice (3 + 0)**

Prerequisites: PSY 101, AAS 101, and three hours of coursework at the 200-level or above in AAS, CHS, ICS, NAS, PSY, or WMS, or permission of instructor  
 This course examines the origins, nature, and transmission of prejudice from a psychological perspective. Specific areas examined include racism, sexism, classism, and homophobia. Theoretical orientations, research, and perspectives on change are addressed.

**PSY 398-3 Cooperative Education: Psychology (0 + 9)**

Prerequisites: PSY 101, major or minor in psychology, upper division status, permission of instructor  
 This course provides an advanced internship experience in a private company or governmental agency related to psychology, supervised by professionals on-the-job in conjunction with a Metro State psychology professor. May be repeated once for credit with a different internship.

**PSY 415-3 Introduction to Psychological Testing (3 + 0)**

Prerequisites: PSY 101, PSY 231, and either PSY 300 or PSY 362  
 This course studies the underlying assumptions of reliability and validity; and use of tests in achievement, aptitude, and diagnostic situations. The course surveys selected instruments of each type stressing utility and limitations.

**PSY 430-3 Sensation and Perception (3 + 0)**

Prerequisites: BIO 100 or equivalent, PSY 101, PSY 231, and nine additional hours of psychology coursework  
 This course examines how information about the outside world is sensed and how that information is organized and interpreted to form perceptions. Anatomy and physiology of the sensory systems will be studied, as will perceptual theories, models, controversies, and applications.

**PSY 431-3 Physiological Psychology (3 + 0)**

Prerequisites: BIO 100 or equivalent, PSY 101, and nine hours of upper-division psychology courses, or permission of instructor  
 This course studies the physiological bases of normal and abnormal behavior with emphasis on neurology and hormones.

**PSY 439-3 Psychology of Learning (3 + 0)**

Prerequisites: PSY 231 and nine hours of upper-division psychology courses, or permission of instructor  
 This course provides a general study of the psychology of learning including leading theories and principal empirical findings, both historical and contemporary. This course includes both animal and human learning.

**PSY 441-3 Human Factors Engineering (3 + 0)**

Prerequisites: PSY 101 and PSY 231, or permission of instructor  
 This course surveys the field of human engineering dealing with the problems and processes involved in designing equipment and environments to optimally serve their intended functions. Emphasis is on the industrial applications of psychological research data to the design of equipment and environments.

**PSY 445-3 Advanced Statistics SPSS/PC (3 + 0)**

Prerequisites: PSY 232 or its equivalent, and permission of instructor before enrolling  
 This course offers study of multivariate statistics such as multiple regression, factor analysis, discriminant analysis, and multivariate analysis of variance. Students will learn how to use the Statistical Package for the Social Sciences (SPSS) to perform the necessary statistical tests. Emphasis will be on understanding, application, and interpretation of the multivariate statistics.

**PSY 451-3 History and Systems of Psychology (3 + 0)**

Prerequisites: Fifteen semester hours of psychology, satisfaction of all Level I and Level II General Studies Course requirements, and senior status  
 A survey of major theoretical systems in psychology in the context of an historical perspective. (Senior Experience)

**PSY 460-3****(AAS 460) Black Psychology (3 + 0)**

Prerequisites: Six hours in African American studies; six hours in psychology, or permission of instructor  
This course will critically examine the major concepts and models in psychology in terms of their applicability to Blacks. New directions and foci in Black psychology will be explored as well as the theories, writings and research of leading Black psychologists. Credit will be granted for only one of these courses.

**PSY 463-3 Introduction to Clinical Psychology (3 + 0)**

Prerequisites: PSY 300 and PSY 362

This course is a survey of behavior disorders with an emphasis on diagnostic and therapy theories, procedures, and techniques. There is a focus on Colorado law covering the practice of psychology as well as ethical issues in the practice of therapy.

**PSY 495-3 Pro-seminar in Psychology (Variable Topics) (3 + 0)**

Prerequisites: Junior or senior status and Psychology major or minor

An intensive teaching seminar, intended for advanced students majoring or minoring in psychology, organized around a selected theme. Course content will vary, and the course may be repeated for credit under different topics. Topics considered may include advanced seminar in sexuality, forensic psychology, psycholinguistics, honors seminar and others.

**PSY 497-3 Teaching of Psychology (3 + 0)**

Prerequisites: Fifteen semester hours of psychology, junior or senior status, psychology major or minor

This course provides intensive experience as an undergraduate teaching assistant under close faculty supervision. The experience includes lecture/seminar meetings and additional hours of application each week. Students prepare presentations, critiques, and discussions of emerging issues.

**Reading****RDG 151-3 Cognitive Strategies for Analytical Reading (3 + 0)**

Prerequisites: Minimum performance standard score on the reading preassessment placement test

This course is designed to expand college students' communication strategies in reading, listening, and reasoning. Through pragmatic assignments, students will have the opportunity for guided practice and application. (General Studies Course—Level I, Communication)

**RDG 205-1 Advanced Reading: Various Topics (1 + 0)**

Offered under a variety of topics. Each one-credit module covers an advanced reading skill or competency, such as developing flexible reading rates, skimming and scanning skills, increasing reading comprehension, and using advanced library reference skills.

**RDG 306-3 Critical Reading/Thinking (3 + 0)**

Prerequisites: RDG 151 or permission of instructor and satisfaction of Level I General Studies course requirements

This course is designed to develop and expand analytical, creative, and evaluative thought processes. Students will apply their critical reading and thinking processes as they study academic and societal issues. They will learn strategies for transferring these processes to other situations. (General Studies Course—Level II, Arts and Letters)

**RDG 312-4 Developing Print Literacy: Preschool-Third Grade (4 + 0)**

Prerequisites: EDU 234 and 235 or permission of instructor

This course focuses on instruction which will enable children to develop the skills, concepts, and attitudes necessary for greatest success in becoming proficient with print. The course is intended for those who will be in contact with children in preschool through grade 3.

**RDG 313-4 Teaching Reading in the Elementary School: K-6 (4 + 0)**

Prerequisites: EDU 212 and PSY 180 or permission of instructor

This course introduces prospective teachers to all aspects of elementary reading instruction. Includes defining the reading process, emergent literacy, word identification strategies, developing vocabulary and comprehension skills, instructional tools and approaches, and adapting reading curriculum to special learners.

**RDG 314-2 Whole Language Integration Across the Curriculum (2 + 0)**

Prerequisites: RDG 312, 313, or 328 or permission of instructor

Focus is placed upon comprehension-centered whole language as a process. This course is designed to prepare prospective teachers with the practical application of the theoretical concepts of this instructional procedure.

**RDG 315-4 Middle School Instructional Reading and Writing Strategies (4 + 0)**

Prerequisites: EDS 221 and EDS 222 or permission of instructor

This course focuses on the instructional strategies available to the middle school teacher. Emphasis is placed on using an integrated reading and writing approach to the middle school academic core. Extensive practice will be done in writing interdisciplinary thematic units that are developed around compelling personal and social issues for the middle school student.

**RDG 316-4 Strategies for Enhancing Adult Literacy (4 + 0)**

Prerequisite: RDG 314 or permission of instructor

This course introduces prospective teachers to all aspects of adult basic literacy instruction. Included are word identification skills, comprehension-based instructional strategies, and vocabulary building techniques which can be used in an integrated curriculum with functionally limited adults in adult basic education courses.

**RDG 328-4 Teaching of Reading and Writing in the Content Areas (4 + 0)**

Prerequisites: EDU 221 and EDU 222 or permission of instructor

This course is designed for students expecting to teach a content area subject in grades 6-12. Special emphasis is given to the listening, reading, writing, discussion, and thinking skills that should be incorporated into content area lesson planning.

**RDG 353-2 Techniques of Teaching Reading to Non-English Speakers (1 + 2)**

Prerequisite: RDG 312 or RDG 313 or RDG 328 or permission of instructor

This course covers theories, methods, and techniques for teaching language and reading to the non-English speaker in grades K-6. A minimum of 25 hours of tutoring with a non-English speaker is required.

**RDG 358-3 Reading in the Bilingual/Bicultural Classroom (3 + 0)**

Prerequisites: RDG 312 or RDG 313 or RDG 328 and proficiency in Spanish

This course emphasizes the teaching of Spanish reading skills in the bilingual/bicultural classroom, preschool through third grade. Methods and techniques for systematically teaching the primary child to speak and read the Spanish language are included.

**RDG 360-3 Practicum in Teaching Reading (1 + 4)**

Prerequisite: RDG 312 or RDG 313 or RDG 328 or permission of instructor

This course encompasses planning, preparing, and presenting reading lessons for a group of students in developmental reading programs. It is designed to acquaint prospective teachers with the practical application of theoretical concepts of teaching. Fifty clock-hours of experience in public or parochial schools are required.

**RDG 425-4 Literacy Assessment Theory and Practice (4 + 0)**

Prerequisite: RDG 360 (may be taken concurrently), or permission of instructor

This course focuses on literacy development from kindergarten through secondary grade levels. Students learn to administer and interpret appropriate assessment instruments and use the results to write instructional plans designed to further literacy development.

**RDG 434-2 Development of Reading/Writing Instructional Materials and Procedures (2 + 0)**

Prerequisite: RDG 360 (may be taken concurrently), or permission of instructor

This course is designed to provide students with the opportunity to analyze and construct visual aids and writing materials appropriate for teaching developmental reading, reinforcing reading skills and concepts, and remediating reading deficiencies.

**RDG 450-3 Language Arts and the Classroom Computer (3 + 0)**

Prerequisite: RDG 312, 313, or 328 or permission of instructor

Reviews the role of, evaluation of, and strategies for integrating computer software into the language arts classroom. Introduces a common word processing and database program and how to use them in developing reading and writing.

**RDG 460-3 Practicum in Literacy Enhancement (1 + 4)**

Prerequisite: Satisfaction of all Level I and Level II General Studies course requirements, senior status, and RDG 425 or permission of instructor

This course involves one-to-one instructional sessions in literacy enhancement for children brought to the campus or in Denver area schools. Appropriate assessment instruments are administered, and the results are interpreted and used to plan and implement effective tutoring sessions. A total of 50 clock hours with the children is required. (Senior Experience)

## Russian

**RSN 101-5 Elementary Russian I (5 + 0)**

This is an introductory course designed to teach all four language skills: speaking, listening comprehension, reading, and writing. Classroom activities will put a special emphasis on the development of speaking skills through structured interactions and natural communication between the students. An overview of selected aspects of Russian culture will be incorporated into the course through a variety of activities.

**RSN 102-5 Elementary Russian II (5 + 0)**

Prerequisite: RSN 101 or equivalent

As a continuation of RSN 101 this course further emphasizes pronunciation, speaking, and understanding based on more complex grammar, reading and writing activities.



## Science

### SCI 280-6 **Conceptual Science and Mathematics (5 + 2)**

Prerequisites: MTH 111, 131, or 161; and either ENG 101 or completion of the Level I communication requirement

This interdisciplinary course develops operational and reasoning skills in the sciences and mathematics. Laboratory work reinforces skills and develops knowledge through applications in the content areas of biology, chemistry, earth science, mathematics, and physics. (General Studies Course—Level II, Natural Science)

### SCI 395-3 **Methods of Teaching Science (3 + 0)**

Prerequisite: Major or minor in science

Designed for those students preparing for teaching science in the secondary school. Course content will include methods of teaching, examination of existing curricular models and construction of curricula. To be taken not more than two semesters before student teaching.

## Social Work

### SWK 101-3 **Introduction to Social Welfare and Social Work (3 + 0)**

Prerequisites: Concurrent enrollment in SWK 102 for Social Work Majors and satisfaction of Level I General Studies course requirements.

Historical and philosophical perspectives of social worker's generalist practice and social welfare programs in response to human need, social problems and social enrichment. Overview of professional social work's role in the field of health, mental health, corrections, family and child welfare and on behalf of special groups such as the aging, developmentally delayed, oppressed ethnic and other minority groups. (General Studies Course - Level II, Social Science)

### SWK 102-1 **Introduction to Agency Experience (1 + 0)**

Prerequisites: Social Work majors must enroll concurrently in SWK 101

Introduces student to social work roles in social service agencies. Concurrent volunteer experience in social work agency is required.

### SWK 202-3 **Social Work with Women (3 + 0)**

Prerequisite: SWK 101 or permission of instructor

The focus is on social work practice with women: Social welfare programs, treatment modalities, social policies and issues related to women are significant themes.

### SWK 205-3 **Human Behavior and the Social Environment I (3 + 0)**

Explores major biopsychosocial theories of human behavior and development—infancy to adolescence—with special sensitivity to the meaning of culture and diversity. Includes concepts such as social injustice, ecological perspective and empowerment.

### SWK 206-3 **Human Behavior and the Social Environment II (3 + 0)**

Prerequisite: SWK 205

Explores major biopsychosocial theories of human behavior and development—adolescence to later adulthood—with special sensitivity to the meaning of culture and diversity. Includes concepts such as social injustice, ecological perspective and empowerment.

### SWK 301-4 **Social Work Services for Children and Adolescents (4 + 0)**

Prerequisites: SWK 101, SWK 102, SWK 205, SWK 206 or permission of instructor

Policy issues and social work practice in the fields of child welfare, school social work and services for youth in trouble with the legal system are examined. Needs and rights of children are significant themes. Field visits to child serving agencies are arranged.

### SWK 302-4 **Case Management in Social Work Practice (4 + 0)**

Prerequisite: SWK 101, SWK 102, SWK 205, SWK 206, or permission of instructor

Case Management is a coordinating service applicable to clients with multiple needs in any setting. The planning, organizing, motivating and evaluating functions and skills of the case manager are the major foci.

### SWK 303-4 **Social Work with the Aging (4 + 0)**

Prerequisite: SWK 101, SWK 102, SWK 205, SWK 206 or permission of instructor

The status, needs, problems and potentials of adults, aging and their families are examined. Social policies and social work practice with the elderly are analyzed.

### SWK 341-4 **Introduction to Generalist Practice (4 + 0)**

Prerequisites: SWK 101, SWK 102, SWK 205, SWK 206 or permission of instructor

Introduction to generalist social work practice with emphasis on professional values, roles, relationships, and interviewing. Develop an understanding of the problem-solving approach including initial contact, data collection, problem definition and goal setting. Utilize cultural and gender sensitive practice skills and knowledge.

**SWK 345-3 Mutual Aid Groups in Social Work (3 + 0)**

Prerequisites: SWK 101, SWK 102, SWK 205, SWK 206 or permission of instructor

Mutual aid groups aimed at empowerment of clients are often part of generalist social work practice to promote growth and change with individuals, families, groups, communities and organizations. Students will gain knowledge about types of groups, group leadership skills and experience group participation.

**SWK 378-3 Social Work Policy (3 + 0)**

Prerequisite: SWK 101 or permission of instructor

Social work policies at the federal, state, and local levels form the context of direct practice. Social work legislation and programs are analyzed. Roles of advocate and lobbyist are examined. Past and present social policies are another focus of this course.

**SWK 379-4 Research in Social Work (4 + 0)**

Prerequisite: SWK 101, SWK 102, SWK 205, SWK 206 or permission of instructor. Students must complete Math 121, Introduction to Statistics, before enrolling in this course.

Fundamental principles, methodology and techniques of social research are applied to social work practice issues. Concepts, skills, and values essential to the design and implementation of a research project are emphasized. Critical analysis and effective utilization of published research are major themes.

**SWK 401-4 Advanced Social Work Practice (4 + 0)**

Prerequisites: SWK 101, SWK 102, SWK 205, SWK 206, SWK 341 or permission of instructor. Students must enroll concurrently in SWK 479.

Assessment, intervention and evaluation stages of generalist practice with oppressed populations - individuals, families, groups, organizations and communities. Includes advanced generalist practice, crisis intervention, risk management in protective services.

**SWK 425-3 Exploring Current Social Work Issues (3 + 0)**

Prerequisites: SWK 101, SWK 102, SWK 205, SWK 206, SWK 341, SWK 378, SWK 379 or permission of instructor

Assessing and addressing the impact of current social work issues on individuals, families, groups and communities.

**SWK 441-4 Advanced Cross-Cultural Social Work Issues (4 + 0)**

Prerequisites: SWK 101, SWK 102, SWK 205, SWK 206, SWK 341, SWK 401 or permission of instructor. Emphasis is on empowerment of individuals, families groups, communities and organizations who have experienced social injustice. Applies principles and perspectives essential to helping African-American, Hispanic, Native-American, Asian-American and other minority clients through case examples.

**SWK 479-5 Professional Internship I (0 + 5)**

Prerequisites: SWK 101, SWK 102, SWK 205, SWK 206, SWK 341, SWK 378, SWK 379 and permission of instructor. Must be taken concurrently with SWK 401.

Students demonstrate readiness for beginning professional employment while in their supervised placements. Completion of a senior project is required which further integrates the academic (theoretical) program with practice experience in the field.

**SWK 481-5 Professional Internship II (0 + 5)**

Prerequisites: SWK 101, SWK 102, SWK 205, SWK 206, SWK 341, SWK 378, SWK 379, SWK 401, SWK 479 and permission of instructor. Students must enroll concurrently in SWK 485. Satisfaction of Level I and Level II General Studies course requirements and senior status.

Students continue to demonstrate readiness for beginning professional employment while in their supervised placements. Completion of a senior project further integrates the academic (theoretical) program with the practice experience in the field. (Senior Experience)

**SWK 485-3 Integrative Seminar (3 + 0)**

Prerequisites: SWK 101, SWK 102, SWK 205, SWK 206, SWK 341, SWK 378, SWK 379, SWK 401, SWK 479 or permission of instructor. Students must enroll concurrently in SWK 481.

Designed to provide for discussion and critical analysis of student's field work experience. Integration of values, ethics, previously learned academic course material with special emphasis on ethnicity and diversity issues.

## Sociology

**SOC 101-3 Introduction to Sociology (3 + 0)**

Prerequisite: Minimum performance standard scores on the reading and writing preassessment placement tests

This course facilitates the development of a sociological perspective as it applies to understanding the social forces that shape persons' lives, interests, and personalities. Emphasis is on the scientific study of people in groups; the importance of culture; the processes of socialization, social control, and social conflict; and the major institutions of society. (General Studies Course—Level II, Social Science)

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### **SOC 104-3 Introduction to Gerontology (3 + 0)**

A study of the processes of aging, biological and social, of the impact of the environment on the personality and behavior of older persons and their roles in society. (Multicultural)

### **SOC 200-3**

#### **(AAS 200) Social Movements and the Black Experience (3 + 0)**

Prerequisite: AAS 101, SOC 101, or permission of instructor

A socio-cultural analysis and interpretation of the nature, cause and consequence of Black social movements in the United States ranging from the slave period to the present time. Particular attention will be given to the Civil Rights movement of the 1950s and 1960s.

### **SOC 201-3 Current Social Issues (3 + 0)**

Prerequisites: SOC 101, satisfaction of the Level I mathematics course requirement, and either ENG 101 or the Level I communication course requirement

This course presents an analysis of the causes and consequences of major social problems, such as crime, family violence, racial and ethnic conflict, and poverty, using examples from contemporary America in conjunction with historical and cross-cultural data. (General Studies Course—Level II, Social Science)

### **SOC 204-3 Aging in American Society (3 + 0)**

Social structure and social institutions and their influence on the elderly population, with emphasis on the economy, government, community, family, health, work, retirement, social roles, and leisure activities.

### **SOC 250-3 Deviant Behavior in Society (3 + 0)**

Prerequisite: SOC 101

An introduction to the study of various types of deviance in societies, their sources and consequences. Several definitions and theoretical approaches are presented and analyzed, with applications to such contemporary topics as crime and delinquency, mental disorders, and society's outsiders.

### **SOC 304-3 Contemporary Issues in Gerontology (3 + 0)**

Prerequisite: SOC 101

A focus on economic, social, political and cultural issues relevant to aging and the aged, including such topics as minority status, social definitions and restrictions, pensions and income, medical care, institutionalization, senior housing, transportation and relationships between the generations.

### **SOC 309-3 Urban Sociology (3 + 0)**

Prerequisite: SOC 101

The history and development of the modern city and its relationship to social and cultural change will be the focus of this course. Social problems, power structures, and social organization, including class divisions, migrants and urbanites, urban institutions, and mass communications and urban leisure will be examined.

### **SOC 310-3 Death and Dying (3 + 0)**

Prerequisite: SOC 101

An examination of attitudes, customs, and institutions related to death and dying, approached three-dimensionally: from the viewpoint of the individual, of society, and of established institutions. Relevant for students in medicine, psychology, law, nursing, law enforcement, human services, business, education, and the behavioral social sciences.

### **SOC 314-3**

#### **(AAS 330) The Black Community (3 + 0)**

Prerequisites: AAS 101 or AAS/SOC 200, or permission of instructor and satisfaction of all Level I General Studies course requirements

This course relates fundamental concepts and theories of Sociology and African American Studies to the study of the Black Community through an analysis of the educational, political, religious, economic and family dimensions. The local, national and international Black Community will be emphasized. Classic and Contemporary Black Community Studies will be examined. Credit will be granted for only one of these courses. (General Studies Course—Level II, Social Science; Multicultural)

### **SOC 316-3 Industry and Occupations (3 + 0)**

Prerequisite: SOC 101

A study of industrial development and occupational change; industrial organization and labor unionism; occupation, control, and social class; industry, labor and politics; the evolution of managerial philosophies; the changing nature of the work force; and the impact of technological progress on the work process and the labor force.

### **SOC 318-3 Labor and Management Organizations (3 + 0)**

Prerequisite: SOC 101

A critical investigation of the history of labor and management philosophies and organizations will provide a basis for in-depth discussion of contemporary labor and management organization and conflict.

**SOC 322-3****(WMS 322) Race, Sex and Ethnic Groups (3 + 0)**

Prerequisites: SOC 101, WMS 101, or permission of instructor, and satisfaction of all Level I General Studies course requirements

A focus on race, racism, sex biases, and ethnic prejudices, their origins and characteristics; facts and myths about populations, including the social, psychological and cultural sources of discrimination and bias; implications in current societal structures and institutions. (General Studies Course—Level II, Social Science; Multicultural)

**SOC 324-3 Poverty in America (3 + 0)**

Prerequisite: SOC 101

An examination of urban poverty and of political, economic, and social factors contributing to and perpetuating various conditions of the poor. Also included is an analysis of past and current poverty programs and their impact on America's underprivileged.

**SOC 332-3 Sociological Theory: Past and Present (3 + 0)**

Prerequisite: SOC 101

An analysis of major sociological theories, from those of Comte, Marx, Durkheim, Weber, and others in the late nineteenth century, to contemporary theoretical approaches in sociology. Emphasis is on comparison and critical understanding of the varying perspectives and on the continuing development of differing theories in changing social contexts.

**SOC 340-3 Childhood and Adolescent Socialization (3 + 0)**

Prerequisite: SOC 101

An analysis of the socialization of children and adolescents in American society, emphasizing the impact of the family, education, religious organizations, the mass media, and teenage subcultures on the socialization process. Socialization in other cultures will be studied for comparison.

**SOC 341-3 The Family in Transition (3 + 0)**

Prerequisite: SOC 101

This course is designed to study the changing nature of the family in a changing society. A variety of theoretical perspectives will be incorporated to facilitate an understanding of the transitions taking place in the areas of sex roles, coupling, parent-child relationships as well as variations in lifestyle, including historical and cross-cultural data.

**SOC 342-3 Education in a Changing Society (3 + 0)**

Prerequisite: SOC 101

An analysis of all levels of formal education in contemporary American society, focusing on the formal and informal goals of education, the relation of education to other societal institutions and to social change, and current issues regarding education in the U.S.

**SOC 343-3 Sociology of Sex Roles (3 + 0)**

Prerequisite: SOC 101

An exploration of historical and contemporary social, political, and economic trends affecting the roles of women and men in society. The emphasis is on the historical, social and cultural forces that have contributed to sex-role typing in the United States and in other societies, and on the effects on individuals and the broader society of maintaining and/or changing sex roles.

**SOC 344-3****(AAS 355) The Black Family (3 + 0)**

Prerequisites: AAS 101 or SOC 101 and satisfaction of all Level I General Studies course requirements

This course provides an in-depth exploration of the Black family as a social institution. Specific emphasis is placed on the historical roots of the Black family and how the African influence is still enmeshed in the functioning of the family in modern society. The factors responsible for the ability of the Black family to meet the challenge of a changing society will be examined. Credit will be granted for only one of these courses. (General Studies Course—Level II, Social Science)

**SOC 346-3 Sociology of Sexuality (3 + 0)**

Prerequisite: SOC 101

This course is a survey of historical, cultural, and social aspects of human sexuality. The interplay between sex and society will be the major focus. Cross-cultural and historical analyses of sexual values and behavior will be examined. Competing and conflicting sexual value systems in contemporary societies will be analyzed. Other topics include: sexual scripts, sexual deviance and social control, sexual socialization processes, and the social bases of sexual dysfunction.

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### **SOC 347-3**

#### **(CHS 321) The Chicano Family (3 + 0)**

Prerequisite: CHS 100 or permission of instructor and satisfaction of all Level I General Studies course requirements

Provides the participant with an opportunity to study the Chicano family as a social institution in its varying manifestations as it transmits knowledge for existence in a multicultural world. Credit will be granted for only one of these courses. (General Studies Course - Level II, Social Science)

### **SOC 350-3 Criminology (3 + 0)**

Prerequisite: SOC 101

A sociological analysis of the nature, causes, and treatment of crime and delinquency; of the processes by which persons and behaviors come to be defined as criminal, and the processes by which such persons and behaviors develop.

### **SOC 351-3 Juvenile Delinquency (3 + 0)**

Prerequisite: SOC 101

This course emphasizes the universality and variability of misconduct and delinquencies of youth. In addition, the course examines the youth subculture, gangs, drug addiction, the juvenile justice system, and the effects of child abuse.

### **SOC 355-3 The Sociology of Law (3 + 0)**

Prerequisite: SOC 101

An examination of the legal norms, the administration of the criminal law, and the impact of legal sanctions.

### **SOC 360-3 Research in the Social Sciences (3 + 0)**

Prerequisite: SOC 101

An introduction to research in the social and behavioral sciences, emphasizing student experience in the actual application of a variety of modern social scientific data-gathering, interpretation, and reporting techniques.

### **SOC 365-3 Contemporary Social Trends: Variable Topics (3 + 0)**

Prerequisite: SOC 101

An examination of trends and/or issues in contemporary society, using the sociological perspective. Each section addresses a separate issue or development. May be repeated under each different topic.

### **SOC 371-3 Politics and Power (3 + 0)**

Prerequisite: SOC 101

An analysis of the structures of power and decision-making in American society, focusing on the interrelationships between political institutions and other institutions in society, sociological theories of power, and possible consequences of various political structures.

### **SOC 373-3 Mass Media and Social Behavior (3 + 0)**

Prerequisite: SOC 101

A study of the function of mass media as a dynamic force in political, economic, and social life, and its multi-dimensional structure and impact for creating new personal behavior in contemporary society.

### **SOC 380-3 Health and Healers (3 + 0)**

Prerequisite: SOC 101

The health care system is currently in a state of transition. This course is designed to analyze from a variety of theoretical models the changes taking place. Specific issues as well as the roles of the participants will be analyzed in terms of the impact upon the health of Americans.

### **SOC 381-3 Population Issues (3 + 0)**

Prerequisite: SOC 101

Examination of past and current demographic theories, the factors associated with population growth, decline, and dispersion, and the national population policies of those nations addressing themselves to the issue of the world population explosion.

### **SOC 383-3 Mental Disorders (3 + 0)**

Prerequisite: SOC 101

An examination of the concepts and treatment procedures for those defined as mentally ill within this society. Specific social variables such as social class, sex, race and marital status will be analyzed in terms of their influence on diagnosed disorders.

### **SOC 391-3 Religious Movements in America (3 + 0)**

Prerequisite: SOC 101

An in-depth analysis of religion as a social institution, its relationship to other institutions, and its importance for stability and change and for order and conflict in society and among societies. Contemporary American sects and religious movements are emphasized, with comparison to religion in other areas of the world.

**SOC 430-3 Social Change (3 + 0)**

Prerequisite: SOC 101

An analysis of the alterations in patterns of culture, social systems and social behavior over time. A variety of theoretical perspectives will be used as a basis for understanding these changes. Factors that contribute to as well as those inhibiting change will be analyzed.

**SOC 435-3 Advanced Seminar in Sociological Theory: Variable Topics (3 + 0)**

Prerequisite: Permission of instructor

Content varies, but each course involves intensive study and critical analysis of major sociological theories, such as those of Weber, Durkheim, Marx, Simmel, etc.; or of selected theoretical systems in contemporary or classical sociology. May be repeated under different topics.

**SOC 460-3 Advanced Research in the Social Sciences (3 + 0)**

Prerequisite: SOC 101 and SOC 360; satisfaction of Level I and Level II General Studies course requirements, and senior status

Continuation of SOC 360. Further application of research techniques, including individual and task-group assignments designed to develop students' skills in designing, organizing, computer coding, and doing computer-assisted analysis of selected research projects. (Senior Experience)

**SOC 470-3 Advanced Field Internship (0 + 9)**

Prerequisites: SOC 201 and upper-division status

An advanced level supervised inservice field experience in the broad area of social concern and the urban scene, conducted with the cooperation of participating agencies and institutions.

## Spanish

**SPA 101-5 Elementary Spanish I (5 + 0)**

This is a basic course in Spanish, with emphasis primarily on pronunciation, speaking, and understanding, supplemented by grammar, reading and writing.

**SPA 102-5 Elementary Spanish II (5 + 0)**

Prerequisite: SPA 101 or one or two years of high school Spanish

This course is the continuation of SPA 101. (General Studies Course—Level I, Communications)

**SPA 111-3 Basic Conversational Spanish I (3 + 0)**

This course is designed to teach the essentials of the Spanish language through a conversational approach.

**SPA 112-3 Basic Conversational Spanish II (3 + 0)**

Prerequisite: SPA 111 or equivalent or permission of instructor

A continuation of SPA 111.

**SPA 180-1-15 International Spanish Year I (1-15 + 0)**

This variable credit course is designed for first year students learning Spanish in a study abroad setting. The course will recognize an approved study abroad educational experience in Spanish speaking, comprehension, reading, and writing.

**SPA 211-3 Intermediate Spanish (3 + 0)**

Prerequisites: SPA 101 and 102

This course emphasizes oral proficiency and continues the sequence of SPA 101 and 102. Classes are taught mainly in Spanish.

**SPA 212-3 Spanish Reading and Conversation (3 + 0)**

Prerequisite: SPA 211, or equivalent, or permission of instructor

This intermediate course is designed to afford the student the necessary practice to communicate with ease in Spanish. Emphasis lies on vocabulary building, reading of cultural material, and conversational skills.

**SPA 231-3 Spanish Grammar and Composition I (3 + 0)**

Prerequisite: SPA 102 or two or three years of high school Spanish

This is an intermediate course to review and strengthen knowledge of the structure of the Spanish language as a basis for more advanced work in speaking, understanding, reading, and writing.

**SPA 232-3 Spanish Grammar and Composition II (3 + 0)**

Prerequisite: SPA 231 or equivalent, or permission of instructor

This course is designed to widen and reinforce the different structures of the Spanish language in order to strengthen the student's writing skills.

**SPA 280-1-15 International Spanish Year II (1-15 + 0)**

Prerequisites: One year of college Spanish or equivalent

This variable credit course is designed to recognize second year study of Spanish language and culture in an approved study abroad setting.

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### **SPA 310-3 Spanish Terminology for the Bilingual Classroom (3 + 0)**

Prerequisite: Two years of college Spanish, its equivalent, or permission of the instructor

This is a practical course designed to help students and teachers with the Spanish terminology used in the different areas of instruction.

### **SPA 311-3 Advanced Conversation (3 + 0)**

Prerequisite: Two years of college Spanish or equivalent, or permission of instructor

This is an advanced course designed to broaden and strengthen the student's conversational skills, emphasizing current topics in the Hispanic world.

### **SPA 314-3 Advanced Composition (3 + 0)**

Prerequisites: SPA 231 and 232 or equivalent, or permission of instructor

This course is designed to reinforce and develop further student's abilities in composition tasks that reflect the kind of writing students are generally asked to perform as Spanish majors. Classes are conducted in Spanish.

### **SPA 315-3 Spanish Phonetics: Theory and Practice (3 + 0)**

Prerequisite: Two years of college Spanish or equivalent, or permission of instructor

This course in Spanish phonology is aimed at improving students' pronunciation and introducing them to the field of descriptive linguistics.

### **SPA 320-3 Culture and Civilization of Spain (3 + 0)**

Prerequisites: Two years of college Spanish or equivalent, or permission of instructor; and satisfaction of Level I General Studies course requirements

This course is an advanced Spanish conversational approach to the understanding of the traditions and history of Spain, and the national character as expressed in everyday life, based on a reading-lecture discussion format. Entirely conducted in Spanish. Oral presentations by participant students will be required. (General Studies Course—Level II, Arts and Letters)

### **SPA 321-3 Spanish-American Culture and Civilization (3 + 0)**

Prerequisites: Two years of college Spanish or equivalent, or permission of instructor; and satisfaction of Level I General Studies course requirements

This course is an advanced Spanish conversational approach to the chief cultural characteristics of the Hispanic-American world. It is based on a reading-lecture-discussion format. Oral presentations and a research paper are required. Conducted in Spanish. (General Studies Course—Level II, Arts and Letters)

### **SPA 322-3 Folklore and Culture of the Mexican Southwest (3 + 0)**

Prerequisites: Two years of college Spanish or equivalent, or permission of instructor; and satisfaction of Level I General Studies course requirements

This course is designed to acquaint the students with the culture, folklore and civilization of the Mexican American in the Southwest. The introductory lectures will deal with the Spanish and Indian heritage. Main concentration will be on the culture and folklore of the people from the arrival of Juan de Onate to the present. (General Studies Course—Level II, Arts and Letters)

### **SPA 325-3 Introduction to Literary Studies in Spanish (3 + 0)**

Prerequisite: SPA 232 or equivalent, or permission of instructor

This course is designed to introduce the students to the study of literature in the Spanish language. Emphasis will be placed on reading and critical analysis of representative works, main literary trends and terminology. Conducted in Spanish.

### **SPA 333-2 Spanish Social and Commercial Correspondence (2 + 0)**

Prerequisite: SPA 232 or equivalent, or permission of instructor

This course presents the fundamental points relative to personal and business letters in Spanish, special emphasis on the development of a vocabulary for all types of letters.

### **SPA 340-3 Survey of Spanish Literature I (3 + 0)**

Prerequisite: SPA 325 or equivalent, or permission of instructor

This course is a general survey of the literature of Spain from the Middle Ages through the romantic era. Reading of representative works, lecture on biography, criticism, and recitation will be included. Conducted in Spanish.

### **SPA 341-3 Survey of Spanish Literature II (3 + 0)**

Prerequisite: SPA 325 or equivalent, or permission of instructor

This course presents Spanish literature since 1870, including post-romanticism, realism, naturalism, the generation of 1898, the genero chico, and more recent works. Conducted in Spanish.

### **SPA 351-3 Masterpieces of Latin American Literature (3 + 0)**

Prerequisite: SPA 325 or equivalent, or permission of instructor

This course is designed to introduce the student to the most important works in Latin American literature with an emphasis in the late nineteenth and early twentieth centuries. Conducted in Spanish.

**SPA 352-3 Contemporary Mexican Literature (3 + 0)**

Prerequisite: SPA 325 or equivalent, or permission of instructor

This is a course which presents the most representative literary figures of contemporary Mexico. Beginning with a novel of the Revolution, the student will be reading and discussing the works of living authors, including Juan Rulfo, Carlos Fuentes, and Octavio Paz. Conducted in Spanish.

**SPA 380-1-15 International Advanced Spanish (1-15 + 0)**

Prerequisite: Upper division status in Spanish or equivalent

This course is designed to recognize upper division study in language, culture and literature in a study abroad setting. This advanced study in Spanish uses a variety of methods and includes reading, writing, and discussion seminars in Spanish.

**SPA 401-3 Advanced Spanish Writing and Grammar I (3 + 0)**

Prerequisite: SPA 314 or equivalent, or permission of instructor

This course is designed to afford the student of Spanish an overall acquaintance with contemporary grammatical analysis and terminology, in order to promote and enhance the student's sensitivity regarding the syntactical structure of the Spanish oral and written modes of expression. Classes are conducted in Spanish.

**SPA 402-3 Advanced Spanish Writing and Grammar II (3 + 0)**

Prerequisite: SPA 401 or equivalent, or permission of instructor

This course is an intensive study of Spanish idiomatic expressions and selected vocabulary to strengthen the student's language skills, with emphasis on written style and on the understanding of the Spanish syntax. The main purpose of this course is to enable the student to manipulate the target language with accuracy, elegance, and assertiveness. Classes are conducted in Spanish.

**SPA 411-3 Contemporary Spanish Literature (3 + 0)**

Prerequisite: SPA 340 or 341 or equivalent, or permission of instructor

This course involves the study and discussion of the major works in contemporary Spanish literature. The course is designed to provide a meaningful language experience through literature and to give an insight into essential problems common to the Hispanic world. Conducted in Spanish.

**SPA 412-3 Contemporary Latin-American Literature (3 + 0)**

Prerequisite: SPA 351 or equivalent, or permission of instructor

This is a course in which the student will be critically reading and discussing the major works of contemporary Spanish American authors in order to appreciate their literary and cultural values and to participate in a meaningful language experience. Conducted in Spanish.

**SPA 420-3 Spanish-American Essay: 19th and 20th Centuries (3 + 0)**

Prerequisite: SPA 311 or equivalent, or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, and senior status

This course presents, discusses and analyzes the most important literary work of representative nineteenth and twentieth centuries Spanish-American essayists. The course is aimed at exposing the student to the thought and stylistic modes found in the intellectual production of the selected prominent figures to be studied. Conducted in Spanish. (Senior Experience)

**SPA 431-3 History of the Spanish Language (3 + 0)**

Prerequisite: SPA 314 and SPA 401 or SPA 402, satisfaction of all Level I and Level II General Studies course requirements, and senior status

This is an introductory course in Spanish philology aimed at improving students' knowledge of Spanish sounds, forms and word order, with the focus on how the Spanish language began and has changed through the centuries. (Senior Experience)

## Speech

**SPE 101-3 Public Speaking (3 + 0)**

Prerequisites: Minimum performance standard scores on the reading and writing preassessment placement tests

This course acquaints students with the basic theory of the art of public speaking and provides experience in the preparation and delivery of short talks. (General Studies Course—Level I, Communication)

**SPE 140-3 The Emerging Role of Women and People of Color in Radio and Television (3 + 0)**

Prerequisite: Permission of instructor

This course is designed to give students a comprehensive overview of the roles of women and people of color in radio and television. This includes portrayals of these two groups in the popular entertainment media, representation on the news, and the job climate and outlook in both radio and television.



## 334 COURSE DESCRIPTIONS

### **SPE 170-3 Communication Theory (3 + 0)**

Prerequisite: SPE 101 or permission of instructor

A review of the research, theoretical assumptions, and models of the oral communication process, this course is designed to provide students with a broad understanding of the basis of oral communication as patterned human behavior.

### **SPE 171-3 Interpersonal Communication: The Individual as a Communicator (3 + 0)**

Prerequisite: Minimum performance standard scores on the reading and writing preassessment placement tests.

A basic skill course in the art of communicating with people, this class provides students with both the exposure to theory and the opportunity to practice developing basic communication skills including listening, perceiving, asserting nonverbal and verbal language sensitivity and problem-solving tactics. The purpose of the course is to increase the students' communication self-esteem. (General Studies Course—Level I, Communication)

### **SPE 173-3 Listening and Interviewing Communication Skills (3 + 0)**

Prerequisite: SPE 101 and SPE 170 or SPE 171

This course is designed to teach students two associated communication skills, listening and interpersonal interviewing. Both content (informational) and empathetic (feeling) listening skills will be emphasized. Seven situation types of interviews will be explored in the course using listening techniques as the primary communication skill.

### **SPE 211-3 Discussion Methods (3 + 0)**

Prerequisite: SPE 101 or permission of instructor

This performance course deals largely with the processes of decision-making in small groups and conferences: research and investigation, analysis of social problems, use of evidence and argument, and social interaction among participants.

### **SPE 216-3 Organizational Communication Theory (3 + 0)**

Prerequisites: SPE 101 and SPE 170 or permission of the instructor

This course is designed to acquaint students with relevant and current theoretical models of organizational communication systems and cultures. The course materials include formal and informal structures, group communication processes, external organizational communication systems, informational effectiveness and ethical considerations.

### **SPE 220-3 Creative Dramatics for the Classroom Teacher (3 + 0)**

Prerequisites: SPE 101 or permission of instructor

This course is designed to introduce methods for learning creative, problem solving techniques and self-expression through dramatic activity. Particular emphasis will be placed on using drama as a teaching tool and will include improvisation, puppetry, literature, and story dramatization.

### **SPE 221-3 Introduction to Theatre (3 + 0)**

Prerequisites: ENG 101 and either SPE 101 or permission of instructor

A comprehensive view of theatrical art providing an understanding of the living stage, its players and craftsmen, and its place as a cultural force in society from antiquity to contemporary times. (General Studies Course—Level II, Arts and Letters)

### **SPE 222-3 Techniques of Acting I (3 + 0)**

Prerequisite: SPE 221 or permission of instructor

This course provides an introduction to the basic principles of acting including improvement of voice, body, and mind in the discipline of the theater. Particular emphasis is placed on the principles of stage movement, improvisation, and beginning scene work.

### **SPE 223-3 Techniques of Acting II (3 + 0)**

Prerequisite: SPE 221, SPE 222, or permission of instructor

This course builds upon basic principles of acting, including improvisation, character development, stage movement, voice, and scene work. Study topics include development of audition techniques, basic acting, television acting techniques, and advanced scene work.

### **SPE 224-3 Introduction to Stagecraft (2 + 2)**

Prerequisite: SPE 221 or permission of instructor

An introduction to the methods and materials of play production including design and construction of sets, lighting practices, techniques of costuming, stage management, and staging methods.

### **SPE 240-3 Introduction to Radio and Television Broadcasting (3 + 0)**

Prerequisite: SPE 101 or permission of instructor

The evolution, organization, and function of broadcasting. Introduction to some of the techniques employed in radio and television broadcasting including film techniques and the film industry as related to the broadcasting industry in the U.S.

**SPE 250-3 Introduction to Communication Disorders (3 + 0)**

Prerequisite: SPE 101 or permission of instructor

This course is intended for non-speech pathology majors or those with a beginning interest in the speech field. The course is designed to assist students in examining the anatomical and physiological aspects of speech production, language, and hearing. This course will focus on common communication disorders.

**SPE 271-3 Interpersonal Communications: the Dynamics of Group Interaction (3 + 0)**

Prerequisite: SPE 101

This course is designed to teach students the dynamics of group process and the special skills required to communicate successfully with many types of difficult group members.

**SPE 272-3 Nonverbal Communication (3 + 0)**

Prerequisite: SPE 101 and SPE 170

Designed to explore the nature of the so-called "silent language" of the human communication process, this course focuses on the classes of nonverbal communication, their impact on human perception, patterned behavior in groups, organizational systems and cultures.

**SPE 273-3 Communication and Interpersonal Conflict (3 + 0)**

Prerequisite: SPE 101

This course develops strategies for managing conflict dynamics in communication interactions at work, home, at school. Effort is made to pinpoint individual communication conflict styles and to assess their effectiveness in conflict interaction.

**SPE 277-3****(WMS 277) Gender and Communication (3 + 0)**

Prerequisite: SPE 101/SPE 171 or permission of instructor; ENG 101 and satisfaction of Level I communication requirement

This course is designed to test the students' ability to inventory their own culturally derived gender communication patterns, especially those in public speaking; analyze those patterns, contrast their own resulting functional and dysfunctional gender communication behaviors; relate those behaviors and their outcomes to their personal work and professional lifestyles; and formulate and test new behaviors based on increased gender communication awareness. Credit will be granted for only one of these courses. (General Studies Course—Level II, Arts and Letters)

**SPE 301-3 Advanced Public Speaking (3 + 0)**

Prerequisites: SPE 101 and 211 or permission of instructor

Preparation, presentation, and appraisal of speeches on challenging subjects. Advanced inquiry into rhetorical analysis, the intensification of ideas and style, with emphasis upon persuasive speaking. Attention will be given to specialized forms of public address.

**SPE 305-1 Intercollegiate Forensics (0 + 2)**

Prerequisite: SPE 101 or permission of instructor

A course for those students participating extensively in intercollegiate speech activities. A maximum of four credits in this course may be applied toward a degree.

**SPE 308-3 Great American Speakers (3 + 0)**

Prerequisites: SPE 101 and satisfaction of Level I General Studies course requirements

A study of selected American speakers, this course critically examines the primary theses developed in major American speeches. This critical analysis includes a rhetorical examination of the rhetorical skills of the speaker based on the persuasive models of Aristotle, Burke, and Griffin, etc. Estimates of the influence of such great speeches on public policy will be surveyed as a measurement of the success of such oral discourse. (General Studies Course—Level II, Arts and Letters)

**SPE 309-3 Argumentation and Advocacy (3 + 0)**

Prerequisite: SPE 101 or permission of instructor

Acquaints the student with the complexity of social problems, methods of research, methods of logical analysis and development, construction of briefs, and techniques of refutation. Includes practice in preparation and oral analysis of selected arguments.

**SPE 310-3 Business and Professional Speaking (3 + 0)**

Prerequisite: SPE 101 or permission of instructor

A course designed for the business and professional person, stresses presentational speaking to secure immediate decision. Emphasis is placed on audio-visual materials in sales, training, and policymaking situations. Students are required to eliminate wordiness in their messages.

**SPE 311-3 Strategies of Organizational Leadership (3 + 0)**

Prerequisite: SPE 101 and either SPE 211 or SPE 271

This course is designed to acquaint students with the major theories of organizational leadership and the functional dimensions of leadership strategy in specific organizational systems.

**SPE 313-3 Conference Leadership (3 + 0)**

Prerequisite: SPE 101 and SPE 311, or permission of instructor

This course provides students with knowledge of the theories of group task and process behaviors and the practical application of that theory in the actual production of a conference. The course focuses on the motivation of volunteers and the appropriate styles of leadership when authority is not granted to the conference director.

**SPE 316-3 Communication in Politics (3 + 0)**

Prerequisites: SPE 101 or permission of the instructor

The course emphasizes communication patterns in governmental institutions, public influence, campaign strategies, propaganda tactics, media in public decision-making, and the impact of communication leadership and group dynamics on the resolution of political and social issues.

**SPE 317-3 Interpersonal Negotiation (3 + 0)**

Prerequisites: SPE 170 and either SPE 171 or SPE 271

This course is designed to teach students the theory and specific negotiation skills needed for resolving interpersonal group and organizational conflict. These skills include identification of conflict issues, fractionating of issues, positioning methods, questioning tactics, measuring negotiated consequences, identifying a negotiated style, managing difficult people, mediating theory and tactics, third party interventions and negotiating frames. Both lecture/discussion and simulated case studies are used to illustrate negotiation principles.

**SPE 320-3 Oral Interpretation: Prose and Poetry (3 + 0)**

Prerequisite: SPE 101 or permission of instructor

A study of traditional and contemporary theories of interpretation of prose and poetry for the purpose of making that literature come alive for the listening audience, and to improve oral communication skills. Numerous oral performances for the application of techniques.

**SPE 322-3 Stage Movement (3 + 0)**

Prerequisite: SPE 222 or permission of instructor

This course provides the student/performer with intense instruction in the use and training of the total human body for communication of artistic expression.

**SPE 323-3 Acting III: Styles of Acting (3 + 0)**

Prerequisite: SPE 221, SPE 222, SPE 223, or permission of instructor

This course is for advanced performers exploring basic "mask" acting techniques, as well as acting styles particular to Greek, Comedy of Manners, Farce, Shakespeare, and Chekhov plays.

**SPE 325-3 Introduction to Scenic Design and Theatre Lighting (2 + 2)**

Prerequisites: SPE 221 and 224, or permission of instructor

The basic elements of scene design and stage lighting for theatrical productions. Several actual design and lighting projects with lectures on the different theories and styles. Emphasis will be placed on design procedures, color, projection, and equipment control, and utilization of facilities.

**SPE 328-3 Stage Directing (2 + 2)**

Prerequisites: SPE 222 and 224, or permission of instructor

This course provides an introduction to the principles and techniques of directing for the theater which includes the selecting, rehearsing, and performance of plays, and the presentation of student directed projects.

**SPE 330-3 Voice Science: Phonetics and Voice and Diction (2.5 + 1)**

Prerequisite: SPE 101 or permission of instructor

Applied instruction in the International Phonetic Alphabet including the science of speech sounds. Particular emphasis is placed on the use of phonetics, and the improvement of acceptable standards of usage in General American Speech.

**SPE 343-3 Radio-Television Announcing (3 + 0)**

Prerequisites: SPE 240 and 330

An advanced course in "on air" operations designed to meet the specific needs of the telecommunications broadcaster and the radio-television-film announcer. Instruction designed to develop pleasing and persuasively effective verbal-vocal-non-verbal communication as a means for improving a variety of telecommunications presentations will be included. Special emphasis will be placed on standard American usage of speech and language particularly as applied to the International Phonetic Alphabet.

**SPE 344-3 Television Production (3 + 0)**

Prerequisite: SPE 240 or permission of instructor

This course is an introduction to television production, operation of broadcast studio equipment, vocabulary, and experience in the direction of multi-camera productions. Specific attention will be focused on preproduction, including identification of audience by age, sex, and culture; production; and post production activities and procedures. Students will participate in a variety of projects and production capabilities.

**SPE 345-3 Broadcast Journalism: Radio (3 + 0)**

Prerequisites: SPE 101, ENG 101, JRN 181, JRN 182, JRN 282, JRN 286, or permission of instructor  
This course is an introduction to radio news writing. It teaches students how broadcast news copy differs from print journalism. It involves learning the techniques of writing in the strict broadcast style used in newsrooms across the nation.

**SPE 347-3 Evolution of Cinematics as Art (2 + 2)**

Prerequisite: SPE 240 or permission of instructor  
A course designed to explore the historical, technical, and aesthetic elements of film expression from the point of view of the creative and perceptual process emphasizing the history of the motion picture as presented through the films and ideas of some important cinematographers.

**SPE 348-3 Workshop in Radio Production (1 + 4)**

Prerequisites: SPE 240 and 343, or six hours of equivalent broadcasting courses and/or experience, or permission of the instructor

This course provides students with an opportunity to produce radio programs for audiences including women, children, men, ethnic groups, occupational groups, organizations, etc., for use on commercial and/or educational radio.

**SPE 350-3 Speech Pathology I (2 + 2)**

Prerequisites: Junior or Senior status or permission of instructor  
This course is designed as an introductory course in speech pathology, including terminology, definitions, and classifications of speech problems. Normal speech and language development and causes, diagnoses, and therapies for articulation, stuttering, and voice disorders are covered.

**SPE 351-3 Speech Pathology II (2 + 2)**

Prerequisite: SPE 350 or permission of instructor  
The central nervous system and its relationship to speech. Speech and language problems related to neurological deficit including aphasia, cerebral palsy, mental retardation, and learning disabilities. Emphasizes an interdisciplinary approach to treatment.

**SPE 352-3 Language Acquisition (3 + 0)**

Prerequisites: Junior or Senior status or permission of instructor  
This course studies language acquisition in children: phonology, morphology, syntax, and semantics. Emphasis is on the study of language as a rule-system, linguistic and cognitive implications, and language functions. It is intended for those interested in clinical careers in speech pathology and audiology, psychology and education.

**SPE 353-3 Voice Science: Pathology and Technology (3 + 0)**

Prerequisites: SPE 350 or permission of instructor  
This course teaches scientific vocabulary and current technology in diagnosis and analysis of voice function, pathological conditions, techniques for remediating those physiological abnormalities, as well as techniques for the students' personal voice and speech enhancement.

**SPE 355-2 Speech Pathology: Observation I (2 + 4)**

Prerequisite: SPE 350 or permission of instructor  
Provides the opportunity for students to observe the clinical evaluation and treatment of speech, language, and hearing disorders.

**SPE 356-1 Speech Pathology: Observation II (0 + 2)**

Prerequisites: SPE 350 and 355, or permission of instructor  
Continuation of SPE 355 with provisions for observing in-depth clinical diagnoses and treatment in speech pathology and audiology.

**SPE 357-3 Methods of Speech Pathology-Audiology: Diagnostic Procedures (1.5 + 3)**

Prerequisites: SPE 350 and 360  
This course exposes students to the various processes of speech and the diagnostic techniques that are available to the speech pathologist and audiologist in determining the type and degree of the speech deficiency.

**SPE 358-3 Methods of Speech Pathology: Articulation and Stuttering (1.5 + 3)**

Prerequisites: SPE 350 and 355 and/or permission of instructor  
This course focuses on methods of management related to articulator problems. Diagnostic procedures and the application of techniques for correcting the deviations in the production of speech sounds are presented. Identification, diagnosis, and therapeutic techniques used with stutters are included.

**SPE 359-3 Speech Problems in the Schools (2 + 2)**

Prerequisite: Junior or senior status  
For students whose major interests are distributed among general speech, education, psychology, rehabilitation, nursing and related areas. Appropriate for students considering a major in Speech Pathology and Audiology.

## 338 COURSE DESCRIPTIONS

### **SPE 360-3     Audiology I (2 + 2)**

Prerequisites: Junior or Senior status or permission of instructor

This course is designed as a study of the anatomy and physiology of the ear, and the measurement of sound and of hearing. Includes practice in testing of hearing sensitivity, interpretation of the audiogram, and treatment and audiological management of the hearing impaired.

### **SPE 361-3     Audiology II (2 + 2)**

Prerequisite: SPE 360 or permission of instructor

Diagnostic and rehabilitative audiological procedures including the use of amplification. Emphasis is on special testing.

### **SPE 362-3     Aural Rehabilitation (3 + 0)**

Prerequisites: SPE 101 and SPE 360

This course acquaints the student with the ramifications of hearing loss and assists in determining the intervention strategies most applicable to a particular hearing impaired client so as to enhance social adjustment, communication abilities, and vocational achievement.

### **SPE 374-3     Psychology of Communication (3 + 0)**

Prerequisites: SPE 101 and SPE 211, and satisfaction of Level I General Studies Course requirements

This course explores the critical examinations of the psychological factors underlying speech comprehension, the speaker's adjustment to an audience, the listener's sets and responses, and the attitudes, beliefs, and predispositions of hearers toward the appeal of the human communication. This is not a psychology course. (General Studies Course—Level II, Arts and Letters)

### **SPE 376-3     Cultural Influences on Communication (3 + 0)**

Prerequisites: SPE 101 and either SPE 171 or SPE 271 or SPE 272, and satisfaction of Level I General Studies course requirements

This course leads students to an understanding of their own cultural backgrounds and communication patterns as well as those used by "cultural strangers." The ultimate goal of the course is to broaden students' perspective of life, people, and to expand their capacity to adapt to a changing world by exploring perceptual differences, verbal and nonverbal cultural communication similarities and differences. (General Studies Course—Level II, Arts and Letters; Multicultural).

### **SPE 377-3     Interpersonal Communication in the Family (3 + 0)**

Prerequisites: SPE 101 and either SPE 171 or SPE 271

This course is designed to assist students to better understand and improve interpersonal communication processes in families, including duo-career communication problems, personality patterns, family group roles, and their impact on interaction, verbal and nonverbal messages in family climates, and listening skills for managing family interpersonal conflict and change.

### **SPE 380-3     Instructional Methods for Speech Teachers and Creative Speech (2 + 2)**

Prerequisites: Junior status in the Speech Education program and/or successful completion of the process for becoming a bona fide speech major, and acceptance into the Teacher Education program by the Metro State Division of Education, or permission of instructor

A comprehensive course designed to provide prospective elementary or secondary teachers of speech to recognize various speech activities as an effective way to develop language and improve communication. Different ways of stimulating creativity will be explored.

### **SPE 405-2     Advanced Intercollegiate Forensics (0 + 4)**

Prerequisite: Permission of instructor

For students participating extensively in competitive intercollegiate speech activities. A maximum of eight hours credit may be applied toward a degree.

### **SPE 408-3     Rhetorical Criticism of Public Address (3 + 0)**

Prerequisite: SPE 101 and junior/senior status, or permission of instructor

This course focuses on the historical and critical methodologies for analyzing rhetorical efforts, both from the points of view of an intellectual discipline and as a practical art in a democratic society.

### **SPE 409-3     Classical Rhetoric (3 + 0)**

Prerequisites: SPE 101 or permission of instructor, and satisfaction of all Level I and Level II General Studies course requirements, and senior status

This course acquaints students with the classical traditions of rhetorical theory including the presophists, sophists, Aristotle, Plato, Isocrates, Cicero, Quintilian, etc. Standards of "ethical persuasion" and the responsibilities of rhetorical persuasion are examined in depth. (Senior Experience)

**SPE 410-3 Techniques of Persuasion (3 + 0)**

Prerequisite: SPE 309 or permission of instructor

A critical investigation of the factors that influence individuals and groups through the media of persuasive rhetorical campaigns. Course involves specific investigation and analysis of twentieth century and contemporary persuasive campaigns. Students will have opportunities to develop persuasive campaigns in various rhetorical areas.

**SPE 412-3 Freedom of Speech (3 + 0)**

Prerequisites: SPE 101, or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, and senior status

This course is a study of the historical and social influences with inquiry into the legacy of our inherited rights to free speech. Also, to examine and refine the First Amendment's clause on freedom of speech and the press, threats to this freedom, and special inquiry into contemporary issues and cases. (Senior Experience)

**SPE 416-3 Advanced Organizational Communication (3 + 0)**

Prerequisites: SPE 216 and SPE 317 or permission of instructor

This course acquaints students with organizational communication structural designs as well as methods/models for analyzing/auditing the effectiveness of such organizational communication systems. The course also addresses implementing organizational communication change through communication processes.

**SPE 420-3 Reader's Theatre (1.5 + 3)**

Prerequisites: SPE 221, 320, 328, or permission of instructor

Concerned with improving the skill of reading dramatic material aloud, usually as a member of a group of student readers. Emphasis is placed upon preparing scripts. Programs will be video-taped and may be presented in public performances.

**SPE 426-1 Theatre: Practicum I (0 + 2)**

Prerequisites: SPE 101, 224, or permission of instructor

To provide the student with a direct practical experience in production of theatrical productions, thus augmenting the theoretical aspects of other theater courses. May be repeated for credit for three semesters as the same course number.

**SPE 427-2 Theatre: Practicum II (0 + 4)**

Prerequisites: SPE 224, 328, 426, or permission of instructor

An advanced course in practical supervision and administration of theatrical productions. Students will direct, design, and manage the plays produced during the semester. Open only to junior and senior level students. May be repeated for three semesters as the same course number.

**SPE 444-3 Advanced Television Production (3 + 0)**

Prerequisite: SPE 344

This is an advanced course in television production with projects in both studio and field. Specific attention is focused on preproduction, production, and post production activities of advanced program production. Students will participate in a variety of projects and production capacities.

**SPE 445-3 Broadcast Journalism: Television (3 + 0)**

Prerequisite: SPE 345

This course is an introduction to television news writing. It teaches students how to write for the visual medium. It includes "on-air" stand-up reporting, newscast writing, and writing to visuals and videotape. It prepares students for advanced level courses in broadcasting.

**SPE 448-3 Seminar Practicum in Broadcasting (0 + 6)**

Prerequisite: SPE 348 or permission of instructor

An advanced course in direct broadcast production that shows the student an opportunity to supervise a variety of production elements through first-hand experience as a producer/director. Open only to junior and senior level broadcast students. This course may be repeated for three semesters.

**SPE 449-3 Effects of Radio-Television on Contemporary Life (2.5 + 1)**

Prerequisite: SPE 240 or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements and senior status

A study of some significant effects of radio-television and the electronic mass media on twentieth century lifestyles. Particular emphasis will be given to "key" indicators of effects including demographics and current research. (Senior Experience)

**SPE 450-1-3 Clinical Practice in Speech Pathology and Audiology (0 + 2-6)**

Prerequisites: SPE 350, 351, 357, 360 and 361, or permission of instructor

Methods of administration of clinical tests of speech pathology and audiology and the application of the principles. Students are introduced to supervised clinical practice.

## 340 COURSE DESCRIPTIONS

### **SPE 455-1 Practicum in Speech Pathology (0 + 2)**

Prerequisites: SPE 350 and 351, or permission of instructor

Supervised application of the principles and techniques of speech pathology in administering and interpreting voice and articulation tests in the speech and hearing clinic.

### **SPE 457-3 Medical Aspects of Speech and Hearing Disorders (3 + 0)**

Prerequisites: SPE 351, SPE 361, or permission of instructor

This is a course in advanced anatomy and physiology of the communication structures, focusing on neurology including an examination of several neurologically-passed speech, language, and hearing disorders. Representatives from related fields will present relevant research findings on communication disorders and approaches to remediation.

### **SPE 463-1 Practicum in Audiology (0 + 2)**

Prerequisite: SPE 361 or permission of instructor

Supervised application of the principles and techniques of audiology in administering and interpreting hearing tests in the speech and hearing clinic.

### **SPE 470-3 Speech Communication and the Trainer (0 + 2)**

Prerequisite: SPE 101, SPE 170, SPE 171, SPE 271 or permission of instructor

A course designed to teach students how to translate their liberal arts background into on-the-job communication training programs using interpersonal and group dynamics skills. Actual demonstrations via video will be used allowing students the opportunity to practice and evaluate their program design and training communication style in front of real audiences.

### **SPE 476-3 Communication and the Elderly (3 + 0)**

Prerequisite: SPE 101 and SPE 171 or SPE 271

Designed to investigate the particular communication patterns and problems of the aged, the course focuses on the culturally communicated attitudes toward the elderly via media, marketing and institutions as well as specific communication issues of the aged such as the communication of intimacy, friendship, control, health confirmation in work environments, home life, retirement and death.

## Surveying and Mapping

### **SUR 151-4 Surveying I (2 + 4)**

Prerequisite: High school or college trigonometry or MTH 140

This is the introductory course in elementary surveying. It covers the theory of measurements; methods of collecting and recording data; reduction of angles, directions, distances, and elevations; the computation and adjustment of traverses; methods of computing areas; and inverting and plotting by coordinates.

### **SUR 252-4 Surveying II (2 + 4)**

Prerequisite: SUR 151

A course, with separate field exercises, designed to cover the theory and applications of the state plane coordinate system; the introduction to control, boundary, construction surveys; photogrammetry; astronomic observations; circular and parabolic courses; and earthwork. In the fieldwork, modern theodolites and total stations are used.

### **SUR 253-4 Route Surveying (2 + 4)**

Prerequisites: SUR 252, SUR 262

This course is designed to expand the introduction to circular and parabolic curves and earthwork treated in SUR 252. It includes the mathematics of spirals; mass diagram of earthwork quantities; highway alignment and design; and surveys for other routes (i.e., railroads, pipelines, tunnels, transmission lines, etc.)

### **SUR 255-3 Surveying Computations (3 + 0)**

Prerequisite: SUR 151

This course is designed to provide instruction in methods of computations used in solving problems in surveying. These include traverse rotation circular curve problems, intersection problems, land area partitioning, resection, reduction to center, secants to a circle. It includes the use of programmable, hand-held, and personal calculators in problem-solving exercises.

### **SUR 262-3 Survey Drafting (2 + 4)**

Prerequisites: CEN 120, SUR 151

A study of map symbols, contours, sources for map data, and methods used in map plotting, including computer-aided drafting. Also studied are topographic maps and survey plats, and methods of reproduction.

### **SUR 265-3 Photogrammetry I (2 + 3)**

Prerequisites: SUR 252, SUR 262

Aerial cameras; the geometry of vertical, tilted and overlapping photographs; flight planning; ground control; and stereo plotters.

**SUR 271-2 Astronomy for Surveyors (2 + 0)**

Prerequisite: SUR 252

The celestial sphere and solutions for position and direction. Altitude and hour-angle methods of solar observations, and observations of Polaris and other stars by day and night.

**SUR 354-3 Boundary Law I (3 + 0)**

Prerequisite: SUR 252

Boundary control and legal principles, subdivision of the public lands, riparian rights.

**SUR 362-3 Cartographic Surveys (2 + 3)**

Prerequisites: MTH 141, SUR 252, SUR 262

Plane table mapping, U.S. government maps, introduction to map projections, the military grid (UTM and UPS). Includes both field work and map drafting.

**SUR 366-3 Land Information Systems (3 + 0)**

Prerequisite: SUR 252

Procedures and standards for a multipurpose cadastre. Includes a practical project using existing software.

**SUR 376-3 Surveying Data Adjustment (3 + 0)**

Prerequisites: MTH 214, MTH 321, SUR 252, SUR 255

This course is designed to provide a firm foundation in the basic principles used in the adjustment of survey data, using the method of least squares. It includes error propagation, weighted means, and the preanalysis of survey measurements.

**SUR 448-3 Geodesy (3 + 0)**

Prerequisites: MTH 241, SUR 474, PHY 233

Introduction to geometric geodesy, three-dimensional coordinate system, geodetic astronomy, gravimetric geodesy, tidal movements, and satellite geodesy. Laplace stations, deflection of the vertical, and the North American Datum of 1983.

**SUR 453-3 Site Planning (3 + 0)**

Prerequisites: SUR 255, SUR 262, SUR 354

Case studies in land development or subdivision, including preliminary plans, final plats, grading plans, storm sewer plans, erosion control, and other aspects of design.

**SUR 454-3 Boundary Law II (3 + 0)**

Prerequisites: SUR 255, SUR 354, SUR 366

This course is designed to treat the areas of evidence and procedures for boundary location. Statute and case laws are studied. The professional aspects of land surveying and the concept of the multipurpose cadastre are covered.

**SUR 465-3 Photogrammetry II (2 + 3)**

Prerequisites: SUR 265, SUR 376

Photographic films, air photo interpretation, concepts of analytical photogrammetry, survey control extension and densification, modern instrumentation.

**SUR 474-4 Geodetic and Special Surveys (3 + 2)**

Prerequisite: SUR 362

Precise surveying measurements and instruments; reduction to datum, second order methods; geodetic computations; hydrographic and mine surveys; gyro theodolites; discussion of inertial and satellite positioning.

## Technical Communications

**COM 241-3 Basic Multi-Image Production (2 + 2)**

Introduction to the principles of multi-image photography, programming for one and two projector shows, preparation of graphics, sound recording and mixing, and presentation techniques.

**COM 242-3 Basic Corporate Videotape Production (2 + 2)**

This course serves as an introduction to the fundamentals of basic corporate videotape production terms and techniques. Students will produce single-camera, remote productions.

**COM 243-3 Introduction to Technical Media (3 + 0)**

This course serves as an introduction to media used for industrial applications. Basic techniques, terminology, equipment characteristics, media selection, advantages, and disadvantages are studied.

**COM 244-3 Writing for Radio (3 + 0)**

Prerequisite: ENG 101 or permission of instructor

This course introduces the student to basic radio writing principles, formats, and techniques. The student practices preparing continuity, commercials, public service announcements, and programs.



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### **COM 245-3 Basic Multimedia Production (2 + 2)**

Prerequisite: CMS 101 or permission of instructor.

This course serves as an introduction to the fundamentals of basic multimedia production. The students will produce a multimedia program.

### **COM 246-3 Presentation Graphics (2 + 2)**

The student will design and produce computer graphic images for use in informational presentations, multi-image programs, computer screen show presentations, and print publications.

### **COM 261-3 Introduction to Technical Writing (3 + 0)**

Prerequisite: ENG 101 or permission of instructor

This course offers practice in the specific techniques required for writing in the areas of technology and science; particular emphasis is placed on report formats for government, science and industry, and the various audiences requiring technical information.

### **COM 272-3 Introduction to Communication Concepts and Systems (3 + 0)**

This course introduces the students to the major communication concepts and systems used by industry, government, science, engineering, and the media in transmitting and receiving information. It prepares the student to identify strengths and weaknesses in the communication process.

### **COM 331-3 International Technical Communications (3 + 0)**

Prerequisite: Junior status or permission of instructor

This course introduces students to the requirements of international technical communications. It defines the characteristics of an international requirements of technical communicator and provides students with opportunities to practice necessary skills.

### **COM 332-3 Semiotics of International Technical Communications (3 + 0)**

Prerequisite: COM 272 or permission of instructor

This course will survey semiotics from classical times to the 1990s. Students will study semiotic theories as they apply to technical communications and will then attempt to solve problems in international technical communications.

### **COM 333-3 Technical Writing for Translation (3 + 0)**

Prerequisite: COM 261 or permission of instructor.

This course prepares technical writers, editors, and scriptwriters to develop text and scripts in a manner that facilitates translation for international use.

### **COM 341-3 Advanced Multi-Image Production (1 + 4)**

Prerequisite: COM 241 or permission of instructor

Students will examine and learn complex multi-image techniques. Students will cooperatively produce a multi-image presentation, that has a specific audience, purpose, and budget. Advanced photographic and audio applications will be applied to production and programming of the presentation.

### **COM 342-3 Intermediate Corporate Videotape Production (1 + 4)**

Prerequisite: COM 242 or permission of instructor

This course teaches intermediate videotape production terms and techniques. Students will write, produce, and direct a videotape program which has a specific corporate purpose and audience. Students will schedule a remote production and edit a videotape program.

### **COM 344-3 Corporate Scriptwriting for Film and Television (3 + 0)**

Prerequisite: ENG 101 or permission of instructor

This course stresses the principles of corporate film and television scriptwriting, organization, and writing of story outlines, treatments, formats, and scripts. It provides training in the fundamentals of visual and audio applications and production viewing and analysis of film and television productions.

### **COM 345-3 Intermediate Multimedia Production (2 + 2)**

Prerequisite: COM 245 or permission of instructor

This course teaches intermediate multimedia production terms and techniques. The students will write a script, create graphic and audio elements, produce and direct a multimedia program that has a specific corporate/educational purpose and audience.

### **COM 347-3 Writing for Corporate Audio (3 + 0)**

Prerequisite: ENG 101 or permission of instructor

This course introduces the student to the techniques of writing words to be heard versus words to be read. The student will practice writing narration and dialogue, and learn to create an aural scene using music and sound effects.

**COM 351-3 Industrial Communication (3 + 0)**

Prerequisite: COM 272, equivalent work experience, or permission of instructor

This course focuses on the study of organizational communications, stressing information flow within organizations. Emphasis is placed on the structure and function of communication networks in and between business, government, and industrial organizations. Practice in solving typical communication problems is included.

**COM 352-3 Communication of Power and Authority (3 + 0)**

Prerequisite: Sophomore status or 3 years full-time employment, or permission of instructor

This course emphasizes the ways decisions are presented and the image of power and authority are transmitted by a variety of verbal and nonverbal techniques. The students learn to use, recognize, and interpret oral and written power language, signs, symbols, and gestures.

**COM 353-3 Corporate Cultures (3 + 0)**

Prerequisite: COM 272, equivalent work experience, or permission of instructor

This course studies the communication patterns and networks that occur in corporations and determines the cultures and climates of those organizations. Students learn to read and interpret the hidden messages within a corporation's communication and to evaluate a corporation's culture in relation to their own personalities.

**COM 356-3 Variable Topics in Industrial Communicating (3 + 0)**

Prerequisite: COM 272 or permission of instructor

This is a current topics course which studies topics of particular interest to persons concerned with communication activities in industrial and governmental organizations. The content of the course changes each semester and may be repeated for credit.

**COM 361-3 Advanced Technical Writing (3 + 0)**

Prerequisite: COM 261 or equivalent work experience

Advanced study of the techniques and principles of technical writing as applied to reports, manuals, and proposals, using formats common to government, science, and industry. It includes the study of report design, audience analysis, report use, and writer intent.

**COM 362-3 Industrial Editing and Production (3 + 0)**

Prerequisite: COM 261 or permission of instructor

Techniques for producing company publications, including writing, editing, formatting, reproduction and casting.

**COM 363-3 Designing Technical Publications (2 + 2)**

Prerequisite: COM 261 or permission of instructor

This course emphasizes the need for appropriate presentation of technical material to enhance the usability of publications. It focuses on processes, vocabulary, use of publishing software, and interaction between writer and designer through hands-on experience.

**COM 364-3 Writing Computer-User Software Documentation (3 + 0)**

Prerequisite: COM 261 or CMS 201 or CSI 101

This course prepares the student to write instruction manuals for computer software for users who are not computer experts. The course emphasizes audience analysis, vocabulary, format and style, use of graphics, writing techniques, and production.

**COM 365-3 Writing Hardware Documentation (3 + 0)**

Prerequisite: COM 261 or permission of instructor

This course prepares the student to write instructional manuals including maintenance, operations, and service manuals. The course emphasizes audience analysis, vocabulary, format and style, use of graphics, writing techniques and productions.

**COM 366-3 Variable Topics in Industrial and Technical Communications (3 + 0)**

Prerequisite: COM 261 or permission of instructor

A current topics course which studies communication models and techniques for reporting industrial and governmental information to specialized and general audiences to advance corporate or agency goals and interests. The content of the course will change from semester to semester. May be repeated for credit.

**COM 378-3 Communications Law (3 + 0)**

Prerequisite: Six hours of COM, JRN, or business courses, or permission of instructor

This study of legal practices which impacts professional communicators places special emphasis on copyright as it applies to print media, computers, satellite transmission, and visual presentation; the law of privacy; federal trade regulations; and other areas of special interest to industrial and technical communicators.

**COM 441-3 Budgeting and Planning for Audio-Visual Productions (3 + 0)**

Prerequisites: Senior status, 12 hours COM designated courses (nine of which must be upper division), and satisfaction of all Level I and Level II General Studies course requirements

Methods and techniques for budgeting and planning. Viewing and analysis of A-V programs, scheduling for production in terms of time, equipment and cost. Evaluation of finished programs. (Senior Experience)

**COM 442-3 Advanced Corporate Videotape Production (1 + 4)**

Prerequisite: COM 242 and COM 342, per permission of instructor

This course covers advanced video production techniques including editing, lighting, graphics, scripting, and audio recording. Students will formulate and track budgets, plan and execute remote shoots, and carry out all aspects of corporate video production. Students will obtain outside clients for the final videotape project.

**COM 463-3 Costing and Planning Technical Publications (3 + 0)**

Prerequisites: Junior status or 12 hours of COM-designated courses of which nine hours are upper level.

This course focuses on methods and techniques for planning, scheduling and budgeting technical publications. Students analyze large publication projects to determine schedule, budget, resources, estimating, productivity, and cost analysis.

**COM 476-3-12 Advanced Internship in Technical Communications (0 + 9—36)**

Prerequisites: Twelve semester hours of COM designated courses and the recommendations of two Metro State Technical Communications faculty members

This advanced, on-the-job learning experience enables students to work in their chosen career fields. An approved plan from a cooperating organization serves as the course outline for a specific advanced internship, but the outline must fulfill the general requirements of the course. The student must merit the internship experience and provide an acceptable plan of work before being granted permission to register for this course.

**COM 479-3 Senior Seminar in Technical Communications (3 + 0)**

Prerequisites: Senior status and twelve or more hours of COM or AES designated courses, or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements

This course gives the advanced student an opportunity to write a paper of publishable quality and present a seminar based on in-depth research or an application of state-of-the-art practices in an area of Technical Writing and Editing, Organizational, or Technical Media Emphases. (Senior Experience)

**Telecommunications****TLC 249-1-6 Internship in Radio-Television-Film-Mass Communications (0 + 3-18)**

Prerequisites: SPE 240 and one additional three-hour course in the area of broadcasting or permission of instructor

Students will receive in-service training at selected radio, television, film or industrial stations or facilities within the greater Denver metropolitan community. The in-service training will vary according to the specific station or facility to which the student is assigned.

**TLC 349-1-15 Advanced Internship in Radio-Television-Film-Mass Communications (0 + 3-45)**

Prerequisites: TLC 249

Students will receive advanced in-service training at selected radio, television, film or industrial stations or facilities within the greater Denver metropolitan community. The advanced in-service training will vary according to the specific station or facility to which the student is assigned and the semester hours earned will also vary accordingly. This course may be repeated for four semesters and the total amount of semester hours earned overall in TLC 349 will be determined by the department and the telecommunications advisor.

**Urban Studies****URS 100-3 Introduction to Urban Studies (3 + 0)**

A course that concentrates on: What are urban studies, and how do they affect the daily activities of all urban area residents and institutions? An introductory cross-disciplinary approach to the symbiotic relationships between people and their urban environments. Particular emphasis is placed upon the role of transportation and housing as they influence urban patterns.

**URS 200-3 An Inside Look at Urban Institutions (3 + 0)**

A course taught by representatives of private, local, state and federal institutions serving urban areas. These institutions are primarily concerned with housing, public services, transportation, planning and land use. The representatives will explain the functions of their particular institutions. The course will be coordinated by a Metro State faculty person.

**URS 289-1-3 Urban Problems: Topics (1 + 0—3 + 0)**

The course will focus on current urban problems across the nation. Topics may include problems with pollution, water supply, urban sprawl, controlled growth and alternative forms of transportation.

**URS 300-3 World Patterns of Urbanization (3 + 0)**

Prerequisite: URS 100 or Introductory course in SOC, HIS, ANT — Non U.S.

A survey and examination of major urbanized world regions and the development of urban systems. Emphasis will be on non-Western urbanization.

**URS 328-3 Transportation: Issues and Policies (3 + 0)**

Prerequisite: URS 100 or 200, URS 228, or permission of instructor

Involves students in the problems of moving people and goods in urban areas. Transportation networks will be analyzed in terms of individual neighborhoods, social needs and political decision making. Focus of the course will be Denver, Colorado.

**URS 330-3 Housing: Issues and Policies (3 + 0)**

Prerequisite: URS 100, 200, or permission of instructor

The focus of this course is on current social and economic issues regarding housing in America's urban areas. Topics covered include housing markets, components of housing costs, housing for low income, aged and minorities, housing standards and land development.

**URS 350-3 Emerging Urban Political Systems (3 + 0)**

Prerequisites: Any six hours from PSC 300, 302, URS 200 or 210

The course focuses on changes in the nature of urban governmental issues and processes. It includes the political organization of urban sprawl, new towns, exurbs, neighborhoods, regional governments and cities in political transition.

**URS 351-3 Community Development and Planning (3 + 0)**

Prerequisites: Nine hours of urban studies, sociology or urban land use

The focus of this course will be planning and community development on a small scale. It will include community and institutional structures, relationships to public policies as well as funding agencies. Students will prepare a community development plan.

**URS 371-3 Ethnic Groups in U.S. Cities (3 + 0)**

Prerequisites: URS 100 plus three hours of political science, sociology, anthropology or human geography

A social, economic, psychological and spatial investigation of ethnic groups in U.S. cities. Emphasis will be on the development of ethnic consciousness and its implication for economic, political and cultural identity and residential-community maintenance.

**URS 380-3 Applied Urban Research Methods (3 + 0)**

Prerequisite: URS 100

A survey course designed to acquaint class participants with practical yet sophisticated methods of conducting applied urban research. Population census materials, archival and government records and other research techniques will be examined and utilized to develop individual and group projects.

**URS 389-1-3 Readings in Urban Studies (1-3 + 0)**

Prerequisites: Six-nine hours of urban studies plus permission of instructor and department chair

Provides an opportunity for students with a background in urban studies to pursue study on a specific topic. Will require frequent meetings between student and instructor.

**URS 450-3 Cities of the Future (3 + 0)**

The focus of this course will be to identify and evaluate alternate futures for cities. The course will explore the possible futures of urban politics, economics, employment, transportation, and related areas.

**URS 489-4 Interdisciplinary Seminar (4 + 0)**

Prerequisites: Nine hours in urban studies plus upper-division status

Truly a team-taught course that will utilize the talents and expertise of several different professors addressing the same topic from their respective viewpoints. In viewing each concentration, three professors from such fields as psychology, land use, sociology, political science, urban studies, or history will jointly teach the course. Each time the seminar is offered a different area of concentration will be stressed.

## Women's Studies

**WMS 101-3 Introduction: Woman in Transition (3 + 0)**

Prerequisite: Minimum performance standard scores on the reading and writing preassessment placement tests

This course introduces the discipline of women's studies, the historical development of feminist thought, and the social, economic, and technological factors which have led to changing roles for women throughout the world; examines patterns of female socialization and psychological development within a sex/gender system which differentiates and stratifies human beings in the workplace, the law, the media, education, religion, health care, and intimate relationships; and focuses analysis on race and class with particular attention to women of color and non-Western women cross-culturally. (General Studies Course—Level II, Social Science)

**WMS 113-2 Directed Readings in Women's Studies (2 + 0)**

This course permits the student to develop a basic knowledge of the materials and information involved in the discipline of women's studies. Through the selections read, students will develop an overview of the theories, history and scope of the literature in the discipline. This course offers individualized instruction and personal consultation with faculty.

## 346 COURSE DESCRIPTIONS

### **WMS 165-3**

#### **(HIS 165) Women in U.S. History (3 + 0)**

Prerequisite: Minimum performance standard scores on the reading and writing preassessment placement tests

Women in U.S. History emphasizes women's changing roles in American History from 1607 to the present. The course covers the nature of women's work and her participation in the family, church, and reform movements in the colonial and Republican periods and the nineteenth and twentieth centuries. This class presents the emergence of the modern woman in the twentieth century as well as the re-emergence of the women's movement. The course stresses both the changes and the continuities over the last 300 years. Credit will be granted for only one of these courses. (General Studies Course—Level II, Historical)

### **WMS 218-3 Assertiveness Training (3 + 0)**

This class aims to help people develop assertive behavior and learn the difference between assertiveness and aggressiveness, and to teach people how to set, measure, and attain behavioral goals. These goals fall under the general heading of awareness.

### **WMS 234-1-3 Career and Personal Development (Variable Title) (1-3 + 0)**

Prerequisite: WMS 101 or permission of instructor

These courses will aim at self-improvement and career enhancement and will include such titles as: Women and Health, Women and Aging, Career Mobility, and New Directions for Women. Check Class Schedule for each semester's offerings. May be repeated for credit as titles change.

### **WMS 265-3**

#### **(HIS 265) Women of the West (3 + 0)**

This course examines women who inhabited the American frontiers from pre-Columbian times through the twentieth century. The lives and attitudes of Native American, Hispanic, African American, and native-born and European immigrant women are emphasized. Differences between images and the reality of women's lives are highlighted.

### **WMS 277-3**

#### **(SPE 277) Gender and Communication (3 + 0)**

Prerequisite: SPE 101/SPE 171 or permission of instructor, ENG 101, and satisfaction of Level I communication requirement

This course is designed to test the students' ability to inventory their own culturally derived gender communication patterns especially those in public speaking; analyze those patterns, contrast their own resulting, functional and dysfunctional gender communication behaviors; relate those behaviors and their outcomes to their personal work and professional lifestyles; and formulate and test new behaviors based on increased gender communication awareness. Credit will be granted for only one of these courses. (General Studies Course—Level II, Arts and Letters)

### **WMS 298-1-3 Cooperative Education Internship (Variable Credit) (0 + 3-9)**

Prerequisites: WMS 101, Sophomore status, and permission of instructor

An entry level work experience in a social service agency, nonprofit organization, or an agency of local, state, or federal government in an area related to women's studies. Supervised by professionals on the job in conjunction with Metro State women's studies faculty members. Recommended for minors and contract majors.

### **WMS 305-3**

#### **(PSY 305) Psychology of Gender (3 + 0)**

Prerequisite: PSY 101/WMS 101

This course presents a survey of major contemporary approaches to gender, including a range of scientific and theoretical work. A constructionist approach is utilized to synthesize the views. The course then reviews several major areas of application including relationships, health, violence, workplace, and achievements.

### **WMS 313-3 Advanced Readings in Women's Studies (3 + 0)**

Prerequisites: ENG 102 and WMS 101 or permission of instructor

This course permits the student to develop an in-depth knowledge of the materials and information in the discipline of women's studies. Through the selections read, students will learn the theory, history and scope of the literature in the field. This course offers individualized instruction and personal consultation with faculty. This course builds on WMS 113, but students are not required to have taken WMS 113 previously.

### **WMS 322-3**

#### **(SOC 322) Race, Sex and Ethnic Groups (3 + 0)**

Prerequisites: SOC 101, WMS 101, or permission of instructor, and satisfaction of all Level I General Studies course requirements

A focus on race, racism, sex biases, and ethnic prejudices, their origins and characteristics; facts and myths about populations, including the social, psychological and cultural sources of discrimination and bias; implications in current societal structures and institutions. (General Studies Course—Level II, Social Science; Multicultural)

**WMS 331-3****(CJC 371) Women and the Law (3 + 0)**

Prerequisite: WMS 101 or permission of instructor

Examination of women's legal rights under the American legal system and Colorado law, deals with family law, Equal Employment Opportunity Acts, housing, credit and finance, welfare, social security, abortion, prostitution, rape, and the E.R.A. Credit will be granted for only one of these course numbers.

**WMS 336-3****(HIS 336) Women in European History (3 + 0)**

Prerequisites: HIS 101 or HIS 102 or permission of instructor

This course provides a historical analysis of the role and contribution made by women in the development of the Western Civilization from Neolithic times to the present.

**WMS 342-2-3 Women and the Humanities (Variable Title) (2-3 + 0)**

Prerequisite: WMS 101 or permission of instructor

Focuses on women in relation to the humanities and covers such topics as: Concepts about Women in Western Civilization; Feminist Creativity; Rediscovered Women Writers; and Autobiographies of Women. Check Class Schedule for each semester's offerings. May be repeated once for credit as titles change.

**WMS 344-3 Women and the Natural Sciences (Variable Title) (3 + 0)**

Prerequisite: WMS 101 or permission of instructor

Focuses on women in relation to the natural sciences and covers such topics as Women's Biology; History of Women in Science; and Women and Geography. Check Class Schedule for each semester's offerings. May be repeated once for credit as titles change.

**WMS 345-3 Women and the Arts (Variable Title) (3 + 0)**

Prerequisite: WMS 101 or permission of instructor

Focuses on women in relation to the arts and covers such topics as Woman as Muse; Women Artists; Women Composers/Conductors/ Performers; Women in Theatre; Women and Film; Women Subjects in Art. Check Class Schedule for each semester's offerings. May be repeated once for credit as titles change.

**WMS 346-3 Women and the Social Science (Variable Title) (3 + 0)**

Prerequisite: WMS 101, SOC 101, or permission of instructor, and satisfaction of all Level I General Studies course requirements

Focuses on women in relation to the social sciences and covers such areas as Women and the Family; Women and Addictions; Women in the Criminal Justice System; Domestic Violence; Cross-Cultural Roles of Women; Women and Politics. Check Class Schedule for each semester's offerings. May be repeated once for credit as titles change. (General Studies Course—Level II, Social Sciences; Multicultural)

**WMS 348-3****(PSY 348) Psychology of Women (3 + 0)**

Prerequisite: PSY 101 or WMS 101

This course presents the history and development of theories, research, and concepts in the psychology of women, including a focus on mental health and illness, the pathology of women's social roles, biological basis of women's behavior, and feminist psychological theories and research.

**WMS 351-3 Feminist Theory (3 + 0)**

Prerequisites: WMS 101 and satisfaction of Level I General Studies course requirements

This course studies both the classical tradition of feminist thought and its contemporary expression. Beginning with the "protofeminist" thinkers of the 17th century, it analyzes traditional theories of "woman's nature." Feminist theory's primary concern is with the humanistic foundations of multi-cultural, social, psychological, and political theories of women. Primary and secondary sources in several disciplines are examined as they contribute to the development of the eight major varieties of contemporary feminist thinking. (General Studies Course—Level II, Arts and Letters)

**WMS 367-1-3 Contemporary Issues in Women's Studies (Variable Title) (1-3 + 0)**

Prerequisite: WMS 101 or permission of instructor

Objectives vary with course title, but generally focus is on current issues that are constantly changing and developing in this area. Check Class Schedule for each semester's offerings. May be repeated once for credit as titles change.

**WMS 386-3****(HIS 386) Advanced U.S. Women's History (3 + 0)**

Prerequisites: HIS 121, or HIS 122, or HIS/WMS 165, or permission of instructor

This course provides an in-depth examination of issues pertinent to women of the Americas. Themes will include pre-Columbian culture, immigration work, family life, and women's rights.

## 348 COURSE DESCRIPTIONS

### **WMS 395-3**

#### **(ART 395) Women's Art/Women's Issues (3 + 0)**

Prerequisites: WMS 101, ART 104 or ART 200, or permission of instructor, and satisfaction of Level I General Studies course requirements

This course develops an understanding of women artists and their work from the perspectives of feminist scholarship in art and art history. (General Studies Course—Level II, Arts and Letters)

### **WMS 398-1-12 Cooperative Education Internship (Variable Credit) (0 + 3-36)**

Prerequisites: WMS 101, Junior status, and permission of instructor

An advanced work experience in a social service agency, nonprofit organization, or an agency of local, state, or federal government in an area related to women's studies. Supervised by professionals on the job in conjunction with Metro State women's studies faculty members. Recommended for minors and contract majors.

### **WMS 425-1-3 Topics in Women's Studies (Variable Title) (1-3 + 0)**

Prerequisite: WMS 101 or permission of instructor

Topics are selected to incorporate an in-depth approach to the study of a particular area of historical, cultural, or political significance to women's studies students. Check Class Schedule for each semester's offerings. May be repeated once for credit as titles change.

### **WMS 475-3 Senior Seminar (3 + 0)**

Prerequisite: 6 credits in women's studies or permission of instructor, satisfaction of all Level I and Level II General Studies course requirements, and senior status

Designed primarily for contract majors and minors as the culmination of work in women's studies, this seminar will cover interdisciplinary bibliography and research methodology. Students will write and present in the seminar their senior paper. As each project will be individual, papers will reflect each student's particular course of study. Open to contract majors and minors and others by permission of the instructor. (Senior Experience)

### **WMS 486-3**

#### **(HIS 486) History of Feminism and Women's Rights (3 + 0)**

Prerequisites: Either HIS 121, HIS/WMS 165, or WMS 101, or permission of instructor

The purpose of this course is to examine the history of American feminism from the Age of the Revolution to the present. Through the use of primary and secondary sources, the philosophies and strategies of women's rights activists and organizations will be examined. Among the special topics to be considered are the conditions and intellectual currents in society that facilitated the growth of American feminism, the achievements of the women's rights movement, the forces that opposed women's rights, and the issues for debate within the feminist movements.



**D**r. Sheila Kaplan became president of Metropolitan State College of Denver in September 1993. Dr. Kaplan is the eighth president of Metro State.

Previously, she held the positions of chancellor at the University of Wisconsin-Parkside, and vice chancellor for Academic Affairs of the Minnesota State University System. Before joining the Minnesota System, she was vice president for Academic Affairs at Winona State University, Minnesota. From 1972 to 1978, Dr. Kaplan was director of the City University of New York (CUNY) baccalaureate program.

A native of Brooklyn, N.Y., Dr. Kaplan received her bachelor of arts degree in European history from Hunter College-CUNY in 1965, and her master of arts degree from Johns Hopkins University in 1967. The City University of New York awarded her a doctorate in 1973 after specialized study in modern European history and modern British history. From 1970 to 1975, she taught history at the Borough of Manhattan Community College-CUNY, Brooklyn College-CUNY, and Bernard M. Baruch College-CUNY.

## The Faculty

### SCHOOL OF BUSINESS

WC 257, 556-3245

#### ACCOUNTING

CN 307, 556-3181

##### Clute, Ronald C.

B.S., California State University at Northridge; M.A., California State University at Long Beach; Ph.D., University of Notre Dame; C.P.A.; Associate Professor of Accounting

##### Dehning, Lyle E.

B.S., University of Colorado; M.A., University of Northern Colorado; C.P.A.; Assistant Professor of Accounting

##### Hess, Alison R.

B.A., LL.M., University of Denver; J.D., California Western School of Law; Assistant Professor of Accounting

##### Lee, Buryung

B.S., Dongah University (Korea); M.B.A., Central Missouri State University; Ph.D., Temple University; Assistant Professor of Accounting

##### Lee, Patsy L.

B.A., University of Texas; M.B.A., Ph.D., University of North Texas; C.P.A.; Associate Professor of Accounting

##### Lombard, J. Larry

B.S., University of Tulsa; M.S., Oklahoma State University; Ph.D., University of Arkansas; C.P.A.; Associate Professor of Accounting

##### Parker, Mary Virginia

B.A., University of Tulsa; M.A., Ph.D., University of Colorado; C.P.A.; Professor of Accounting

##### Pollart, F. Lee

A.B., Colorado State University; M.B.A., University of Denver; Ph.D., University of Wisconsin; Assistant Professor of Accounting

##### Ryu, Tae Ghil

B.B.A., Yonsei University (Seoul); M.B.A., University of Missouri; Ph.D., Rutgers University; Assistant Professor of Accounting

##### Skougstad, David A.

B.A., Occidental College; M.S., Colorado State University; C.P.A.; Assistant Professor of Accounting

##### Thornton, Phillip W.

B.A., University of Oklahoma; M.B.A., Henderson State University; Ph.D., University of North Texas; Assistant Professor of Accounting

### COMPUTER INFORMATION SYSTEMS AND MANAGEMENT SCIENCE

WC 239, 556-3122

##### Di Brell, Branston A.

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##### Freeman, James L.

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##### Garman, George B.

B.S., Indiana University; Ph.D., Notre Dame University; Associate Professor of Computer Information Systems and Management Science

##### Helms, Susan J.S.

B.S., Texas Tech University; M.S., Purdue University; Ph.D., University of Texas; Associate Professor of Computer Information Systems and Management Science

##### Landry, John R.

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##### Larsen, Gwynne E.

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##### Marold, Kathryn

B.A., Creighton University; M.S.S., Ph.D., University of Denver; Professor of Computer Information Systems and Management Science

##### Mawhinney, Charles H.

B.S., Carnegie-Mellon University; M.B.A., Ph.D., University of Pittsburgh; Professor of Computer Information Systems and Management Science

##### Megeath, Joe D.

B.A., M.S., University of Wyoming; Ph.D., Colorado School of Mines; Professor of Computer Information Systems and Management Science

##### Monroe, Stuart R.

B.S., Penn State University; M.B.A., Brigham Young University; Ph.D., University of Arizona; Associate Professor of Computer Information Systems and Management Science



**Morrell, Joseph S.**

B.S., University of Southwestern Louisiana; M.S., Louisiana State University; Ph.D., Florida State University; Professor of Computer Information Systems and Management Science

**Morris, Gerard J.**

B.S., University College Galway; M.S., University of Minnesota; Ph.D., University College Galway; Associate Professor of Computer Information Systems and Management Science

**Palmer, Gerald K.**

B.A., Stanford University; M.A., University of Alberta; Ph.D., University of Colorado; Associate Professor of Computer Information Systems and Management Science

**Pence, Norman E.**

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**Pook, Laszlo**

B.S.E.E., University of Colorado; M.S.E.E., University of Colorado; D.B.A., University of Colorado; Professor of Computer Information Systems and Management Science

**Prins, Charles A.**

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**Shaw, Kenneth D.**

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**ECONOMICS**

CN 312, 556-3217

**Akacem, Mohammed**

B.A., Portsmouth Polytechnic; M.A., Ph.D., University of Colorado; Professor of Economics

**Brown, R. Michael**

B.A., M.S., Ph.D., University of Colorado; Interim Dean, School of Business; Professor of Economics

**Call, Steven T.**

B.S., Brigham Young University; M.A., Ph.D., Indiana University; Professor of Economics

**Cochran, John Paul**

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**Erickson, Erick Lee**

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**Fleisher, Arthur A.**

B.A., San Diego State University; M.A., Ph.D., George Mason University; Associate Professor of Economics

**Gilliam, Lynde O.**

B.A., North Carolina State University; M.A., Old Dominion University; Ph.D., Colorado State University; Associate Professor of Economics

**Kulkarni, Kishore**

B.A., M.A., University of Poona; M.A., Ph.D., University of Pittsburgh; Professor of Economics

**Pasternak, Richard E.**

B.A., Holy Cross College; M.A., Louisiana State University; Ph.D., University of Alabama; Professor of Economics

**FINANCE**

WC 247, 556-3776

**Boswell, Jerry D.**

B.S., B.A., and M.B.A., Washington University; D.B.A., Indiana University; CFA; Professor of Finance

**Choi, Ducksang**

B.S., Seoul National University; M.B.A., University of Tennessee; D.B.A., Mississippi State University; Assistant Professor of Finance

**DyReyes, Felix R.**

B.S., Letran College; M.S., Southern Illinois University; Ph.D., Iowa State University; Professor of Finance

**Foster, Phillip B.**

B.S., M.S., Ph.D., University of Oregon; CCIM; Associate Professor of Finance

**Griffin, C. Ramon**

B.S., Auburn University; M.B.A., Ph.D., Georgia State University; C.F.P.; Associate Professor of Finance

**Huggins, Kenneth M.**

B.A., Dakota Wesleyan University; M.B.A., Indiana University; D.B.A., Texas Tech University; CFP; Associate Professor of Finance

**Mayes, Timothy**

A.A., University of Florida; B.S., Ph.D., University of Central Florida; Assistant Professor of Finance

**MANAGEMENT**

WC 240, 556-3247

**Breitenbach, Robert R.**

B.A., University of Cincinnati; M.B.A., Ph.D., Ohio State University; J.D., University of Oklahoma; Professor of Management

**Faurer, Judson C.**

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**Frederick, Elizabeth A.**

B.S., Pennsylvania State University; M.B.A., Michigan State University; Ph.D., University of Maryland; Associate Professor of Management

**Geisler, Jerry**

B.S., M.A., Central Missouri State University; Ph.D., University of Missouri at Columbia; Professor of Management

**Gilliard, Debora**

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**Price, Courtney**

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**Taylor, Ronald L.**

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**MARKETING**

CN 304, 556-3182

**Bell, Jack A.**

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**SCHOOL OF LETTERS,  
ARTS AND SCIENCES**

SI 101, 556-3215

**AFRICAN AMERICAN STUDIES**

Location TBA, 556-4004

**Ekundayo, Zawdie A.**

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**Thobhani, Akbarali H.**

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**ART**

AR 187, 556-3090

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**BIOLOGY**

SI 217, 556-3213

**Alford, Donald K.**

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**CHEMISTRY**

SI 323, 556-2610

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**CHICANO STUDIES**

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**EARTH AND ATMOSPHERIC SCIENCES**

SI 139, 556-3143

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**ENGLISH**

CN 209, 556-3211

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**HISTORY**

WC 263, 556-3113

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**JOURNALISM**

WC 266, 556-3485

**Brobst, Deborah Hurley**

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**Chapman, Richard**

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**McLaughlin, John P.**

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**MATHEMATICAL & COMPUTER SCIENCES**

SI 141, 556-3207

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**Yarar, Ruth Goldberg**

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**MODERN LANGUAGES**

CN 201, 556-2908

**Cervantes, Alfonso**

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**Clay, Gudrun**

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**Conde, David**

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**Doerr, Richard P.**

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**Esquibel, Antonio**

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**Esteve, Juan P.**

B.A., B.S., Instituto de Segunda Enseñanza; J.D., University of Havana; M.A., Ph.D., University of Colorado; Professor of Spanish and Criminal Justice

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**Williams-Gascon, Ann**

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**MUSIC**

AR 286, 556-3180

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**PHILOSOPHY**

WC 161, 556-3097

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**PHYSICS**

NC 3123, 556-2454

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**POLITICAL SCIENCE**

WC 163, 556-3220

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**PSYCHOLOGY**

SI 231, 556-3205

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**SOCIOLOGY, ANTHROPOLOGY  
AND SOCIAL WORK**

WC 156, 556-3167

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AR 269, 556-3033

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**WOMEN'S STUDIES AND SERVICES**

NP 1033, 556-8441

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**SCHOOL OF****PROFESSIONAL STUDIES**

WC 136, 556-2978

**AEROSPACE SCIENCE**

WC 134, 556-2982

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**CRIMINAL JUSTICE AND  
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WC 152, 556-2980

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**ENGINEERING TECHNOLOGY  
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TE 109, 556-3227

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**HOSPITALITY, MEETING & TRAVEL ADMINISTRATION**

NP 1059, 556-3152

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**HUMAN PERFORMANCE, SPORT & LEISURE STUDIES**

PE 217, 556-3145

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**MILITARY SCIENCE**

RO 201, 556-3942

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SO 226, 556-3130

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WC 256, 556-2518

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**Vern Nelson, Ph.D.**, Professor Emeritus (posthumously)—Mathematical Sciences

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**M. William Tillson, Ph.D.**, Professor Emeritus—English

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**A**

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