Bulletin of The University of Texas at San Antonio

Graduate Catalog 1977-78
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I. CALENDAR
## Fall Semester, 1977

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 22-25</td>
<td>Monday-Thursday. Registration, Orientation, Advisement.*</td>
</tr>
<tr>
<td>August 29</td>
<td>Monday. Classes begin.</td>
</tr>
<tr>
<td>September 2</td>
<td>Friday. Last day to add a class without special permission. Last day for late registration. Last day to drop a course or withdraw without a record of the enrollment. Deadline for Fall, 1977, graduates to apply for graduation.</td>
</tr>
<tr>
<td>September 5</td>
<td>Monday. Holiday.</td>
</tr>
<tr>
<td>September 12</td>
<td>Monday. Last day to add a class.</td>
</tr>
<tr>
<td>September 23</td>
<td>Friday. Last day for students to withdraw and receive a partial refund of tuition and fees.</td>
</tr>
<tr>
<td>October 7</td>
<td>Friday. Last day to drop a course with an automatic grade of &quot;W.&quot;</td>
</tr>
<tr>
<td>October 31</td>
<td>Monday. Deadline for submission of preliminary draft of thesis.</td>
</tr>
<tr>
<td>November 22</td>
<td>Tuesday. Deadline for submission of final copy of thesis.</td>
</tr>
<tr>
<td>November 24-26</td>
<td>Thursday-Saturday. Thanksgiving holidays.</td>
</tr>
<tr>
<td>December 5</td>
<td>Monday. Last day to drop a course or withdraw.</td>
</tr>
<tr>
<td>December 8</td>
<td>Thursday. Deadline to file approved thesis with Dean's Office.</td>
</tr>
<tr>
<td>December 12-17</td>
<td>Monday-Saturday. Final Examinations.</td>
</tr>
<tr>
<td>December 17</td>
<td>Saturday. Semester closes.</td>
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</tbody>
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## Spring Semester, 1978

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 9-12</td>
<td>Monday-Thursday. Registration, Orientation, Advisement.*</td>
</tr>
<tr>
<td>January 16</td>
<td>Monday. Classes begin.</td>
</tr>
<tr>
<td>January 20</td>
<td>Friday. Last day to add a class without special permission. Last day for late registration. Last day to drop a course or withdraw without a record of the enrollment. Last day for Spring, 1978, graduates to apply for graduation.</td>
</tr>
<tr>
<td>January 27</td>
<td>Friday. Last day to add a class.</td>
</tr>
<tr>
<td>February 10</td>
<td>Friday. Last day for students to withdraw and receive a partial refund of tuition and fees.</td>
</tr>
<tr>
<td>February 24</td>
<td>Friday. Last day to drop a course with an automatic grade of &quot;W.&quot;</td>
</tr>
<tr>
<td>March 27</td>
<td>Monday. Deadline for submission of preliminary draft of thesis.</td>
</tr>
<tr>
<td>April 3-8</td>
<td>Monday-Saturday. Spring vacation.</td>
</tr>
<tr>
<td>April 18</td>
<td>Tuesday. Deadline for submission of final copy of thesis.</td>
</tr>
<tr>
<td>May 1</td>
<td>Monday. Last day to drop a course or withdraw.</td>
</tr>
<tr>
<td>May 4</td>
<td>Thursday. Deadline to file approved thesis with Dean's Office.</td>
</tr>
<tr>
<td>May 8-13</td>
<td>Monday-Saturday. Final Examinations.</td>
</tr>
<tr>
<td>May 13</td>
<td>Saturday. Semester closes.</td>
</tr>
<tr>
<td>May 14</td>
<td>Sunday. Commencement.</td>
</tr>
</tbody>
</table>

*A more detailed calendar for registration, orientation, and advisement will be issued by the Registrar.
**Summer Session, 1978**

**May 29-30**  
Monday-Tuesday. Registration, Orientation, Advisement.*

**May 31**  
Wednesday. Classes begin.

*A more detailed calendar for registration, orientation, and advisement will be issued by the Registrar.*
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Arnold H. Hassen, Assistant Professor, B.S., Brooklyn College; Ph.D., Indiana University
Martin A. Kramen, Assistant Professor, B.S., M.S., University of Illinois; Ph.D., University of Kansas
Marilyn A. Luduena, Assistant Professor, B.A., Western Reserve University; Ph.D., Stanford University
Jerry L. Phillips, Assistant Professor, B.A., University of Colorado; Ph.D., Colorado State University
Samuel A. Ramirez, Assistant Professor, B.A., University of Texas at El Paso; M.S., Texas Tech University; Ph.D., Indiana University
James T. Rutledge, Assistant Professor, A.B., University of California, Berkeley; Ph.D., University of California, Davis.
Seymour S. Kelter, Adjunct Professor, B.S., St. Joseph's College; M.A., University of Kansas; Ph.D., Syracuse University

Division of Earth and Physical Sciences
Charles Howard, Professor, B.S., Ph.D., University of Wisconsin at Madison
Richard V. McGee, Professor, B.S., University of Texas at Austin; M.S., Yale University; Ph.D., University of Texas at Austin
B. S. Thyagarajan, Professor, B.S., Loyola College, India; M.S., Ph.D., Presidency College, India
John W. Morgan, Associate Professor, B.S., Birmingham University, England; Ph.D., Australian National University, Canberra
Herbert B. Silbar, Associate Professor, B.S., M.S., Lehigh University; Ph.D., University of California
Charles A. Sorber, Associate Professor, B.S., M.S., Pennsylvania State University; Ph.D., University of Texas at Austin
Philip L. Stotter, Associate Professor, A.B., Harvard College, Cambridge; A.M., Ph.D., Columbia University, New York
Miroslav Synak, Associate Professor, B.S., M.S., Charles’ University, Prague; Ph.D., University of Chicago

Petr Hochmann, Assistant Professor, M.S., Charles’ University, Prague; Ph.D., Czechoslovak Academy of Science, Prague

Robert D. Renthal, Assistant Professor, B.A., Princeton University; Ph.D., Columbia University

Robert F. Williams, Assistant Professor, B.A., Gettysburg College; Ph.D., Emory University, Atlanta

Division of Mathematics, Computer Science, and Systems Design

Manuel P. Berlozabal, Professor, B.S., Rockhurst College; M.S., Notre Dame University; Ph.D., University of California at Los Angeles

Joseph E. Valentine, Professor, B.S., Southwest Missouri State; M.S., University of Illinois; Ph.D., University of Missouri

Stanley G. Wayment, Professor, B.S., Brigham Young University; M.S., University of Utah; M.S., Stanford University; Ph.D., University of Utah

William B. Gearhart, Associate Professor, B.S., M.S., Ph.D., Cornell University

Lucio Tavernini, Associate Professor, B.S., Heald Engineering College; M.S., University of Colorado; M.S., Ph.D., University of Wisconsin at Madison

Clinton J. Kolaski, Assistant Professor, B.S., M.S., Ph.D., University of Wisconsin at Madison

Kay A. Robbins, Assistant Professor, S.B., Ph.D., Massachusetts Institute of Technology

Steven Robbins, Assistant Professor, S.B., S.M., Ph.D., Massachusetts Institute of Technology

David G. Tabor, Assistant Professor, B.S., University of Texas at Arlington; M.S., Ph.D., New Mexico State University

James D. Thomas, Assistant Professor, B.S., M.S., St. Louis University; M.A., Yeshiva University; Ph.D., Pennsylvania State University

Ram C. Tripathi, Assistant Professor, B.A., M.A., Banaran Hindu University, India; M.S., Ph.D., University of Wisconsin at Madison

Joseph F. Dreussi, Instructor, B.S., M.S., University of Houston
HISTORY

On June 5, 1969, the legislative act creating The University of Texas at San Antonio as a component institution of The University of Texas System was signed into law by the Governor. By this legislation directing that The University of Texas at San Antonio offer "courses leading to such customary degrees as are offered at leading American universities," the Legislature of the State of Texas established a new public institution of higher learning that would serve both undergraduate (lower and upper division) and graduate students. The legislation further stipulated that The University be "one of the first class."

In May, 1970, the Board of Regents of The University of Texas System accepted a gift of approximately 600 acres of wooded land located sixteen miles northwest of the center of San Antonio to serve as the permanent campus for The University of Texas at San Antonio. Shortly thereafter administrative and planning offices were established in the former Maison Blanche building on the grounds of the HemisFair Plaza.

By the end of 1970, a master conceptual plan for the permanent campus was approved by the Board of Regents, and by June, 1971, final plans and specifications for the first seven permanent buildings of the campus were completed. After completion of the site improvement work, construction contracts were awarded in May, 1972, calling for a completion date of May, 1974, subsequently revised because of construction delays.

In January, 1972, temporary classrooms and offices were acquired in northwest San Antonio in the Koger Executive Center at the intersection of Loop 410 and Babcock Road. Graduate students enrolled for the first time at the Koger site in June, 1973. These facilities were occupied by The University until buildings on the new campus became available. Upper-division junior and senior students were accepted on the permanent campus in September, 1975; and lower-division students were registered in June, 1976.

In the Spring of 1972 the Board of Regents of The University of Texas System and the Coordinating Board, Texas College and University System, gave approval to UT San Antonio's academic organization of five Colleges with seventeen Divisions and to its proposed fifteen graduate and twenty-seven undergraduate degree programs, now increased at the undergraduate level to thirty-one.

PURPOSE AND PHILOSOPHY

The major purpose of The University of Texas at San Antonio is to respond, in a climate of intellectual freedom and with academic programs of the highest quality, to the educational needs of the multicultural community of metropolitan San Antonio and the South Texas region, the State of Texas, the nation, and the international community. The University is committed to excellence in teaching and scholarship and to flexibility in academic programs and instructional approaches, as it seeks to guide individual students toward achievement of their maximum potential.

Through programs of a multidisciplinary character, UT San Antonio strives to eliminate the isolation of disciplines and to reflect the integrated nature of societal issues and problems. The University is committed to cooperation with all institutions of higher education in San Antonio and the surrounding region and is a member of the Higher Education Council of San Antonio. UT San Antonio also cooperates with the San Antonio community to improve accessibility to library resources; to provide internships with local professions and businesses; to offer continuing education institutes, seminars, and special activities; and to utilize local, non-university personnel with special talents and abilities to enrich classroom instruction. To serve the metropolitan area of Bexar County, The University offers courses and programs on
The University of Texas at San Antonio was granted full accreditation at the graduate level by the Southern Association of Colleges and Schools in December 1974 and full
accreditation at the undergraduate level in December 1976. Because accreditation applies retroactively within the year awarded, all UT San Antonio degrees have been awarded by an accredited institution.

THE JOHN PEACE LIBRARY

The John Peace Library of The University of Texas at San Antonio, named in 1974 in honor of the late former Chairman of The University of Texas System Board of Regents, has undergone rapid development and expansion since 1972, when work began on the development of collections. As of Fall 1976 the available collections of the library numbered 170,000 processed volumes, 44,700 volumes in microform; 29,000 federal, state and local documents; and 350,000 pieces of microforms. The library subscribes to approximately 2,000 periodicals and receives as a designated depository a wide variety of federal, state, and local documents. In addition, the library has extensive holdings in microform of governmental documents, research reports, and newspapers. All materials have been selected to support the teaching and research needs of UT San Antonio.

The UT San Antonio special collections and rare books focus on Western Americana and on Texana. A truly distinguished collection of books and documents for research in the period of the Texas Republic has been made available through the generosity of the late John Peace. The Ewing Halsell Foundation provided funds for purchase of the Morris Cook J. Frank Dobie Collection. The library has also acquired a large collection of Western Americana from R. W. Warden of Montana. In addition, the library holds the architecture collection of Ralph H. Cameron and the Bible collection of Harry and Alma Dietert. The Piper Foundation assisted The University in the purchase of The San Antonio Collection, an extensive collection of materials on the history of San Antonio, from Ray Walton.

UT San Antonio is a participant in the Regional Historical Depository Program sponsored by the Texas State Library. This archive preserves and makes available to researchers a wide variety of public and private documents from a 22-county region surrounding San Antonio. The archive is housed at the Institute of Texan Cultures.

The library building is designed to offer full services and convenience to students and faculty. The majority of books and periodicals are on open shelves for browsing and ease of access. In addition to the traditional library facilities, the John Peace Library also has full audio-visual capability and music listening facilities. Carrels, group study rooms, lounges, and faculty studies are conveniently located throughout the building to provide ideal study conditions. A required lower-division course orients students in the use of libraries in general and the John Peace Library in particular. A staff of highly qualified subject-specialist librarians is available for consultation and assistance.¹

THE COMPUTER CENTER

The Computer Center provides modern computational facilities for research and academic programs. An intermediate scale computer is available for student and faculty use. An IBM 370 model 148 is being utilized to support the academic computing requirements.

THE LUTCHER CENTER

The Lutcher Center is a conference facility of The University of Texas System. Responsibility for administration and supervision of the Lutcher Center is assigned to the President of The University of Texas at San Antonio.

¹Additional information on the John Peace Library and on its borrowing regulations may be obtained in the Library.
The Lutcher Center supports the administrative and developmental programs of The University of Texas System and its component institutions. It also provides space, facilities, and services for educational and public service programs of component units of The University of Texas System. The Center may also be used by other public and private educational institutions and by groups engaged in public service.

THE INSTITUTE OF TEXAN CULTURES

The Institute, located on HemisFair Plaza in downtown San Antonio, is a state-wide educational research and dissemination center focusing on Texas History and culture. This center is concerned principally with collecting, organizing, and interpreting information on Texas subjects and with producing films, filmstrips, slides, tapes, publications, and exhibits on these subjects for state-wide use on television, in classrooms, in museums, and at public gatherings for the benefit of the people of Texas.

Offices and classrooms of the Division of Continuing Education are located in the Institute.

THE CENTER FOR STUDIES IN BUSINESS, ECONOMICS, AND HUMAN RESOURCES

The Center for Studies in Business, Economics, and Human Resources is the research center of the College of Business. The major objective of the Center is to provide students and faculty of The University with an adequate environment for problem solving and community-related research. While the Center is an integral part of the College of Business, it interacts with the faculty of the other Colleges to provide an interdisciplinary approach to research and business education.

The focus of activity at the Center is on application of theories and research techniques to produce useful information for public and private decision making. Specialized data files are maintained on a continuing basis, while a research library and information systems guide interested users to sources of information. The knowledge and experience of The University's faculty are utilized to solve specific problems in the broad categories of management, finance, administration, planning, economic feasibility, production, economic impact, anti-trust laws and procedures, international trade, environmental protection, and manpower utilization. Graduate students have the opportunity of applying research methods through research assistantships. Discourse between academicians, specialists, community leaders, and students is encouraged through conferences and seminars which bring well-known scholars and professionals to San Antonio.

CENTER FOR ARCHAEOLOGICAL RESEARCH

The Center for Archaeological Research (in the Division of Social Sciences, College of Humanities and Social Sciences) was established in September, 1974. Among its objectives are: (1) the training of students in archaeology; (2) the promotion of archaeological research in the South and South Central Texas region; (3) carrying out archaeological surveys and assignments for federal and state agencies as required by legislation and executive orders; (4) aiding local agencies and citizens who need the services of trained archaeologists.

The Center's staff includes a number of graduate and undergraduate students. They, along with other Center personnel, have conducted archaeological investigations in various parts of Texas, particularly in the South, Southwest, and Central sections of the state. Results of these investigations are published in the Center's three publication series: *Archaeological Survey Reports, Regional Studies, and Special Reports*. 
The Center has administered more than 50 contracts and grants to date, among which was a two-year study of the archaeology and ethnohistory of the Spanish mission complex at Guerrero, Mexico. The Center has also helped to organize and support regional archaeological surveys and excavations and has participated in local, state, and international archaeological conferences.

**CENTER FOR APPLIED RESEARCH AND TECHNOLOGY**

The Center for Applied Research and Technology (CART) is the research center of the College of Sciences and Mathematics. The major goals of CART are to provide for expanded research opportunities in the applied sciences for faculty and graduate students, to provide an educational opportunity whereby individual skills can be developed to fill employers' needs for applied scientists, and to provide research-related services for the community at large. Although CART is a part of the College of Sciences and Mathematics, it interacts with the faculty of other Colleges and with the local research community through the Southwest Research Consortium.

CART serves as a focal point for applied science research activities at The University by providing guidance and programs for contract and grant management and by furnishing analytical services and research support for faculty and students. Exceptional students have an opportunity to gain valuable work experience through CART's technical services and research programs.

The CART staff includes faculty, research associates, students, and other technical and support personnel. Emphasis is on interdisciplinary research in the earth, life, and physical sciences. Efforts have been concentrated in chemical, environmental, energy, and health-related studies.

Specifically, research teams have been formed recently to conduct investigations in such diverse areas as "Histological-Histopathological Survey of Macroepifauna and Demersal Fishes," "Health Implications of Sewage Treatment Plants," "Health Effects Associated with the Application of Wastewater to Land," and "Quinuclidine Compounds. Efficient New Syntheses of Hypotensives, Antimalarials, and Antiarrhythmics."

**CENTER FOR LEARNING AND DEVELOPMENT RESEARCH IN EDUCATION**

The Center for Learning and Development Research in Education, located in the College of Multidisciplinary Studies, is designed to stimulate basic and applied research in learning and development, particularly as it refers to the educational process. Faculty and students from this College, as well as faculty and students from other Colleges of The University, are encouraged to study problems appropriate to this area. The objectives of the Center include: promotion of research in learning and development in education; development of cooperative faculty-student research; cooperation with school districts, social service agencies, and community agencies on problems of mutual interest; and solicitation of funds for appropriate activities.

The Center's role consists of identifying and coordinating faculty, student, and community interests, needs, and resources. Faculty members from the College and The University, with interest and training in learning and development in education, participate in projects related to the Center's activity.

**RESEARCH CENTER FOR THE ARTS**

The Research Center for the Arts was established in the College of Fine and Applied Arts on September 1, 1977. The Center's activities encompass the visual and performing arts (studio art, architecture and music), art and architectural history, and art criticism. A primary focus of the Center is on the latter disciplines with special
reference to the study of Iberian and Interamerican arts. These disciplines by their scholarly nature form the nucleus of the Center's activities. Among the goals of the Center are to provide assistance to faculty, students and other persons interested in pursuing research and further studies, and to make available general information on the arts of Spain, Portugal, and the Americas. The Center by so doing takes advantage of the strengths of the courses and programs of the College and University.

The Center fosters professional research in the visual and performing arts (studio art, architecture and music) in general and in Iberian and Interamerican art historical research in particular. It provides the opportunities for faculty and students in the College to continue their own research and to serve the community of scholars within and outside The University.

THE UNIVERSITY BOOKSTORE

The University Bookstore, owned and operated by UT San Antonio, is located on the first level of the Science-Education Building adjacent to the Student Lounge. The Bookstore provides a complete stock of all required and recommended books for UT San Antonio courses. In addition, the University Bookstore carries a complete line of general school supplies, writing instruments, art materials, soft goods, decals, greeting cards, and a variety of gift items.

THE UNIVERSITY CAFETERIA

The University Cafeteria, located in the heart of the campus on the first level of the John Peace Library, provides meals and fountain service to the university community. Owned and operated by UT San Antonio, the Cafeteria serves breakfast, hot lunches, and features short orders, soft drinks, and fountain items. Catering for both large and small groups is available. Further information may be obtained from the Cafeteria.
III. TUITION, FEES, CHARGES, PENALTIES AND DEPOSITS
PAYMENT

Students are entitled to enter class or laboratory only after their tuition, fees, and deposits have been paid.\textsuperscript{1} Payment may be made by personal check for the exact amount due, provided the bank transit number is encoded thereon in compliance with revised Federal Reserve Bank regulations. Checks for larger amounts, if the difference is to be paid in cash to the students, cannot be accepted. In paying by check, students should exercise care. A bad check, whether given by mistake or otherwise, unless it is the admitted error of the bank concerned, is likely to delay actual payment and thus result in a penalty as outlined in the section on Bad Check Charges. The University does not maintain a check cashing service for students. It is recommended that students establish checking accounts in local San Antonio banks before enrolling in order that they can easily cash checks in the city. Many local merchants will not cash out-of-town checks.

TUITION

Pursuant to Subchapter B, Chapter 54, Texas Education Code, each student who registers at UT San Antonio is required to pay tuition\textsuperscript{2} according to the number of semester credit hours for which registration is completed and according to his/her residence classification, as set forth in the tables below:

TUITION EACH SEMESTER

<table>
<thead>
<tr>
<th>Number of Hours Taken\textsuperscript{3}</th>
<th>Residents of Texas</th>
<th>Nonresidents</th>
</tr>
</thead>
<tbody>
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<td>50.00</td>
<td>40.00</td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>14</td>
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<td>560.00</td>
</tr>
</tbody>
</table>

\textsuperscript{1}All tuition charges and fees are subject to change without notice.

\textsuperscript{2}See the Exemption from Tuition and Fees section in this section of the catalog.

\textsuperscript{3}Tuition for resident or nonresident students registered for thesis or dissertation credit only is $12.00 for residents of Texas and $50.00 for nonresidents (U.S. citizens and foreign students) in those instances where such credit is the final credit-hour requirement for the degree in progress. For residence regulations, consult the Director of Admissions and Registrar.

\textsuperscript{4}Foreign students who registered for the first time before June 20, 1975 are charged $14.00 per semester hour, unless (1) an exception for financial need can be demonstrated through the Student Financial Aid Office; or (2) the Coordinating Board, Texas College and University System, certifies that the student's home country charges U.S. citizens at publicly funded colleges and universities a tuition fee equal to or less than $200.00 per semester. Students in (1) and (2) above are charged the previous tuition fee of $14.00 per semester hour, with a minimum of $200.00 per semester.
TUITION, FEES, CHARGES, PENALTIES AND DEPOSITS / 27

15 60.00 600.00 210.00
16 64.00 640.00 224.00
17 68.00 680.00 238.00
18 72.00 720.00 252.00
19 76.00 760.00 266.00
20 80.00 800.00 280.00
21 84.00 840.00 294.00
Each Additional Hour 4.00 40.00 14.00

TUITION EACH SUMMER SESSION

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<th>Number of Hours Taken</th>
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<th>9 Weeks</th>
<th>U.S. Citizens</th>
<th>Foreign Students*</th>
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<th>9 Weeks</th>
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<td>196.00</td>
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</tr>
</tbody>
</table>
Each Additional Hour 4.00 4.00 40.00 14.00 14.00

CONCURRENT TUITION

Students who register at more than one public institution of higher education in Texas concurrently may receive the benefits of a lower tuition rate. If at the time of registration, a student can produce evidence of having already paid his or her tuition at another public institution of higher education in Texas, the student should present such evidence at the Fee Assessment station during registration.

*Tuition for resident or nonresident students registered for thesis or dissertation credit only is $12.00 for residents of Texas and $50.00 for nonresidents (U.S. citizens and foreign students) in those instances where such credit is the final credit-hour requirement for the degree in progress.

*Foreign students who registered for the first time before June 20, 1975 are charged $14.00 per semester hour, with a minimum of $100 per six-week summer term and $150.00 per nine-week summer term.

Foreign students who register for the first time after June 19, 1975 are charged $40.00 per semester hour of credit, unless (1) an exception for financial need can be demonstrated through the Student Financial Aid Office, or (2) the Coordinating Board, Texas College and University System, certifies that the student's home country charges U.S. Citizens at publicly funded colleges and universities a tuition fee equal to or less than $200 per semester, or $100.00 per six-week summer term or comparable period. Students in (1) and (2) above are charged the previous tuition fee of $14.00 per semester hour, with a minimum of $100 per six-week term and $150 per nine-week summer term.
RESIDENCE REGULATIONS

A student entering or re-entering The University of Texas at San Antonio may be required to file a residence questionnaire. The student's status as a resident or nonresident will be made in accordance with the Texas Education Code. If the applicant has any doubt about his status, he/she should consult the Director of Admissions and Registrar prior to registration. There can be no change in residence classification except under the express authorization of the Registrar.

PENALTY OF TUITION UNDER INCORRECT RESIDENCE CLASSIFICATION

Responsibility for registering under the proper residence classification rests with the student. A student who wrongly pays the Texas, rather than the nonresident, tuition is subject to a penalty of $100.00 for each registration under incorrect residence classification. In addition, if a student has obtained residence classification by virtue of deliberate concealment or misrepresentation of facts, he/she may be subject to disciplinary action.

STUDENT USE FEE AND STUDENT SERVICE FEE

Each student who registers at UT San Antonio is required to pay student use and service fees according to the number of semester credit hours for which registration is completed, as set forth in the table below:

<table>
<thead>
<tr>
<th>SEMESTER HOURS</th>
<th>STUDENT USE FEE</th>
<th>STUDENT SERVICE FEE</th>
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<tr>
<td>Each Additional Hour</td>
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</table>

DEGREE APPLICATION FEE

An $8.00 application fee is required of candidates for a degree. Application for a degree must be made at the Registrar's Office and the fee paid no later than the end of the add/drop period of the term (Fall, Spring, or Second Six-Week Summer Session) in which the student plans to graduate. This fee must be paid only once for the same degree. The fee is not refundable. Cap and gown rental is not provided as part of the degree application fee.

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*See the Exemption from Tuition and Fees in this section of the catalog.*
Veterans attending The University under an exemption⁹ are not exempt from payment of this fee.

**THESIS BINDING FEE**

A fee of $5.00 per copy is charged for binding the two official copies of the thesis to be filed with The University.

**LATE REGISTRATION FEE**

A late registration fee of $5.00 is charged for the first day of late registration, and an additional $2.50 per day is assessed thereafter. The maximum late registration fee for any one term is $15.00. This fee may be waived only in extenuating circumstances by the President or his delegate. The late registration fee is not refundable.

**LIBRARY DEPOSIT FOR LIMITED BORROWER'S CARD**

Limited Borrowers are defined in the Appendix of this catalog. By depositing $15.00, a Texas resident may obtain a Limited Borrower's Card for borrowing unrestricted materials in person; this deposit is also required for non-students who are auditing UT San Antonio courses and who wish Library privileges. Persons holding a Limited Borrower's Card are charged a fee of $3.00 (plus copying costs, if any) for each interlibrary loan request. The $15.00 deposit is refundable upon return of the Borrower's Card.

**LIBRARY FINES FOR OVERDUE MATERIALS AND FOR LOST OR DAMAGED ITEMS**

Fines are charged for overdue library materials and for library items that are lost or damaged.¹⁰

**BAD CHECK CHARGE**

A charge of $5.00 is assessed for each returned check to offset the cost of handling dishonored checks. The University will not accept a check from a student who wittingly or unwittingly has previously given two bad checks.

**REPLACEMENT OF STUDENT IDENTIFICATION CARD CHARGE**

A charge of $2.00 is assessed for the issuance of a duplicate student identification card. This charge must be paid at the time the application for the duplicate is made.

**TRANSCRIPT CHARGE**

A charge of $1.00 is made for each UT San Antonio transcript. This fee must be paid before a transcript will be issued.

**LABORATORY FEE**

In certain courses a laboratory fee, not to exceed the actual cost of materials and supplies and not less than $2.00 nor more than $8.00, may be charged. When a laboratory fee is charged, the schedule of classes indicates the associated fee. For each course which involves the use of computers in instruction, a laboratory fee of $8.00 is charged.

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⁹See the Exemption from Tuition and Fees in this section of the catalog.

¹⁰Borrowing and fine regulations of the John Peace Library are available in the Library.
SUPPLEMENTARY AND SPECIAL FEES

Certain art, music and other courses may require supplementary or special fees. When such fees are charged, the schedule of classes indicates the associated fee.

AUDITING FEE

All auditors of courses must submit an approved Request for Audit Form to the Registrar.

Students registered at UT San Antonio may, with the approval of the instructor and Dean of the College in which the course is offered, audit courses by paying an auditing fee of $5.00 per course. The audit fee is not refundable.

Upon approval of a Request for Audit Form, a non-student auditor must pay an auditing fee of $25.00 per course. The fee is not refundable. Non-students over 65 are permitted to audit without paying a fee, provided space is available and a Request for Audit Form is approved. Non-student auditors who wish library privileges may receive them by paying a non-student library deposit (Limited Borrower's Deposit) of $15.00 at the John Peace Library.

Permission to audit may be obtained and fees paid only during the late registration period.

PARKING FEES

Parking fees for students are as follows:

- **Class B**: $12.00 Student parking permit
  - 8.00 if purchased during the spring semester
  - 4.00 if purchased during summer session
- **Class D**: 6.00 Motorcycles, motor scooters, motor bicycles
  - 4.00 if purchased during the spring semester
  - 2.00 if purchased during summer session
- **Class M**: 1.00 Bicycles
  - .50 for less than twelve months

Student vehicles bearing valid State of Texas Disabled Veteran's license plates are exempt from the payment of parking fees. A partial refund is made for any remaining term(s) in which the student does not enroll. Applications for such refunds may be obtained from the Bursar's Office.

FIELD TRIP FEE

A supplementary fee is assessed students in certain courses to pay for the expenses of field trips.

PHYSICAL INSTRUCTION LABORATORY FEE

A fee of $4.00 for a semester or a summer term is required of every student registering for physical education activity class. Lockers, locks, and towels are provided.

STUDENT GYMNASIUM AND FACILITY USE FEE

Students not registered for physical education activity class who desire to use the facilities or use a locker and a lock may obtain it by paying a fee of $2.00 for a semester or summer session or any part thereof. Towels are not provided.
TUITION, FEES, CHARGES, PENALTIES AND DEPOSITS / 31

UTSA AND UT SYSTEM PERSONNEL GYMNASIUM AND FACILITY USE FEE

Faculty and staff gymnasium and facilities use fees are required. Faculty and staff (including guests) desiring the use of the Convocation Center and Gymnasium and other recreational facilities (with lockers and locks provided) are charged fees according to the following schedule. Towels are not provided.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>ANNUAL FEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTSA and UT System Personnel</td>
<td></td>
</tr>
<tr>
<td>1. Faculty-staff member</td>
<td>$12.00</td>
</tr>
<tr>
<td>2. Faculty-staff spouse</td>
<td>6.00</td>
</tr>
<tr>
<td>3. Faculty-staff children</td>
<td>3.00 (maximum of $25.00 per family)</td>
</tr>
<tr>
<td>4. Student spouse</td>
<td>3.00</td>
</tr>
<tr>
<td>5. Student children</td>
<td>1.00</td>
</tr>
<tr>
<td>Guest Fee</td>
<td></td>
</tr>
<tr>
<td>1. Guest of UT San Antonio student, faculty</td>
<td>1.00</td>
</tr>
<tr>
<td>member, or staff member</td>
<td></td>
</tr>
</tbody>
</table>

These fees are non-refundable.

DUPLICATE FEE RECEIPT

A service charge of $1.00 is assessed for the issuance of a duplicate fee receipt. This charge must be paid at the time the application for a duplicate fee receipt is made.

GENERAL PROPERTY DEPOSIT

Every student must make a general property deposit of $10.00 at the time of initial registration to protect The University from losses, such as property loss, damage, or breakage, violation of rules in any University library or laboratory, failure to return keys furnished by The University, or damage to or loss of any other University property. Charges are billed directly to the student or are collected by the department upon reissue of supplies or property. Failure to pay the charges promptly results in denial of the student's readmission or re-enrollment, and in refusal to issue the student's transcript by The University. The property deposit records are reviewed periodically and if charges have been made against the deposit, the student shall be required to bring the deposit up to $10.00.

The deposit is refunded upon request, less outstanding charges, only when the student officially withdraws from school or graduates. A general property deposit which remains without call for refund for a period of four years from the date of last attendance at The University shall be forfeited, and the deposit shall become operative to the permanent use and purpose of student scholarships.

CAREER PLANNING AND PLACEMENT REGISTRATION FEE

UT San Antonio students and alumni interested in developing a placement credential file are requested to register with the Career Planning and Placement Center. Currently enrolled students are permitted free registration. Alumni are assessed a $3.00 annual registration fee. Registrants receive, as part of their registration, the preparation, duplication and maintenance of three credential sets. A fee of $1.00 is assessed for each additional set requested by the registrant during his/her current year of registration.
TEACHER PLACEMENT SERVICE FEE

Presently enrolled students of The University of Texas at San Antonio may register for teacher placement services with the Office of Teacher Certification and Placement on a no fee basis. UT San Antonio alumni are assessed a $3.00 annual fee for the same services. Both students and alumni receive, as part of their registration, the preparation, duplication and maintenance of three credential sets. A fee of $1.00 is assessed for each additional set requested by the registrant during his/her current year of registration.

PROFESSIONAL LIABILITY (MALPRACTICE) INSURANCE

Prior to official registration for courses that place them in a clinical situation, allied health students are required under the Rules and Regulations of The University of Texas System Board of Regents to show evidence of professional liability (malpractice) insurance coverage. The Director of the Division of Allied Health and Life Sciences may be consulted relative to obtaining such insurance.

EXEMPTION FROM TUITION AND FEES

The Statutes of the State of Texas prescribe certain cases in which students can be exempted from tuition and/or certain fees. The various types of exemptions and the fees to which such exemptions apply are described below; however, in each case it is the student's responsibility to initiate the action of applying for an exemption through the Registrar's Office and providing satisfactory evidence that all conditions required for the exemption have been met. Until such time as the exemption is granted, a student will be required to pay all tuition and fees from his or her own funds. Students who might be eligible for an exemption should apply for the exemption at the Registrar's Office at least one month prior to registration of the term in which they plan to utilize the exemption provision.

Exemption of Texas ex-service personnel. Legal residents of Texas are exempted from tuition and all fees and charges, except property deposit fees, student services fees and any fees or charges for lodging, board, or clothing, when they meet all the following criteria prior to the end of the registration period for the term that the exemption is claimed:

1. They have resided in Texas for a period of not less than twelve (12) months prior to the date of registration.
2. They served in the armed forces or in certain auxiliary services in World War I, World War II, the Korean conflict, or the Cold War. If service was in the Cold War, they must have served on active military duty (other than for training) for more than 180 days.
3. They were bona fide legal residents of the state at the time of entering service.
4. They were honorably discharged from service (those who served in World War II and who were discharged because of being over the age of thirty-eight or because of a personal request are not eligible for this exemption).
5. They are not eligible for education benefits provided for veterans by the United States Government.

Benefits for children of Texas veterans. Exemption from payment of tuition and all fees and charges, except property deposit fees, student services fees and any fees or charges for lodging, board or clothing, is extended to children of members of the armed forces who were killed in action or died while in the service in World War II or in the Korean conflict or in the Cold War and to orphans of members of the Texas National Guard killed since January 1, 1946, while on active duty.

Exemption of children of certain disabled public employees. Children of certain firemen, peace officers, employees of the Texas Department of Corrections, and
game wardens who have suffered injury resulting in death or disability sustained in the line of duty are exempt from payment of all tuition, fees, and charges.

Exemption of certain deaf and blind students. Blind or deaf persons who are Texas residents are, under certain conditions, exempt from payment of tuition and all fees and charges, except any fees or charges for lodging, board, or clothing.

Children of prisoners of war or persons missing in action. A dependent child under 21 years of age, or a person under 25 years of age who receives the majority of support from his or her parent or parents, is exempted from the payment of tuition and all fees and charges, except any fees for lodging, board, or clothing, if he or she is the dependent child of any person who is a domiciliary of Texas on active duty as a member of the armed forces of the United States and who at the time of registration is classified by the Department of Defense as a prisoner of war or as missing in action.

Student Use Fee. When the payment of this required fee causes undue hardship, a student may receive an exemption from payment of the fee by making application through the Office of Student Financial Aid. Exemptions are limited to 5% of the total enrollment.

REFUND POLICY AND ADJUSTMENT OF FEES FOR STUDENTS WITHDRAWING, ADDING, OR DROPPING COURSES

A student who officially withdraws from The University receives 100 percent refund of tuition and refundable fees paid only if he or she does so prior to the first class day.

In a semester, upon surrender of the student identification card, a student withdrawing officially a) during the first five class days receives a refund of 80 percent of the applicable portion of the tuition and fees; b) during the second five class days, 70 percent; c) during the third five class days, 50 percent; d) during the fourth five class days, 25 percent; e) after the fourth five class days, no refund. In a summer term, a student withdrawing officially a) during the first, second, or third class day receives a refund of 80 percent of the applicable portion of the tuition and fees; b) during the fourth, fifth, or sixth day, 50 percent; c) the seventh day of class and thereafter, no refund. 11

A student who enrolls in The University for a given term and who is subsequently required to withdraw because of academic dismissal the previous term, receives a refund of all tuition and fees.

Refunds of tuition, applicable fees, student use fees, and student service fees are made for courses dropped within the first twelve class days in the fall and spring or within the first four class days in a summer term if the student paid more than the minimum required and if the student has dropped below the total number of hours for which he or she originally was registered. Tuition and applicable fees for added courses are billed to the student.

The University will refund tuition and fees paid by a sponsor, donor or scholarship to the source rather than directly to the student who has withdrawn if the funds were made available through the institution.

No refunds are made until 15 days have elapsed from the time fees were paid unless the fees were paid in cash or by money order. Refund checks are mailed to the address indicated when the student withdraws from The University. Students entitled to refunds should allow ten working days after the fifteen days clearing period for receipt of the refund.

11 These refund percentages are applicable to tuition, the supplementary fees, the student use fee, laboratory fees, and the student service fees.
The University reserves the right to deduct from the refund any outstanding financial obligations owed The University.

**DEBTS OWED THE UNIVERSITY**

In the event of non-payment of debts owed to The University (or failure to meet admission requirements), any of the following actions may be taken:

1. Denial of re-admission of the student.
2. Denial of further registration.
3. Withholding of official transcripts.
4. Withholding a diploma to which the student would otherwise be entitled.

When a student has any of the above actions against his or her record it is the student's responsibility to clear any obligations with The University and see that the Registrar's Office is notified. No further services of The University will be provided until all obligations are cleared.

A student who pays tuition and fees with a check which is not subsequently honored by a bank and the fault is not that of the bank and who does not make payment within five days will be withdrawn from The University by the Registrar for non-payment of tuition and fees.
IV. INSTITUTIONAL POLICIES CONCERNING STUDENTS
INSTITUTIONAL POLICIES CONCERNING STUDENTS

RULES AND REGULATIONS OF THE BOARD OF REGENTS

All students of The University of Texas at San Antonio are subject to the rules and regulations governing student conduct and discipline as set out in the Rules and Regulations of the Board of Regents of The University of Texas System and in the UT San Antonio Student Handbook.

The Regents' Rules and the Student Handbook have full force and effect as they concern all UT San Antonio students. The Regents' Rules may be consulted in the offices of the President, the Vice Presidents, and the Deans and in the John Peace Library.

A student at The University neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to comply with both the penal and civil statutes of the State and the federal government, the Rules and Regulations of the Board of Regents, and the policies and procedures of The University of Texas at San Antonio. The Student Handbook may be obtained in the Office of the Dean of Students.

STUDENT HEALTH SERVICES

The Application for Admission to The University of Texas at San Antonio includes an Immunization Record Form. This form must be completed by the student's family physician and returned to The University Student Health Center before the student can register.

When The University is in session, a registered nurse is on duty during class hours, and, when needed, a referral is made to a physician for medical treatment. The University Student Health Center has only limited medical capabilities.

Students are advised to carry health and accident insurance. Out-of-town students should have documents to verify insurance coverage to avoid possible delays in obtaining medical treatment.

COUNSELING CENTER

The Counseling Center provides professional services which are designed to help meet the personal and developmental needs of UT San Antonio students. Individual or group sessions are available for students seeking personal, educational, or vocational counseling. Counseling and educational psychologists in the Center deal with a variety of student concerns and utilize counseling techniques, psychological assessment, and other aids to assist students in need of specialized service. All counseling is free, confidential, and on a voluntary basis.

TESTING CENTER

The Testing Center provides a university-wide testing service. National tests are given on national testing dates. For the student seeking a better self-understanding, interest and personality inventories and achievement and intelligence tests may be scheduled by appointment in the Testing Center.

FINANCIAL AID

Loans, scholarships and grants-in-aid are administered through the Office of Student Financial Aid. Financial aid counseling for students and/or parents is an integral part of the total financial aid function. Applicants are urged to contact the UT San Antonio financial aid office about advice concerning opportunities for self-help and sources of financial aid and guidance that will assist them in making decisions about financing their education. An appointment with the Director of Financial Aid is encouraged.
for this purpose during the semester prior to the one for which aid is being requested. Application forms and information on how to apply are available at the Student Financial Aid Office. Eligible students are notified of the amount and sources of financial aid only after they have been admitted officially to The University. Therefore, applicants should apply for admission, before or at the same time they apply for financial aid.

In addition to providing scholarships and loan funds, UT San Antonio participates in state and federal financial aid programs, such as the College Work-Study Program, the Hinson-Hazlewood Loan Program, the Federally Insured Student Loan Program, the Veteran's Administration Educational Loan Program, and the Law Enforcement Education Program. A limited number of scholarships is also available to students with high academic credentials and financial need. Non-interest, short-term emergency loans of up to $120.00 are available to students. These are repayable during the semester in which they are incurred.

Scholastic aptitude and financial need are important factors in determining eligibility for most programs. Each financial aid applicant must:

1. File a Financial Aid Form with the College Scholarship Service or American College Testing Program for determination of financial need. (Filing a Financial Aid Form is unnecessary for students seeking only a Federally Insured Student Loan.)
2. File a UT San Antonio application for Financial Aid with the Office of Student Financial Aid.
3. Meet deadlines set by the Office of Student Financial Aid.

The Texas Rehabilitation Commission offers assistance for tuition and non-refundable fees to students who have certain disabling conditions provided their vocational objectives have been approved by a Texas Rehabilitation Commission counselor. Examples of such conditions are orthopedic deformities, emotional disorders, diabetes, epilepsy, heart conditions, etc. Other services are also available to assist the handicapped student to become employable. Application for such services should be made at the Texas Rehabilitation Commission, 102 Rilla Vista, San Antonio, Texas.

**CAREER PLANNING AND PLACEMENT CENTER**

The Career Planning and Placement Center offers a variety of services and educational programs in response to the career planning and employment placement needs of UT San Antonio students and alumni.¹

To assist students in making career choices, the Center provides information relative to employment opportunities for which students may expect to qualify upon completion of a given degree.

Such information includes, when available, a record of the employment of previously enrolled students, their average starting salaries, and the percentages of UT San Antonio graduates obtaining employment in those fields for which their previous courses of study were intended as preparation.

The Center provides the following employment placement services: part-time, summer and vacation employment opportunities; career placement for students and alumni after graduation; and assistance in the selection of graduate school or further training. Students and alumni may develop a placement file and may meet with representatives from business, industry, and government who conduct on-campus interviews for purposes of career employment.

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¹Fees for services of the Career Planning and Placement Center are set forth in Section III of this catalog.
Educational placement programs are also available at the Center and are designed to assist individuals in the development of effective employment-search skills, techniques and methods, e.g., correspondence methods, mailing campaigns, resume development, and interviewing skills training. Individuals are seen on a "drop-in" or appointment basis.

Students and alumni are encouraged to use the career, vocational, and educational counseling services and the career reference library. It is recommended that students take the aptitude and interest assessment tests and that they participate in the life planning workshops, value clarification labs, decision-making labs, and career exploration seminars.

**TEACHER PLACEMENT SERVICE**

The Teacher Placement Service, located in the Office of Teacher Certification and Placement, assists students from all Colleges and Divisions within The University of Texas at San Antonio who seek employment in the field of education by facilitating contact and communication between students and employers. The services of the teacher Placement Service are available to all presently enrolled students, as well as to alumni of The University of Texas at San Antonio.

**ATHLETICS**

Initially, the athletic program at UT San Antonio consists of general recreational activities and intramural programs. These recreational and intramural programs depend upon the availability of facilities and staff. Eventually, students will be able to participate in handball, track, tennis, basketball and volleyball. Playing fields are planned for soccer, touch football, softball and baseball. As interest among students develops, competitive programs will be offered.

**LIVING ACCOMMODATIONS**

The University provides no on-campus housing. Students are responsible for providing their own housing facilities. A housing directory is available in the Office of Community and Student Affairs to assist students in finding living accommodations in the San Antonio community.

**IDENTIFICATION CARDS**

Student identification cards are mandatory. The card is non-transferable. A replacement cost of $2.00 is charged for lost or mutilated cards.

**DIRECTORY INFORMATION**

All educational records of students at The University of Texas at San Antonio are maintained in accordance with State and Federal Laws.

Pursuant to the Family Educational Rights and Privacy Act, Directory Information at UT San Antonio includes the following:

- Student's Name
- Current and Permanent Address
- Telephone Listing
- Date and Place of Birth
- Major field of study, including concentration
- Classification

*Fees for the Teacher Placement Service are set forth in Section III of this catalog.*
A student's consent is presumed, unless a written request to restrict the information as confidential is made by the student in the Registrar's Office on a prescribed form no earlier than the first day of registration and no later than the 12th class day in a semester, or the 4th class day in a summer term. This consent or restriction remains in effect for the duration of the semester or summer term and must be refiled each subsequent semester or term that the student wishes to restrict the information. In those cases where a student files a request for restriction of information, such information is treated as confidential, and, in response to public inquiries, The University will verify only whether an individual is currently enrolled at The University.

For more specific information concerning confidentiality of student records or release of information consult the Student Handbook available in the Office of the Dean of Students.

ORIENTATION

An orientation program is available to acquaint new students with the purposes and programs of The University, to advise them of registration procedures, and to allow for interviews among students, parents, counselors, and faculty members.

LOST AND FOUND

All personal articles found at The University are placed in the Office of the Dean of Students. Items can be claimed upon proper identification of ownership.
V. ADMISSION REQUIREMENTS
ADMISSION

Admission requirements for graduate study at UT San Antonio are designed so that students admitted will have a high probability of success in graduate level academic work. The criteria for the various classifications of admission to The University of Texas at San Antonio are set forth in the following paragraphs.

ADMISSION AS A GRADUATE DEGREE-SEEKING STUDENT

Unconditional Admission. Every Master's degree program at The University of Texas at San Antonio is based on the assumption that the students participating in it already possess a general college education to the baccalaureate degree level. In order to be eligible for unconditional admission to UT San Antonio as a degree-seeking student at the graduate level, an applicant must: (1) hold a baccalaureate degree from a regionally accredited college or university in the United States or have proof of equivalent training at a foreign institution; (2) have a "B" average (3.0 on a 4.0 scale) in the last 60 semester hours, or the equivalent, of course work for the baccalaureate degree as well as in all graduate level work previously taken, (3) have completed a minimum of 18 semester hours (12 of which must be upper-division) in the area in which the graduate degree is sought, (4) be accepted into the degree program; (5) submit scores from the Graduate Record Examination Aptitude Test (GRE) or, for those applying for the M.B.A. program, scores from the Graduate Management Admission Test (GMAT); and (6) be in good standing at the last institution attended.

Conditional Admission. An applicant desiring to work toward a graduate degree in an area in which his or her previous preparation is insufficient to permit unconditional admission may be admitted conditionally to the graduate degree program with the stipulation that course work or other study as determined by the appropriate Committee on Graduate Studies, the Division Director, and the Dean will be undertaken to remove deficiencies and that such make-up work will be in addition to the regular degree requirements. Any conditions placed on the student's admission are stated in the admission notice. An individual seeking admission as a graduate degree-seeking student whose grade-point average is less than that specified for unconditional admission may be admitted conditionally to a graduate degree program upon the recommendation of the appropriate Committee on Graduate Studies, the Division Director, and the Dean who will assign conditions regarding the number of semester hours to be taken and the minimum grade-point average to be maintained before unconditional status may be attained. In no case may the grade-point average condition be lower than that required for a student to remain in The University as a graduate (degree-seeking, certificate, or special) student. (See the section on Academic Standing.) The student is expected to remove conditions by the end of the first full semester of enrollment. If they are not met, the student may be barred from continuation in the graduate program. An applicant who fails to meet the requirements for unconditional admission and is admitted on a conditional basis may be admitted on academic probation.

1 When there are more qualified applicants than can be instructed adequately by available faculty or accommodated in available facilities, The University may restrict the admission and enrollment of students.

2 A graduate degree-seeking student is one admitted to a graduate degree program. Some graduate degree programs specify additional admission requirements. The applicant should refer to the specific degree descriptions for any admission requirements in addition to the university-wide requirements listed here.

3 An individual review of the applicant's background is made by the appropriate Committee on Graduate Studies, the Division Director, and the Dean for the program to which admission is being sought. A committee may be appointed to examine a student in his or her previous preparation before an application to enter the program is approved. No student is admitted in the absence of a favorable recommendation by the appropriate Committee on Graduate Studies, the Division Director of the program, and the Dean of the College.

4 Information on the GRE and GMAT and applications for the tests may be obtained from the Educational Testing Service, Princeton, New Jersey 08540. The institution code for The University of Texas at San Antonio is 6919-5 for the GRE and 6919 for the GMAT.
If an applicant is not eligible for either unconditional or conditional admission, the applicant is denied admission as a graduate degree-seeking student. The appropriate Committee on Graduate Studies, the Division Director, and the Dean may recommend the applicant’s admission or denial of admission as a Special Graduate Student (see below).

ADMISSION AS A GRADUATE-LEVEL TEACHER CERTIFICATION STUDENT

In order to be eligible for unconditional admission to The University of Texas at San Antonio as a teacher certification student at the graduate level, an applicant must: (1) be eligible for unconditional admission to the graduate degree program(s) appropriate to the certification program sought and have the approval of the Director of the Division of Education; (2) make application for a specific certificate program; (3) be a U.S. citizen, or have evidence of having made application for citizenship; and (4) hold a valid teacher’s certificate in Texas.

An applicant desiring to work toward graduate-level teacher certification in an academic area in which his or her undergraduate preparation is insufficient to permit unconditional admission may be admitted conditionally to the certification program with the stipulation that coursework or other study as determined by the appropriate Committee on Graduate Studies, the Division Director, the Dean of the College offering the degree program, and the Director, Office of Teacher Certification and Placement will be undertaken to remove deficiencies and that such make-up work will be in addition to the regular certification requirements. Any conditions placed on the student’s admission are stated in the admission notice.

An individual seeking admission as a graduate-level certification student whose grade-point average is less than that required for unconditional admission may be admitted conditionally to a certification program with the approval of the appropriate Committee on Graduate Studies, the Division Director, and the Dean of the College offering the degree program and the Director, Office of Teacher Certification and Placement. Conditions will be assigned regarding the number of semester hours to be taken and the minimum grade-point average to be maintained before unconditional status may be attained. In no case may the grade-point average condition be lower than that required for a student in The University as a graduate (degree, certificate, or special) student. (See the section on Academic Standing.) The student is expected to remove conditions by the end of the first full semester of enrollment. If conditions are not met, the student may be barred from continuation in the certification program. An applicant who fails to meet the requirements for unconditional admission and is admitted on a conditional basis may be admitted on academic probation.

If an applicant is not eligible for either unconditional or conditional admission, the applicant is denied admission as a graduate-level certification student. The appropriate Committee on Graduate Studies, the Division Director, and the Dean may recommend admission or denial of admission as a Special Graduate Student (see below).

ADMISSION AS A SPECIAL STUDENT AT THE GRADUATE LEVEL

An individual who does not elect to enter either a graduate-level degree or certification program may seek permission to register as a special student in one or more of the following ways:

1. A certificate student is one admitted to a graduate-level teacher certification program. A student admitted to a graduate teacher certification program according to these provisions and simultaneously to a graduate degree program is considered, for classification purposes, to be a graduate degree-seeking student.

2. A summary of Professional Certificate Programs for Permanent Certification for Teaching in the Public Schools of Texas is available from the Office of Teacher Certification.

3. A special student at the graduate level is one admitted to The University for the purpose of enrolling in graduate and/or undergraduate courses without entering a degree or certification program. All academic requirements of this catalog apply to special students.
the Colleges. To be eligible for admission as a special student at the graduate level, an applicant must: (1) be in good standing at the last institution attended; (2) possess at least a bachelor's degree from a regionally accredited college or university or an equivalent degree from a foreign institution; and (3) have grade-point averages of 3.0 or higher (on a 4.0 scale) in the last 30 hours of academic course work prior to receipt of the highest degree and 3.0 or higher in all academic course work since the degree. An applicant who does not meet the above requirements may be recommended for admission as a special student at the graduate level by the appropriate Committee on Graduate Studies, the Division Director, and the Dean(s) of the College(s) in which courses will be taken. In the latter case, admission may be on academic probation.

Special students at the graduate level are eligible to take any graduate or undergraduate courses for which they have the necessary prerequisites, provided space is available and they have the approval of the course instructor(s). Students holding bachelor's degrees who are admitted as special undergraduate students may enroll in undergraduate courses only. If they wish to take courses at the graduate level, they must apply and be admitted as special graduate students.

Credit earned as a special student may be applied toward a Master's degree only when the credits earned for these courses have been evaluated and approved for this purpose by the appropriate Committee on Graduate Studies, The Division Director, and the Dean of the College offering the degree program. The approval of the Director, Office of Teacher Certification and Placement is required before credit earned as a special student can be applied to a graduate-level teacher certification program.

To continue in The University as a special student in a subsequent term, the student must meet the standards required to remain in The University as indicated in the section on Academic Standing.

ADMISSION AS A TRANSIENT STUDENT AT THE GRADUATE LEVEL

An applicant who wishes to enroll, normally for one session only, without pursuing a degree or a graduate-level teacher's certificate at The University of Texas at San Antonio should apply for admission as a transient student. In order to qualify as a transient student at the graduate level, the applicant must hold at least a baccalaureate degree from a regionally accredited college or university and be in good standing at the last institution attended.

Transient students may register for any courses for which they have the necessary prerequisites, the approval of the course instructor(s), and in which space is available. A student registered in this capacity normally cannot register for a subsequent term unless he or she has been admitted as a degree-seeking, certification, or special student.

ADMISSION OF INTERNATIONAL STUDENTS

The following admission requirements pertain to all applicants for admission who are not citizens of the United States or whose previous education has been outside the United States. All applicants for admission as international students must:

1. Meet the graduate admission requirements for degree-seeking students. Individuals who will be on a student visa may not be admitted other than as degree-seeking or transient students. (An I-20 form is not issued to transient students.)

2. Submit scores from the Test of English as a Foreign Language (TOEFL)* or successfully complete an intensive course in English from an accredited college.

*Students needing to take this test should write to the Educational Testing Service, Box 899, Princeton, New Jersey 08540, requesting information on taking the TOEFL. The code for The University of Texas at San Antonio is 6919.
or university in the United States. A minimum score of 550 on the TOEFL is required. Subsequent English tests and preparation may be required by a student's advisor if more work in English is necessary. TOEFL scores are not required for international students from countries whose primary language of instruction is English; nor are TOEFL scores required for non-citizens of the United States graduating from United States high schools, colleges, or universities or from institutions in which English is the medium of instruction.

3. Submit a statement guaranteeing the student's ability to pay all expenses while a student at The University, if attendance under the F-1 (student) visa is anticipated. The statement may be sent from a parent or guardian when endorsed by a bank or other reliable institution, or from a United States citizen who will accept responsibility for the student's financial needs.

The above admission criteria serve as guidelines for admission for international students. The credentials of each applicant are examined on an individual basis by the appropriate Committee on Graduate Studies, the Division Director, and the Dean responsible for the projected degree program with admission granted only to those who show promise of success in graduate study at The University of Texas at San Antonio.

TEMPORARY ADMISSION

Graduates of U.S. or foreign institutions whose previous preparation cannot be evaluated adequately by admission deadlines may be granted temporary admission on academic probation. Such admission may be granted for one term only upon the favorable recommendations of the Dean(s) of the College(s) in which courses will be taken and the Vice President for Academic Affairs. If the student fails to be granted admission as a degree-seeking, certificate, special, or transient student, under the procedures set forth, the student is withdrawn for failure to meet admission requirements and is not allowed to register until admission requirements are met. Temporary admission is permitted only in rare cases.

Credit earned while under temporary admission may be applied toward a Master's degree and/or certification program only after the student has been admitted to such programs and only when the credits earned for the courses have been approved by the appropriate Committee on Graduate Studies, the Division Director, and the Dean of the College offering the degree program. The additional approval of the Director, Office of Teacher Certification and Placement is required before credit earned as a temporarily admitted student can be applied to a graduate certification program.

APPLICATION DATES

Students applying for admission as degree-seeking, certificate, special, or transient students may apply for admission as early as nine months before the beginning of the term in which they wish to begin graduate study. Application forms and instructions are available from the Admissions Office. The completed application form and all required supporting documents must be on file with the Admissions Office at least 30 days before registration for the term in which studies are to begin. Failure to comply with the application dates may cause deferment of admission until a subsequent term.

ADMISSION PROCEDURES

The procedures to be followed in applying for admission are explained on the Application for Admission form. Each applicant for admission is individually responsible for ensuring that all required support documents (e.g., application form, test
results, required transcripts, etc.) are on file in the Admissions Office, since admission is not considered until the applicant's file is complete.

Students who apply for admission to The University of Texas at San Antonio for any term and do not register, must re-apply for admission if they wish to enroll at a later date. A subsequent application for admission must be in accordance with current admission requirements. New transcripts, test scores, and all other supporting documents are required since files for applicants who do not register are not retained.

RE-ADMISSION POLICIES AND PROCEDURES

Students, other than transient students, who previously have been admitted and registered at The University of Texas at San Antonio, who were enrolled within 12 months prior to the beginning of any semester or summer session, and who are scholastically eligible to return may re-enroll without applying for re-admission. Former students who have not been enrolled within 12 months prior to the anticipated date of return must submit an application for re-admission to the Admissions Office. All former students returning to UT San Antonio who have attended other institutions of higher education since they were last enrolled must submit an official transcript from each such institution. Eligibility for re-admission for any former student depends on academic status at the conclusion of the student's last UT San Antonio enrollment and any subsequent college or university work attempted.
VI. GENERAL ACADEMIC REGULATIONS
REGISTRATION

All students who attend classes at The University of Texas at San Antonio must be registered officially or must be approved as auditors. Registration instructions are included in the Schedule of Classes published for each term. Questions regarding registration should be directed to the Registrar's Office.

The University does not guarantee the availability of particular courses or sections, and admission to classes is permitted only until the maximum number of students allowable in any section has been reached. The University reserves the right to cancel any course or section in which the number of registrants does not warrant its continuation.

LATE REGISTRATION

Late registration permits students to register during the first week of classes in a regular semester or during the first two class days of a summer term. Students who register late are charged an additional $5.00 the first day of late registration and an additional $2.50 per day thereafter with the maximum amount being $15.00 for any one term. This fee is non-refundable. Instructions for late registration are available at the Registrar's Office. Students are not permitted to register after the close of late registration.

Those students who register late are responsible for completing any work missed in the courses for which they enroll during the time the course was in session prior to their being registered. It may be necessary for late registrants to select courses in which to enroll from a reduced schedule since many courses will have been closed at their capacities.

ADDING COURSES

After registration, but during the first week of classes in a semester, or the first two class days in a summer term, a student may add a course only with the approval of the course instructor, the student's advisor, and the Director of the Division in which the course is offered. After the first week of classes and through the twelfth class day of any semester, or on the third or fourth class day of any summer term, the additional approval of the Dean of the College in which the course is offered is required. After the twelfth class day of any semester or after the fourth class day of any summer term, students may not add a course except for extremely rare and extenuating circumstances as approved by the Vice President for Academic Affairs. The University Calendar indicates the deadline dates for adding courses.

DROPPING COURSES

Courses officially dropped during the add/drop period (the first week or a semester or the first two days of a summer term) do not appear on the student's transcript. A student who drop course after the add/drop period and through the first six weeks of a semester or through the first ten days of a summer term may drop courses and receive an automatic grade of "W." The student is responsible for filing the change with the Registrar's Office so that the action becomes official.

If a student finds it necessary to drop a course after the first six weeks of classes in a semester or after the tenth class day in a summer session, it is his/her responsibility to...
initiate and complete procedures for obtaining an approved withdrawal from the course. The forms for this purpose are available in the Registrar's Office. A student who officially drops a course after the first six weeks of classes in a regular semester or after the tenth class day in a summer session must take the form to his/her instructor who will enter on it a grade of "W" if the student is passing the course at the time of withdrawal or a grade of "F" if he/she is failing the course at the time of withdrawal. In order for the action to be official, the student must file the approved form with the Registrar's Office. Students may not drop courses later than the first day of the final week of classes for a semester or a summer term. The University Calendar indicates the deadline dates for students to drop courses each term.

If a student ceases to attend class, the instructor must notify the Registrar's Office of the date on which attendance ceased. The instructor may drop a student from the class for non-attendance when approved by the Dean of the College in which the course is offered. If the student is dropped by the instructor during the first six weeks of a semester or during the first ten days of a summer term, the student will receive a grade of "W." From the beginning of the seventh week of a semester and the eleventh day of a summer term, the instructor shall assign a grade of "W" if the student was passing at the time of the withdrawal or a grade of "F" if the student was failing at the time of the withdrawal.

AUDITING OF COURSES

UT San Antonio students and non-students who wish to audit a course may do so with the approval of the instructor and the Dean of the College in which the course is offered, providing there is space in the classroom after all registered students have been accommodated. A course must achieve its minimum size without auditors. Auditing entitles a student to listen and observe. Participation of an auditor in class is at the discretion of the instructor. No UT San Antonio credit is granted for courses that are audited.

All auditors must submit the Request for Audit Form to the Registrar. A UT San Antonio student pays an auditing fee of $5.00 per course and auditors who are not registered UT San Antonio students must pay an auditing fee of $25.00 per course. Non-student auditors who wish library privileges may receive them by paying a non-student library deposit (Limited Borrower's Deposit) of $15.00 at the John Peace Library. Persons over 65 are permitted to audit without paying an auditing fee, if space is available. Permission to audit may not be obtained and fees paid until the late registration period. No official record is made of enrollment in classes on an audit basis.

VERIFICATION OF ENROLLMENT

Following the add/drop period of each semester or summer term, a verification report is sent to each student indicating the schedule of classes in which he/she is officially enrolled. Any discrepancies between the courses shown on the notice and the courses the student is attending should be resolved immediately by the student in person with the Registrar's Office.

MAINTAINING REGISTRATION

Degree candidates are expected to maintain registration until all degree requirements are satisfied. By failing to register for at least one term within a 12-month period a student breaks his or her registration and must be re-admitted. (See Re-admission Policies and Procedures.) A "re-admitted student" is required to satisfy degree
requirements set forth in the Catalog in effect at the time of re-admission. Students must be registered during any semester or summer term that they are taking courses or required examinations or are receiving guidance toward the thesis.

ACADEMIC STANDING

A student's academic standing, whether the student is degree-seeking, certificate only, special or transient, is defined as: good standing, academic probation, academic dismissal.

Good standing is the absence of any contingency that would result in the student's being on academic probation or academic dismissal.

Academic probation describes the standing of a student at the graduate level who is in one of the following categories:

1) a student who fails to achieve a grade-point average in any term at UT San Antonio of 3.00 or higher;
2) a student who receives a grade of "D" or "F" in any course in a term;
3) a student who does not meet all requirements for unconditional or regular admission and who, by special action is admitted on academic probation;
4) a student who has been reinstated following academic dismissal.

Academic probation is cleared only when none of the above criteria apply and when the student achieves an overall grade-point average of 3.00 in graduate-level courses taken at UT San Antonio. Students on academic probation are encouraged to discuss their status with their academic advisors.

Academic dismissal occurs:

1) when a student at the graduate level earns a grade-point average in any term of less than 2.00; or
2) when a student at the graduate level who is on academic probation during a term would again be placed on academic probation under the provisions of academic probation set forth above. If, however, the student's UT San Antonio grade-point average for the term is at least 3.00, he/she will be continued on academic probation.

CANCELLATION OF ENROLLMENT

Any student who fails to fulfill admission or registration requirements or who otherwise fails to adhere to academic regulations is subject to having his/her enrollment for that term cancelled. Application for re-admission to a subsequent term may be considered, provided the deficiency which resulted in the cancellation has been removed.

WITHDRAWAL PROCEDURES

A student who finds it necessary to withdraw from The University (i.e., drop all courses for which he/she is enrolled) may obtain the form for this purpose from the Registrar's Office. After completing the required form, the student must file it with the Registrar's Office in order to withdraw officially. Students who officially withdraw from The University after the add/drop period, but during the first six weeks of a semester or during the first ten days of a summer term, will receive a grade of "W" for each course in which he/she was enrolled. Students who officially withdraw after the first six weeks of classes in a regular semester or after the tenth class day of a summer session will receive a grade of "W" for each class they are passing at the time of withdrawal and a grade of "F" for each class in which they are not passing at the time
of withdrawal. Students who withdraw from all classes are subject to The University's academic probation and dismissal regulations. Students withdrawing should refer to the regulations on refunds of tuition and fees, readmission policies, and requirements for maintaining registration.

PETITION FOR REINSTATEMENT

A student who has been dismissed academically may petition for reinstatement. Information is available in the Registrar's Office and in the office(s) of the College Dean(s).

GRADUATE STUDENT CLASSIFICATION SYSTEM

Degree-Seeking Student: A student who is admitted to a graduate degree program.

Certificate Student: A student who is admitted to a graduate-level teacher certification program. A student admitted to a graduate teacher certification program and simultaneously to a graduate degree program is considered, for classification purposes, to be a graduate degree student.

Special Student: A student who is admitted for the purpose of enrolling in graduate and/or undergraduate courses in one or more Colleges of The University without entering a degree or certification program.

Transient Student: A student who registers for courses in the summer session only or during one semester only and who does not intend to work toward a degree or certificate at UT San Antonio.

DEFINITION OF A FULL-TIME AND PART-TIME GRADUATE STUDENT

A full-time graduate student (degree, certificate, special, or transient) is one enrolled for nine or more semester hours of graduate credit during a regular semester or for three or more hours of graduate credit during a six-week summer term, or for 5 or more hours of graduate credit during a nine-week summer term.

Upon request, the Registrar may certify students as "full-time" during the term in which they intend to graduate if they are completing degree requirements, regardless of the number of hours involved. Such certifications may be made only for one term. Students requesting full-time certification under this provision should realize that certain external agencies require a specific number of hours of actual enrollment in order for the student to be eligible for various benefits. In such cases, The University must certify the actual number of hours for which the student is enrolled. It should be further understood that students who are enrolled for a term and wish to utilize this provision can be certified as full time only if the courses and/or hours are degree requirements and the courses and/or hours will complete all degree requirements if they are satisfactorily completed.

COURSE NUMBERING SYSTEM

All courses are designated by four-digit numbers following a two or three-letter abbreviation of the subject field. The first digit indicates the level of the course. All courses with a first digit of 1 or 2 are lower-division (freshman and sophomore) courses, and all courses with a first digit of 3 or 4 are upper-division (junior or senior) courses. All course numbers starting with 5 or 6 are graduate courses. The second and third digits are used within the Colleges by each Division to distinguish individual courses. The fourth digit indicates the semester hour value of the course.
PREREQUISITES

Prerequisites are stated for many courses listed in this catalog. The purpose of the prerequisite is to advise the student of the background expected of all students in the course. When a student has not met the specific prerequisites listed, he/she may, under special conditions, obtain permission to register from the instructor of the course. It is the student's responsibility to be sure that he/she has met all prerequisites before enrolling in any course.

REPEATING COURSES

Only those courses listed in the catalog in which the course description specifically indicates "may be repeated for credit" may be repeated with both credit hours and grade points earned being counted. Students at the graduate level may not repeat courses for the purpose of raising a grade.

GRADING SYSTEM

Hours attempted. The number of hours attempted is the total number of hours for which a student has enrolled and received grades of "A," "B," "C," "D," or "F" (see below).

Hours earned. The hours earned by a student are the number of semester hours of credit earned in which grades of "A," "B," "C," "D," or "CR" have been received (see below).

Grade-Point Average. The UT San Antonio grade-point average (GPA) is determined by dividing the number of grade points earned at UT San Antonio by the number of semester hours attempted at UT San Antonio. Credits and grades for work completed at other institutions and credits earned by examination are not included in the UT San Antonio grade-point average.

Grade symbols and grade points.

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<th>Symbols</th>
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<td>A</td>
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EXPLANATION OF GRADE SYMBOLS

"A" through "F." A = Outstanding; B = Above average; C = Average; D = Below average but passing; F = Failure.

"CR" or "Credit." The symbol "CR" is used to indicate that satisfactory performance has been demonstrated by examination (see Credit by Examination section).

"EP" or "Postponement of Final Examination." The symbol "EP" is used to indicate that a student has been permitted to postpone a final examination. See "Postponement of Final Examination Procedures" in this section of the catalog.

"W" or "Withdrawal." The symbol "W" is used to indicate that after the add/drop period a student voluntarily and officially has dropped a course, has ceased to attend
a course without officially dropping it, or was dropped from a course by the instructor. After the "automatic W period," the symbol "W" indicates that the student was passing the course at the time of dropping, ceasing to attend, or being dropped.

"IN" or "Incomplete." The grade of "Incomplete" ("IN"), subject to the regulations of this section, may be assigned a student at the discretion of the instructor. The purpose of the "Incomplete" grade is to allow a student to complete a course without repetition of the regular work of a course. It may not be assigned when a definite grade can be given for the work done. The "Incomplete" grade is given to indicate that some part of the work of a student in the course has, for good reason, not been completed, while the rest has been satisfactorily completed. The student must have been in attendance at least three-fourths of the term.

Incomplete work must be made up within one year of the time that the "Incomplete" grade is received and before the student's graduation. If the work is not completed within this time, the "Incomplete" remains on the student's record, and credit may be earned only when the student re-enrolls in the course and completes the entire course satisfactorily. The time limit does not apply to graduate level thesis or internship courses, except that an "Incomplete" cannot be removed after a degree is awarded. The time limit does apply to all other graduate courses, including Special Problems and Independent Study courses.

Whenever a grade of "Incomplete" is assigned, the instructor is required to file a "Requirements for Removal of Incomplete" report with the Registrar's Office.

"NR" or "No Report." The grade "No Report" ("NR") may be assigned a student only by the Registrar. This symbol is assigned only when in unusual circumstances it is not possible to obtain the student's proper grade by the deadline necessary for processing grades at the close of the term and is replaced with the official grade as soon as possible.

REPORTING OF GRADES

Grades are reported by course instructors by term and are due in the Registrar's Office 48 hours following the final examination. Final grades cannot be withheld nor can reporting of them be deferred. Absence from a final examination should be reported as "EP," if a postponed examination has been authorized in accordance with the "Postponement of Final Examination Procedures" set forth in this catalog.

GRADE REPORTS

The Registrar's Office mails final grades to students as soon as they are compiled after the close of each semester and each summer term. The grade report reflects the grade that appears on the instructor's final grade sheet; subsequent changes are not included. Grades are mailed to the address on file in the Registrar's Office. Only one grade report is mailed; additional copies are not available.

CHANGE OF GRADES

Grade changes from "Incomplete" ("IN") to a letter grade must be made within the time limit provisions explained under "Explanation of Grade Symbols" in this catalog. A grade of "Incomplete" may be changed by the instructor within the time limits, by completing a Removal of Incomplete form and filing it with the Registrar's Office.

Grade changes from "Postponement of Final Examination" ("EP") to a letter grade should be made as soon as possible after the student has taken the authorized
postponed final examination. As explained under "Postponement of Final Examination Procedures" in this catalog, if a postponed final examination is not taken before the end of the fall or spring term following the one for which it was approved, the grade in the course is changed by the Registrar’s Office to "F." Prior to that time the instructor may change the "EP" to another letter grade by completing a change of Grade Form and filing it with the Registrar’s Office.

Any other change of grade must be initiated by the instructor on the required form available in the Registrar’s Office and in the Offices of the College Deans. All requests for a change of grade should be accompanied by a statement explaining the requested change. It is the policy to change a grade (other than "Incomplete") only in the case of error. Additional work performed by a student may not be used to raise a grade that has been reported to the Registrar’s Office. Requests for a change of grade require the approval of the Vice President for Academic Affairs before the Registrar will make the change on the student’s record.

POSTPONEMENT OF FINAL EXAMINATION PROCEDURES

A student who is compelled to be absent from a final examination because of illness or other imperative reason should, either in person or through a friend, petition his/her academic Dean for permission to postpone the examination. This request, which requires prior approval by the instructor, should be made to the Dean as soon as the student knows he/she will be compelled to absent.

The instructor records the symbol “EP” on the final grade report for a student who has been permitted to postpone an examination.

The examination should be given as soon as possible (preferably during the same examination period), but not later than thirty days after the original examination period. If for good reason the student cannot take the examination within the thirty-day period, the examination may be scheduled at any time convenient to the instructor, except that in no case will it be given later than the end of the fall or spring term following the one for which the postponed examination was approved. If a postponed examination is not taken before the end of the next fall or spring term, the grade in the course is changed to "F."

CLASS PARTICIPATION POLICY

Regular attendance at and participation in all meetings of courses for which a student is registered is expected. It is the instructor’s responsibility to set and to communicate to students the attendance requirements for each course. The degree to which classroom participation is required and whether or not work missed by a student during his absence may be made up is at the discretion of the instructor.

When, in the judgment of the instructor, a student has been absent excessively, the instructor may report the absences to the Dean of the College in which the course is offered and recommend that the student be dropped from the course. If the Dean approves the recommendation, he advises the Registrar, who in turn advises the instructor and student of the action taken.

A student who enrolls for a course and then does not attend will be considered absent from class until he/she officially drops the course or until he/she has accumulated an excessive number of absences and is dropped from the class.

CHANGE OF MAJOR OR DEGREE

A student who wishes to change his or her major or degree objective must obtain the required forms at the Registrar’s Office. The change is not official until the student is admitted to the new degree program, certification program, or classification.
GENERAL ACADEMIC REGULATIONS

SCHOLASTIC DISHONESTY
The integrity of a university degree depends on the integrity of the work done for that degree by each student. The University expects that a student should maintain a high standard of individual honor in his/her scholastic work.

"Scholastic dishonesty" includes, but is not limited to, cheating on a test or other class work, plagiarism (the appropriation of another's work and the unacknowledged incorporation of that work in one's own written work offered for credit), and collusion (the unauthorized collaboration with another person in preparing course work offered for credit).

Should a student be accused of scholastic dishonesty, the Dean of the College in which a student is enrolled may initiate disciplinary proceedings.

CATALOG OF GRADUATION
General and specific requirements for graduate degrees may be altered in successive catalogs, but a student who has maintained registration (see "Maintaining Registration") is bound only by the degree requirements of the catalog in force at the time of admission to the graduate program, and within the six-year limitation. At the student's discretion, the requirements as stated in a subsequent catalog may be elected. No degree will be granted on the basis of degree requirements listed in a catalog issued more than six years prior to the date of graduation. In the event that certain required courses are discontinued, substitutions may be authorized or required by the appropriate Committee on Graduate Studies, the Division Director, and the Dean.

APPLICATION FOR A DEGREE
A degree candidate should apply officially for his or her degree at the time of registration or no later than the end of the add-drop period of the term (fall, spring, or summer session) in which he or she intends to graduate. Upon receipt of the degree form and payment of the required fee, an official degree check is prepared and issued to the student by the Office of Admissions and Registrar. The degree check lists all remaining degree requirements.

Students who fail to apply for their degree by the end of the add-drop period of the term in which they intend to graduate may encounter delays in graduation, may not be included in the Commencement Program, and/or may experience a delay in receipt of their diplomas.

Students who apply for the degree in a given term but who do not fulfill all requirements must file a new degree application at the time of registration (but no later than the end of the add-drop period) for the next term in which they intend to graduate. The degree application fee is required only once for the same degree.

GRADUATION DATES
Degrees are conferred at the end of each semester and at the end of the summer session. Formal public ceremonies are held only at the conclusion of the spring semester. Students who wish to participate in commencement ceremonies at the close of the spring semester and who have graduated during the previous summer or fall terms may do so as may degree candidates for the spring semester. Information on the procedures to be followed is available in the Registrar's Office.
TRANSCRIPTS

Official transcripts of all course work taken at The University of Texas at San Antonio are available at the Registrar’s Office. Requests for transcripts must be in writing and must bear the signature of the student whose record is requested. A fee of $1.00 is charged for each copy of the transcripts and must be paid in advance. Transcripts from other institutions submitted to UT San Antonio become property of The University and are not reproduced and/or mailed to other institutions, agencies, or individuals. Upon request, work in progress (i.e., a listing of classes in which the student is currently enrolled) is included with the transcript without additional charge.

Transcript service is withheld from students who have a financial obligation or other commitment outstanding to The University until the obligation is cleared.

RELEASE OF TRANSCRIPTS AND ACADEMIC RECORDS

UT San Antonio transcripts and other information from a student’s academic records are released by the Registrar only upon written request from the student or other person authorized by law and when payment of the appropriate fee is made. Exceptions may be made in response to a subpoena or court order and as provided in the policy on releasing directory information set forth in this catalog.

All official certifications with regard to the academic performance or status of a student or former student of The University of Texas at San Antonio are made by the Registrar’s Office.

CHANGE OF NAME

A student’s name on official records at UT San Antonio is the name under which the student applied for admission, unless a Change of Name form has been processed through the Registrar’s Office. Name changes are made only when appropriate legal documentation accompanies the request, except that upon marriage a student may declare the newly taken name.

CHANGE OF ADDRESS

Currently enrolled students who have changed their addresses should notify the Registrar’s Office by completing the appropriate form. Official notification of change of address is necessary for proper identification of students’ records and for accurate mailing of correspondence, grade reports, transcripts, registration instructions, and information pertaining to graduation requirements.
VII. MASTER’S DEGREE REGULATIONS
UNIVERSITY-WIDE REQUIREMENTS FOR THE MASTER’S DEGREE

In order to receive a Master’s degree from UT San Antonio, the following minimum requirements must be met.

1. The student must be admitted as a degree-seeking student for the degree sought;
2. The student must remove all conditions of admission, if any were assigned at the time of admission;
3. The student must apply for and be admitted to candidacy for the degree;
4. Subject to the six-year time limitation, the student must complete satisfactorily all course work as specified in his or her Program of Study, and, if Option I is selected, must complete satisfactorily the thesis as outlined in the Requirements for Thesis section of this catalog;
5. The student must formally apply for the degree;
6. The student must complete satisfactorily the comprehensive examination, except as provided for M.B.A. degree;
7. The student must meet the grade-point average requirement of 3.00 or higher (on a 4.00 scale) in all work counted as part of the degree program.¹
8. The student must be in good standing.

Detailed descriptions of each of the above requirements are included in this catalog.

TRANSFER OF CREDIT

Ordinarily all work for the Master’s degree must be done at The University of Texas at San Antonio. Transfer credit of usually not more than six semester hours may be allowed for graduate course work completed at another accredited institution upon the approval of the appropriate Committee on Graduate Studies, the Division Director, and the Dean of the College in which the major area is located.² Upon petition by the student and recommendation of the appropriate Committee on Graduate Studies, the Division Director, and the Dean, a maximum of one-third of the semester hours of course work (exclusive of thesis) required for a degree at UT San Antonio may be accepted as transfer credit for the degree. All work submitted for transfer credit must have been completed with grades of “A” or “B” and must have been completed no more than six years before the degree is awarded.

It is the policy of The University of Texas System that all academic institutions within the System may accept graduate credit from each other, and the regular requirements on residency are adjusted accordingly. The applicability of specific courses from other University of Texas institutions to a student’s graduate degree program at UT San Antonio, however, must be approved by the appropriate Committee on Graduate Studies, the Division Director, and the Dean.

CREDIT BY EXAMINATION

Credit by Examination at UT San Antonio is designed to enable students, who may already have achieved the objectives of certain courses leading to a baccalaureate degree, to receive credit for these courses. Credit cannot be earned by CEEB

¹No courses in which grades of less than “C” were earned may be applied to a graduate degree, nor may courses for which the grade of “CR” was earned by examination be applied to minimum degree requirements

²The Registrar’s Office evaluates transcripts and designates which graduate courses are acceptable under the above provisions for transfer toward Master’s degrees at UT San Antonio. Whether or not a course if transferable as graduate course work is determined by the course number assigned by the institution awarding the credit. To be transferable to UT San Antonio (up to a maximum of six hours) courses must be defined as graduate courses at the institution where credit was earned. Courses which are defined as upper-division by their course numbers but permitted to be applied to a graduate degree at the institution awarding the credit are not accepted for transfer toward a Master’s degree at UT San Antonio.
examination or by UT Challenge Examination for any courses used to meet minimum requirements for a graduate degree or graduate teacher certification program. Graduate-level students wishing to satisfy TEA requirements for undergraduate certification programs by means of CEEB testing programs should petition the Office of the Vice President for Academic Affairs for such approval. Graduate degree-seeking students in the College of Business or in the Division of Environmental Studies may challenge by examination any UTSA graduate-level “professional” or “background” course that is required in addition to minimum degree requirements. (See the UTSA Credit by Examination Brochure.)

CORRESPONDENCE AND EXTENSION COURSES
Courses completed by correspondence or by extension may not be applied to a graduate degree program.

COURSES COUNTED FOR ANOTHER DEGREE
No courses counted toward another degree may be applied to a graduate degree, either directly or by substitution. Work done for the Master’s degree may be included in the work for the doctoral degree, when it is offered, provided it is acceptable to the candidate’s Supervising Committee, the appropriate Committee on Graduate Studies, the Division Director, and the Dean.

LIMITATION ON UNDERGRADUATE CREDIT COUNTED TOWARD A MASTER’S DEGREE
With the approval of the appropriate Committee on Graduate Studies, the Division Director, and the Dean of the College in which the student expects to earn his/her degree, a candidate for the Master’s degree may apply a maximum of six semester hours of credit for upper-division (junior or senior) courses completed at UT San Antonio with the grades of "A" or "B" to a Master’s degree; no courses below the upper-division level or with other grades may be applied to the degree.

ADMISSION TO CANDIDACY
All students seeking the Master’s degree at UT San Antonio must file the Application for Admission to Candidacy with the Dean of the College in which the degree program is located. Admission to Candidacy is a degree requirement. The Application for Admission to Candidacy normally should be filed at the end of the first semester of full-time graduate study or upon completion of the first 12 hours of graduate work.

In order to be admitted to candidacy, the student must comply with the following requirements:

1. Complete all conditions of admission, if any were assigned at the time of admission;
2. Complete all special admission requirements for the degree program, if any;
3. Be in good standing;
4. Have an acceptable Program of Study;
5. If a thesis is to be written, the supervising professor and thesis committee must be selected and the thesis topic must be acceptable;
6. Be recommended for admission to candidacy by the appropriate Committee on Graduate Studies and the Division Director.
7. Be approved for admission to candidacy by the Dean of the College in which the degree program is offered.
The Dean, or a committee appointed by the Dean, may examine the student on his/her preparation in the major area and related subjects and may require him/her to make up any deficiencies before the application for admission to candidacy is approved. The examination may be oral and/or written at the discretion of the examiners.

COMPREHENSIVE EXAMINATION

A candidate for a Master’s degree, other than candidates for the M.B.A. degree who complete MGT 5903, must, in addition to all other requirements, pass a comprehensive examination which may be oral or written or both. The examining committee is appointed by the Dean of the College in which the degree is offered. Comprehensive examinations are given only to those students who have been admitted to candidacy for the degree.

OPTIONS FOR MASTER’S DEGREES

Two options are available for most Master’s Degree Programs.³

Option I. The candidate for a Master of Arts, Master of Science, or Master of Business Administration degree is required to complete the required number of semester hours of credit in course work approved by the appropriate Committee on Graduate Studies, the Division Director, and the Dean, including six semester hours of credit for a thesis. The thesis is subject to approval by the student’s Graduate Advisor, Thesis Committee, and Dean.

Students receiving advice and assistance from a faculty member in the preparation of theses are required to enroll in the appropriate thesis course (if necessary, for multiple terms) until final approval of completed thesis has been given and two copies have been filed with the student’s Dean.

Option II. For a Master’s degree under Option II, a student can meet requirements without writing a thesis but instead is required to complete a program of course work, as indicated in Chapter VIII, approved by the appropriate Committee on Graduate Studies, the Division Director, and the Dean.

At the beginning of the student’s Master program he/she should in consultation with his/her Graduate Advisor select the option most suitable to his/her needs. Should a student elect to change options after being admitted to candidacy, he/she will need to apply for candidacy under the new option.

REQUIREMENTS FOR THESIS

The following steps for completing a thesis as part of the Master’s degree are the responsibility of each degree candidate selecting Option I:

1. Secure the approval of the Thesis Director, who is also Chairman of the Thesis Committee. The Thesis Committee consists of the Thesis Director and two additional members of the Graduate Faculty appointed by the College Dean. The student is expected to work closely with the Thesis Director in selecting the thesis topic and in completing other details of his/her study.

2. Submit a preliminary draft for approval by the Thesis Director not later than 45 calendar days before final examinations of the term in which the degree is to be awarded. The first draft copy should be corrected, legible, and typewritten. The format of the thesis must follow University regulations. The detailed requirements are available from the College Dean.

3. Secure approval of the draft by the Thesis Committee. This step is intended to signify that the thesis meets the required standards for content, expression,
format, spelling and accuracy. Candidates are responsible for meeting the standards of those reading and approving the thesis.

4. Submit the approved draft to a typist. The approved draft of the thesis is then to be typed in acceptable form.

5. Submit the final copy of the thesis to the Thesis Director and Thesis Committee not later than 20 calendar days before final examinations of the term in which the degree is to be awarded. This copy of the thesis must be the original and, if acceptable, must be signed by the Thesis Director and members of the Thesis Committee.

6. File two unbound copies, including the original, of the approved thesis with the Dean's Office at least 10 days prior to the last day of classes of the term in which the degree is to be awarded. The copies are transmitted by the College Dean to the Library, where they are bound. One copy is retained by the Library, and the other is returned to the College Dean. (A fee of $5.00 per copy will be charged for binding the official copies of thesis.)

7. It is customary that copies of the thesis be presented to the Thesis Director and members of the Thesis Committee. Arrangements and expenses for binding of all copies, except the two official copies for The University, are the responsibility of the student. Copyright may be arranged by the author and will be at the student's expense.

ADDITIONAL MASTER'S DEGREE

A student who holds a Master's or higher degree may pursue an additional Master's degree at UT San Antonio only under the following conditions:

1) that the additional Master's opens an additional area, field, or concentration;

2) that the proposed second Master's is approved by the appropriate Committee on Graduate Studies, the Division Director, and the Dean of the College in which the additional degree program is offered.

It should be further understood:

1) that the same courses cannot be applied toward two different degrees;

2) that credit applied to a previous degree at another institution which duplicates a portion of the program required under the second degree being sought at UT San Antonio does not reduce the number of hours required for that second degree. Courses already taken would not be required. Rather, additional course work would be substituted for such previously completed courses.

TIME LIMITATION ON APPLYING CREDIT TOWARD A MASTER'S DEGREE

All credit to be applied to a Master's degree must have been earned within the six years immediately preceding the date the degree is awarded. Outdated UT San Antonio credits may be accepted upon approval of the appropriate Committee on Graduate Studies, the Division Director, and the Dean; an examination may be required as a condition for validating credit.
VIII. SUMMARY OF GRADUATE DEGREE PROGRAMS AND SUPPORT AREAS FOR 1977-78
The following graduate degree programs are available during 1977-78. Detailed requirements for each degree are found in Section IX of the present catalog.

Master of Business Administration Degree

Business
Interamerican Management

Master of Arts Degree

Bicultural-Bilingual Studies
Concentrations: (1) Bicultural Bilingual Teacher Education
(2) Bicultural Studies
(3) English as a Second Language

Education
Concentrations: (1) Cultural Foundations of Education
(2) Curriculum and Instruction
(3) Early Childhood and Elementary Education
(4) Educational Management
(5) Educational Psychology
  Counseling and Guidance
  Special Education
(6) Institutions of Higher Education

English
Environmental Management
Concentrations: (1) Management of Human Resources
(2) Urban Studies

History
Spanish
Concentrations: (1) Hispanic Culture
(2) Hispanic Literatures
(3) Spanish Language

Master of Fine Arts Degree
Art

Master of Science Degree
Biology
Chemistry
Environmental Management
Concentration: (1) Management of Natural Resources
Mathematics, Computer Science, and Systems Design

*Course offerings in graduate degree programs may be delayed if facilities are unavailable or if enrollments or resource and space limitations do not warrant their implementation.
Additional graduate courses are available in the following support areas during 1977-78.²

- Anthropology
- Art History and Criticism
- Earth Science
- Comparative Literature
- Geography
- Linguistics
- Museum Science
- Music
- Physical Science
- Political Science
- Sociology

²Course offerings in graduate support areas may be postponed if facilities are unavailable or if enrollments or resource and space limitations do not warrant scheduling or continuation of a particular course.
IX. GRADUATE DEGREE PROGRAMS AND SUPPORT COURSES
COLLEGE OF BUSINESS

MASTER OF BUSINESS ADMINISTRATION
DEGREE IN BUSINESS

The Master of Business Administration Degree in Business is designed to provide intensive education to qualified graduate students and is available to individuals with undergraduate degrees in the business administration areas, as well as to those with specializations outside the business field.

Students whose previous training has been in non-business fields may be admitted to the M.B.A. Program in Business but are required as a condition of admission to complete, in total or in part, depending upon the background of each student, a core of professional courses or their equivalents. Students whose background is in business but who have completed the professional core courses or their equivalents five or more years prior to entering the program will be required to complete successfully or test out of the professional core courses. The professional courses are open only to graduate students and are in addition to degree requirements of the M.B.A. in Business.

Special Admission Requirements. For unconditional admission to the M.B.A. program in Business, applicants must meet university-wide graduate admission requirements and have an approximate composite score of 500 on the Graduate Management Admission Test (GMAT). Those who have not met the requirement of 18 semester hours of course work in the business area receive conditional admission to complete those professional courses or their equivalents which they are lacking. No credit for these courses may count toward degree requirements of the M.B.A. in Business.

The professional core courses are:

- ACC 5003 The Theory, Method, and Use of Accounting
- BDS 5003 Quantitative Methods for Business Analysis
- BDS 5013 Data Processing for Business Analysis
- BLW 5003 Legal Environment of Business
- ECO 5003 Economic Theory and Policy
- FIN 5003 Administrative Finance
- MGT 5003 Conceptual Paradigms of Management
- MKT 5003 Marketing Theory

All applicants for admission to the M.B.A. Program in Business must take the Graduate Management Admission Test (GMAT) and submit results to the Admissions Office well in advance of the desired date of admission.

Degree Requirements. The M.B.A. program in Business requires 36 semester hours of work beyond any hours acquired in the above professional courses. All candidates for the M.B.A. Degree in Business are required to complete successfully the following core of 24 semester hours.

- ACC 5023 Accounting Analysis for Decision-Making
- ECO 5023 Managerial Economics
- FIN 5023 Financial Management
- MGT 5023 Quantitative Methods in Business
- MGT 5033 Business Research Methods
- MGT 5043 Behavior in Organizations

1Applications for the GMAT, or information on the test, may be obtained from GMAT, Educational Testing Service, P.O. Box 966R, Princeton, New Jersey 08540.

2Persons having an undergraduate degree in accounting or the equivalent must substitute an accounting elective for this course with the approval of the Director, Division of Accounting and Business Data Systems and the Dean of the College.
MGT 5903  Management Policy, Problems, and Trends
MKT 5023  Marketing Management

Students for the M.B.A. Degree in Business may elect one of two options to complete the required 36 hours. Under Option I, students are required to complete the 24 semester hours of the above core, 6 semester hours of electives as recommended by the Committee on Graduate Studies, and approved by the appropriate Division Director and Dean, and 6 hours of Master's Thesis. Students who wish to utilize the non-thesis option, Option II, are required to complete the 24 semester hours of the above core, and 12 semester hours of electives as approved by the Committee on Graduate Studies, and approved by the appropriate Division Director and Dean.

MASTER OF BUSINESS ADMINISTRATION
DEGREE IN INTERAMERICAN MANAGEMENT

In response to the geographical, commercial, and ethnic environments of The University of Texas at San Antonio, the College of Business offers the Master of Business Administration Degree in Interamerican Management. The fundamental objective of this degree program is to offer students an opportunity to gain perspective on commercial activities in a setting which is bilingual, transnational, and cross-cultural. To achieve this end, specific interamerican content courses have been developed in the disciplines of accounting, management, marketing and finance. Arrangements with Latin American universities enable students to complete a portion of their work while residing outside the United States. The interamerican content courses and possibilities for foreign study are supplemented by research and workshop opportunities in the area of interamerican business. Students entering the degree program meet the normal admission requirements for the College of Business and are encouraged to undertake Spanish language study concurrently with their work on the M.B.A. Degree in Interamerican Management.

Special Admission Requirements. Applicants for admission to the Master of Business Administration program in Interamerican Management are required to meet the same special admission requirements set out above for the Master of Business Administration Degree in Business.

Degree Requirements. All candidates for the M.B.A. Degree in Interamerican Management must complete the following core of 21 semester hours:

- ACC 5023  Accounting Analysis for Decision-Making
- ECO 5023  Managerial Economics
- ECO 5303  International Trade and Finance
- FIN 5023  Financial Management
- MGT 5023  Quantitative Methods in Business
- MGT 5903  Management Policy, Problems, and Trends
- MKT 5023  Marketing Management

In addition to the above core, students desiring an M.B.A. Degree in Interamerican Management must complete 6 semester hours of international courses as follows:

- FIN 5833  International Managerial Finance and Accounting
- MKT 5673  International Marketing and Management

To complete the program, students choose either an elective program of 9 semester hours in interamerican content courses as listed below or a combination of elective courses.

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3Persons having an undergraduate degree in accounting or the equivalent must substitute an accounting elective for this course with the recommendation of the Committee on Graduate Studies and the approval of the appropriate Division Director and Dean of the College.

4MGT 5903 will likely have a special section which will incorporate a computerized international business game to illustrate how business decisions are influenced by transnational transactions.
interamerican content courses and foreign study as recommended by the Committee on Graduate Studies and approved by the appropriate Division Director and Dean of the College. Normally the foreign study will be taken at a cooperating Latin American institution. An agreement is currently in effect with the Instituto Technologico y de Estudios Superiores de Monterrey and the Universidad de las Americas, Mexico City, to provide courses and workshops.

Interamerican Content Elective Courses:

- ACC 5683 Accounting and Tax Practices in Latin America
- FIN 5673 Interamerican Banking and Financial Systems
- MKT 5693 Marketing Environment in Latin America
- MGT 5173 Comparative Interamerican Administration
- ECO 5423 Problems of the Latin American Economies
- BLW 5173 Legal Environment of Interamerican Business

Foreign course work may be taken as:

- FIN 5963-6 Interamerican Business Internship or
- MKT 5963-6 Interamerican Business Internship
- FIN 5983 Interamerican Business Essay or
- MKT 5983 Interamerican Business Essay
DIVISION OF ACCOUNTING AND BUSINESS DATA SYSTEMS

COURSE DESCRIPTIONS

ACCOUNTING
(ACC)

5003 The Theory, Method and Use of Accounting
(3-0) 3 hours credit.
An intensive study of accounting as a tool to communicate financial information for planning, for analyzing and for controlling business enterprises directed toward decision making.

5023 Accounting Analysis for Decision-Making
(3-0) 3 hours credit. Prerequisite: ACC 5003 or the equivalent. The study of accounting and its uses by management in the decision-making process.

5033 Controllership
(3-0) 3 hours credit. Prerequisite: 24 hours of accounting or consent of instructor.
A study of the accounting executive's role in the management of a business enterprise; case studies of the use of accounting information to management.

5043 Advanced Problems in Auditing
(3-0) 3 hours credit. Prerequisite: Undergraduate course in auditing or consent of instructor.
Specialized study of complex auditing problems including statistical sampling techniques, auditing techniques through the computer, auditor's reports, S.E.C. regulations, and interim reporting.

5883 Accounting and Tax Practices in Latin America
(3-0) 3 hours credit. Prerequisite: ACC 5023 or the equivalent. A study of Latin American fiscal systems and practices in their relation to management and managerial accounting; includes tax laws and tax liability, reporting practices, and development of corporate accounting policy.

6013 Seminar in Current Accounting Theory
(3-0) 3 hours credit. Prerequisite: 24 hours of accounting or consent of instructor.
A study of current accounting literature; accounting bulletins of the American Institute of Certified Public Accountants, Securities Exchange Commission accounting releases and other relevant material.

6023 Seminar in Contemporary Accounting Thought
(3-0) 3 hours credit. Prerequisite: 24 hours of accounting or consent of instructor.
A study of contemporary accounting issues in accounting research; cases and readings of current accounting literature; and the development and presentation of accounting research.

6033 Seminar in Public Accounting Practice
(3-0) 3 hours credit. Prerequisite: 24 hours of accounting or consent of instructor.
A study of the establishment, development, and management of a public accounting practice. Selected topics include: client relations, quality control, fee billing and collection, professional responsibilities, and office management.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered. Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems Courses may be repeated for
credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a Master's degree.

**6983 Master's Thesis**
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate Advisor and thesis director. Thesis research and preparation. May be repeated for credit, but not more than 6 hours will apply to the Master's degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.

**COURSE DESCRIPTIONS**

**BUSINESS DATA SYSTEMS (BDS)**

**5003 Quantitative Methods for Business Analysis**
(3-0) 3 hours credit. Prerequisites: MAT 1022 and 1062 or their equivalents or consent of instructor. A comprehensive study of quantitative methods used in business analysis. Emphasis is given to business applications using algebra, calculus, probability and statistics. Specific topics include decision analysis, economic indexes, forecasting, inventory management, Markov analysis and behavioral statistics.

**5013 Data Processing for Business Analysis**
(3-0) 3 hours credit. Prerequisite: CS 1043 or its equivalent or consent of instructor. Emphasizes computer methods in business research. Research topics addressed include payroll systems, investment analysis, production analysis, input/output systems, and marketing survey analysis.
DIVISION OF ECONOMICS AND FINANCE

COURSE DESCRIPTIONS

BUSINESS LAW

(Blw)

5003 Legal Environment of Business
(3-0) 3 hours credit.
Intensive study of law of contracts, negotiable instruments, sales, bankruptcy, agencies, partnerships and corporations, and wills and estates.

5173 Legal Environment of Interamerican Business
(3-0) 3 hours credit. Prerequisite: BLW 5003 or the equivalent.
Essentials of Latin American commercial law; recognized forms of business organization; corporate structure and liability; government regulation and antitrust policy; law of international commerce.

COURSE DESCRIPTIONS

ECONOMICS

(eco)

5003 Economic Theory and Policy
(3-0) 3 hours credit.
Intensive study of micro- and macro-economic concepts; the price system as it functions under competition, monopoly and partial monopoly; national income measurement and determination; business cycles; money and banking; monetary policy; fiscal policy and economic stabilization.

5023 Managerial Economics
(3-0) 3 hours credit. Prerequisites: ECO 5003 and BDS 5003 or their equivalents.
Application of price theory to economic decisions of the firm. A problem-oriented approach emphasizing demand, production, and profit-maximizing conditions and their implications for output and pricing strategies under various market structures and types of organization.

5033 Microeconomic Theory
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Theory of consumer demand; economic behavior under pure and imperfect competition; price and output determination; resource allocation; general equilibrium; welfare economics.

5043 Public Managerial Economics
(3-0) 3 hours credit. Prerequisite: ECO 5003 or the equivalent or consent of instructor.
Economic theory and methodology relevant to the public sector. Concepts of marginal analysis, calculation of costs and benefits, and economic efficiency applied to problems of environmental quality, education, crime, and human resources. Microeconomic analysis of inflation, unemployment, income distribution, and economic growth; fiscal federalism and revenue sharing.

5053 Macroeconomic Theory
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Construction and consideration of empirical significance of aggregate economic models of the determination of income, employment, interest rates, and the price level; theories of consumption, investment, and money holdings; stabilization policy; comparative statics analysis.

5223 Monetary Theory
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Theory and practice of monetary control; supply and demand for money; instruments of monetary control and channels of economic impact; current issues in theory and policy.
5303 International Trade and Finance  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
Survey of trade theory including modern pure theory and trade policy, balance of  
payments and exchange rates, international financial institutions and policy problems.

5403 Governmental Regulation of Industrial Organization  
(3-0) 3 hours credit. Prerequisite: ECO 5003 or the equivalent. Structure of American  
industry; policy toward business performance and behavior; theory of government  
interference.

5413 Economics of Health  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
Application of economic models to the analysis of the medical and health services  
industry.

5423 Problems of the Latin American Economies  
(3-0) 3 hours credit. Prerequisite: ECO 5023 or its equivalent.  
Survey of problems relating to the economic development of selected Latin American  
countries; structural problems, balance of payments, foreign investment and foreign aid;  
emphasis on current issues.

5463 Economics of Regional Development  
(3-0) 3 hours credit. Prerequisite: ECO 5023 or its equivalent.  
Localational analysis of economic activities; structure of regions and their economic base;  
growth poles and theories of regional growth; geographical and cultural determinisms;  
strategies for area economic development.

5603 Public Finance and Fiscal Policy  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
Theoretical rationale for collective action; incidence, equity, and efficiency of taxation  
methods; externalities and property rights; fiscal management and debt financing.

5913 Antitrust — Legal and Economic Analysis  
(3-0) 3 hours credit. Prerequisite: ECO 5003 or the equivalent. An analysis of promoting  
and protecting competition through law. Antitrust implications of the managerial process  
are to be examined and evaluated.

6303 Economics of Human Resources  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
Study of education process, rates of return and investment in human resources such as  
health and on-the-job training. Educational planning, production and economic growth  
are analyzed.

6313 Labor Economics  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
Survey of wage theory; wage determination and structure of labor markets; employment  
opportunities, economic security, leisure, and technological change; labor organizations  
and collective bargaining.

6363 Manpower Policy  
(3-0) 3 hours credit. Prerequisite: ECO 5003 or the equivalent.  
Projecting of labor needs and the evolution of economic society and the development of  
labor force skills to supply these needs. Alternative choices of resources and public  
programs available at the local, state, and national levels to assist in the efficient  
utilization of human resources.

6373 Economics of Poverty  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
Causes of poverty and ways society provides the means of livelihood for those unable to  
care for themselves.

6553 Urban Economics  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
Economic dimensions of cities, location theory, theories of agglomeration and urban  
growth, analysis of urban problems of the public sector, transportation, pollution, hous­ 
ing, poverty, land use, and crime.
6951-3 **Independent Study**
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 **Special Problems**
1 to 3 hours credit. Prerequisite: Consent of Instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems Courses may be repeated for credit when the topics vary; but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6983 **Master's Thesis**
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate Advisor and thesis director.
Thesis research and preparation. May be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the Master's degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.

**COURSE DESCRIPTIONS**

**FINANCE**

(3-0) 3 hours credit. Prerequisite: ACC 5003 or the equivalent.
Intensive study of the financial dimensions of business enterprise; financial organization structures; financing of business operations; capitalization; refunding and reorganization.

(3-0) 3 hours credit. Prerequisite: FIN 5003 or the equivalent.
A study of the methodology used by the financial manager in the financing of various operations of a business enterprise such as planning, requisition and management of funds.

(3-0) 3 hours credit.
An examination of the investment decision in both the personal and corporate setting. Emphasis is placed on the analysis of risk and return characteristics of various investment alternatives, portfolio selection and management, and tax considerations. Problems and cases include investment decisions in securities, capital goods, and real estate.

(3-0) 3 hours credit. Prerequisite: FIN 5023 or the equivalent.
The evaluation and structure of Latin American financial institutions; operations of the money and capital markets; the role of the government reflected in the operations of the central banks and the public sector financial institutions; source and uses of funds; and the relationships between financial institutions and business enterprises.

(3-0) 3 hours credit. Prerequisite: FIN 5023 or the equivalent.
The principle financial intermediaries in the U.S. economy and the changing dimensions
in financial intermediation. Analysis of money and capital markets, flow of funds, and interest rates and security prices.

5733 **Operation of Financial Institutions**  
(3-0) 3 hours credit. Prerequisite: FIN 5023 or the equivalent.  
Management practices peculiar to managing the financial firm; covered are the major depositary and non-depositary intermediaries. Emphasis is upon asset and liability management, industry structure, and competitive environment.

5813 **Capital Formation and Budgeting**  
(3-0) 3 hours credit. Prerequisite: FIN 5023 or the equivalent.  
Analysis of the cost-of-capital concepts and capital budgeting as these are associated with the micro and macro approach to finance.

5823 **Public Financial Administration**  
(3-0) 3 hours credit. Prerequisite: FIN 5023 or FIN 5043.  
Problems of financial management in governmental units: alternative revenue sources, financial planning and control, cash debt management; survey of modern expenditure management, control and planning.

5833 **International Managerial Finance and Accounting**  
(3-0) 3 hours credit. Prerequisite: FIN 5023 or the equivalent.  
The theory of business finance as applied to the operations of multinational firms; financial analysis and control foreign investment decision; working capital management; and international capital markets and credit institutions. Examination of special accounting problems with particular focus on different systems, consolidation, and translation of foreign accounts. Analysis of recent trends in international monetary affairs.

5913 **Portfolio Theory and Efficient Capital Markets**  
(3-0) 3 hours credit. Prerequisite: FIN 5633 or the equivalent.  
A comprehensive survey on the classical and contemporary theories of optimum portfolio construction; a study of the determinants of risk-return trade-offs in the selection of securities; emphasis on the theory and evidence of efficient capital markets and its implications on the analysis of securities and portfolio management.

5963-6 **Interamerican Business Internship**  
3 or 6 hours credit. Prerequisites: Consent of Division Director and Dean.  
Work experience in interamerican business or public agency.

5983 **Interamerican Business Essay**  
3 hours credit. Prerequisites: Consent of Division Director and Dean.  
Original research report on an interamerican management topic.

6603 **Revenue Administration**  
(3-0) 3 hours credit.  
Elements of management accounting in the public sector. Design and use of expenditure control systems and effectiveness evaluation techniques. Case material utilized to demonstrate application of modern cost accounting to local government decision making. Topics include: revenue estimation, forecasting, audit procedures, property tax assessment.

6613 **Financial Management for Not-For-Profit Organizations**  
(3-0) 3 hours credit. Prerequisite: FIN 5023 or the equivalent.  
The application of basic financial, accounting, and social theory and methods to the management of the finance function for such not-for-profit organizations as hospitals, educational institutions and research organizations. In addition to budgetary problems emphasis will be placed on the methods of expenditure measurements and control.

6623 **Advanced Budgeting**  
(3-0) 3 hours credit. Prerequisite: FIN 5023 or FIN 5043  
The budget as a tool for executive control and decision making; emergent issues in budget processed to make them more effective; executive-legislative relations and the budget at various levels of government. The politics of goals and constituencies in the budgetary process.
6633 Financing Urban Development  
(3-0) 3 hours credit.  
A study of the various sources of revenues available to finance the development of cities.  
An evaluation of the favorable and unfavorable dimensions of these various funding sources. Cost benefit analysis is used to evaluate the alternatives as they affect city development.

6643 Public Sector Investment Problems and Analysis  
(3-0) 3 hours credit. Prerequisite: FIN 5003 or the equivalent, or consent of instructor.  
Theory and analysis of investment decisions undertaken in the public sector. Concepts of capital budgeting, social costs, and benefits, social rates of discount, and human capital investments will be considered.

6951-3 Independent Study  
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.  
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 Special Problems  
1 to 3 hours credit. Prerequisite: Consent of instructor.  
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a Master's degree.

6983 Master's Thesis  
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate Advisor and thesis director.  
Thesis research and preparation. May be repeated for credit, but not more than 6 hours will apply to the Master's degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.
DIVISION OF MANAGEMENT AND MARKETING
COURSE DESCRIPTIONS

MANAGEMENT (MGT)

5003 Conceptual Paradigms of Management
(3-0) 3 hours credit.
Intensive study of the various theoretical constructs of the spectrum of organization and
management theories including the process, empirical, behavioral and quantitative
approaches.

5023 Quantitative Methods in Business
(3-0) 3 hours credit. Prerequisites: BDS 5003 and BDS 5013 or their equivalents.
A study of applications of quantitative approaches to business decision analyses.
Emphasis is given to optimization, statistical, and simulation procedures. Specific
managerial decisions addressed include resource allocation, transportation schedul­
ing, capital budgeting, and inventory and production management.

5033 Business Research Methods
(3-0) 3 hours credit. Prerequisites: BDS 5003 and BDS 5013 or their equivalents.
Theory of methods used in conducting research in business, evaluation of major sources
of business information, analysis of organization in writing research reports and prob­
lems in the major forms of business research.

5043 Behavior in Organizations
(3-0) 3 hours credit. Prerequisite: MGT 5003 or the equivalent.
Study of individual, interpersonal, and intergroup behavior in organizations. Focuses on
problems of formal and informal organization, communications, motivation, change,
conflict, cooperation, influence and authority.

5053 Organizational Communications
(3-0) 3 hours credit. Prerequisite: MGT 5003 or the equivalent.
A survey of theoretical and functional aspects of organizational communication stress­
ing interpersonal, intra and interorganizational, and intercultural communication.

5063 Communication and Change
(3-0) 3 hours credit. Prerequisite: MGT 5053.
This course stresses the methodology of detecting and correcting organizational mal­
functioning arising from individual or organizational communication audit, including
sampling techniques, data gathering techniques (questionnaire, interview, observation)
and data analysis.

5073 Interpersonal Communication in Organizations
(3-0) 3 hours credit. Prerequisite: MGT 5003 or the equivalent.
Specific focus will be placed on problems resulting from status differentiation in
superior-subordinate and peer relationships. Topics will include negative feedback,
information distortion, interviewing, transactional analysis, and interpersonal percep­
tion.

5103 Organizational Systems Analysis
(3-0) 3 hours credit. Prerequisite: MGT 5003 or the equivalent.
An intensive course covering current literature relating to management theory and
enterprise leadership.

5123 Comparative Administration
(3-0) 3 hours credit. Prerequisite: MGT 5003 or the equivalent.
Analysis of various attributes and patterns of administration in public or private enter­
prises operating in widely differing economic, sociocultural, educational, and tech­
nological environments. Focus on the identification and evaluation of similarities and
differences among variables associated with organizations to gain a better understand­
ing of administrative processes.

5143 Managerial Process
(3-0) 3 hours credit. Prerequisite: MGT 5003 or the equivalent. Focus on the functions of
the manager including planning, staffing, organizing, directing, and controlling. Em­
phasizes the process "school" of management.
5153 Social Issues in Business
(3-0) 3 hours credit. Prerequisite: MGT 5003 or the equivalent.
Focus on the forces surrounding the secularly oriented, technologically energized, and scientifically administered business sector of Western society. Develops an understanding of the underlying and basic forces that have fostered and shaped business. Emergence of the social responsibility ethic is examined.

5173 Comparative Interamerican Administration
(3-0) 3 hours credit. Prerequisite: MGT 5003 or the equivalent.
Comparative study of Latin American and U.S. management structures and practices; institutional and behavioral considerations affecting goals and strategy; relation of administrative behavior to central government policy.

5203 Managerial Strategy and Systems
(3-0) 3 hours credit. Prerequisite: MGT 5003 or the equivalent.
Development of a conceptual framework for strategy, its definition, elements, and relationships to the basic functions of managing. Analysis of directional action decisions required to achieve the organization's purposes.

5233 Management of Professional and Technical Laboratories
(3-0) 3 hours credit. Prerequisite: MGT 5043 or consent of instructor.
Focuses on the operation and management of medical and scientific laboratories. Includes the development of the laboratory facilities and services, the operation of the laboratory, the management of the professional staff, and the coordination of the laboratory with other institutional units.

5263 Administration for Health Science
(3-0) 3 hours credit. Prerequisite: MGT 5043 or consent of instructor.
Exploration of basic principles of administration with emphasis on their application to health service organizations. Integrated studies in organization theory and the changing nature of management, decision process, planning and budgeting, personnel administration, control and evaluation.

5273 Health Services Systems Analysis
(3-0) 3 hours credit. Prerequisite: MGT 5043 or consent of instructor. Organized social efforts to mobilize resources for promotion of health, prevention of disease, and provision of medical care. Analysis of the complexities of the pluralistic American health service system.

5283 Health Systems Planning
(3-0) 3 hours credit. Prerequisite: MGT 5043 or consent of instructor.
An examination of planning principles, the use of intermediate to advanced statistical and mathematical programming techniques, and application of advanced planning-programming processes to the development of health care delivery systems.

5293 Program Evaluation in Health Care
(3-0) 3 hours credit. Prerequisite: MGT 5043 or consent of instructor.
A study of the process of program analysis and evaluations in health care. Emphasis on management information structures, process versus output evaluation, economic and cost-benefit analysis, and the use of advanced analytical techniques in the evaluation of organizational goal achievement.

5303 Literary Interpretations of American Business
(3-0) 3 hours credit.
Critically reviewing the literary portrayal given American business and businessmen, this course examines the works of authors, novelists, playwrights, and poets whose writings have been instrumental in shaping the American public's image of the free enterprise system.

5333 Small Business Development and Operation
(3-0) 3 hours credit. Prerequisite: MGT 5003 or the equivalent.
Includes the development of new business organizations, joint ventures, mergers and acquisition, and new products services. Conceptualization of the managerial role in emerging enterprises.

5373 Simulation Analysis of Business Systems
(3-0) 3 hours credit. Prerequisites: BDS 5003 and BDS 5013 or their equivalents.
The application of simulation techniques in the analysis of a variety of business systems.
Examples will include accounting, finance, economics, marketing, and management systems.

5393 Production Management
(3-0) 3 hours credit. Prerequisites: MGT 5003 and MGT 5023 or their equivalents.
An analysis of the management functions related to production: planning, design, construction control, and operational control. Special topics will include forecasting, project management via CPM/PERT, plant location and layout, production scheduling, quality control, job design and analysis, and inventory management.

5413 Information Systems for Management
(3-0) 3 hours credit. Prerequisite: MGT 5023.
A survey of existing management information systems and procedures for planning and implementing these systems. Specific topics will include "needs" analysis, computer equipment selection, budgeting and scheduling for implementation, and post-installation utilization, modification, maintenance, and cost control.

5433 Logistics Systems Analysis
(3-0) 3 hours credit. Prerequisite: MGT 5023.
A study of the logistics requirements during the life cycles of a variety of business, industrial, and military systems. Emphasis is placed on the design, implementation, and management of logistic support systems. Specific topics will include requirements planning, procurement, maintainability, reliability, and analytical tools for evaluating logistic alternatives.

5623 Industrial Relations
(3-0) 3 hours credit.
An analysis of collective bargaining systems in organizations. Emphasis placed on the roles of management, unions, and government in collective bargaining and agreement administration.

5643 Personnel Management Process
(3-0) 3 hours credit. Prerequisite: MGT 5003 or the equivalent.
Management's approach to and the techniques for handling the human factor in an enterprise to maximize the productive efficiency of the firm through sound procurement, development, utilization, and maintenance of its human resources. Focus on behavioral and social science findings as they relate to work and their implications for personnel philosophy, policy, and practice.

5903 Management Policy, Problems, and Trends
(3-0) 3 hours credit. Prerequisite: Semester of graduation or minimum completion of 24 semester hours of M.B.A. work.
A case study course intended to provide a capstone coverage of material taken in the M.B.A. program, as well as broadening the horizons of the student beyond the focus on the firm. The macro-economic aspects of our economy and contemporary problems and trends of business are covered.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours regardless of discipline will apply to the Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems Courses may be repeated for credit when the topics vary, but not more than 6 hours regardless of discipline will apply to a Master's degree.

6983 Master's Thesis
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate Advisor and thesis director.
Thesis research and preparation. May be repeated for credit, but not more than 6 hours will apply to the Master's degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.

COURSE DESCRIPTIONS

MARKETING

(MKT)

5003  Marketing Theory

(3-0) 3 hours credit.
Examination of Marketing in Society and the firm. Functions, institutions, processes, methods and issues will be examined. Emphasis will be on marketing decision-making.

5023  Marketing Management

(3-0) 3 hours credit. Prerequisite: MKT 5003 or the equivalent.
A study of current problems in the area of marketing management. Marketing practices and thought are analyzed.

5043  Consumer Behavior in Marketing Strategy

(3-0) 3 hours credit. Prerequisite: MKT 5023 or the equivalent.
Analysis of the consumer as the focal point of the economic system.

5063  Marketing Research Design and Application

(3-0) 3 hours credit. Prerequisites: MKT 5023, BDS 5003, BDS 5013, or their equivalents.
Problems in obtaining and analyzing internal and external marketing information using various instruments, design and techniques germane to marketing.

5083  Promotion Management

(3-0) 3 hours credit. Prerequisite: MKT 5003 or the equivalent.
Uses of communication processes and programs to attain promotional goals; examination of mass and interpersonal forms of communication and the uses of sales promotion tools.

5103  Problems in Marketing Management

(3-0) 3 hours credit. Prerequisite: MKT 5023 or the equivalent.
Case problems in marketing. Designed to give the student an opportunity to utilize the material and analytical tools that have been acquired.

5123  Analysis of the Sales Function

(3-0) 3 hours credit. Prerequisite: MKT 5023 or the equivalent. Examination of current and relevant issues regarding the role of selling in the firm; discussion of communication concepts and managerial processes in goal selection and attainment for sales activities.

5143  Management of Transportation Systems

(3-0) 3 hours credit. Prerequisite: MKT 5003 or the equivalent.
Characteristics and critical comparisons of various transportation methods, the use of transportation as a component of the distribution system, rate making, labor problems, functions of the ICC, CAB and other regulatory groups, cartels, consideration of new concepts such as the increase in freight forwarders, unit trains and containerization.

5673  International Marketing and Management

(3-0) 3 hours credit. Prerequisite: MKT 5023 or the equivalent.
Analysis of the social, cultural, political and economic environment for international business; problems in organizational structure of the firm and control of international operations in the multinational firm; study of alternative marketing strategies for crossnational market development.

5683  Import-Export Marketing

(3-0) 3 hours credit. Prerequisite: MKT 5023 or the equivalent.
Analysis of theory and practice of import-export operations between North America and Latin America. Special attention to actual practices and procedures of current operations, role of middlemen, customs, and transportation.

5693  Marketing Environment in Latin America

(3-0) 3 hours credit. Prerequisite: MKT 5023.
Analysis of market institutions in economic development in Latin America; problems and
techniques of market research in Latin America; Inter-America trade patterns; special
attention to consumer behavior in the external environment for marketing in Latin
America.

5963-6 Interamerican Business Internship
3 or 6 hours credit. Prerequisites: Consent of Division Director and Dean.
Work experience in interamerican business or public agency.

5983 Interamerican Business Essay
3 hours credit. Prerequisites: Consent of Division Director and Dean.
Original research report on interamerican management topic.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form
available) of the instructor, the student's Graduate Advisor, and the Division Director and
Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a
faculty member. For students needing specialized work not normally or not often avail­
able as part of the regular course offerings. May be repeated for credit, but not more than
6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as
part of the regular course offerings. Special Problems Courses may be repeated for
credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply
to the Master's degree.

6983 Master's Thesis
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate
Advisor and thesis director.
Thesis research and preparation. May be repeated for credit, but not more than 6 hours
will apply to the Master's degree. Credit will be awarded upon completion of the thesis.
Enrollment is required each term in which the thesis is in progress.
COLLEGE OF FINE AND APPLIED ARTS
DIVISION OF ART AND DESIGN
MASTER OF FINE ARTS DEGREE

The M.F.A. degree is the terminal degree in the field of studio art. The objective of this degree is to provide advanced study in the field of art in preparation for careers as practicing artists, artist/teachers at the college or university level, or in other art-related enterprises.

Special Admission Requirements. In addition to satisfying the university-wide graduate admission requirements, applicants are expected to have a Bachelor of Fine Arts Degree or a Bachelor of Arts Degree with a major in art or the equivalent. As part of their undergraduate degree students should have completed approximately 45 semester hours in studio art and 15 semester hours in art history. Students accepted into the M.F.A. program who have fewer than the 15 semester hours required in art history will be given a comprehensive examination early during their first semester to determine if those deficiencies may be waived.

Applicants who do not meet the special admission requirements should consult the catalog for admission criteria as special students.

In addition to filing the regular University application for admission, all applicants must submit to the Division of Art and Design for evaluation twenty slides (35mm) of their work (no portfolios unless requested), a statement describing the objectives of proposed graduate study, and three letters of recommendation.

Degree Requirements.

Major field (painting; drawing; sculpture; photography; printmaking; ceramics). 21 hours
Electives: Additional courses (other than major) including at least 3 hours outside the Division of Art and Design. 15 hours
Art history and criticism 15 hours
Master of Fine Arts Exhibition 6 hours
Master of Fine Arts Research Project 3 hours

60 hours

It is recommended that a student have completed at least 24 semester hours prior to applying for advancement to candidacy.

COURSE DESCRIPTIONS
ART

5003 Concepts and Practices in the Visual Arts
(2-2) 3 hours credit. An exploration of the fundamental attitudes and premises governing the perception and creation of art in the visual arts.

5153 Painting
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent. A course providing an opportunity for students to extend their knowledge of and practice in the demands of the discipline, emphasizing various painting media and development of personal imagery. May be repeated for credit, but not more than 12 semester credit hours will apply toward the M.F.A. requirements.
5253 **Drawing**  
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent. A course providing an opportunity for students to extend their knowledge of and practice in the demands of the discipline, emphasizing various drawing media and approaches for the development of imagery. May be repeated for credit, but not more than 12 semester credit hours will apply toward the M.F.A. requirements.

5353 **Printmaking — (Lithography)**  
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent. A course providing an opportunity for students to extend their knowledge of and practice of the demands of the discipline, including the technical processes and an emphasis on development of personal imagery. May be repeated for credit, but not more than 12 semester credit hours will apply toward the M.F.A. requirements.

5363 **Printmaking — (Intaglio)**  
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent. A course providing an opportunity for students to extend their knowledge of and practice of the demands of the discipline, including the technical processes and an emphasis on development of personal imagery. May be repeated for credit, but not more than 12 semester credit hours will apply toward the M.F.A. requirements.

5453 **Photography**  
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent. A course providing an opportunity for students to extend their knowledge of and practice of the demands of the discipline, including technical processes and the development of expressive images. May be repeated for credit, but not more than 12 semester credit hours will apply toward the M.F.A. requirements.

5553 **Sculpture**  
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent. A course providing an opportunity for students to extend their knowledge of the practice of the demands of the discipline, including a variety of materials and technical methods and approaches for the creation of sculpture. May be repeated for credit, but not more than 12 semester credit hours will apply toward the M.F.A. requirements.

5753 **Ceramics**  
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent. A course providing an opportunity for students to extend their knowledge of and practice in the demands of the discipline, including a variety of technical processes and materials and approaches for the creation of ceramics. May be repeated for credit, but not more than 12 semester credit hours will apply toward the M.F.A. requirements.

6006 **Advanced Studio Problems**  
(0-12) 6 hours credit. Prerequisite: Admission to Candidacy for the M.F.A. degree. Individually directed graduate projects intended to promote the student's creative insight and performance in the designated studio concentration: Painting, Drawing, Printmaking, Sculpture, Ceramics and Photography. May be repeated for credit, but not more than 12 semester credit hours will apply toward the M.F.A. requirements.

6013 **Practicum in the Visual Arts**  
3 hours credit. Prerequisite: Admission to Candidacy and consent of instructor. Students will initiate projects for development outside the regular studio classroom setting. These may include community oriented activities such as workshops for community centers, special art programs for public or private educational organizations and service projects for displays, murals and exhibitions for special environments. The instructor will supervise and evaluate the students' activities.

6846 **Master of Fine Arts Exhibition**  
6 hours credit. Prerequisite: Completion of course requirements in the major. Concentrated studio activity in the major field of study emphasizing preparation of work for the concluding exhibition.

6853 **Master of Fine Arts Research Project**  
3 hours credit. Prerequisite: Completion of course requirements in the major. Students will prepare a research paper dealing with topics related to their creative work emphasizing critical and historical considerations. Topics will be chosen by the student in
consultation with the graduate advisor upon recommendation of the Graduate Studies Committee and the approval of the Division Director and the Dean.

6951-3 Independent Study
1 to 3 hours credit. Prerequisite: Graduate Standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered. Independent reading, research, discussion, and/or writing under the direction of faculty member. For student's needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master of Fine Arts degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor. An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special problems courses may be repeated for credit when the topics vary, but not more than 6 hours regardless of discipline, will apply to the Master of Fine Arts degree.

COURSE DESCRIPTIONS
ART HISTORY AND CRITICISM
(AHC)

5113 Art History Methodology for Artists
(3-0) 3 hours credit. Prerequisite: Acceptance into the M.F.A. program. A basic methodology course designed to introduce the new M.F.A. candidate to all facets of the discipline of Art History.

5813 Topics in the History of Art and Architecture
(3-0) 3 hours credit. Prerequisite: Reading knowledge of a foreign language as appropriate to the topic. Graduate standing in art history or a related area. A lecture course designed to deal with specialized areas in art history. May be repeated for credit as topics vary.

Topics include:
- Renaissance Arts
- Baroque Arts
- Spanish Arts
- New World Hispanic Arts
- Pre-Columbian Arts
- Contemporary Latin American Arts
- Contemporary Mexican Arts
- Mexican American and Chicano Arts
- Contemporary European and U.S. Arts
- 20th Century and U.S. Art since 1945

6813 Practicum in Art History and Criticism
3 hours credit. Prerequisite: Consent of instructor. A form of "Learning Laboratory" in which the principles and methodologies of Art History, Art Criticism and Museology are applied in a practical manner outside the classroom in areas such as museum and gallery activities, historical preservation, research for private collections, and community oriented educational or informational functions and publications. Projects will be initiated by the students with close supervision and evaluation by the instructor.

6823 Seminar in Art History and Art Criticism
(3-0) 3 hours credit. Prerequisite: Graduate standing in art history or related area and consent of instructor. An intensive study of specific bodies of work in terms of form and meaning leading to a definition of style and placement of works within art historical contexts, as well as an examination of art criticism and its influences.

Topics are selected from the following areas: Spanish and other European arts and New World arts (Pre-Columbian, Colonial and Contemporary).

May be repeated for credit when topics vary.
6951-3 Independent Study
1 to 3 hours credit. Prerequisite: Graduate Standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours regardless of discipline, will apply to the Master of Fine Arts degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor. An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems Courses may be repeated for credit when the topics vary, but not more than 6 hours regardless of discipline, will apply to a Master of Fine Arts degree.
DIVISION OF MUSIC
COURSE DESCRIPTIONS
MUSIC (MUS)

5003 Foundation of Music Education
(3-0) 3 hours credit. Prerequisite: Bachelor of Music degree or the equivalent.
A study of historical, philosophical and psychological foundations of Music Education.
This course also develops principles of Music Education.

5013 Trends in Music Education
(3-0) 3 hours credit. Prerequisite: Bachelor of Music degree or the equivalent.
A study of contemporary trends in music education in the elementary school, the middle
school and the senior high school with reference to music of the Southwestern part of the
United States.

5203 Advanced Conducting
(2-4) 3 hours credit. Prerequisite: Bachelor of Music degree or the equivalent and
experience in conducting.
A study of conducting techniques for the advanced conductor. Student should have
controlling experience and analytical capabilities. Individual development will be
emphasized in this course.

5213 Advanced Choral Techniques
(2-4) 3 hours credit. Prerequisite: Bachelor of Music degree or the equivalent and
experience in conducting choral ensembles.
A study of choral techniques including development of tone, phrasing, diction, analysis
of repertoire, rehearsal organization and style.

5303 Survey of Music Literature: 1400-1750
(3-0) 3 hours credit. Prerequisite: Bachelor of Music degree or the equivalent.
A survey of the music to the Renaissance and Baroque periods. Included among the
composers to be studied are Des Prez, Lassus, Victoria, Esquivel, Palestrina, Gabrieli,
Schuetz, Monteverdi, Scarlatti, Bach and Handel. A research paper is expected.

5313 Twentieth Century Music Literature
(3-0) 3 hours credit. Prerequisite: Bachelor of Music degree or the equivalent.
A study of compositional and structural characteristics of twentieth century music.
Includes neo-classical, tone row, neo-romantic, indeterminate, electronic, pan-diatonic
and neo-modal music.

5732 Chamber Chorale
(0-3) 3 hours credit.
The study of selected works for mixed voices through ensemble participation in rehearsal
and performance. May be repeated for credit.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Permission in writing (form available) of the instructor,
the student’s Advisor, and the Division Director and Dean of the College in which the
course is offered.
Independent reading, research, discussion, and/or writing under the director of a faculty
member. For students needing specialized work not normally or not often available as
part of the regular course offerings. May be repeated for credit, but not more than 6 hours
will apply to the Master’s degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor. An organized course offering
specialized study not normally or not often available as part of the regular course
offerings. Special Problems Courses may be repeated for credit when the topics vary,
but not more than 6 hours, regardless of discipline, will apply to a Master’s degree.
The Master of Arts Degree in English is designed to provide the student with a general knowledge of English and American literature, an understanding of the historical context in which that literature was produced, the opportunity to develop skills of critical analysis, and an introduction to the principal kinds of literary research. The degree program prepares the student for a career in teaching in the secondary school or junior college, and it also affords the training and knowledge upon which further graduate study may be based.

**Special Admission Requirements.** In addition to satisfying the university-wide graduate admission requirements, the applicant must have completed at least eighteen semester hours of work (exclusive of freshman courses) in English with a grade-point average of B+ (3.3 on a 4.0 scale) in all work taken in English at the upper-division and graduate levels. These requirements may be waived in unusual circumstances upon the recommendation of the Committee on Graduate Studies and the approval of the Division Director and the Dean of the College of Humanities and Social Sciences.

**Degree Requirements.** All candidates for the degree will be required to complete successfully 36 semester hours, including eight courses in core areas, and to pass the comprehensive examination. Twelve hours will be taken as electives in English or, with the approval of the Committee on Graduate Studies, the Division Director, and the Dean of the College of Humanities and Social Sciences, in a related discipline as part of a coherent program of study.

The comprehensive examination, composed of both written and oral portions, is offered three times a year and is normally taken in that semester in which the candidate is due to complete his or her graduate study. The comprehensive examination may be taken twice only.

A thesis is not written for the M.A. in English.

**Core Areas**

- ENG 5113 Bibliography and Research Methods
- ENG 5313 Renaissance Poetry, or
- ENG 5333 Renaissance Drama
- ENG 5323 Shakespeare Studies
- ENG 5413 Eighteenth-Century Poetry, or
- ENG 5423 Eighteenth-Century Fiction
- ENG 5513 Romantic Poetry, or
- ENG 5523 Literature of the Victorian Period
- ENG 5613 American Romanticism, or
- ENG 5623 American Realism
- ENG 5733 Twentieth-Century Poetry, or
- ENG 5743 Twentieth-Century Fiction
- ENG 5813 History of the English Language, or
- ENG 5823 Structure of American English
COURSE DESCRIPTIONS

ENGLISH (ENG)

5113 Bibliography and Research Methods
(3-0) 3 hours credit.
Methods of literary study and research; the techniques of literary scholarship; basic bibliographical tools and format; fundamental approaches to literary criticism.

5123 Theory of Literature
(3-0) 3 hours credit.
Concentration on the history of literary theory, tracing the development of Platonic and Aristotelian conceptions of literary form and meaning from the Greeks through Romantic artists and theorists; study of problems in post-Kantian aesthetics, particularly as they are manifested in contemporary literary theory and criticism.

5183 Problems in Teaching English
(3-0) 3 hours credit.
Advanced study of materials for teaching English literature and composition in the secondary school and junior college; application of electronic media to teaching literature; application of rhetoric and linguistics to problems in the teaching of composition.

5193 Practicum in English Composition
3 hours credit. Prerequisite: ENG 5183 or consent of instructor.
Supervised Writing Laboratory experience in diagnosing and working with problems in English Composition. Application of traditional and recent theories of composition instruction. Areas of investigation include: dialects, rhetorical theories, basic writing issues, theoretical linguistics, and methods of evaluation.

5213 Chaucer Studies
(3-0) 3 hours credit.
Review of the Canterbury Tales, detailed study of Troilus and Criseyde, and reading of other poems. To be read in Middle English.

5313 Renaissance Poetry
(3-0) 3 hours credit.
Critical survey of verse of the sixteenth and seventeenth centuries; emphasis on Spenser, Donne, Jonson, Herbert, and Marvell.

5323 Shakespeare Studies
(3-0) 3 hours credit.
Reading and analysis of representative plays.

5333 Renaissance Drama
(3-0) 3 hours credit.
Critical survey of the drama to 1642 (exclusive of Shakespeare); emphasis on Marlowe, Kyd, Jonson, Webster, and Middleton.

5343 Milton Studies
(3-0) 3 hours credit.
Reading and analysis of the major poems and selected prose.

5413 Eighteenth-Century Poetry
(3-0) 3 hours credit.
Study of the transition from Neo-classicism to Romanticism; emphasis on the works of Dryden, Pope, Thomson, and Burns.

5423 Eighteenth-Century Fiction
(3-0) 3 hours credit.
Reading and analysis of representative works of fiction; emphasis on Defoe, Swift, Richardson, Fielding, Smollett, Sterne, and Austen.

5513 Romantic Poetry
(3-0) 3 hours credit.
Reading and analysis of verse of the Romantic period; emphasis on Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats.
5523 Literature of the Victorian Period  
(3-0) 3 hours credit.  
Critical survey of verse and prose (including fiction) of the Victorian period; emphasis on Dickens, Eliot, Browning, Tennyson, Arnold, and Hardy.

5613 American Romanticism  
(3-0) 3 hours credit.  
Reading and analysis of verse and prose (including fiction) of the American Romantic movement; emphasis on Poe, Hawthorne, Emerson, Thoreau, Melville, Dickinson, and Whitman.

5623 American Realism  
(3-0) 3 hours credit.  
Reading and analysis of prose (including fiction) of the Realists and Naturalists; emphasis on the work of Howells, Twain, Crane, James, and Dreiser.

5723 Contemporary Literature  
(3-0) 3 hours credit.  
Reading and analysis of important contemporary British and American writers; emphasis on such writers as Bellow, Malamud, Plath, and Lowell.

5733 Twentieth-Century Poetry  
(3-0) 3 hours credit.  
Reading and analysis of the major British and American poets of the first half of this century; emphasis on Yeats, Stevens, Eliot, Frost, Roethke, Cummings, Auden, and Thomas.

5743 Twentieth-Century Fiction  
(3-0) 3 hours credit.  
Reading and analysis of the major British and American novelists of the first half of this century; emphasis on Conrad, Joyce, Virginia Woolf, Faulkner, Fitzgerald, and Hemingway.

5813 History of the English Language  
(3-0) 3 hours credit.  
A study of the historical development of the lexicon and the phonological, morphological, and syntactic patterns of English. Attention to the dialectal variety during the early stages of the language as well as to the distinctive characteristics of the Old, Middle, and Modern English periods.

5823 Structure of American English  
(3-0) 3 hours credit.  
Introduction to formal analysis and description of the structural characteristics of American English on the phonological, morphological, syntactic, and semantic levels, with attention to contemporary variation and to modern theoretical description of regional and social dialects.

6113 Studies in English and American Literature  
(3-0) 3 hours credit.  
Detailed study of a topic in English and/or American literature. Topics may include: medieval literature, Restoration and eighteenth-century drama, American literature of the colonial period, modern drama. May be repeated for credit when topics vary.

6951-3 Independent Study  
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered. Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's Degree.

6971-3 Special Problems  
1 to 3 hours credit. Prerequisite: Consent of instructor. An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the Master's Degree.
DIVISION OF FOREIGN LANGUAGES

MASTER OF ARTS DEGREE IN SPANISH

The Master of Arts Degree in Spanish offers the student a view in depth of Hispanic literature, culture, and language underscoring the unity of the Hispanic world rather than its national components. Elective courses in linguistics further the student's grasp of the Spanish language in its geographical, cultural, and social variations. Comparative literature elective courses permit the candidate an opportunity to place contributions of the Hispanic heritage within the context of world literature, to perceive relationships among literatures, and to discern what is uniquely Hispanic. Within the M.A. degree in Spanish, concentrations are offered in Hispanic Culture, Hispanic Literatures, and Spanish Language. The degree program in Spanish prepares the student for careers in education, government, business, and social service.

Special Admission Requirements. In addition to satisfying the university-wide graduate admission requirements, applicants are expected to have a bachelor's degree with a major in Spanish or the equivalent and an adequate command of both written and oral Spanish, and must submit scores on the Advanced Test in Spanish of the GRE, three letters of recommendation, statement of purpose, and schedule a personal interview with the Graduate Advisor of Record. Knowledge of a second foreign language is strongly recommended.

Degree Requirements. All candidates must complete:

a. the core courses (9 hours)

b. elected concentration courses (12 hours)

c. an additional 9 hours of electives as approved by the Committee on Graduate Studies, the Division Director and the Dean

d. either 6 hours of Thesis (Option I) or an additional 6 hours of elective courses (Option II) as approved by the Committee on Graduate Studies, the Division Director and the Dean

e. comprehensive examination. A comprehensive examination, both written and oral, designed to test the student's general knowledge in the chosen field as well as to evaluate critical abilities is administered normally in the term in which the candidate expects to receive the degree.

Core Courses

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<tr>
<td>SPN 5833</td>
<td>Structure of Spanish</td>
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<tr>
<td>SPN 6703</td>
<td>Concepts of Hispanic Culture: The Dynamics of Change</td>
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<tr>
<td>SPN 6853</td>
<td>Theory of Literature</td>
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Concentration Courses

Hispanic Culture

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<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>SPN 6813</td>
<td>Seminar in Hispanic Cultures</td>
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<tr>
<td>SPN 6823</td>
<td>Modern Hispanic Cultures</td>
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An additional 6 hours as approved by the Committee on Graduate Studies, the Division Director and the Dean to be chosen from among appropriate divisional offerings or from appropriate courses in related disciplines (e.g.: Art History and Criticism, History, Anthropology, Bicultural-Bilingual Studies).

Hispanic Literatures

Student must take one course in each of four groups:

1. SPN 5623 Hispanic Literature of the Middle Ages
2. SPN 5633 Hispanic Renaissance Literature
3. SPN 5663 Hispanic Baroque Literature

*With approval of the Committee on Graduate Studies, the Division Director and the Dean, other courses may be substituted to individualize a student's degree program.*
2. SPN 5723 Spanish Realism and Naturalism: From Freedom to Determinism
   SPN 5783 Twentieth Century Spanish Poetry
   SPN 5793 Twentieth Century Spanish Prose

3. SPN 5683 Spanish-American Realism and Naturalism
   SPN 5753 Twentieth Century Spanish-American Poetry
   SPN 5763 Twentieth Century Spanish-American Prose

4. SPN 5673 The Enlightenment and Romanticism in the Hispanic World
   SPN 5743 Modernism and the Generation of '98

Spanish Language
SPN 5843 History of the Spanish Language
SPN 5863 Spanish Phonetics and Phonology
LNG 5053 Grammatical Models and the Development of Linguistics

And one of the following:
SPN 6843 Seminar in Hispanic Linguistics
SPN 5883 Spanish Syntax
SPN 5893 Hispanic Dialectology

Option I
The satisfactory completion of a thesis in accordance with university regulations as stated under "Options for Master's Degrees."

Option II
An additional six (6) semester hours of course work in another discipline related to the student's Concentration, or in other Concentrations, as approved by the Committee on Graduate Studies, the Division Director and the Dean.

COURSE DESCRIPTIONS

SPANISH
( SPN )

5373 Research Methods in Bibliography in Hispanic Studies
(3-0) 3 hours credit.
Methods of research, basic bibliographical tools, critical terminology, techniques of scholarly writing, library procedures applied to Hispanic language, culture, and literature.

5623 Hispanic Literature of the Middle Ages
(3-0) 3 hours credit.
Individual works as representative of the Medieval world view, the mixture of Western and Eastern cultures, and the initiation of genres from the tenth century to the beginning of the Renaissance.

5633 Hispanic Renaissance Literature
(3-0) 3 hours credit.
A study of Hispanic Renaissance epics, lyric poetry, prose, and drama. Medieval survivals and Italian innovation. The Spanish awareness of the New World and its reflections in literature. Spaniards' writing from Spanish America and their themes: landscape, man, ethics, the Conquest.

5643 Don Quijote
(3-0) 3 hours credit.
A study of the novel's narrative structure, literary motifs, stylistic devices, and ideological background. The meaning of Don Quijote in Western tradition.
5663 Hispanic Baroque Literature
(3-0) 3 hours credit.
A study of Hispanic Baroque both in Spain and Spanish America. Literary genres, themes, style, and ideological background.

5673 The Enlightenment and Romanticism in the Hispanic World
(3-0) 3 hours credit.
Selected readings in the essay, poetry, and drama to illustrate Hispanic manifestations of the new literary genres, themes and styles generated by the eighteenth century Enlightenment and the Romantic Revolution.

5683 Spanish-American Realism and Naturalism
(3-0) 3 hours credit.
Selected readings exemplifying the development of narrative prose from the cuadros de costumbres of the mid-nineteenth century through the regionalista, indigenista and indigenista writings in the twentieth century.

5723 Spanish Realism and Naturalism: From Freedom to Determinism
(3-0) 3 hours credit.
Theory and practice. Selected readings in nineteenth century Spanish prose from Larra to Blasco Ibanez exemplifying the trend from freedom to determinism.

5743 Modernism and the Generation of '98
(3-0) 3 hours credit.
The cosmopolitan concept of art for art's sake at the turn of the century contrasted to literature as the search for national and personal roots. Selected readings from both Spain and Spanish America.

5753 Twentieth Century Spanish-American Poetry
(3-0) 3 hours credit.
Studies of the major works from the vanguard movement to the present.

5763 Twentieth Century Spanish-American Prose
(3-0) 3 hours credit.
Examination of works with emphasis on literary innovations and new currents in the Novel and short story.

5783 Twentieth Century Spanish Poetry
(3-0) 3 hours credit.
Studies of the major works from the generation of '27 to the present.

5793 Twentieth Century Spanish Prose
(3-0) 3 hours credit.
Examination of works with emphasis on literary innovations and new currents in the novel and short story.

5803 Mexican-American Literature
(3-0) 3 hours credit.
Mexican-American literature in the realm of the Hispanic tradition. Similarities and divergences. Its ethnic, social and linguistic characteristics. Its correlation with various forms of artistic expression. Genres, themes, and authors. Localism and universality.

5833 Structure of Spanish
(3-0) 3 hours credit.
Introduction to the formal framework of analysis and description of the structural characteristics of Spanish on the phonological, morphological, and syntactic levels with attention to structural features of Spanish-American variants.

5843 History of the Spanish Language
(3-0) 3 hours credit.
Chronological development of the Spanish language. Sound changes and morphosyntactic changes as processes in a living community; attention given to linguistic features produced through cultural contacts and interaction.

5863 Spanish Phonetics and Phonology
(3-0) 3 hours credit.
The framework of articulatory phonetics and its application to the description of Spanish. Analysis of the sound system of Spanish from both the structuralist and transformational points of view. Attention given to regional and social variation.
5873 Advanced Studies in Spanish Grammar
(3-0) 3 hours credit.
Readings and discussions of a variety of studies on Spanish grammar and in-depth analysis of selected problems.

5883 Spanish Syntax
(3-0) 3 hours credit.
Introduction to the modern framework of grammatical description and the application of it to Spanish. Consideration of the major syntactic patterns in Spanish and their relevance for achieving an in-depth command of Spanish usage.

5893 Hispanic Dialectology
(3-0) 3 hours credit.
A study of regional and social variation of Spanish with regard to pronunciation, grammar, and vocabulary. Special attention to San Antonio, Mexican-American, and Mexican Spanish.

6703 Concepts of Hispanic Culture: The Dynamics of Change
(3-0) 3 hours credit.
A profile of the geography and regional dialects, the races and religions, the economics and politics of the Spanish-speaking world as seen through the eyes of both literary and non-literary figures.

6813 Seminar in Hispanic Cultures
(3-0) 3 hours credit.
Studies of different facets of Hispanic Civilization such as: Christian and non-Christian cultures; "Civilization and Barbarism"; Revolutionary Movements and the Arts; Conquest and mestizaje. May be repeated for credit when topics vary.

6823 Modern Hispanic Cultures
(3-0) 3 hours credit.
Studies of cultural expression of particular ethnic groups and regions, such as: Spanish-speaking Minorities in the U.S.; the Afro-Antillean Culture; Cultures of the River Plate, Mexico and Venezuela; Indian Cultures. May be repeated for credit when topics vary.

6833 Seminar in Hispanic Literatures
(3-0) 3 hours credit.
Studies of independent topics not covered in the regular sequence of Hispanic literature courses. Stress will be on research. May be repeated for credit when topics vary.

6843 Seminar in Hispanic Linguistics
(3-0) 3 hours credit.
Studies of independent topics not covered in the regular sequence of Hispanic linguistics courses. Stress will be on research. May be repeated for credit when topics vary.

6853 Theory of Literature
(3-0) 3 hours credit.
Essential problems of literary theory and critical methodology. Areas covered generally include language as literature, literature and society, literature as symbolic form, genres, motifs and themes, periods, styles, and generations.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a Master's degree.
6983 **Master's Thesis**

3 hours credit. Prerequisite: Admission to candidacy and permission of the Graduate Advisor and thesis director. Thesis research and preparation. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.

### COURSE DESCRIPTIONS

#### COMPARATIVE LITERATURE (CL)

5013 **Theory of Comparative Literature**

(3-0) 3 hours credit.


5023 **Genre Studies**

(3-0) 3 hours credit.

Examination of genres or sub-genres in terms of their distinctive features and diachronic development.

5033 **Motif Studies**

(3-0) 3 hours credit.

The course will focus on literary motifs and trace their development through a variety of texts and cultures.

5133 **Renaissance, Mannerism, Baroque**

(3-0) 3 hours credit.

A comparison of European literary styles and their ideological background from the 15th to the 17th centuries.

5153 **Romanticism, Realism, Naturalism**

(3-0) 3 hours credit.

Study of European, North and South American literary styles from the termination of the Enlightenment to the end of the 19th century.

5213 **Major Authors**

(3-0) 3 hours credit.

Juxtaposition of authors from varying traditions, demonstrating the commonality of literary experience.

5223 **Twentieth Century Studies**

(3-0) 3 hours credit.

The study of Symbolism, Modernism, Expressionism, Surrealism, and Existentialism.

6213 **Literature and the Other Arts**

(3-0) 3 hours credit.

Examination of the relationship between literature and one or more of the other arts (e.g., painting, music, sculpture, film). The course will focus both on specific works of art and on the validity of comparing the arts.

### COURSE DESCRIPTIONS

#### LINGUISTICS (LNG)

5013 **Sociolinguistics**

(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor.

Theory, research, and field collection of data for the study of linguistic variation that can be related to social, economic, geographical, and other aspects of cultural groups in various societies.
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5023 Psycholinguistics
(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor. The study of the empirical evidence for linguistic hypotheses in human behavior, i.e., the validation of hypotheses about competence on the basis of actual performance. Relationship between first and second language acquisition and development, relationship between language and thought.

5043 Phonology
(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor. Analysis of the sound systems of various languages and the formulation of descriptions to explain them. Readings in both structuralist and generative descriptions.

5053 Grammatical Models and the Development of Linguistics
(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor. Description and comparison of various grammatical models with emphasis on the Twentieth Century and the relationship of these models to earlier approaches to language study.

5063 Theory of Syntax
(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor. Analysis of grammatical problems and consideration of adequate ways of describing and explaining them.

5073 Historical Linguistics and Language Families
(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor. The comparison of historically related languages and the methods of reconstructing their common ancestor. The nature of language change. A survey of the family grouping of some of the languages of the world, with attention given to structural differences.

5083 History of Linguistics
(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor. A history of the various stages of the development of linguistics as a discipline in the Western World.

5093 Language Variation
(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor. Geographical variation of language, comprised of traditional dialectology and linguistic geography, including work with linguistic atlases. Social variation of language, with attention to its role in language change and the development of dialects.

5113 Computer-Assisted Research In Language Study
(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor. Familiarization with the capabilities and limitations of the computer in problems involving language. Learning and utilizing a computer language in linguistic analysis, literary text analysis, or any application where the data are essentially strings of words.

5123 Contrastive Linguistics
(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor. A comparison of the salient phonological, syntactical, and semantic features of various languages with a pragmatic explanation of the difficulties which the differences in structure cause the speaker of one language in learning another.

5133 Semantics
(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor. The structure of meaning involving the arbitrary association of various morphemes with things and situations. The concept of the linguistic sign. Symbol and referent. Denotation and connotation.

5143 Linguistic Structures
(3-0) 3 hours credit. Prerequisite: LNG 3813 or equivalent or consent of instructor. The study and analysis of language structures from various theoretical points of view including structural and generative-transformational.
DIVISION OF SOCIAL SCIENCES
THE MASTER OF ARTS DEGREE IN HISTORY

Objectives. The Master of Arts program in History is founded on two objectives. The first is to build an awareness of history as an intellectual enterprise and an identification with the scholars who carry it forward. While it is necessary to be acquainted with the findings of historians, it is also essential to appreciate the discipline as a scholarly venture and to participate actively in that venture.

The second objective is to examine in detail one of several areas of historical study, with cross-disciplinary coursework serving to broaden the student's ability to interpret historical data. The program of study incorporates an integrated body of formal courses, supervised study, and an original research project.

Degree Requirements. The Master's program consists of 27 credit hours of coursework in history plus 6 credit hours of thesis credit. With approval, up to 9 hours of coursework may be taken in fields other than history. During the first semester after admission to the program a plan of studies must be submitted to the Graduate Advisor. The program of studies, with the recommendation of the Committee on Graduate Studies, requires approval of the Division Director and Dean. A comprehensive examination is administered at the conclusion of coursework, prior to beginning the Master's thesis. The thesis is based on original scholarship and is required of all degree students except those who, in the faculty's judgment, have previously completed equivalent scholarly work. A student for whom the Master's thesis is waived will take 6 additional credit hours of coursework in history or in a related area in lieu of the thesis.

Competence in a foreign language will be required where warranted, given the student's curricular emphasis and thesis research. The language requirement is determined during the student's first semester in the program and must be fulfilled before beginning work on the thesis.

The sequence of courses selected by the Master's student must build to a coherent and definable area of emphasis. Possible areas of emphasis are: 1) Historical Studies of the U.S.-Mexican Borderlands, 2) Historical Process and Literature in Latin America, 3) the Overseas Expansion of Europe, and 4) American Social History. Prospective students should consult the Division's Graduate Advisor for approved course references.

COURSE DESCRIPTIONS
HISTORY (HIS)

5013 Historiography (3-0) 3 hours credit.
An examination of the nature of history, historical method, appraisal of sources, and presentation of results. A research paper is normally required.

5123 The American Revolution, 1763-1789 (3-0) 3 hours credit.
A history of British America from the imperial crisis of 1763 to the ratification of the United States Constitution in 1789, with emphasis on the early beginnings of the American nation, and social, economic, military, and cultural features of the revolutionary movement.

5143 The Civil War, Reconstruction and American Society (3-0) 3 hours credit.
The social background and causes of the Civil War and the impact of the war and of Reconstruction on society and politics.
5163 **The American Frontier Experience**  
(3-0) 3 hours credit.  
A history of the westward movement of population from the Atlantic seaboard to the mid-continent, treating particularly the frontier thesis of Frederick Jackson Turner. Emphasis on the effects of the frontier experience upon American social structure, politics, economy, life style and attitudes as influenced by the changing frontier.

5173 **History of United States Immigration**  
(3-0) 3 hours credit.  
The emergence and impact of immigrant groups in the United States, from colonial times to the present, with special emphasis on patterns of settlement, assimilation, acculturation, discrimination, cultural resistance and preservation, and the contributions of immigrants to the American experience.

5183 **The Rise of American Industrial Society, 1877-1929**  
(3-0) 3 hours credit.  
The political, economic, cultural, and social evolution of industrial society in the United States from 1877 to 1929, focusing on reactions to the growth of big business and organized labor and their impact on urbanization. Significant developments include the emergence of the United States as an industrial power, the Populist Revolt, neo-imperialism, the Progressive Era, and the Great Depression.

5193 **The Emergence of Modern America, 1929 to the Present**  
(3-0) 3 hours credit.  
Analysis of recent American history with emphasis upon the rise of the United States as a world power, the Great Depression, FDR and the New Deal, World War II, the Cold War, and an assessment of the administrations of recent presidents.

5203 **Seminar in American State and Local History**  
(3-0) 3 hours credit.  
The relationship of local and immediate events to national and regional affairs; the possibilities for classroom use of local history in stimulating student interest in broader historical matters; use of local source materials such as county, community, and private documents.

5263 **The Spanish Borderlands, 1521-1821**  
(3-0) 3 hours credit.  
A comprehensive study of Spanish exploration and colonization in the borderlands adjacent to the international boundary between the Southwestern United States and Mexico. Emphasis on Hispanic institutions and cultural values which shaped the development of a frontier society on the eve of Mexican independence. Attention is given to bibliographic sources and specialized readings.

5273 **The Mexican Borderlands Since 1821**  
(3-0) 3 hours credit. Prerequisite: HIS 5263 recommended.  
A continuation of The Spanish Borderlands, 1521-1821, with a comparative description and analysis of the historical development of Texas, New Mexico, Arizona, and California from the Treaty of Guadalupe Hidalgo to the 20th Century.

5293 **The Trans-Mississippi West**  
(3-0) 3 hours credit.  
A regional history of the exploration, acquisition, settlement, and development of the territory west of the Mississippi River in the nineteenth and twentieth centuries, with emphasis on the influences of the frontier upon Spanish and Anglo-American institutions.

5353 **Seminar in Texas History**  
(3-0) 3 hours credit.  
An examination in broad perspective of significant historical trends in Texas, covering such topics as exploration, migration, settlement, political growth, economic development, and cultural conflict and confluence. Attention to archival resources, bibliography and current instructional materials.

5403 **History of Mexico and Guatemala: The Colonial Period**  
(3-0) 3 hours credit.  
Survey and detailed examination of the major events, trends and developments during the period of Spanish domination from 1521 to 1810. Consideration will be made of the
legacy of native culture and social systems from the Pre-Hispanic past. Demographic, social and economic disruptions and readjustments in the early colonial period; the viceroyalty.

5413 History of Mexico: The Republican Period
(3-0) 3 hours credit.
A detailed survey of Mexican history from independence to the present, concentrating on the Santa Anna period, the United States-Mexican War, the Juárez reforms, the rise and decline of Porfirian rule, and the significance of the Revolution of 1910 and its aftermath.

5443 History of South America: The colonial period
(3-0) 3 hours credit.
Includes consideration of the Caribbean; Portuguese colonization of Brazil; the conquest of Peru and the civil wars; the conflict between crown and colonists over native populations; Jesuit settlements in Paraguay; social, political and cultural developments within the colonies; the economic basis of The Wars of Independence.

5453 History of South America: The Early Republican and Modern Periods
(3-0) 3 hours credit.
The Wars of Independence; conservative/liberal conflicts and civil wars in the early republican period; the War of the Pacific; social, economic and political developments; Brazil as a separate tradition. Relations between South American republics and the United States; the Panama Canal incident; European immigration; industrialization and social change; World War II; demographic changes and foreign immigration; Communism and revolutionary movements; Castro and Cuba.

5463 Latin American Leaders of the Republican Period: A Biographical Approach
(3-0) 3 hours credit.
The biographical approach to Latin American history; problems of biographical research on post-independence leaders; the militaristic legacy of The Wars for Independence and the rise of the caudillo; major biographers and their works; the lives of major republican Latin American leaders and their influence on the course of Latin American history and culture.

5503 Seminar in the History of Mexico
(3-0) 3 hours credit.
An examination of selected issues of Mexican history such as the role of the Church in Mexican society in colonial and republican Mexico, the colonial legacy, problems in U.S.-Mexican relations, and causes of the Revolution of 1910. Individual research in primary and secondary sources will be emphasized.

5583 The Age of Exploration: Fifteenth Through Seventeenth Centuries
(3-0) 3 hours credit.
An analysis of European discovery, exploration, economic expansion, and initial colonization in Asia, Africa, and America, with special attention to the operation of European imperial systems in the seventeenth century and the impact of the European presence on indigenous societies.

5573 The Age of Imperialism: Eighteenth Through Twentieth Centuries
(3-0) 3 hours credit.
Imperial rivalries, industrialization and imperialism, late nineteenth century imperialism, indigenous reactions, decolonization, and national liberation movements.

5633 English History From the Seventeenth Century
(3-0) 3 hours credit.
Selected aspects of English history from the seventeenth century to the present with attention to English political evolution, industrialization and economic change, social mobility in England, and the growth and development of the British Empire.

5643 European History, 1618-1815
(3-0) 3 hours credit.
Significant aspects of early modern European history will be considered, including economic and social change in Western Europe, the Scientific Revolution of the 17th Century, enlightened despotism and the French Revolution.

5663 European History Since 1815
(3-0) 3 hours credit.
Significant issues in modern European history, with attention to the methods and as-
sumptions of different categories of historical interpretation. Topics include the Congress of Vienna, the Revolutions of 1848, the industrialization of Europe, the cultural effects of the first World War, and the rise of Hitler.

5753 Africa to 1800: The Rise of African States and the Slave Trade
(3-0) 3 hours credit.
The evolution of major African civilizations and states and the impact of commercial slavery. An analysis of the concepts of state and state building, trade, economic structure, and culture in the setting of African history.

5763 Africa Since 1800: Colonial Rule to Independence
(3-0) 3 hours credit.
A study of the 19th Century European partition of Africa, the introduction and operation of colonial administrations, the evolving relationships between indigenous societies and the imperial powers, the rise of African opposition to colonial rule, and the spread of nationalism.

5773 The Middle East and North Africa Since 1600
(3-0) 3 hours credit.
An advanced survey of Middle Eastern and North African history since 1600, emphasizing the growth and decline of the Ottoman and Safavid empires, the incursion of European powers in the 19th and 20th centuries, the partition of the Ottoman Empire, and the growth of Arab, Turkish, and Iranian nationalism.

6113 Law and Society in America
(3-0) 3 hours credit. Prerequisite: HIS 5013 recommended.
An examination of the role of law as both a reflection and initiator of change in American life, from colonial times to the present. Subjects will range from 17th century slavery to the equal rights revolution of the 20th century.

6123 A History of Technology and Social Change in America
(3-0) 3 hours credit.
An examination of the socio-economic context in which inventions occur, the inventions themselves, and their impact on society. The emphasis will be on the social uses and consequences of particular inventions rather than upon technical problems associated with their development.

6133 Reform Movements in American History
(3-0) 3 hours credit.
An examination of the origins, development and achievements of selected reform movements from the 18th century to the present. Specific subjects will vary, but may include such attempts at reform as revivalism, abolitionism, populism, progressivism, and civil rights.

6353 Research Seminar in Southwest History
(3-0) 3 hours credit. Prerequisite: At least one course in Southwestern or Colonial Latin American history, or permission of instructor.
Examination and analysis of selected topics relating to the borderlands of Mexico and the United States from the sixteenth to the twentieth centuries. Supervised preparation of a research paper.

6503 Research Seminar in Latin American History
(3-0) 3 hours credit. Prerequisite: At least one graduate-level course in Latin American history or permission of instructor.
Analysis of major primary and secondary research materials in selected areas of Latin American history and a consideration of interpretive methods. Supervised research projects.

6603 Research Seminar on the Expansion of Europe and Imperialism
(3-0) 3 hours credit. Prerequisite: HIS 5563, HIS 5573, or permission of instructor.
An examination of research materials pertinent to the history of European expansion, of
methodologies developed to interpret them, and of historical questions guiding inquiry in the field. Supervised preparation of a research paper; interdisciplinary approaches will be emphasized.

6703 Research Seminar in American Social History
(3-0) 3 hours credit. Prerequisite: At least one graduate-level course in United States history or permission of instructor.
An analysis of the concepts of social history, its breadth and scope. Primary attention will be given to the original sources available to the social historian and to the methods of evaluating them. Each student will prepare a research paper on an appropriate topic.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours regardless of discipline, will apply to the Master's degree.

6983 Master's Thesis
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate Advisor and thesis director.
Thesis research and preparation. May be repeated for credit, but not more than 6 hours will apply to the Master's degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.

COURSE DESCRIPTIONS
ANTHROPOLOGY
(ANT)

5013 History and Theory of Cultural Anthropology
(3-0) 3 hours credit.
A survey of the problems which are central to the anthropological study of culture, with attention to evolutionary, historical and functional points of view.

5023 History and Theory of Archaeology
(3-0) 3 hours credit.
A survey of the history and development of Archaeology; research techniques; method and theory of prehistoric research.

5133 Regional Native Cultures of North America
(3-0) 3 hours credit.
A survey of native cultures ranging from the Arctic to the Woodlands of Eastern North America, and the Greater Southwest. The rise of regional variation, the role of native religious movements, the influence of natural environment, and continuities into the historical present are considered.

5143 Ethnology of Mesoamerica
(3-0) 3 hours credit.
Examination of the cultural diversity of the native and ladino cultural traditions of Mexico and Guatemala. The period covered is the colonial through the recent period although emphasis is on the latter. Community studies of traditional communities, social, structural and economic systems studies, urban anthropology, and other sources are utilized.

5153 Seminar in Mexican-American Culture
(3-0) 3 hours credit.
A survey of Mexican-American culture. Special studies in ethnology, ethnography, folklore, and linguistics.
5203 Language, Culture, and Cultural Change
(3-0) 3 hours credit.
Analysis of the nature and function of language and non-verbal communication. Problems of cross-cultural communication and acculturation in relation to cultural conflict with particular emphasis on the Mexican-American. Includes cultural dynamics and directed change.

5213 Cultural Ecology
(3-0) 3 hours credit.
A systems approach to the inter-relationships between man, culture and the natural world.

5223 Medical Anthropology
(3-0) 3 hours credit.
Consideration of cultural factors in the practice of medicine, training of physicians, attitudes toward drugs and medical personnel. Psychological elements and value systems in traditional societies and their non-medical explanations and attitudes toward disease, trauma, curing, and preventive medicine.

5423 Archaeological Backgrounds of Mesoamerica
(3-0) 3 hours credit.
Review of Mesoamerican prehistory from late Pleistocene times to the fall of Tenochtitlan. Emphasis will be placed on social and technological development sequences, the growth and decline of political states, linkages to natural settings, interaction among cultures, and continuities into the historical present.

5433 Archaeological Backgrounds of the Middle East, the Mediterranean, and Europe
(3-0) 3 hours credit.
Examination of the major events of prehistory in the area, the establishment of agricultural life, the development of urbanism, and the interaction of the various zones of the area in the evolution of civilization.

5443 The Archaeology of South America
(3-0) 3 hours credit.
A consideration of the major features of native cultures of South America, Central America, and the Caribbean. Emphasis on the variety of cultural forms and cultural evolution. The roles of demography, subsistence systems, militarism, religion, and other factors in the rise of South American cultures will be discussed.

5554 Field Course in Archaeology
(2-12) 4 hours credit. Prerequisite: Consent of instructor.
Advanced training in field procedures, and their applications to problem-oriented field research. Students may not enroll in other courses concurrently except for ANT 6442. May be repeated for credit.

6113 Seminar in the Anthropology of Mesoamerica
(3-0) 3 hours credit. Prerequisite: ANT 5143 or 5423 or permission of instructor.
Attention is centered on a limited number of significant problems in Mesoamerican anthropology to which materials from archaeology, ethnology and ethnohistory contribute. Examples of such problems are: demography and the rise of Mayan empire, roots of Mesoamerican peasant culture, and distribution analysis of cultural and language variance. May be repeated for credit when topics vary.

6442 Supervised Field Research
(0-12) 2 hours credit. Prerequisite: Consent of instructor.
Offered only during the summer, this course must be taken concurrently with ANT 5554. The course is designed to provide intensive training and requires the student to carry out independent research and analysis of field data. May be repeated for credit.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to a Master's degree.
6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a Master's degree.

COURSE DESCRIPTIONS
GEOGRAPHY
(GRG)

5103 The Regional Geography of the Greater Southwest
(3-0) 3 hours credit.
The physical and cultural characteristics of the American Southwest, including Texas, and the adjacent parts of Mexico. Both Pre-Hispanic and European periods are considered.

5113 Cultural and Physical Geography of North America
(3-0) 3 hours credit.
Physical and cultural characteristics of the human use of the North American continent both in aboriginal times and after European contact. Ecological zoning, settlement patterning, demographic developments, cultural influence and modification of the landscape are among the topics covered.

5123 Cultural and Physical Geography of Middle America
(3-0) 3 hours credit.
Physical and cultural characteristics of human occupation of the area between the Greater Southwest and South America. Ecological and cultural diversity, economic interdependence, demographic history, aboriginal and European land use are included in the course.

5133 Cultural and Physical Geography of South America
(3-0) 3 hours credit.
Characteristics of aboriginal and post-European land use and interaction among the varying ecological settings of South America. Contrasts between the settlement patterns and land use of the tropical forest zones, the Andes, and the llanos of the Southwest.

5143 Cultural and Physical Geography of the Mediterranean and Europe
(3-0) 3 hours credit.
Consideration of the prehistoric and historic periods in ecological interaction with human populations. Such matters as central place theory, etc., are used to explain settlement patterns and economic developments. Topics such as the Roman subsistence dependence on North Africa are included.

5303 Economic Geography
(3-0) 3 hours credit.
Substantive and theoretical consideration of the economic implications of geography. Topics include the development of industrial patterns, subsistence patterns, transportation systems, and resource exploitation. Central place theory, Boserup's theory of agricultural growth, and other theoretical matters are considered.

5313 Urban Settlements
(3-0) 3 hours credit.
A cross-national analysis of the distribution and character of urban settlement patterns, with attention to recent theory and analytic techniques pertaining to urban location, communication, energy, political hegemony and access to resources.

6153 Seminar in the Geography of Latin America
(3-0) 3 hours credit. Prerequisite: GRG 5123 or GRG 5133.
Intensive analysis of selected problems in Latin American geography, including comparative settlement patterns; resource distribution and political structure; altitudinal factors in exchange networks; and micro-regional analyses. May be repeated for credit when the topics vary.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and
Dean of the College in which the course is offered. Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to a Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a Master's degree.

COURSE DESCRIPTIONS
POLITICAL SCIENCE
(POL)

5033 Comparative Political Institutions and Processes
(3-0) 3 hours credit.
A comparative examination of political institutions and processes in selected industrial societies of Europe and North America. Special attention to the impact of social and economic change on the character of elites, bureaucracy, and public policy.

5103 American Political Parties
(3-0) 3 hours credit.
Selected aspects of the political party and pressure group systems in the United States. Subjects treated may include: historical development; theories of parties and interest groups; the electoral and governmental context.

5123 The Executive in American Government
(3-0) 3 hours credit.
A comparative examination of the ways in which different units of government carry out authoritative rules. Single, multiple, and bureaucratic executive institutions on all levels of American government will be examined using various modes of analysis.

5153 Contemporary Issues in American Government
(3-0) 3 hours credit.
An examination of the major normative and descriptive theories of the American political system as it relates to economic, social, ethical, and other structures and processes. Illustrative material will be drawn from selected areas of contemporary public policy. A colloquium format will be employed.

5303 Public Values and Public Management
(3-0) 3 hours credit.
An introduction to the historical background and contemporary practices, techniques, and theories of public management. Ideals and ideologies of public service; distinctive qualities of the public and for-profit sectors; responsiveness and accountability; interest groups and the economic environment of public management; ethics in the public service; future trends.

5343 Personnel Management in the Public Sector
(3-0) 3 hours credit.
The evolution of public personnel administration in the United States at the federal, state, and local levels. Problems of recruitment, in-service training, promotion, dismissal, employee production evaluation. Merit, civil service, career, and patronage systems. Unionization, collective bargaining, and strikes in the public sector.

5403 The Politics of Planning in American Government
(3-0) 3 hours credit.
An examination of the use of planning at the local, state, and federal levels as a tool in public policy formation. Topics include: the growth of state and local planning in response to federal programs, the use of planning by interest groups, the role of planning in executive-legislative relations.

5413 Seminar in Regulatory Politics
(3-0) 3 hours credit.
The role of business, labor, consumer, and other interest groups as actors in the
regulatory process. The formation of public policy through the interaction of government and private interests will be examined in such areas as economic, environmental, and social welfare regulation.

5503 Political Organization of Urban Centers
(3-0) 3 hours credit.
The conflict between the subordinate legal status of local governments and the ideal of local autonomy and control. Topics may include: administrative and financial responsibilities of municipal, county and special district governments; the role of localities in shaping national policy; the politics of cooperation and conflict between units of government.

5623 Intergovernmental Relations in the United States
(3-0) 3 hours credit.
The administrative and political effects of the division of authority among coordinate units of government. Federal-state, state-local, local-federal, state-state, local-local, governmental-nongovernmental relations will all be examined.

5633 American State Governments
(3-0) 3 hours credit.
A comparative examination of administration, policy, and political behavior in the American states, as they reflect differences in institutions and political cultures. Special attention to Texas.

5903 Methods of Social Research
(3-0) 3 hours credit.
The logic and practice of social research, with special attention to applications in administration and public policy. Problems of research design, conceptualization, operationalization, and sampling; quantitative analytical techniques, including analysis of variance, multiple regression, and factor analysis; use of computer packages such as SPSS, BMD, and OSIRIS.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered. Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to a Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor. An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a Master's degree.

COURSE DESCRIPTIONS
SOCIOLOGY
(SOC)

5043 Seminar in Juvenile Delinquency Research
(3-0) 3 hours credit.
A comparative and integrative review of contemporary research into social deviance among children and adolescents: youth subcultures, the impact of juvenile service institutions, gangs and movements, applications to corrections and educational institutions. Will be of particular interest to school administrators.

5103 Socio-Psychological Dimensions of Work
(3-0) 3 hours credit.
Problems faced by members of the labor force in industrialized societies. The accompanying stresses that specialization and obsolescence place on the individual. The impact of work on labor force attitudes and performance. Labor force activity is examined against different cultural backgrounds. Programs to create a better work climate are examined.
5113 Seminar in Urban Social Stratification  
(3-0) 3 hours credit. 
Sociological theories of social organization in urban contexts and recent research in such matters as inter-ethnic relations and subsystems of stratification.

5123 Seminar in Family Relations  
(3-0) 3 hours credit. 
Examination of marriage and the family as social institutions. Interpersonal relationships within the family and relationships between the family and its environment. Specialized topics, such as adult education for marriage and workshop sessions for teachers of family courses in public schools, will be included.

5153 Seminar in the Cultural Pluralism of the Southwest  
(3-0) 3 hours credit. 
Investigation of institutional, demographic, cultural and social-psychological aspects of the principal minority groups of the American Southwest. Examination of group identity, inter-group relations and social change.

5163 Women in Business and Professional Careers  
(3-0) 3 hours credit. 
Study of female roles, achievement motivations, and career choices and opportunities. Historical background of female labor force participation and the attitudes and legislation which have affected this participation. Impact on both sexes of working for and with women.

6043 Seminar in Advanced Social Psychology  
(3-0) 3 hours credit. 
Examination of theory and research on social behavior and attitudes. Various social-psychological approaches will be discussed: reinforcement, field theory, cognitive and psychoanalytic orientations, and combined approaches.

6951-3 Independent Study  
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered. Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to a Master's degree.

6971-3 Special Problems  
1 to 3 hours credit. Prerequisite: Consent of instructor. An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a Master's degree.
COLLEGE OF MULTIDISCIPLINARY STUDIES
DIVISION OF BICULTURAL-BILINGUAL STUDIES
MASTER OF ARTS DEGREE IN BICULTURAL-BILINGUAL STUDIES

Concentrations in:
- Bicultural-Bilingual Teacher Education
- Bicultural Studies
- English as a Second Language

The Master of Arts Degree in Bicultural-Bilingual Studies is designed to meet several societal needs through advanced multidisciplinary study in the fields of language and culture.

Degree Requirements. All candidates for the Master of Arts Degree in Bicultural-Bilingual Studies will be required to select a concentration and successfully complete one of the following Options listed under each concentration as indicated below. Upon completion of course work the candidate will be required to pass a written and oral comprehensive examination.

Concentration in Bicultural-Bilingual Teacher Education. This concentration usually follows on the baccalaureate degree in Early Childhood, Elementary, and Secondary Education and provides intensive bicultural-bilingual teacher preparation. Preparation may also include such related areas as the teaching of English as a second language, social sciences, education, linguistics, literature and the arts.

Special Admission Requirements. In addition to satisfying the university-wide graduate admission requirements students entering this program must demonstrate oral and written proficiency in English and another language by giving evidence acceptable to the Division of Bicultural-Bilingual Studies.

Concentration in Bicultural-Bilingual Teacher Education

Option I (a total of 30 semester hours including a thesis)

Eighteen (18) semester hours of course work normally required from the following areas:

Socio-Cultural (three required hours)
- BBL 5013 Bicultural Groups in the United States
- BBL 5073 Psychological Considerations in a Bicultural Environment
- LNG 5013 Sociolinguistics
- BBL 5123 Sociolinguistic Approaches to Bilingual Education
- BBL 5133 Biculturalism: Spanish-Speaking Groups in the U.S.

Bilingual Education Theory (three required hours)
- BBL 5113 Bilingual Education Programs: Prototypes and their Adaptation to Community Needs
- BBL 5163 Philosophy of Bilingual Education

Linguistics and Second Language Studies (three required hours)
- ESL 5003 Linguistics for Second Language and Bilingual Specialists
- ESL 5013 Psycholinguistic Foundations of Second Language Teaching/Learning and Bilingual Performance
- ESL 5023 Language Analysis for Second-Language Specialists
- LNG 5013 Sociolinguistics
- LNG 5023 Psycholinguistics
Teaching Methodology: Content and Language (six required hours)

BBL 5033 Techniques of Teaching Content in a Bicultural-Bilingual Program
BBL 5063 Reading Techniques in a Bicultural-Bilingual Program
BBL 5103 Materials for Teaching Content in Bilingual Programs
BBL 5143 Media of Communication in Bilingual Classrooms

Research, Development and Evaluation (three required hours)

BBL 5053 Tests and Measurements in Bilingual and Second Language Studies
BBL 6053 Testing Members of Bilingual Societies
BBL 6063 Research Methodology in Bilingual and Second Language Studies

Six (6) semester hours of course work in English as a Second Language, as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean.

Six (6) hours of Master's Thesis.

Option II (a total of 36 semester hours, non-thesis program)

Twenty-one (21) semester hours of course work normally required from the following areas:

Socio-Cultural (six required hours)

BBL 5013 Bicultural Groups in the United States
BBL 5023 Cultural Adaptation in Bilingual Societies
BBL 5073 Psychological Considerations in a Bicultural Environment
BBL 5123 Sociolinguistic Approaches to Bilingual Education
BBL 5133 Biculturalism: Spanish-Speaking Groups in the U.S.

Bilingual Education Theory (three required hours)

BBL 5113 Bilingual Education Programs: Prototypes and their Adaptation to Community Needs
BBL 5163 Philosophy of Bilingual Education

Linguistics and Second Language Studies (three required hours)

ESL 5003 Linguistics for Second Language and Bilingual Specialists
ESL 5013 Psycholinguistic Foundations of Second Language Teaching/Learning and Bilingual Performance
ESL 5023 Language Analysis for Second-Language Specialists
LNG 5013 Sociolinguistics
LNG 5023 Psycholinguistics

Teaching Methodology: Content and Language (six required hours)

BBL 5033 Techniques of Teaching Content in a Bicultural-Bilingual Program
BBL 5063 Reading Techniques in a Bicultural-Bilingual Program
BBL 5103 Materials for Teaching Content in Bilingual Programs
BBL 5143 Media of Communication in Bilingual Classrooms

Research, Development and Evaluation (three required hours)

BBL 5053 Tests and Measurements in Bilingual and Second Language Studies
BBL 6053 Testing Members of Bilingual Societies
BBL 6063 Research Methodology in Bilingual and Second Language Studies

Six (6) semester hours of course work in English as a Second Language, as recommended by the Committee on Graduate Studies, and approved by the Division Director and Dean.
An additional nine (9) semester hours of course work in Bicultural-Bilingual Studies, English as a Second Language, or from a related area, as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean.

**Concentration in Bicultural Studies.** This concentration normally requires a baccalaureate degree in the social sciences, literature or the arts. It provides a research-oriented multidisciplinary approach to the study of culture contact in the modern world with an emphasis on the United States. Courses drawn from this concentration may also provide cultural support work for persons with a primary interest in other academic areas such as the social sciences, health sciences, education and business.

**Special Admission Requirements.** In addition to satisfying the university-wide graduate requirements, students entering this program must demonstrate oral and written proficiency in English and another language by giving evidence acceptable to the Division of Bicultural-Bilingual Studies.

**Concentration in Bicultural Studies**

**Option I** (a total of 30 semester hours including a thesis)

Twenty-four (24) semester hours of course work normally required from the following areas:

**Socio-Cultural Studies** (six required hours)
- BBL 5013 Bicultural Groups in the United States
- BBL 5023 Cultural Adaptation in Bilingual Societies
- BBL 5073 Psychological Considerations in a Bicultural Environment
- BBL 5133 Biculturalism: Spanish-Speaking Groups in the United States
- ANT 5153 Seminar in Mexican-American Culture
- SOC 5153 Seminar in the Cultural Pluralism of the Southwest

**Historical Foundations** (six required hours)
- HIS 5173 History of United States Immigration
- HIS 5263 The Spanish Borderlands, 1521-1821
- HIS 5273 The Mexican Borderlands since 1821
- HIS 5403 History of Mexico: The Colonial Period
- HIS 5413 History of Mexico: The Republican Period
- HIS 5503 Seminar in the History of Mexico
- HIS 6353 Research Seminar in Southwest History

**Art History, Literature and Expressive Culture** (three to six required hours)
- SPN 5803 Mexican American Literature
- SPN 6823 Contemporary Hispanic Cultures
- AHC 5813 Topics in the History of Art and Architecture

**Language** (three to six required hours)
- SPN 5833 Structure of Spanish
- SPN 5843 History of the Spanish Language
- SPN 5863 Spanish Phonetics and Phonology
- SPN 5873 Advanced Studies in Spanish Grammar
- SPN 5883 Spanish Syntax
- SPN 5893 Hispanic Dialectology
- ESL 5003 Linguistics for Second Language and Bilingual Specialists

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*Support work may be selected from such related areas as Economics, Management, Art History and Criticism, Music, Spanish, Anthropology, History, Political Science, Sociology and Education.*
**Theory and Method** (three required hours)

The student will select a course in theory and method from any discipline as preparation for the thesis. Examples of such courses are:

- **SOC 5113** Seminar in Urban Social Stratification
- **ANT 5013** History and Theory of Cultural Anthropology
- **ANT 5203** Language, Culture and Culture Change
- **POL 5033** Comparative Politics: Industrialized Societies
- **HIS 5013** Historiography
- **CL 5013** Introduction to Comparative Literature
- **SPN 6853** Theory of Literature
- **SPN 5373** Research Methods in Bibliography in Hispanic Studies

**LNG 5013** Sociolinguistics

In addition to these twenty-four (24) required course hours, the student will write a thesis for six (6) hours credit.

Six (6) hours of Master’s Thesis.

**Option II** (a total of 36 semester hours of course work)

Thirty-three (33) semester hours selected from the following areas. A maximum of twelve (12) and a minimum of six (6) hours are required from each area: See Option I for individual course listings in each area.

**Socio-Cultural Studies** (six to twelve required hours)

**Historical Foundations** (six to twelve required hours)

**Art History, Literature and Expressive Culture** (three to six required hours)

**Language** (six to twelve required hours)

Three (3) hours in theory and method in a relevant discipline.

In addition to regularly listed courses, all University Divisions offer Special Problems (6973) and Independent Studies courses which may be counted for program credit with the recommendation of the Committee on Graduate Studies and approved by the Division Director and Dean.

**Concentration in English as a Second Language**

The concentration in English as a Second Language is a program designed for those who are concerned with teaching English as a second or foreign language (TESL/TEFL). Bilingual Education teachers, oral language specialists, reading specialists, second language teachers, vocational English specialists and others, including those concerned with language testing, curriculum direction, administration, and counseling, will be prepared for a variety of professional positions in all levels of second-language education, e.g., in adult literacy projects, and in government language services, both in the United States and abroad.

The concentration in English as a Second Language is multidisciplinary, and the curriculum has been designed to present systematic instruction in applied linguistics and the methodology of teaching English as a second or foreign language. Preparation may also include such related areas as Bicultural-Bilingual Studies, Foreign Languages, Education, Social Sciences, Business, English, Literature, and the Arts.

**Special Admission Requirements:** In addition to satisfying the university-wide graduate admission requirements, students entering the Concentration of English as a Second Language must demonstrate proficiency in a foreign language. Applicants may satisfy this provision in any one of three ways:

1. By completion of the Fourth semester of a foreign language.
2. By taking an examination and obtaining a satisfactory score.
3. By demonstrating ability as an educated speaker of a language other than English.

**Option I** (a total of 30 semester hours including thesis is required).

Fifteen (15) hours of course work normally required from the following:

- ESL 5003 Linguistics for Second Language and Bilingual Specialists
- ESL 5013 Psycholinguistic Foundations of Second Language Teaching/ Learning and Bilingual Performance
- ESL 5023 Language Analysis for Second Language Teachers
- ESL 5033 Reading Acquisition and Techniques
- ESL 5053 Second Language Teaching Methods

Nine (9) semester hours of course work in Bicultural-Bilingual Studies, as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean.

Six (6) semester hours of Master's Thesis.

**Option II** (a total of 36 semester hours, non-thesis program)

Eighteen (18) semester hours of course work normally required from the following:

- ESL 5003 Linguistics for Second Language and Bilingual Specialists
- ESL 5013 Psycholinguistic Foundations of Second Language Teaching/ Learning and Bilingual Performance
- ESL 5023 Language Analysis for Second-Language Specialists
- ESL 5033 Reading Acquisition and Techniques
- ESL 5053 Second Language Teaching Methods
- ESL 6063 Controlled Composition and Writing in Second Language Programs
- ESL 6073 Language Teaching Materials
- LNG 5013 Sociolinguistics

Nine (9) semester hours of course work in Bicultural-Bilingual Studies as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean.

An additional nine (9) semester hours of course work in English as a Second Language, Bicultural-Bilingual Studies, or from a related area as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean.

**COURSE DESCRIPTIONS**

**BICULTURAL-BILINGUAL STUDIES**

**BBL**

5013 Bicultural Groups in the United States
(3-0) 3 hours credit.
The multidisciplinary examination of socio-cultural maintenance and change in several ethnic groups in the United States and their relation to general issues in biculturalism. The reaction by U.S. societal sectors to cultural diversity.

5023 Cultural Adaptation in Bilingual Societies
(3-0) 3 hours credit.
A study of the interrelationship between cultural and linguistic conflicts in bilingual communication and the implications of these within the context of acculturation and bilingual assimilation for the socio-cultural institutions, intergroup relationships and American value system.

5033 Techniques of Teaching Content in Bilingual Programs
(3-0) 3 hours credit.
A study of methodologies, approaches and/or techniques applicable to the teaching of subject area content in bicultural-bilingual programs with emphasis on the distribution
of the two languages in such programs and the balanced development of content-related lexica; offered in Spanish.

5053 Tests and Measurements in Bilingual and Second Language Studies
(3-0) 3 hours credit.
Psychometric terminology and basic computations; informal and formal test development procedures; testing construction according to instructional objectives; and measurement of language dominance, aptitude, proficiency and attitudes.

5063 Reading Techniques in a Bicultural-Bilingual Program
(3-0) 3 hours credit. Prerequisite: Some background in the acquisition of language is desirable.
Analysis of the basic principles, issues, and methodologies in the teaching of reading in the native language and its transferability to the second language; investigation of the current research and materials. Appropriate applications of these in a bicultural-bilingual program.

5073 Psychological Considerations in a Bicultural Environment
(3-0) 3 hours credit.
A study of psychological factors affecting the learning styles of children in bicultural environments; cognitive styles and development of ethnic values; relations among dominant and non-dominant ethnic groups; and strategies for effecting institutional change.

5093 Children's Literature in a Bicultural-Bilingual Program
(3-0) 3 hours credit.
A study of the available literature in Spanish for children for use in a bicultural-bilingual program.

5103 Materials for Teaching Content in Bilingual Programs
(3-0) 3 hours credit.
A study of materials applicable to the teaching of subject area content in bicultural-bilingual programs with emphasis on the adaptation of existing materials and the development of materials specifically designed for the concurrent and/or alternate use of two languages as media of instruction; offered only in Spanish.

5113 Bilingual Education Programs: Prototypes and Their Adaptation to Community Needs
(3-0) 3 hours credit.
An investigation of theoretical prototypes in bicultural-bilingual education; emphasis on program selection, its adaptation to community needs and its implementation.

5123 Sociolinguistic Approaches to Bilingual Education
(3-0) 3 hours credit.
A study of the demographic, ethnographic and socio-cultural elements of bicultural multicultural communities and the roles of these elements in the adaptation and implementation of elementary and secondary school programs based upon the sociological reality of a culturally diverse community.

5133 Biculturalism: Spanish-Speaking Groups in the U.S.
(3-0) 3 hours credit.
The study of culture contact between one or more Spanish-speaking groups and mainstream United States society according to different disciplinary perspectives.

5143 Media of Communication in Bilingual Classrooms
(3-0) 3 hours credit.
Emphasis on specialized teaching-related vocabularies and communicative skills needed to conduct a bilingual classroom; offered in Spanish.

5163 Philosophy of Bilingual Education
(3-0) 3 hours credit.
An historical overview of bilingual schooling in the U.S., past and present research, theories and philosophy of bicultural-bilingual education and how these factors relate to present educational systems.

6013 Theater Arts in the Bilingual School
(3-0) 3 hours credit.
An analysis of aspects of theater arts and their integration into the bilingual classroom,
including representative plays and playwrights, techniques, terminology, creative
dramatics and participatory theater. A study of the role of puppets, masks, table theaters,
etc., and their impact on children and learning in bicultural settings.

6023 The Bilingual Media Resources Centers
((3-0) 3 hours credit.
A comparative study of the role of the media resources centers and their functions as
integral components of bicultural-bilingual programs; includes an analysis of terminol­
ogy, problems, solutions and projections for centers in Bicultural-Bilingual Programs.

6043 Gifted Children and Bilingualism
((3-0) 3 hours credit.
Techniques of individualizing instruction for grouping, and teaching gifted minority
children in bilingual educational programs; educating creativity in the classroom; re­
search on the identification and education of gifted minority children.

6053 Testing Members of Bilingual Societies
((3-0) 3 hours credit.
Issues of testing and assessment with non-dominant ethnic populations, practicum in
testing with selected instruments; class research projects of a psychological or linguist­
ic nature into presumed characteristics of minority groups in the San Antonio area.

6063 Research Methodology in Bilingual and Second Language Studies
((3-0) 3 hours credit. Prerequisite: BBL 5053 or equivalent course in Test and Measure­
ments or Elementary Statistics.
Research paradigms in the social and behavioral sciences, with emphasis on
psychological and linguistic research methods; design of a research project; inter­
mediate statistics.

6073 Research Methodology in Ethnographic Studies of Bilingual Societies
((3-0) 3 hours credit. Prerequisite BBL 5123 or consent of instructor.
Techniques to survey and determine bilingual societies with emphasis on their norms of
verbal and non-verbal interaction and their inherent value systems.

6153 Evaluation in Bilingual and Second Language Programs
((3-0) 3 hours credit. Prerequisite: BBL 5053.
Research and evaluation paradigms; formative and summative, process and product
evaluations; special problems in evaluating language programs and bilingual popula­
tions; conducting needs assessments; evaluation and project management; variables of
interest to bilingual and second language programs; design of a comprehensive evalua­
tion study; application of standard computer programs.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form
available) of the instructor, the student's Graduate Advisor, and the Division Director and
Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a
faculty member. For students needing specialized work not normally or not often avail­
able as part of the regular course offerings. May be repeated for credit, but not more than
6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as
part of the regular course offerings. Special Problems courses may be repeated for credit
when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the
Master's degree.

6983 Master's Thesis
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate
Advisor and thesis director.
Thesis research and preparation. May be repeated for credit, but not more than 6 hours
will apply to the Master's degree. Credit will be awarded upon completion of the thesis.
Enrollment is required each term in which the thesis is in progress.
### COURSE DESCRIPTIONS

#### ENGLISH AS A SECOND LANGUAGE (ESL)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5003</td>
<td>Linguistics for Second Language and Bilingual Specialists</td>
<td>(3-0) 3 hours</td>
<td>Concepts in Linguistics as they relate to issues in English as a Second Language and Bilingual Studies and Education, theoretical and methodological. This course focuses on an overview of the nature and structure of language with implications for the teaching of second languages in bilingual programs as well as in adult ESL programs.</td>
</tr>
<tr>
<td>5013</td>
<td>Psycholinguistic Foundations of Second Language Teaching/Learning and Bilingual Performance</td>
<td>(3-0) 3 hours</td>
<td>The study of the principles and theories critical for the teaching and acquisition of second languages and the performance of bilingual skills in bilingual settings.</td>
</tr>
<tr>
<td>5023</td>
<td>Language Analysis for Second-Language Specialists</td>
<td>(3-0) 3 hours</td>
<td>A course to train second-language specialists to identify and analyze the language learning elements in their lessons.</td>
</tr>
<tr>
<td>5033</td>
<td>Reading Acquisition and Techniques</td>
<td>(3-0) 3 hours</td>
<td>A course on the relationship of reading acquisition to language, and the preparation and adaptation of appropriate reading texts at various levels. Critical evaluation of existing reading materials and progressive second language readers available in controlled vocabularies. Specifically designed for students of ESL.</td>
</tr>
<tr>
<td>5053</td>
<td>Second Language Teaching Methods</td>
<td>(3-0) 3 hours</td>
<td>Prerequisite: ESL 5013 or consent of instructor. A critical study of various methodologies in second language teaching.</td>
</tr>
<tr>
<td>6013</td>
<td>Error Analysis</td>
<td>(3-0) 3 hours</td>
<td>Prerequisite: ESL 5003 or equivalent. A study of errors in second-language learning with a view to establishing their causes and to preventing their recurrence in writing and in speech; the distinction between errors caused by language interferences and those caused by developmental factors.</td>
</tr>
<tr>
<td>6023</td>
<td>History of Second Language Teaching</td>
<td>(3-0) 3 hours</td>
<td>A history of the principles of language teaching from antiquity to the present day, with special emphasis on the historical aims of language teaching; the relevancy of particular methods; and the theoretical justifications for past methods and techniques.</td>
</tr>
<tr>
<td>6033</td>
<td>Topics in Second Language Teaching</td>
<td>(3-0) 3 hours</td>
<td>Suggested topics include: the direct method in language teaching; teaching foreign languages in the elementary school; the audio lingual methods, techniques and practices; language policy and implementation. May be repeated for credit when topics vary.</td>
</tr>
<tr>
<td>6043</td>
<td>Media in Second Language Teaching</td>
<td>(3-0) 3 hours</td>
<td>A course designed to introduce the student to principles and methods of utilizing media in second language teaching: pictures, films, filmstrips, tapes, and language laboratories.</td>
</tr>
<tr>
<td>6053</td>
<td>Seminar in Second Language Test Construction</td>
<td>(3-0) 3 hours</td>
<td>Prerequisite: ESL 5003 or equivalent. Investigation of various approaches, methods and techniques for testing in English as a Second Language Programs, with emphasis placed on tests of English language aptitude, proficiency, achievement, and dominance.</td>
</tr>
<tr>
<td>6063</td>
<td>Controlled Composition and Writing in Second Language Programs</td>
<td>(3-0) 3 hours</td>
<td>Prerequisite: ESL 5003 or equivalent. The development, presentation, and evaluation of materials for the teaching of composi-</td>
</tr>
</tbody>
</table>
tion and writing to second language learners in English as a Second Language and Bilingual Programs

6073 Language Teaching Materials
(3-0) 3 hours credit. Prerequisite: ESL 5003 or equivalent.
Preparation in the revision, adaptation, and utilization of language teaching materials. Designed for ESL, bilingual education, and adult basic education programs.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems Courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6993 Master's Thesis
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate Advisor and thesis director.
Thesis research and preparation. May be repeated for credit, but not more than 6 hours will apply to the Master's degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.
DIVISION OF EDUCATION
MASTER OF ARTS DEGREE IN EDUCATION

Concentrations:
- Cultural Foundations of Education
- Curriculum and Instruction
- Early Childhood and Elementary Education
- Educational Management
- Educational Psychology/Counseling and Guidance
- Educational Psychology/Special Education
- Institutions of Higher Education

The Master of Arts Degree in Education offers seven areas of concentration so that students may choose a program of study most suitable to their needs and objectives. Degree plans are designed to prepare competent personnel for public and private elementary and secondary schools, junior colleges, and senior colleges and universities, as well as governmental agencies. At the heart of each degree program is the concept of flexibility which enables the degree program to be constructed to the particular needs of individual students.

The concentration in Cultural Foundations of Education is suitable for students who wish to study the philosophical and cultural context of education. Programs of study in this concentration examine the issues surrounding contemporary education from perspectives provided by history, sociology, anthropology, and philosophy. A program of studies is also available which critically examines modes of inquiry in the study of education.

The programs in Curriculum and Instruction are focused on both the theoretical and practical aspects of curriculum planning, development, implementation and evaluation in all subject fields and at all educational levels. Throughout the program the concepts of curricular innovation and teaching excellence are stressed in conjunction with expanded knowledge of subject matter fields and applied research.

The Early Childhood and Elementary Education concentration stresses human growth and development since, to a large extent, the adult characteristics of an individual are determined long before he or she reaches first grade. Included in the program are learning theory and familiarization with current research and research methods. Students in this program learn to observe and identify symptoms of learning problems, as well as to cope with them effectively. This concentration is designed primarily for experienced classroom teachers at the early childhood and elementary levels.

The concentration in Educational Management is designed for those individuals who desire careers in public and private school systems, elementary schools, or secondary schools in administrative positions. This concentration helps individuals to understand instructional problems and educational philosophies as well as to develop expertise in management and the applications of management to educational settings. Sufficient flexibility is provided to allow students in this program to obtain additional training in related areas which will increase effectiveness in the educational setting while increasing their broad knowledge of the elementary and secondary educational processes. Students seeking administrative certification are able to complete the requirements for this concentration while working toward professional certification in administration and supervision.

The concentration in Educational Psychology/Counseling and Guidance is designed for those students interested in careers in counseling and guidance at the elementary, secondary or higher education levels. The concentration provides understanding of the role of counseling and guidance in education, skills in collecting, organiz-
ing and interpreting information relative to students, and techniques for communicat­
ing this information to students, parents, and other appropriate publics. Certification
requirements can be planned within the degree requirements.

The concentration in Educational Psychology/Special Education is designed for
those students preparing to teach (or currently teaching) children identified as
mentally retarded, emotionally disturbed, or language/learning disabled. The stu­
dent may elect any of the emphases above or combinations of them. The program is
intended to provide both theoretical and conceptual understandings of students with
these problems and clinical opportunities to develop and apply skills in working with
children. Certification requirements can be planned within the degree requirements.

The Institutions of Higher Education concentration is designed for those individuals
seeking careers in the areas of teaching or administration at the junior college,
college, or university level. While many professionals will continue beyond the
Master's level and seek the Ph.D. degree in this area, this program serves both the
student for whom the M.A. degree is terminal and the student who is pursuing the M.A.
degree as an intermediate program leading to the doctorate. Sufficient flexibility is
incorporated in the program to allow students to obtain an understanding of the role,
scope, and interactions of institutions of higher education, along with specialized
areas in which professional competency is required. In addition to studying the
particular characteristics of institutions of higher education and the multitude of
critical issues involved, students complete considerable work outside the area of
professional education which is especially applicable to a particular area of career
interest. (For example, a student whose goal is to teach chemistry may do much of his
course work in that area; a student whose objective is college administration may
take courses in management; etc.)

Special Admission Requirements. Individuals without adequate preparation in
Education may be required to complete preparatory courses as a condition of
admission.

Degree Requirements. All degrees in Education have three components:

A) A core of experiences common to all concentrations

2. Values and Their Relationship to Education (EDU 5103 or EDU 5203).
3. Learning Psychology (EDP 5003) for students in the appropriate concentra­
tions, or, with consent of advisors, EDP 5013, EDP 5023, or HED 5203 may
substitute.
4. An appropriate course in Curriculum and Instruction (C&I 5003 for a con­
centration in Curriculum and Instruction; C&I 5503, 5513, or 5523 for Early
Childhood students; C&I 5603 for Elementary students in the Early Child­
hood and Elementary concentration; C&I 5803 or HED 6003 for a concentra­
tion in Higher Education. C&I 6003 for a concentration in Educational Man­
agement).

B) A program focus approved by the Graduate Advisor of at least nine (9) hours in
one of the following concentrations (three of these 9 hours could also meet
requirements above under "A"):

1. Cultural Foundations of Education
2. Curriculum and Instruction (Program options: Master Teacher, Curriculum
Specialist, Instructional Media Specialist, Curriculum Evaluation Specialist,
Reading Specialist, Instructional Supervisor)
3. Early Childhood and Elementary Education (Program options: Early Child­
hood Education, Elementary Education, Early Childhood and Elementary
Education)
4. Educational Management
5. Educational Psychology/Counseling and Guidance
6. Educational Psychology/Special Education
7. Institutions of Higher Education (Program options: College and University Teaching, College and University Administration, Continuing Education)

C) Electives of at least 3 to 18 hours. These allow students in consultation with advisors to tailor-make programs to student needs and career goals. They also allow students the opportunity to complete certificate programs. Students who choose Degree Option I (Thesis Option) will have a minimum of 3-6 hours of electives. It is recommended that students following Option I elect EDU 5053 Inferential Educational Statistics as one course in their programs. Students who elect Degree Option II (Non-Thesis Option) will have in most programs 15-18 hours of electives. Students seeking certificates as well as Master's degrees may find Degree Option II more appropriate.

COURSE DESCRIPTIONS
CURRICULUM AND INSTRUCTION (C&I)

5003 Curriculum Theory and Dynamics (3-0) 3 hours credit.
An examination of theoretical structures underlying curriculum considerations and the implications of these for processes of curricular planning, development and change.

5103 Diagnosis and Prescription: Individualizing Instruction (3-0) 3 hours credit. Prerequisite: C&I 5003 or consent of instructor. An in-depth study of the tasks and problems associated with individualized instruction. Students will examine the means available for measuring and diagnosing individual learning needs and styles and for selecting from alternative learning materials and environments those most appropriate to individual needs. This course and SED 5103 may not both be taken for credit.

5203 Patterns of Instructional Interaction (3-0) 3 hours credit. Prerequisite: C&I 5003 or consent of instructor. Practice in the skills and dynamics of instructional behavior and a study of the predictability of student response behavior when strategies are selected according to predetermined criteria. This course and SED 5203 may not both be taken for credit.

5303 Instructional Media and Technology (3-0) 3 hours credit. Prerequisite: C&I 5003 or consent of instructor. Students will examine and develop criteria and schema for evaluating and selecting different instructional media forms, especially as the characteristics peculiar to different media forms apply to the instructional objectives and instructional environment planned.

5313 Instructional Materials Production I: Graphics (3-0) 3 hours credit. Prerequisite: C&I 5003 or consent of instructor. Preparation in the skills required for the production of a variety of materials for classroom use. The rationale for the use of visual media and the specifics of design and technical production procedures for the creation of effective instructional media formats are presented.

5343 Programming Instruction (3-0) 3 hours credit. Prerequisite: C&I 5003 or consent of instructor. A course intended to prepare students in the specific theory and skills of developing programmed instructional materials. S-R Theory as applied in the development of programmed instruction will be examined. Students will be expected to develop and developmentally test a unit of programmed instruction.

5403 Instructional Design and Development (3-0) 3 hours credit. Prerequisite: C&I 5003 or consent of instructor. A course dealing with the design of instruction. Special attention will be given to theory and method of design based on congruence between identified needs and approaches to curriculum development.
5453 Curriculum Evaluation
(3-0) 3 hours credit. Prerequisite: C&I 5003 or consent of instructor.
An examination of the several procedures used to evaluate curriculum materials and
development activities. Formative and summative evaluation will be compared and
contrasted and the consequences of model evaluative systems will be demonstrated.

5503 Early Childhood Curricula
(3-0) 3 hours credit. Prerequisite: EDU 5003 or consent of instructor. A systematic
analysis of early childhood curricula. A critical study of objectives, methods of organiza-
tion, content, methods, and materials of learning used with young children.

5513 Materials, Methods, and Techniques in Teaching Early Childhood Education
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
A study of the methodologies and techniques effective in teaching kindergarten and
preschool children. Construction and use of materials for teaching at the level of student
ability.

5523 Advanced Curriculum Design for Early Childhood Education
(3-0) 3 hours credit. Prerequisite: C&I 5503 or consent of instructor. An analysis of the
theoretical basis for curriculum building: developmental levels, domains of learning,
taxonomies of objectives.

5603 Elementary School Curricula
(3-0) 3 hours credit.
A systematic analysis of elementary school curricula. A critical study of the objectives,
methods of curricular organization, and content used with elementary school children.

5703 Secondary School Curricula
(3-0) 3 hours credit. Prerequisite: EDU 5003 or consent of instructor.
A systematic analysis of secondary school curricula. A critical study of objectives,
methods of organization, content, methods and materials of learning used with youth.

5733 Reading in Elementary School
(3-0) 3 hours credit.
An analysis of fundamental concepts and principles of beginning reading. Studies of
methodology in organizing and teaching an eclectic program of reading. Ability to
assess and develop reading readiness and oral language skills. Ability to stimulate
literary appreciation in young children. Critical evaluation of existing beginning reading
programs. This course and ECE 5733 may not both be taken for credit.

5743 Reading in Secondary School
(3-0) 3 hours credit.
Principles and techniques for teaching higher level reading and comprehension skills in
order to maximize proficiency in learning various academic subjects. Ability to stimulate
literary appreciation in older children, to differentiate instruction to meet individual
needs. Effective use of teaching aids and equipment. This course and SED 5743 may not
both be taken for credit.

5753 Diagnostic and Corrective Reading Techniques
(3-0) 3 hours credit. Prerequisite: C&I 5733 or an undergraduate reading methods course
or consent of instructor.
Diagnosis and correction of specific reading skill disabilities. Emphasis on techniques
which can be implemented in the regular classroom. Work with children to carry out
course objectives in both classroom and clinical environments.

5773 Clinical Practicum in Reading
3 hours credit. Prerequisite or concurrent enrollment: C&I 5753 and consent of instructor.
Multidisciplinary approach to diagnosis and correction of reading disabilities. Neurological,
physical, perceptual, mental, emotional and linguistic aspects which may impede learning. Administration and interpretation of standardized testing instruments.
Development of suitable approaches for remediation. Work with children to carry out
course objectives in both classroom and clinical environments.

5793 Seminar in Reading Administration and Supervision
(3-0) 3 hours credit. Prerequisites: C&I 5773, EDU 5003 or consent of instructor.
Organization and functions of developmental, corrective, and remedial reading pro-
grams. Selection, initiation, implementation and evaluation of suitable reading materi-
als. Administrative procedures and techniques. Staff, personnel, and job requirements. Development, initiation, implementation and evaluation of inservice training programs.

5803 Higher Education Curricula
(3-0) 3 hours credit. Prerequisite: EDU 5003 or consent of instructor. A systematic analysis of higher education curricula. A critical study of objectives, methods of organization, content, methods and materials of learning used with college students.

6003 Supervision: Theoretical Basis
(3-0) 3 hours credit
An application of learning theory, curriculum development theory, and educational planning theory to curricular development and instructional supervision. A course requiring students to work in small groups and individually in a laboratory setting.

6013 Supervision: Teaching-Learning Process
(3-0) 3 hours credit. Prerequisites: C&I 5003, C&I 6003 or consent of instructor. The analysis and application of models of the teaching-learning process to instructional supervision. A course requiring students to work in small groups and individually in a laboratory setting.

6023 Supervision: Tools and Techniques
(3-0) 3 hours credit. Prerequisites: C&I 5003, C&I 6003 or consent of instructor. The study and application of content, interaction and climate analysis techniques, and the development of communication and interpersonal skills needed for working with teachers. A course requiring students to work in small groups and individually in a laboratory setting.

6103 Occupational Planning in Mental Retardation
(3-0) 3 hours credit. Prerequisite: EDP 5413 or consent of instructor. Curriculum for secondary school age mentally retarded children.

6153 Occupational Information and Resources
(3-0) 3 hours credit. Prerequisite: EDP 5203 or consent of instructor. A study of occupations, requirements for entry, and means of satisfying personality needs.

6203 Methods for Teaching Children with Language/Learning Disabilities
(3-0) 3 hours credit. Prerequisite: Consent of instructor. The theoretical and practical aspects of prescriptive instructional materials and techniques.

6303 Advanced Methods in Subject-Matter Fields
(3-0) 3 hours credit. Prerequisite: C&I 5003 or consent of instructor. Course sections are designed to aid students in achieving skill in instructional methodology that is specifically related to and derived from the characteristics of the discipline taught.
1. Science
2. Mathematics
3. Social Studies
4. Language Arts
5. Foreign Languages
May be repeated for credit when disciplines vary.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered. Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor. An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.
COURSE DESCRIPTIONS

EARLY CHILDHOOD AND ELEMENTARY EDUCATION

5123 Seminar in Development in Early Childhood and Infancy
(3-0) 3 hours credit. Prerequisite: EDP 5013 or consent of instructor.
Studies of the results of stimulating sensory equipment in the early years and investigation of insufficient psychological and physiological nourishment. Deviations from steady differentiation of emotional responses during early childhood, achievement motivation and studies of frustration and tolerance. Includes suggested practices that may enable future generations to avoid developmental disruptions and to alleviate existing developmental handicaps.

5143 Language Development During Early Childhood
(3-0) 3 hours credit.
Patterns of acquisition of language skills among the young of diverse ethnic groups will be analyzed in order to identify experiences that promote language development in early childhood.

5243 Language and Communication in Elementary School Children
(3-0) 3 hours credit.
A study of language and communication in children based on psychological research on symbolic logic concerning attention and discrimination, memory, and thinking. Topics include models of language use, semantics, language and personality, communication systems, bilingualism, bidialectalism, and classroom interaction.

5453 Classroom Behavior Problems in Children
(3-0) 3 hours credit. Prerequisite: EDU 5003 or consent of instructor. A survey of common behavioral problems of children likely to be encountered by teachers in elementary and early childhood classrooms. Emphasis on understanding factors which influence the development of such problems in school aged children, and curricular considerations affecting or affected by classroom behavior.

5473 Specialized Instruction in the Elementary School
(3-0) 3 hours credit. Prerequisite: EDU 5003 or consent of instructor. In-depth investigations of experimental programs in special areas of knowledge such as Mathematics, Science, Social Studies, will be made. Students will complete a field study.

5493 Sociological Implications of the Elementary School
(3-0) 3 hours credit.
Historical examination of the relationship of the elementary school to the society it serves, including a study of the relationship of some aspects of societal changes, e.g., groups involved, roles of individuals, to changes within the elementary school, e.g., general goals, curricular emphases.

5733 Reading in Elementary School
(3-0) 3 hours credit.
An analysis of fundamental concepts and principles of elementary school reading. Studies of methodology in organizing and teaching an eclectic program of reading. Ability to assess and develop reading readiness and oral language skills. Ability to stimulate literary appreciation in young children. Critical evaluation of existing beginning reading programs. This course and C&I 5733 may not both be taken for credit.

6103 Seminar in Early Childhood Education
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Analysis of the historical and contemporary issues in Early Childhood Education with emphasis on current research and the role of the family in the education of children.

6123 Administration of Early Childhood Programs
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
A study of the organization, structure, and operation of Kindergarten, Day-care, and Nursery programs, both public and private. Implications for elementary education.
6143  Seminar on Day Care for Children Under Three: Social and Developmental Aspects
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Child caretaking in different social structures; day care centers from a cross-cultural perspective; biological and social aspects of traditional families and alternative family arrangements; physical and mental characteristics of children under three; learning capacity of children under three; deprivation syndromes.

6163  Biological Basis of Child Development
(3-0) 3 hours credit. Prerequisites: One course in general biology or BIO 1033 and EDP 5013 or ECE 5123.
Theoretical aspects of behavioral biology; behavioral genetics; comparative physiology of behavior; behavioral embryology; physiological and environmental factors affecting development of behavior; early development of learning and cognitive functions.

6183  Seminar in Early Childhood Education in Cross-Cultural Perspective
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
An examination of contrasting strategies of socialization employed by societies around the world, past and present; limits of and alternatives to formal early childhood education in the current Western sense. Readings are drawn from both ethnographic and theoretical sources in anthropology, psychology and education.

6453  Research in Elementary Education
(3-0) 3 hours credit.
Study of research and problems of current significance in the development of educational programs for elementary school children.

6473  Seminar in Elementary Education
(3-0) 3 hours credit.
Examination of the discipline of a subject-field selected, e.g., science, social studies, music, including an intensive study of research findings, publications of related professional organizations and advanced experimentations related to teaching/learning situations.

6951-3  Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6963,6,9  Internship in Early Childhood or Elementary Education
3, 6 or 9 hours credit. Prerequisite: Consent of instructor.
Seminar presentations and discussion of methods, techniques and procedures coupled with directed experiences 1) in the early childhood education setting, 2) in the elementary school, and 3) in the area of reading. May be repeated for credit to a maximum of 9 hours.

6971-3  Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

COURSE DESCRIPTIONS
EDUCATION
(EDU)

5003  Research Methods in Education
(3-0) 3 hours credit. Prerequisite: Admission to graduate program or consent of instructor.
Basic concepts of research design, strategies of experimental, historical, and descriptive research, and basic statistical procedures are introduced. Participants use these concepts to read, interpret, and evaluate educational research and to plan and conduct such research. A field study will be required.

5053 **Inferential Educational Statistics**  
(3-0) 3 hours credit. Prerequisites: EDU 5003 and MAT 5073 or consent of instructor. The concept of inferential statistics in education as a means of drawing conclusions and interpreting results is a central theme. A variety of statistical techniques often used in educational research are introduced with the intent of having students be able to elect the appropriate statistical procedure and interpret the results.

5103 **Contemporary Educational Philosophy**  
(3-0) 3 hours credit. A critical examination of selected contemporary philosophies and an evaluation of their assimilation into educational thought and practices.

5203 **Evolution of Educational Thought**  
(3-0) 3 hours credit. An analysis of the educational writings and teachings of Plato, Aristotle, the Scholastics, Comenius, Dewey, Froebel, Herbart, Kant, Locke, Pestalozzi, Rousseau, and Spencer and the impact on contemporary educational theory and practice.

5403 **Education, Cultural Differences and Acculturation**  
(3-0) 3 hours credit. Educational changes and adjustments resulting from the interaction of a variety of different cultural backgrounds in the modern school. Specialized techniques, processes and programs designed to meet unique learning needs of the non-English speaking child.

5503 **Seminar in Social Foundations of Education**  
(3-0) 3 hours credit. Examination and analysis of social structures, values and culture as these interact with educational systems. Special emphasis will be placed on the urban environment and its particular relationships with education.

5603 **Contemporary Issues in Education**  
(3-0) 3 hours credit. Prerequisite: EDU 5003 or consent of instructor. Identification and analysis of the major contemporary educational issues, evaluation of attempted historical resolutions, and review of information relevant to policy decisions.

6951-3 **Independent Study**  
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered. Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 **Special Problems**  
1 to 3 hours credit. Prerequisite: Consent of instructor. An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6983 **Master's Thesis**  
3 hours credit. Prerequisites: Admission to candidacy in the Master's Program and permission of the Graduate Advisor and thesis director. Thesis research and preparation. May be repeated for credit, but not more than 6 hours will apply to the Master's degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.
EDUCATIONAL MANAGEMENT

COURSE DESCRIPTIONS

EDUCATIONAL MANAGEMENT (EDM)

5003 General School Administration
(3-0) 3 hours credit. Prerequisite: One year of teaching experience.
The roles, tasks and problems of district and building level administrators; interrelationships of modern school systems and their relationship to local, state and federal government.

5103 School Finance and Taxation
(3-0) 3 hours credit.
Current problems, issues, and practices in local, state and federal financial support for primary and secondary schools and the relation of school finance problems to broader socio-economic issues.

5203 School and Community Relations
(3-0) 3 hours credit.
Parent participation in the school and strategies for informing the community about school activities and promoting school community interactions are analyzed. Studies will be made on interrelationships among the home, schools, and community.

5303 Human Relations in Educational Administrations
(3-0) 3 hours credit.
Analysis and identification of group processes and individual behavior which tend to enhance democratic interaction in the achievement of educational goals.

5403 The Principalship
(3-0) 3 hours credit. Prerequisite: One year teaching experience.
Analysis of the principal's role as he or she interacts with his or her various referent groups. Special emphasis on behavior. Applicable to elementary and secondary administration.

5503 Administration and Function of Special Programs
(3-0) 3 hours credit.
A study of the role of the administrator in initiating, developing, supervising and supporting programs in Guidance, Vocational and Technical Education, Career Education, Special Education, Compensatory Education and Reading.

5603 Field Based Individual Research
3 hours credit. Prerequisite: Consent of instructor.
Individualized projects in educational administration based on a problem area identified through contact in the field. Students are to develop the ability to locate, analyze, synthesize, and propose applications of research and literature to an identified problem area.

5703 Legal Foundations of Education
(3-0) 3 hours credit.
Analysis of current legal basis and practices in the governance of education and the implications of significant court decisions pertaining to school operations.

5803 The Middle School
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Origin, objectives, programs, and administration of the middle school with consideration of the junior high school heritage. Emphasis on organization of programs based on physical and psychological development of the clientele.

6103 Personnel Administration
(3-0) 3 hours credit. Prerequisite: MGT 5003 or consent of instructor.
Problems in the personnel administration of public and private schools. Policies affecting personnel, rights and responsibilities of students and teachers, insurance, salary schedule, retirement, sick leave, collective negotiations, and auxiliary enterprises.

6203 Educational Facilities — Resources and Planning
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
An analysis of the building and other physical plant needs of the local public school district, including planning, financing, construction, and utilization.
6303 Education Systems Analysis
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
A study of systems analysis techniques applicable to education including PERT, P.P.B.S., M.B.O., and other management systems, including management information systems.

6403 Organizational and Administrative Theory in Education
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
A study of current theories, concepts and principles of leadership and their in-depth application to educational roles. Emphasis is placed on the responsibility of the educational administrator for effective leadership in the school and community and the evaluation of staff competence and role performance.

6503 Futurology and Educational Planning
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
An examination of knowledge, values, attitudes and feelings regarding future cognition along with psychological and ethical issues regarding futurology and long range planning. Identification of techniques of analysis and methodological approaches for forecasting related to the educational subsystem. Development of concepts of desired futures and strategies for changing the subsystem to meet the demands.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6963 Internship
3 hours credit. Prerequisite: Consent of instructor.
1. EDUCATIONAL MIDDLE MANAGEMENT
Supervised on-the-job experience with related reading and study. The intern will work with building level administrators or district program specialists in applying management fundamentals to an ongoing school program. Students are exposed to decision-making processes such as program development, plant utility, financial and personnel management.

2. DISTRICT-WIDE EDUCATIONAL MANAGEMENT
Supervised on-the-job experience with related reading and study. The intern will work with district level administrators in applying management principles to an ongoing phase of a district-wide program. Students are involved with planning, implementing, and evaluating various aspects of a district's educational program.
May be repeated for credit when topics vary.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

COURSE DESCRIPTIONS
EDUCATIONAL PSYCHOLOGY (EDP)

5003 Psychological Basis for Learning
(3-0) 3 hours credit.
A concentrated analysis of mental processes important to learning and an evaluation of the major concepts, theories, and results of research in learning as applied to education.

5013 Learning Theories Related to Child Development
(3-0) 3 hours credit.
A study of developmental and learning theories related to the growth of the child from infancy through childhood.
5023 Learning Theories Related to Adolescent Development
(3-0) 3 hours credit.
A study of developmental and learning theories related to the growth during the adolescent and adult period.

5203 The Guidance Function in Education
(3-0) 3 hours credit. Prerequisite: Graduate standing.
The role of guidance services in education. Focus will be on: teacher, counselor, administrator roles, current and emerging practices.

5213 Diagnosis and Counseling
(3-0) 3 hours credit. Prerequisites: EDU 5003 and EDP 5203.
Counseling theory and techniques for identification of student problems. Focus on: tools and techniques for identification; counseling for personal adjustment.

5223 Psychometric Procedures
(3-0) 3 hours credit. Prerequisites: EDU 5003 and EDP 5203.
A study of instruments used to measure personality variables. Focus on administering and interpreting instruments measuring intellectual abilities.

5233 Group Processes: The Individual In the Group
(3-0) 3 hours credit. Prerequisites: EDU 5003 and EDP 5203 or consent of instructor.
A study of group structure and theory. Focus on group influences on behavior.

5303 Principles and Techniques of Evaluation
(3-0) 3 hours credit.
Study of the role of evaluation, development of instruments for assessing the products of learning and the techniques for interpreting and communicating evaluation results.

5393 Practicum in Counseling
3 hours credit. Prerequisites: EDP 5213, EDP 5233 and consent of instructor.
Supervised experience identifying and diagnosing student problems in an educational setting.

5403 The Exceptional Child in School
(3-0) 3 hours credit.
Study of children with unusual educational problems: educable and trainable mentally retarded, cerebral palsied, gifted, learning disabled; educational strategies for facilitating their learning; field experiences.

5413 The Mentally Retarded Child
(3-0) 3 hours credit. Prerequisite: EDP 5403.
A study of the characteristics, needs, educational goals of the mentally retarded child. Current research and historical approaches to the education of this child will be examined.

5423 Behavioral Management and the Emotionally Disturbed Child
(3-0) 3 hours credit. Prerequisite: EDP 5403 or consent of instructor.
A study of the principles and theory of behavior modification with application to the emotionally disturbed child.

5433 Developmental Assessment of Emotionally Disturbed Children
(2-2) 3 hours credit. Prerequisite: EDP 5403 or consent of instructor.
The application of standardized and informal classroom evaluation techniques to learning problems encountered by emotionally disturbed children.

5443 Counseling with Parents of Emotionally Disturbed Children
(3-0) 3 hours credit. Prerequisite: EDP 5403 or consent of instructor.
A study of counseling theories to help parents of emotionally disturbed children understand the nature of handicapping conditions, education prescriptions and progress.

5453 Characteristics of the Child with Learning Disabilities
(3-0) 3 hours credit.
A study of the incidence, classification, etiology, and characteristics of the child with learning disabilities. Special emphasis will be given to diagnosis and to the circumstances governing referrals.
5463 The Psychology of Language/Learning Adjustment
(3-0) 3 hours credit. Prerequisite: EDP 5403 or consent of instructor.
A study of the nature of conflict and the mechanism of adjustment for the learning disabled child.

5473 Curriculum for the Mentally Retarded Child
(3-0) 3 hours credit. Prerequisite: EDP 5403 or consent of instructor.
Curriculum plans designed to facilitate development of mentally retarded children.

5483 Practicum in Mental Retardation
3 hours credit. Prerequisites: EDP 5403, EDP 5473, and consent of instructor.
An orientation to school settings designed for the mentally retarded; participants will study and evaluate existing strategies for the handicapped in area school settings.

5583 Practicum in Special Education: Language and/or Learning Disabilities
3 hours credit. Prerequisite: Consent of instructor.
The application of theoretical principles to field settings. Student will work in educational settings which will include planning, implementing and evaluating appropriate experiences with students who have language and/or learning disabilities.

5593 Practicum in Special Education: Emotionally Disturbed
3 hours credit. Prerequisite: Consent of instructor.
The application of theoretical principles to field settings. Student will work in educational settings which will include planning, implementing and evaluating appropriate experiences with emotionally disturbed students.

6003 Educational Social Systems
(3-0) 3 hours credit. Prerequisites: EDP 5003 and EDP 5233.
A study of social systems theory applied to educational settings. Students will integrate observational research methodology, social systems theory, and social learning theory to the analysis of schools, classrooms, and other educational groups.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6963, 6 Internship
3 or 6 hours credit. Prerequisite: Consent of instructor.
A supervised field-based experience in some aspect of educational psychology with related reading and study. May be repeated for credit to a maximum of 6 hours.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

COURSE DESCRIPTIONS
HIGHER EDUCATION (HED)

5003 The Development of Higher Education in the U.S.
(3-0) 3 hours credit.
A study of the transition from patterns of European institutions of higher learning to the development of uniquely American institutions. Relates the development of resources, human and physical, to the changing role of higher education in American society.

5103 Contemporary Thought in Higher Education
(3-0) 3 hours credit.
A study of current thought as it relates to the management of institutions of higher education.
5203  **The American College Student**  
(3-0) 3 hours credit.  
The college student's role in contemporary society; characteristics, basic values, peer group influence, campus culture, needs and pressures.

5303  **Seminar in Governance of Higher Education**  
(3-0) 3 hours credit.  
Analysis of current practices and issues in the governance of higher education which affect students, faculty, administration, scope and role of colleges and universities.

5403  **Resource Allocations in Higher Education**  
(3-0) 3 hours credit.  
Concepts and practices in financing, planning, program and institutional budgeting in higher education.

5603  **Development and Organization of Adult and Continuing Education**  
(3-0) 3 hours credit.  
Exploration of forms of continuing and adult education conducted by business and industry, the armed forces, educational institutions and private foundations, including federal and state programs of support; external and alternative degree programs; the open university concept and self study programs; general treatment of historical development.

5613  **Methods in Adult and Continuing Education**  
(3-0) 3 hours credit.  
An examination of delivery systems adapted to adult learning requirements to include television, radio, audio-tutorial and computerized instruction. Individualized program instruction versus the traditional classroom, the format for adult learning, testing for comprehension and retention.

5623  **Adult and Continuing Education Management Systems**  
(3-0) 3 hours credit.  

5633  **Practicum in Adult and Continuing Education**  
3 hours credit. Prerequisite: Consent of instructor.  
A supervised experience concerned with coordinating adult and continuing education programs. Activities include developing programs, finding community sponsors and clients, budgeting and staffing programs, implementing and evaluating programs. Students meet with other students and a senior staff member to discuss their experiences, problems, and solutions and strategies.

6003  **The Community College**  
(3-0) 3 hours credit.  
The historical and philosophical foundations for the community junior college movement in the United States will be analyzed and utilized as a basis for understanding contemporary trends and problems of community junior colleges.

6103  **Effective Teaching in Higher Education**  
(3-0) 3 hours credit.  
A seminar that focuses on the image of the college professor and on a review of the current research on the teaching/learning process at the college or university level. Includes a review of educational psychology of the late adolescent and adult, an investigation of new and effective instructional methods, and an appraisal of evaluation procedures.

6951-3  **Independent Study**  
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered. Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, may be counted toward the Master's degree.
SECONDARY EDUCATION / 129

6963 Internship in Higher Education
3 hours credit. Prerequisite: Consent of instructor.
A supervised field-based experience in some aspect of higher education with related reading and study.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, may be counted toward the Master's degree.

COURSE DESCRIPTIONS
SECONDARY EDUCATION
(SED)

5103 Diagnosis and Prescription: Individualizing Instruction, Secondary
(3-0) 3 hours credit.
An in-depth study of the tasks and problems associated with individualized instruction in secondary schools. Students will examine the means available for measuring and diagnosing individual learning needs and styles and for selecting from alternative learning materials and environments those most appropriate to individual needs. This course and C&I 5103 may not both be taken for credit.

5203 Patterns of Instructional Interaction, Secondary
(3-0) 3 hours credit.
Practice in the skills and dynamics of instructional behavior and a study of the predictability of student response behavior when strategies for secondary schools are selected according to predetermined criteria. This course and C&I 5203 may not both be taken for credit.

5743 Reading in Secondary School
(3-0) 3 hours credit.
Principles and techniques for teaching secondary school reading and comprehension skills in order to maximize proficiency in learning various academic subjects. Ability to stimulate literary appreciation in older children, to differentiate instruction to meet individual needs. Effective use of teaching aids and equipment. This course and C&I 5743 may not both be taken for credit.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, may be counted toward the Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, may be counted toward the Master's degree.
DIVISION OF ENVIRONMENTAL STUDIES

The objectives of the Division of Environmental Studies are:

To provide a framework for professional development and personal growth and
To prepare graduates for professional careers in the management of human
resources, natural resources, or urban systems.

In order to deal effectively with the complex problems which attend modern society, it
is necessary that the student of Environmental Management be able to:

Integrate diverse academic disciplines,
Master techniques of analysis and synthesis,
Put societal problems and the applicable tools of public management into a
philosophical and ethical context.

Therefore, the Division of Environmental Studies employs, and is firmly committed to,
the multidisciplinary approach to resolve the problems facing our society, our cities
and our environment.

The Division of Environmental Studies offers the following degree programs:

MASTER OF ARTS DEGREE IN ENVIRONMENTAL MANAGEMENT
Concentrations in: Management of Human Resources
Urban Studies

MASTER OF SCIENCE DEGREE IN ENVIRONMENTAL MANAGEMENT
Concentration in: Management of Natural Resources

MASTER OF ARTS DEGREE IN ENVIRONMENTAL MANAGEMENT
Concentration in: Management of Human Resources

The Master of Arts Degree in Environmental Management with a concentration in
Management of Human Resources is available to students whose undergraduate
degrees are in a variety of areas such as business, communications, economics,
engineering and the social sciences. This program is for those individuals who want
to prepare for careers involving the analysis, development and management of
human resources in both the public and private sector.

Special Admission Requirements. For unconditional admission to the Master of
Arts Degree Program in Environmental Management, applicants must meet
university-wide graduate admission requirements. Those who have not met these
requirements are evaluated on an individual basis in order to ensure that their
backgrounds are adequate for conditional admission to the M.A. degree program.
Some or all of the following courses may be required as admission conditions for
students whose backgrounds are insufficient to permit unconditional admission to
the concentration in Management of Human Resources.

MGT 5003 Conceptual Paradigms of Management
ECO 5003 Economic Theory and Policy
MAT 5073 Methods of Statistics I
BDS 5003 Quantitative Methods for Business Analysis

Degree Requirements. All candidates for the Master of Arts Degree in Environmen-
tal Management are required to complete successfully a program which contains a
total of 36 semester hours.

Required (Core) Courses:
ECO 5043 Public Managerial Economics
ENV 5533 Environment and Systems
ENV 6603 Investigative Methods
Required Practicum (6 hours from the following):

- ENV 6943 Workshop in Public and Environmental Management (3 or 6 hours)
- ENV 6963 Internship (3 or 6 hours)
- ENV 6983 Master's Thesis (6 hours)

Workshop may be repeated for credit only when subject matter changes. Internship consists of 6 hours. Thesis must consist of 6 hours.

Special Problems and/or Independent Study may be substituted for all or part of the Practicum requirements with the recommendation of the Committee on Graduate Studies and the approval of the Division Director and Dean.

Concentration Requirements:

- FIN 5043 Budgeting and Finance in the Public Sector
- ENV 5453 Planning and Management of Manpower Programs
- ENV 6643 Concepts of Public and Environmental Management

Support Work:

Twelve (12) semester hours of course work from a related field in Environmental Management or from another support area, as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean.

MASTER OF ARTS DEGREE IN ENVIRONMENTAL MANAGEMENT

Concentration in:

Urban Studies

The Master of Arts Degree in Environmental Management with a concentration in Urban Studies is available to students whose undergraduate degrees are in such areas as architecture, economics, engineering, environmental design, and social sciences. The program is for those individuals who want to prepare for careers in urban planning and urban design.

Special Admission Requirements. For unconditional admission to the Master of Arts Degree in Environmental Management, applicants must meet university-wide graduate admission requirements. Those who have not met these requirements are evaluated on an individual basis in order to ensure that their backgrounds are adequate for conditional admission to the M.A. degree program.

Some or all of the following courses may be required as admission conditions for students whose backgrounds are insufficient to permit unconditional admission to the concentration in Urban Studies.

- MGT 5003 Conceptual Paradigms of Management
- ECO 5003 Economics Theory and Policy
- MAT 5073 Methods of Statistics I
- BDS 5003 Quantitative Methods for Business Analysis

Degree Requirements. All candidates for the Master of Arts Degree in Environmental Management are required to complete successfully a program which contains a total of 36 semester hours.

Required (Core) Courses:

- ECO 5043 Public Managerial Economics
- ENV 5533 Environment and Systems
- ENV 6603 Investigative Methods
Required Practicum (6 hours from the following):

- ENV 6943 Workshop in Public and Environmental Management (3 or 6 hours)
- ENV 6963 Internship (3 or 6 hours)
- ENV 6983 Master's Thesis (6 hours)

Workshop may be repeated for credit only when subject matter changes. Internship normally consists of 6 hours. Thesis must consist of 6 hours.

Special Problems and/or Independent Study may be substituted for all or part of the Practicum requirements with the recommendation of the Committee on Graduate Studies and approved by the Division Director and Dean.

Concentration Requirements:

- ENV 5503 Urban Planning I
- ENV 5513 Urban Research
- ENV 5523 Comparative Urban Development
- ENV 6513 Communication Skills for Public Management

Support Work:

Nine (9) semester hours of course work from a related field in Environmental Management or from another support area, as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean.

MASTER OF SCIENCE DEGREE IN ENVIRONMENTAL MANAGEMENT

Concentration In: Management of Natural Resources

The Master of Science Degree in Environmental Management with a concentration in Management of Natural Resources is designed for the individuals who have a quantitative orientation. Graduate students entering the program would have a baccalaureate degree usually in engineering, mathematics, physical or biological sciences, or economics. This field of study is intended for those individuals who want to prepare for careers involving the allocation, regulation, utilization and protection of natural resources and environmental quality.

Special Admission Requirements. For unconditional admission to the Master of Science Degree Program in Environmental Management, applicants must meet university-wide graduate admission requirements. Those who have not met these requirements are evaluated on an individual basis in order to ensure that their backgrounds are adequate for conditional admission to the M.S. degree program.

Some or all of the following courses may be required as admission conditions for students whose backgrounds are insufficient to permit unconditional admission to the concentration in the Management of Natural Resources.

- MGT 5003 Conceptual Paradigms of Management
- ECO 5003 Economic Theory and Policy
- MAT 5073 Methods of Statistics I
- EPS 5403 Earth Science

Degree Requirements. All candidates for the Master of Science Degree in Environmental Management are required to complete successfully a program which contains a total of 36 semester hours.

Required (Core) Courses:

- ECO 5043 Public Managerial Economics
- ENV 5533 Environment and Systems
- ENV 6603 Investigative Methods
**Required Practicum** (6 hours from the following):

- ENV 6943 Workshop in Public and Environmental Management (3 or 6 hours)
- ENV 6963 Internship (3 or 6 hours)
- ENV 6983 Master's Thesis (6 hours)

Workshop may be repeated for credit only when subject matter changes. Internship normally consists of 6 hours. Thesis must consist of 6 hours.

Special Problems and/or Independent Study may be substituted for all or part of the practicum requirements with the recommendation of the Committee on Graduate Studies and the approval of the Division Director and Dean.

**Concentration Requirements:** Minimum of 9 hours credit must be taken from the following courses:

- ENV 5723 Applied Geosciences
- ENV 6613 Applied Ecology
- ENV 6913 Decision Analysis for Public and Environmental Management
- ENV 6923 Modeling and Analysis of Environmental Systems
- CHE 5303 Environmental Chemistry
- EPS 5303 Environmental Physics

**Support Work**

Twelve (12) semester hours of course work from a related field in Environmental Management or from another support area, as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean.

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**COURSE DESCRIPTIONS**

*ENVIRONMENTAL MANAGEMENT (ENV)*

5203 Human and Natural Resources (3-0) 3 hours credit.
A study of population as a resource and the role of humans in the environment. Natural resources are viewed from the contribution they make to the growth process of society. The changing role of human and natural resources as they relate to technology over time is analyzed.

5323 Public Policy Formulation (3-0) 3 hours credit.
Processes through which public demands are generated, converted into formal policy and implemented. Focus is upon the role of the administrator, and institutional-organizational contexts in which the administrator functions.

5353 Evaluation of Public Employees (3-0) 3 hours credit.
An exploration of techniques of evaluating public employees, public wage and salary administration, problems of measuring productivity and types of incentive systems which may be used to increase public employee productivity.

5363 Environmental Geology (2-3) 3 hours credit.
Geologic materials and processes as related to their influence on man's physical environment. Effects of landscape modification and geologic hazards such as earthquakes and landslides. Geologic aspects of waste disposal. Medical geology. Water resources. Planning.

5383 Topics in Health Systems (3-0) 3 hours credit. Prerequisite: Consent of instructor.
This course will discuss the major topics in health systems. It may include such topics as: 1) consumer role in health care systems; 2) changing health care delivery patterns; 3) changing incentive structures; 4) the right to die; 5) national health insurance; 6)
changing quality of care; and, 7) growth of technology. May be repeated when subject matter is different.

5403 **Health Effects of Environmental Pollutants**  
(3-0) 3 hours credit. Prerequisite: A course in physiology and consent of instructor.  
A course on the effects of pollutants upon the health of human beings. The course will consider how pulmonary irritants, ingested substances and contact materials act in physiological systems and the overall effect of these substances on human health and disease.

5413 **Economics of Health Systems**  
(3-0) 3 hours of credit.  
A study of the economics of health care financing and patterns of expenditure of health care dollars. The course will include evaluation techniques for the determination of need for medical service, availability of resources, and the public policy methods and solutions to resolve problems in health care.

5423 **Employment and Training Programs**  
(3-0) 3 hours credit.  
Discuss and develop methods to evaluate the economic and non-economic impacts of employment and training programs. Contributions of employment and training programs to aggregative economic policies, alleviating economic problems of minority groups and women, and upgrading the labor force will be analyzed from theoretical and practical perspectives.

5433 **Affirmative Action Policies**  
(3-0) 3 hours credit.  
The theoretical bases for affirmative action policies will be explored from economic, political and legal perspectives. The operation of typical policies will be analyzed. The interaction of affirmative action policies with civil service rules, collective bargaining structures and internal personnel systems will be discussed.

5453 **Planning and Management of Manpower Programs**  
(3-0) 3 hours credit.  
Prepares students to work with the tools of analysis of labor market conditions, to understand the development of a manpower plan, and to manage the operations of a local manpower program. It reviews national manpower legislation as well as the performance and evaluation results of actual programs.

5503 **Urban Planning I**  
(3-0) 3 hours credit.  
The course explores the development of methodologies and evolution of the city planning movement. An introduction to the major concepts and procedures used by city planners with emphasis on the elements and technical functions of the urban general plan.

5513 **Urban Research**  
(3-0) 3 hours credit. Prerequisite: ENV 5503, or consent of instructor.  
The development of specific analytical tools used in the analysis of urban activity and the application of these tools to analyze case histories. Model building using the systems approach is utilized.

5523 **Comparative Urban Development**  
(3-0) 3 hours credit.  
A comparative study of the interaction of culture, economics, and natural environment as they affect urban development over time. Areas covered include: pre-industrial cities in the Mediterranean, Medieval Europe, and Pre-Hispanic America. The development of city planning in European and American cities will be considered.

5533 **Environment and Systems**  
(3-0) 3 hours credit.  
The theory of growth and change is studied in relation to the spatial relationships of towns, cities and regions. The impact of environmental and public systems as they affect the quality of life are considered and compared to the economic dimensions of these decisions.
5543 Urban Housing
(3-0) 3 hours credit.
An analysis of housing problems, their causes and attempted solutions and ecological
effects to include the dynamics of urban growth and aging processes.

5553 Urban Planning II
(3-0) 3 hours credit. Prerequisites: ENV 5503, ENV 5513, or consent of instructor.
This course focuses on the practical application of the analytical tools and techniques
available to the city planner in addressing planning problems. Emphasis is placed on
developing familiarity and skill in using the supportive research tools needed to accom­
plish the various elements of an urban general plan.

5723 Applied Geosciences
(2-3) 3 hours credit.
Studies in the applied geosciences, such as geophysics, engineering geology,
hydrogeology and meteorology. Laboratory practice, calculations and field work related
topics will be covered. May be repeated for credit when the topics vary.

5733 Marine Environment and Resources
(3-0) 3 hours credit.
Study of characteristics, process, and resources of the marine environment with focus
upon the application of technology in exploring and developing natural resources for the
future.

5813 Energy Conservation and Environment
(3-0) 3 hours credit. Prerequisite: ENV 6603 or consent of instructor.
Analysis of economic opportunities associated with energy conservation practices in
transportation, building and construction, industry, utilities, and food production; as­
sessments of environmental consequences resulting from energy production, conver­
sion and utilization; technologies applicable to the evaluation of trade-offs among
energy, environment and economic considerations.

5823 Water Supply and Treatment
(3-0) 3 hours credit. Prerequisites: CHE 5303 or consent of instructor; a course in fluid
mechanics is recommended.
Discussion of the occurrence, collection, storage, distribution, transmission and quality
of water; the physical and chemical methods of water treatment and conditioning; the
methods involved in the design process and the selection of hardware.

5873 Water and Wastewater Unit Processes Laboratory
(2-3) 3 hours credit. Prerequisites: ENV 5823, ENV 6893 or equivalence, and consent of
instructor.
The application of the physical, chemical and biological water and wastewater treatment
unit processes on a bench or pilot scale. Experimentation is designed to comprehen­
sively study the operation of these unit processes.

6203 Survey of Environmental Law
(3-0) 3 hours credit.
A survey of current law and statutory provisions related to environmental management.
Skills in evaluating legal briefs, law reviews and statutes will be developed.

6213 Governmental Regulation in Public and Environmental Management
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Course will concern two major aspects of governmental regulations: a) the extent and
purpose of the major federal legislation, b) the procedural operation pursuant to the
various acts as they would affect the environmental managers. The discussion of the
major state regulatory laws will be covered.

6223 Legal Regulation of Urban Systems
(3-0) 3 hours credit.
An analysis of the various legal controls that impact on land use, development and
planning practice in the U.S. Subjects include zoning, subdivision regulations, building
and housing codes, deed restriction, urban renewal, public development and the legal
organization for planning implementation.
6293 Seminar in Public and Environmental Management
(3-0) 3 hours credit.
A selection of current topics of interest and importance in public and environmental management.

6343 Manpower Planning and Programming: Models and Research
(3-0) 3 hours credit.
The theoretical and practical problems involved in forecasting manpower needs and intelligent manpower planning and modeling will be analyzed. Existing techniques will be studied and evaluated, with emphasis on their usefulness for public policy formulation.

6413 Policy and Issues on Energy and Mineral Resources
(3-0) 3 hours credit. Prerequisites: ENV 6603, ENV 6853, or consent of instructor.
Evaluation of current national and international energy and mineral resources issues; study of the evolution of national energy policies; energy demand and supply elasticity subject to different pricing policies; energy alternatives development versus costs and adaptability to our modern society.

6503 Urban Design
(3-0) 3 hours credit.
A study of the physical interrelationship among urban residential sectors, urban cores, institutional areas, and circulation systems within the context of the natural environment. Scope of study extends from small groups of users to existing and new communities.

6504 Urban Design Laboratory
(1-6) 4 hours credit. Prerequisite: ENV 6503, or consent of instructor.
The laboratory study will examine the complex interrelationships of open space, transportation, infrastructure, and other major urban elements related to the economic, legal and institutional aspects of development on selected sites.

6513 Communication Skills for Public Management
(2-2) 3 hours credit.
To introduce the student to the use of oral, written, graphics and other representational techniques as a means of expressing and conceptualizing ideas; (1) small group programming, (2) slide video photography as a device to portray situations, (3) writing, presenting and producing a report.

6523 Community Planning and Development
(3-0) 3 hours credit.
Examination of the development of new communities and the redevelopment of older areas including resource commitments and instruments for effectuation and implementation.

6524 Community Planning and Development Laboratory
(1-6) 4 hours credit. Prerequisite: ENV 6523 or consent of instructor.
Field problems in the major phases of new town development and the redevelopment of older urban areas. A practical application of previously studied tools and techniques.

6533 Transportation Planning
(3-0) 3 hours credit.
The course will examine existing and future urban transportation systems and principles in terms of their impact on urban, human and natural resources.

6543 Urban Service Systems
(3-0) 3 hours credit.
Study of urban service systems (e.g., medical service, delivery systems, police systems, fire systems) as interrelated systems by analyzing their measures of effectiveness and common problems. Mathematical models for analyzing these functions are reviewed.

6603 Investigative Methods
(3-0) 3 hours credit. Prerequisites: MAT 1022, MAT 1031, MAT 1051, MAT 1062, ENV 5533, ECO 5043 prior to or concurrent with ENV 6603, or consent of instructor.
Introductory course in systems analysis emphasizing its application for the management of environmental and public systems. Problem formulation, mathematical modeling and solution procedures will be discussed. Quantitative tools will include marginal analysis, classical optimization, linear programming and dynamic programming, stressing both uses and limitations.
6613  Applied Ecology  
(2-3) 3 hours credit.  
The impact of man's activities on the environment: their effect on water, land, animal, and human resources. An evaluation of present and future strategies to preserve a healthy environment; field work and laboratory practice will be included.

6623  Economics of Natural Resources  
(3-0) 3 hours credit.  
A study of governmental and private programs to promote prudent, efficient use of natural resources by society. Cost benefit analysis is utilized to evaluate alternate solutions in formulating policy.

6633  Land and Water Economics  
(3-0) 3 hours credit. Prerequisite: ENV 6623 or consent of instructor.  
A study of the economic aspects of the use, supply, development and management of water and land resources with special emphasis on river basin and project planning, benefit cost analysis, system of accounts analysis, water and land demands and multiple-use management of these resources.

6643  Concepts for Public and Environmental Management  
(3-0) 3 hours credit.  
The application of management concepts as they relate to the development of human and natural resources and as they apply to urban growth. The initiation, organization, and development of programs to utilize efficiently human and natural resources in urban growth are examined.

6653  Management of Renewable and Recyclable Resources  
(3-0) 3 hours credit.  
The study of various tools and techniques used in the management of renewable and recyclable resources. Emphasis is placed on the changing role of these resources and their importance to man. Human and technological developments are examined.

6803  Regulation and Control for Energy  
(3-0) 3 hours credit. Prerequisites: ENV 6603, ENV 6853, or consent of instructor.  
Review and evaluation of existing governmental regulations and tax policies upon the production, transmission and utilization of energy resources; assessment of the effectiveness of different control mechanisms for the enhancement of energy resources development as well as environmental protection.

6813  Water Management  
(3-0) 3 hours credit.  
An application of management principles to the efficient utilization of water resources by society. A study of water as a resource, its value, uses and changing role over time, as a result of ecological change. The formulation of public policy toward water resources is studied.

6823  Land Management  
(3-0) 3 hours credit.  
An analysis of alternative land uses and the methodology by which land use is evaluated. The changing role of land as a resource as it is related to human and technological development is examined. Legal dimensions of natural resources will be considered.

6833  Mineral Resources  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
The origin, geologic setting and distribution of metallic and non-metallic mineral deposits and fossil fuels. Resources and reserves. Uses, economic conditions, exploration and development methods for mineral commodities. Work with specimens, maps, sections and mineral data.

6843  Groundwater Resources Management  
(3-0) 3 hours credit.  
Study of the characteristics, occurrence, distribution, transport, quality, and consumption of groundwater resources with emphasis placed on efficient usage and conservation.

6853  Energy Resources Management  
(3-0) 3 hours credit. Prerequisite: Physical Science background or the consent of instructor.
The flow of energy through agricultural and industrial social systems will be traced from production to final dissipation as heat, and each step will be investigated, together with its environmental impacts.

6863 Air Quality Management
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
An introduction to the broad field of air pollution control; the sources and physical, chemical and biological effects of air pollutants. Discussed are the overall objectives and systematic efforts to deal with air pollution, including air quality criteria, development of air quality standards, and plans for implementing them.

6873 Air Pollution Control
(3-0) 3 hours credit. Prerequisite: ENV 6663 or consent of instructor.
The measurements of individual constituents; specific methods of air pollution control techniques; and the instrumentation and equipment available for both air pollution survey and control.

6883 Solid Waste Management
(3-0) 3 hours credit. Prerequisite: ENV 6603 or consent of instructor.
Characteristics of and problems associated with solid wastes from municipal, industrial and wastewater treatment sources; methods of collection, processing and disposal of various kinds of solid waste; the systems approach applied to facility location, energy and material recovery, and regional solid waste management.

6893 Water Pollution Control Design and Operation
(3-0) 3 hours credit. Prerequisite: CHE 5303 or consent of instructor.
Principles and methods of water pollution control process design and operation; and the selection and optimization of total treatment processes as well as appurtenances and accessory equipments; the methods involved in the design process and the selection of the hardware.

6903 Problem Solving in Energy Systems
(3-0) 3 hours credit. Prerequisites: ENV 6603, ENV 6853 or consent of instructor.
Application of quantitative methodologies and techniques to problems of planning and management of energy systems; problem areas including energy demand and supply projections; energy transmission; facility locations; fuel substitution; reliability of power grids; pricing and taxing policies; formulation and solution of problems of environment, energy and economy.

6913 Decision Analysis for Public and Environmental Management
(3-0) 3 hours credit. Prerequisite: ENV 6603 or consent of instructor.
The role of analysis tools in the areas of costing analysis, decision, and utility theory as they are applied to the efficient utilization of natural resources. The subject is approached from a public sector rather than from a business firm point of view.

6923 Modeling and Analysis of Environmental Systems
(3-0) 3 hours credit. Prerequisites: ENV 6603 and ENV 6913, or consent of instructor.
An advanced course in the application of systems analysis to the solutions of environmental problems; emphasis will be on gaining practical experience in the art of building and solving mathematical models. The approach will be problem, rather than technique, oriented.

6943 Workshop in Public and Environmental Management
(0-6) 3 hours credit.
Provide the student with a team experience in working with citizens’ groups, planning agencies, and local governments on plans, issues or programs related to planning and management in the public sector. Students perform planning and management studies under faculty supervision. May be repeated once for credit with advisor’s consent.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.
6963 Internship
3 hours credit. Prerequisite: Approval of the Dean.
An opportunity will be provided the student to work in an environmental management setting which will permit him to apply the knowledge learned in the formal instruction part of the program. May be repeated for credit to a maximum of 6 hours.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems Courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6983 Master's Thesis
3 hours credit. Prerequisite: Admission to candidacy and permission of the Graduate Advisor and thesis director.
Thesis research preparation. May be repeated for credit, but not more than 6 hours will apply to the Master's degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.
DIVISION OF SPECIAL PROGRAMS

COURSE DESCRIPTIONS

MUSEUM SCIENCE

( MSM)

5013 History and Theory of the Museum
(3-0) 3 hours credit.
Historical development, types (art, history, science, technology), functions, administration, funding, building design, staffing, visitor relations, public relations, etc.

5023 Technical Aspects of Museum Work
(3-0) 3 hours credit.
Preparation, conservation and restoration of collections, exhibit design, graphics production, archival photography, audiovisual technology, graphic image research.

5301.2 Topics in Museum Science
(1-0 or 0-2) 1 hour credit or (2-0, 1-2, 0-4) 2 hours credit.
A series of mini courses designed to give in-depth knowledge and training in specialized areas of museum science. Topics include: record keeping, care and storage of artifacts and prints, registration, accessioning, acquisition, cataloging of collections, museum administration (budgeting, personnel, accounting, purchasing, funding, property control), editorial and curatorial duties and special events. May be repeated for credit when these topics vary.
The graduate program in biology is directed to those students who desire advanced education in specialized areas of the life sciences. Two degree options are available: a thesis program recommended for those desiring to develop expertise in research design and methodology; and a non-thesis program, for students who wish to obtain the M.S. degree through course work. The thesis option provides in-depth knowledge of a specialized field of interest and is recommended for the student planning a research career. The non-thesis program is particularly suitable for individuals teaching in the life sciences.

Graduate faculty in areas such as Biochemistry, Cellular Biology, Developmental Biology, Ecology, Genetics, Immunology, Microbiology, Molecular Biology, Neurobiology, Physiology, and Plant Sciences provide the foundation for the Division's interdisciplinary graduate program. A special program in marine biology and ecology is available with the Marine Science Institute of The University of Texas located at Port Aransas, Texas. Due to the multidisciplinary nature of the Division, students may pursue studies in a number of interdisciplinary areas such as Cell and Molecular Biology, Ecological Systems and Regulatory Biology. Individual programs are organized around each student's interests in consultation with the student's Graduate Advisor.

Special Admission Requirements. Ordinarily, applicants are expected to have completed an undergraduate major in biology. It is strongly recommended that students have at least one semester of organic chemistry and calculus. Students whose undergraduate preparation is not adequate to pursue the graduate program will be required to complete the necessary courses as conditions of admission. Those students who have less than full preparation should anticipate that additional time will be required to complete the degree.

Degree Requirements. All candidates for the degree are required to complete successfully 36 semester hours of graduate credit as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean. These 36 hours will be subject to the following conditions:

1. A minimum of 18 semester hours of graduate credit in organized classes must be earned within the Division.
2. An additional 12-15 hours of coursework as approved by the Committee on Graduate Studies and approved by the Division Director and Dean.
3. A student electing the non-thesis program is required to complete 3 hours of BIO 6951-3, Independent Study, in addition to 18 hours in organized classes in the Division.
4. If a student elects the thesis program, 6 hours of BIO 6983, Master's Thesis, must be completed in addition to the 18 hours in organized classes within the Division.

COURSE DESCRIPTIONS

BIOLOGY (BIO)

5011 Life Sciences Colloquium
1 hour credit. Prerequisite: Graduate standing. Current research presented by faculty, visiting lecturers and thesis candidates. May be repeated for credit.
5041 Graduate Seminar in Life Sciences
(1-0) 1 hour credit. Prerequisite: Graduate standing.
An opportunity for graduate students to participate in a weekly seminar program under
the supervision of a faculty member. Graduate students will not only be responsible for
the content of the program, but will also present the seminars. May be repeated for credit.

5052 Seminar in Life Sciences
(2-0) 2 hours credit. Prerequisite: Graduate standing.
Discussions, current literature and recent advances in specialized areas of Allied Health
and Life Sciences. Seminars are organized according to areas of interest and may be
repeated for credit.

5053 Life Sciences Today
(3-0) 3 hours credit.
An in-depth study of biology, stressing the physical and chemical basis of living
systems. The course is suitable for a non-biologist desiring an understanding of modern
biological concepts.

5233 Environmental and Population Biology
(3-0) 3 hours credit. Prerequisite: Graduate standing or consent of instructor.
The role of the environment in population regulation and control. To include topics such
as environmental cycles of the past and subsequent population changes, human altera-
tions of the environment and their consequences.

5263 Microbial Ecology
(3-0) 3 hours credit. Prerequisite: BIO 3713.
A study of the mutual relationships between microorganisms and their environment,
especially natural habitats of microorganisms (including normal human flora and
pathogens), parasitism, and opportunism in various microbial species.

5271 Microbial Ecology Laboratory
(0-3) 1 hour credit.
Must be taken concurrently with BIO 5263.

5283 Urban Wildlife Management
(3-0) 3 hours credit. Consent of instructor.
Commensal and noncommensal vertebrates that cause severe economic and health
problems for mankind will be studied.

5313 Cytogenetics
(3-0) 3 hours of credit. Prerequisite: BIO 2313 or the equivalent.
An analysis of chromosome structure and function, gene location crossing-over and
variations in chromosome structure and number.

5321 Cytogenetics Laboratory
(0-3) 1 hour credit.
Must be taken concurrently with BIO 5313.

5333 Ecological Genetics
(3-0) 3 hours credit. Prerequisites: BIO 2313 and BIO 2321 or the equivalent. Biostatistics
highly recommended.
An experimental approach to the interaction of genotype and environment in populations
with emphasis on mutagenesis, selection, polymorphism, and adaptive mechanisms.

5341 Ecological Genetics Laboratory
(0-3) 1 hour credit.
Must be taken concurrently with BIO 5333.

5353 Molecular and Biochemical Genetics
(3-0) 3 hours credit. Prerequisites: BIO 2313 and BIO 3513 or the equivalent.
Molecular and biochemical aspects of structure, replication, mutation and phenotypic
expression of genetic material.

5404 Advanced Mammalian Physiology
(4-0) 4 hours credit. Prerequisite: BIO 3413 or the equivalent. Physiology of the organs
and organ systems of mammals.

5412 Advanced Mammalian Physiology Laboratory
(0-6) 2 hours credit.
Must be taken concurrently with BIO 5404.
5422 Neuroanatomy
(2-0) 2 hours credit. Prerequisite: Consent of instructor. The anatomy of the vertebrate nervous system.

5434 Neurophysiology
(4-0) 4 hours credit. Prerequisites: BIO 4413 or equivalent and BIO 5422 or concurrent enrollment.
Physiology of the mammalian nervous system. Emphasis on sensory and motor systems and neural correlations of behavior.

5463 Reproductive Physiology
(3-0) 3 hours credit. Prerequisites: Courses in organ systems physiology and endocrinology or consent of instructor.
A comparative study of mammalian reproduction with emphasis on the human, including cellular and systems mechanisms, hormonal regulation, and the effects of environmental factors.

5471 Reproductive Physiology Laboratory
(0-3) 1 hour credit.
Must be taken concurrently with BIO 5463.

5513 Graduate Biochemistry
(3-0) 3 hours credit. Prerequisite: BIO 3513 or equivalent. An in-depth discussion of structure-function relationships in biological systems, including bioenergetics of metabolism and hormonal and non-hormonal regulation of metabolic pathways.

5543 Enzymes
(3-0) 3 hours credit. Prerequisite: BIO 3513 or the equivalent. A study of enzyme mechanisms, co-factors, kinetics and regulation; isolation, characterization, and practical application.

5552 Enzymes Laboratory
(0-6) 2 hours credit.
Must be taken concurrently with BIO 5543.

5553 Experimental Biochemistry
(0-6) 3 hours credit. Prerequisite: BIO 3521
Laboratory techniques in methods of biochemical fractionation, purification and analysis of cellular components.

5563 Biochemical Macromolecules
(3-0) 3 hours credit. Prerequisite: BIO 3513 or the equivalent. Structure, function, and isolation of macromolecules. Emphasis is on nucleic acids and proteins and their interactions.

5633 Cytodifferentiation
(3-0) 3 hours credit. Prerequisite: Graduate standing in the Life Sciences.
Detailed study of selected areas of developmental biology relating to cellular differentiation, including nuclear-cytoplasmic interactions, induction and reversibility of differentiation.

5743 Biochemical Virology
(3-0) 3 hours credit. Prerequisites: BIO 3713 and BIO 3513.
A detailed study of the diversity of viruses and biochemical mechanisms for their replication.

5751 Biochemical Virology Laboratory
(0-3) 1 hour credit. Must be taken with or following BIO 5743.

5833 Membrane Structure and Function
(3-0) 3 hours credit. Prerequisite: BIO 3513 or the equivalent.
A study of the composition, organization, transport functions and permeability of natural and model membranes.

6112 Advanced Plant Physiology
(2-0) 2 hours credit. Prerequisite: BIO 4603 or consent of instructor.
Principles of plant physiology and biochemistry, with particular emphasis on plant hormones, nitrogen fixation, plant respiration, photosynthesis, and current research work.
6122 **Advanced Plant Physiology Laboratory**  
(0-6) 2 hours credit. Must be taken concurrently with BIO 6112.  
Techniques used in plant physiology, including isotopes, autoradiography, ion-exchange and gas chromatography.

6212 **Advanced Plant Ecology**  
(2-0) 2 hours credit. Prerequisite: Undergraduate plant ecology or consent of instructor.  
Interaction of terrestrial plants with their environment, allelopathy and competition, plant distribution, succession, and factors that control plant growth and dispersal. Special consideration will be given the concepts of climax and succession, and land management.

6222 **Advanced Plant Ecology Laboratory**  
(0-6) 2 hours credit.  
Must be taken concurrently with BIO 6212.  
Techniques and quantitative measurements used in plant ecological research will be demonstrated. Field trips will include the major plant communities in Texas.

6252 **Advanced Animal Ecology**  
(2-0) 2 hours credit. Prerequisite: BIO 3213 or consent of instructor.  
Interaction of terrestrial animals with their environment; discussion of factors that affect animal distribution, populations, and the biotic and abiotic factors that control growth and dispersal in relation to habitat management.

6282 **Advanced Animal Ecology Laboratory**  
(0-6) 2 hours credit.  
Must be taken concurrently with BIO 6252.  
Methods and techniques used to estimate various types of animal populations. Field trips will include major habitats found in Texas.

6373 **Invertebrate Physiology**  
(3-0) 3 hours credit. Prerequisite: BIO 3413.  
An investigation of the mechanisms of respiration, movement, ion and water regulation and hormonal integration in the invertebrates.

6381 **Invertebrate Physiology Laboratory**  
(0-3) 1 hour credit.  
Must be taken concurrently with BIO 6373.

6473 **Environmental Physiology**  
(3-0) 3 hours credit. Prerequisite: BIO 3413 or the equivalent.  
Physiological responses to heat, cold, light, social stimuli and atmospheric pressure in the vertebrate organisms.

6481 **Environmental Physiology Laboratory**  
(0-3) 1 hour credit.  
Must be taken concurrently with BIO 6473.

6492 **Animal Behavior**  
(2-0) 2 hours credit. Prerequisite: BIO 3413.  
Origins and trends of major behavioral patterns with emphasis on organization and adaptive significance. Neural, endocrine, genetic and environmental factors modifying behavior will be examined.

6491 **Animal Behavior Laboratory**  
(0-3) 1 hour credit. Must be taken concurrently with BIO 6482.

6643 **Cellular and Molecular Biology**  
(3-0) 3 hours credit. Prerequisites: BIO 3513 and BIO 3813 or consent of instructor.  
Structure of eucaryotic and procaryotic cells, functions of biomembranes and cytoplasmic organelles, and regulation of cellular activity.

6663 **Experimental Parasitology**  
(3-0) 3 hours credit. Prerequisite: A course in parasitology or consent of instructor.  
A study of animal parasites with special emphasis on the physiology of host-parasite interactions.

6671 **Experimental Parasitology Laboratory**  
(0-3) 1 hour credit.  
Must be taken concurrently with BIO 6663.
6773 **Host-Parasite Interactions**
(3-0) 3 hours credit. Prerequisite: BIO 4782.
A study of infectious disease processes with emphasis on host-parasite relationships of selected microbial pathogens.

6782 **Diagnostic Microbiology**
(2-0) 2 hours credit. Prerequisites: BIO 4792 and consent of instructor.
Recent developments in principles and techniques of diagnostic and epidemiologic microbiology with applications in the clinical laboratory.

6791 **Diagnostic Microbiology Laboratory**
(0-3) 1 hour credit.
Must be taken concurrently with BIO 6782.

6793 **Immunology and Immunochemistry**
(3-0) 3 hours credit. Prerequisites: BIO 4743 and BIO 4751.
The study of current concepts of humoral and cell-mediated immunity with emphasis on molecular mechanisms.

6813 **Information Retrieval: Biomedical Applications**
(3-0) 3 hours credit. Prerequisites: CS 5053 or the equivalent, or consent of instructor.
Reporting, analysis, storage retrieval of biomedical data; emphasis on application of systems analysis to epidemiology of hospital infections, environmental control, fate of clinical reports.

6823 **Molecular Radiation Biology**
(3-0) 3 hours credit. Prerequisites: BIO 3513, BIO 3533 or consent of instructor.
Biological effects of ionizing and non-ionizing radiation and the mechanisms of repair of radiation damage at the cellular and subcellular level.

6873 **Microbial Physiology and Energetics**
(3-0) 3 hours credit. Prerequisites: BIO 3513 and BIO 3713.
Consideration of physiological activities of microorganisms with special emphasis on metabolic capabilities of bacteria and other microorganisms.

6881 **Microbial Physiology Laboratory**
(0-3) 1 hour credit.
Must be taken concurrently with BIO 6873.

6951-3 **Independent Study**
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 **Special Problems**
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary, but not more than 6 hours, regardless of discipline, may be applied to the Master's degree.

6983 **Master's Thesis**
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate Advisor and thesis director.
Thesis research and preparation. May be repeated for credit, but not more than 6 hours will apply to the Master's degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.
DIVISION OF EARTH AND PHYSICAL SCIENCES

MASTER OF SCIENCE DEGREE IN CHEMISTRY

The purpose of the graduate program in chemistry is to provide a sound preparation in the fundamentals of several areas of chemistry, an introduction to recent advances in theory and methods, and to encourage research experience in a specific area of study.

Graduate study in chemistry is offered leading to the M.S. degree with the following interest areas: organic, inorganic, physical and bio-organic chemistry.

Faculty expertise in each of the offered areas provides direct student-faculty interaction for Thesis development through course work and research. Additional cooperative projects and programs are available with other area research institutions.

Special Admission Requirements. In addition to satisfying the university-wide graduate admission requirements, a candidate for the Master of Science degree with a major in Chemistry must complete or have completed a minimum of twenty-four undergraduate semester hours in chemistry, of which twelve or more must be upper-division courses. Included in the undergraduate chemistry requirement are two semesters each of both organic and physical chemistry and one semester of biochemistry with the appropriate laboratory for each. All undergraduate chemistry must be completed with a grade of B or higher.

Degree Requirements. The Master of Science program requires the successful completion of 36 semester hours. The following plan must be followed by all candidates:

- CHE 5113 Advanced Organic Chemistry I (3 semester hours)
- CHE 5133 Advanced Inorganic Chemistry I (3 semester hours)
- CHE 5163 Advanced Instrumental Analysis (3 semester hours)
- CHE 5173 Techniques of Chemical Research (3 semester hours)
- CHE 5213 Chemical Thermodynamics (3 semester hours)
- CHE 5271 Graduate Seminar in Chemistry (3 semester hours)
- CHE 6983 Master's Thesis (6 semester hours)

A minimum of 6 semester hours, as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean, are required from one of the following interest areas:

1. For the Bio-organic Chemistry specialization:
   - CHE 5503 Bio-organic Chemistry
   - CHE 5513 Biophysical Chemistry
   - CHE 6113 Advanced Organic Chemistry II

2. For the Inorganic Chemistry specialization:
   - CHE 5523 Bio-inorganic Chemistry
   - CHE 5613 Applications of Symmetry
   - CHE 6133 Advanced Inorganic Chemistry II

3. For the Organic Chemistry specialization:
   - CHE 5413 Advanced Organic Laboratory
   - CHE 6113 Advanced Organic Chemistry II
   - CHE 6123 Methods of Organic Synthesis

4. For the Physical Chemistry specialization:
   - CHE 5243 Quantum Chemistry
   - CHE 5623 Statistical Thermodynamics
   - CHE 5633 Physical Chemistry of Macromolecular Systems
Supportive electives in chemistry, advanced mathematics, computer science, and/or biology as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean (6 semester hours).

**COURSE DESCRIPTIONS**

**CHEMISTRY**

(CHE)

5113 **Advanced Organic Chemistry I**

(3-0) 3 hours credit. Prerequisites: Eight hours each of undergraduate organic chemistry and physical chemistry or graduate standing in chemistry. An advanced study of topics in organic chemistry such as natural products; conformational analysis; nonbenzenoid aromaticity; biogenesis and biosynthesis; stereochemistry; modern synthetic reactions involving functional group transformations.

5133 **Advanced Inorganic Chemistry I**

(3-0) 3 hours credit. Prerequisite: Three credits of upper-division inorganic chemistry. Modern theories of chemical bonding and structure in inorganic chemistry; acid-base reactions; electrochemistry; symmetry; and descriptive chemistry.

5163 **Advanced Instrumental Analysis**

(2-3) 3 hours credit. Prerequisites: CHE 3223 and CHE 3232. A study of theory and analytical practice of mass spectrometry, NMR, I.R., U.V., AA, liquid chromatography, fluorescence, Mossbauer and X-ray electron spectroscopy.

5173 **Techniques of Chemical Research**

(1-6) 3 hours credit. Prerequisite: Graduate standing in chemistry. A study of experimental design, literature survey, research tools, result reporting and other topics.

5213 **Chemical Thermodynamics**

(3-0) 3 hours credit. Prerequisite: Eight hours each of undergraduate organic chemistry and physical chemistry or graduate standing in chemistry. An advanced study of chemical thermodynamics. Discussion of chemical, electrochemical, and interphase equilibria.

5223 **Chemical Kinetics**

(3-0) 3 hours credit. Prerequisite: CHE 3223 or its equivalent. An advanced study of topics in chemical kinetics, including electrochemical processes and transport phenomenon in inorganic and organic systems.

5243 **Quantum Chemistry**

(3-0) 3 hours credit. Prerequisites: CHE 4253 and MAT 2213 or consent of instructor. A study of concepts and methods of quantum mechanics with emphasis on the nature of the chemical bond and the interaction of electromagnetic radiation with molecules.

5271 **Graduate Seminar in Chemistry**

(0-3) 1 hour credit. Prerequisite: Graduate standing in chemistry or consent of the Division Director. Presentations of seminars based on the chemical literature that deal with current areas of research concern. The course will alternate in topics: inorganic/bio-inorganic, organic/bio-organic, and physical/bio-physical chemistry. The course may be repeated for credit when the topics vary. Participation in announced Divisional seminars is also required.

5303 **Environmental Chemistry**

(2-3) 3 hours credit. Prerequisite: One year of undergraduate chemistry or consent of instructor. An introductory course relating basic inorganic, organic, physical and biochemical principles to environmental problems. Analytical methods used in environmental control are considered.

5323 **Chemistry and Physics of the Atmosphere**

(3-0) 3 hours credit. Prerequisite: CHE 5303 or consent of the instructor. Chemical and photochemical processes in the troposphere and stratosphere. Genera-
tion and chemical modifications of atmospheric pollutants, transport phenomena. Physical and chemical methods of detection of air pollutants.

5333 **Chemistry and Physics of Liquid and Solid Pollutants**  
(3-0) 3 hours credit. Prerequisite: CHE 5303 or consent of the instructor. Polycrystalline, colloid, and clathrate aggregations, their growth and aging. Absorption, chemisorption, and ion exchange processes. Methods of detection and analysis of solid and liquid pollutants.

5341 **Instrumental Analysis of Pollutants**  
(0-3) 1 hour credit. Prerequisites: CHE 5323 and CHE 5333. Laboratory course in instrumental analysis and monitoring of gaseous, liquid, and solid pollutants. Spectroscopic and optical methods, mass spectrometry and chromatography, and electro-chemical techniques. Instrument-computer interfacing.

5413 **Advanced Organic Laboratory**  
(0-8) 3 hours credit. Prerequisites: CHE 4243 or concurrent registration in CHE 5113 or the consent of the instructor. Laboratory techniques for advanced organic/bio-organic synthesis. Identification and purification of synthetic products involving multistep sequences. Study of organic/bio-organic reaction mechanisms through experimental techniques (kinetics, stereochemistry).

5423 **Synthesis of Macromolecules**  
(3-0) 3 hours credit. Prerequisite: CHE 5113 or the consent of the instructor. Synthesis of polymer forming monomers as well as examination of polymerization processes. Formation of polyesters, polyamides, polyethers, polyolefins, plastics, crown ethers, and polyheterocycles. Modes of addition, substitution, and condensation reactions of polymerization.

5433 **Computer Analysis of Instrumental Data**  
(2-3) 3 hours credit. Prerequisites: CS 5053 or equivalent, CHE 5113, CHE 5163, and CHE 5213 or consent of the instructor. Principles of instrument — computer interfacing; computer processing of measured instrumental data; computer controlling of chemical experiments; mathematical modeling of chemical systems.

5503 **Bio-Organic Chemistry**  
(3-0) 3 hours credit. Prerequisite: CHE 5113 or consent of the instructor. Chemical transformations of biochemically important organic compounds and the examination of enzyme active sites from the viewpoint of mechanisms based on chemical modeling studies. Discussion of theories of chemical catalysis, stereochemistry, electron-transfer, chemical kinetics, and molecular structure.

5513 **Biophysical Chemistry**  
(3-0) 3 hours credit. Prerequisites: CHE 5113 and CHE 5213 or consent of the instructor. Physical chemistry of natural macromolecular systems. Spectroscopy: UV, Visible, and CD spectroscopy of proteins and nucleic acids; Fluorescence (steady-state and emission kinetics) of proteins, nucleic acids, and extrinsic labels; Nuclear and electron magnetic resonance of enzymes and cell membranes. Thermodynamics of macromolecular interactions: linked functions and allosteric models.

5523 **Bio-Inorganic Chemistry**  
(3-0) 3 hours credit. Prerequisite: CHE 5133. The study of biochemical oxidation — reduction reactions involving transition metals. Examination of the chemistry of Na, K, Ca, Mg, and P in transport phenomenon and catalysis. Discussion of metalloproteins and inner sphere vs. outer sphere electron transfer.

5613 **Applications of Symmetry**  
(3-0) 3 hours credit. Prerequisites: CHE 5133 and CHE 5213. The applications of group theory in inorganic and organic chemistry with emphasis on its use in spectroscopy and crystallography.

5623 **Statistical Thermodynamics**  
(3-0) 3 hours credit. Prerequisite: CHE 3223 or its equivalent. A molecular approach to the study of the physico-chemical properties of gases, liquids, and solids. A molecular study of chemical and interphase equilibria.
5633 Physical Chemistry of Macromolecular Systems
(3-0) 3 hours credit. Prerequisites: CHE 5163 and CHE 5213.
Study of thermal, mechanic, electric, and optical properties of organic and inorganic
macromolecular compounds with emphasis on principles and experimental techniques.

6113 Advanced Organic Chemistry II
(3-0) 3 hours credit. Prerequisite: CHE 5113 or the consent of the instructor.
Study of organic reaction mechanisms with emphasis on physical organic and kinetic
techniques. Application of molecular orbital theory to organic reactions.

6123 Methods of Organic Synthesis
(3-0) 3 hours credit. Prerequisite: CHE 6113 or the consent of the instructor.
The theory of molecule building to achieve total synthesis of interesting and important
compounds through a systematic examination of modern methods of organic functional
group transformations. Rational syntheses of organic molecules such as natural pro-
ducts, terpenes, steroids, and other molecules of biological importance.

6133 Advanced Inorganic Chemistry II
(3-0) 3 hours credit. Prerequisite: CHE 5133.
Theories of bonding in transition metals including valence bond, crystal field and
molecular orbital theory; metal ion complexation, transition metal geometry; mechanisms of transition metal ion reactions.

6951-3 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form
available) of the instructor, the student's Graduate Advisor, and the Division Director and
Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a
faculty member. For students needing specialized work not normally or not often available
as part of the regular course offerings. May be repeated for credit, but not more than
6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as
part of the regular course offerings. Special Problems courses may be repeated for credit
when the topics vary, but not more than 6 hours, regardless of discipline, will apply to a
Master's degree.

6983 Master's Thesis
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate
Advisor and thesis director.
Thesis research and preparation. May be repeated for credit, but not more than 6 hours
will apply to the Master's degree. Credit will be awarded upon completion of the thesis.
Enrollment is required each term in which the thesis is in progress.

COURSE DESCRIPTIONS
EARTH AND PHYSICAL SCIENCES
(EPS)

5303 Environmental Physics
(3-0) 3 hours credit. Prerequisite: Undergraduate general Physics.
Principles of physics applied to the understanding and solution of environmental prob-
lems. Topics include mechanics, fluid flow, atmospheric structure, solar and terrestrial
radiation, weather data and analysis, and micrometeorology.

5403 Earth Science
(2-3) 3 hours credit.
Study of the solid earth, oceans and atmosphere. Composition and physical processes of
the earth's crust, interpretation of ancient environments and the evolution of North
America.

5413 Field Geology
(0-8) 3 hours credit. Prerequisite: A course in general geology or consent of instructor.
Field study of igneous, sedimentary, and metamorphic rocks. Construction of planimet-
ric and topographic maps, use of aerial photographs and instruction in basic surveying techniques. Three weeks, full-time, in the San Antonio and Central Texas area.

5423  **Minerals and Rocks**  
(2-3) 3 hours credit. Prerequisite: A course in general geology or consent of instructor. Crystallography and crystal chemistry. Physical properties and identification of the more common minerals. Origin, occurrence and identification of major rock types.

5433  **Marine Geology**  
(3-0) 3 hours credit. Prerequisite: A course in general geology or consent of instructor. A survey of the geologic processes in the oceans, nature of the ocean basins, current patterns and element distribution.

5443  **Applied Geology**  
(2-3) 3 hours credit. Prerequisite: A course in introductory geology or consent of instructor. Geologic materials and processes as related to their influence on man's physical environment. Mineral resources, engineering works, and planning.

5454  **Paleontology**  
(3-3) 4 hours credit. Prerequisite: A course in historical geology or consent of instructor. Morphology, classification and distribution of invertebrate, vertebrate, and plant fossils. Elements of evolution and paleoecology. Methods of study.

5703  **Physical Science Studies I**  
(3-0) 3 hours credit. Prerequisite: Consent of instructor. A non-calculus study of the principles of physics and chemistry. May not be used to satisfy the requirements of a major in either of these subjects.

5713  **Physical Science Studies II**  
(3-0) 3 hours credit. Prerequisite: Credit for Physical Science Studies I or consent of instructor. A non-calculus study of the principles of chemistry, geology and astronomy. May not be used to satisfy the requirements of a major in any of these subjects.

5723  **Recent Developments in Physical Science**  
(3-0) 3 hours credit. Prerequisite: Consent of instructor. Studies of recent developments in physical science. A course intended for individuals teaching chemistry, earth science or physics. May not be used to satisfy the requirements of a major in any of these subjects.

5733  **Future Energy Sources**  
(3-0) 3 hours credit. Prerequisites: Consent of instructor and one year of introductory undergraduate physics. A study of research directions aimed at meeting major energy needs: in the short term, new techniques for more efficient use of conventional sources such as oil, coal, and nuclear fission; in the long term, feasible but as yet unproven technologies such as nuclear fusion and solar energy generation in space.

5743  **Physics for Biology and Medical Students**  
(3-0) 3 hours credit. Prerequisite: A two semester course in introductory physics and college algebra. A detailed treatment of physical principles most applicable to biology and medicine: mechanics, fluid flow, basic properties of gases and liquids, heat transfer, simple circuits, biomembranes, acoustics, and optics.
DIVISION OF MATHEMATICS, COMPUTER SCIENCE, AND SYSTEMS DESIGN

MASTER OF SCIENCE DEGREE IN MATHEMATICS, COMPUTER SCIENCE, AND SYSTEMS DESIGN

The graduate program in Mathematics, Computer Science, and Systems Design is directed to those individuals who desire training in both mathematics and computer science and will enable graduates of the program at the Master's level to perform as professionals in applied mathematics, statistics, computer science or digital systems design. The courses recommended in computer science and systems design incorporate the basic concepts suggested by the Institute of Electrical and Electronics Engineers Computer Society and the Association for Computing Machinery curricula groups.

Because of the heterogeneous backgrounds and interests of students in this area, a multi-track program is available. Students upon consultation with the graduate advisor, may select degree programs ranging from mathematics or statistics to a computer science or digital systems design orientation. Additionally, students may supplement mathematics, statistics, computer science, and systems design courses with approved courses from other disciplines.

Special Admission Requirements. It is recommended highly that at least a B.A. or B.S. in mathematics or computer science or a closely related field be completed as preparation. Those students who do not qualify for unconditional admission should anticipate that additional undergraduate and/or graduate course work may be required to complete the degree.

Degree Requirements. All candidates for the degree are required to successfully complete 36 semester hours of credit. These 36 hours will be subject to the following conditions:

1. A minimum of 21 hours of course work must be chosen from eligible courses within the Division of Mathematics, Computer Science, and Systems Design with numbers greater than 5000.
2. Each student in the Master's program is required either to write a Master's thesis or complete 6 hours of advanced courses in the Division as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean.
3. Upon the recommendation of the Committee on Graduate Studies and approval by the Division Director and Dean, 6 semester hours chosen from courses numbered between 3000 and 4999 within the Division of Mathematics, Computer Science, and Systems Design may be included in the degree program.
4. A sufficient number of additional graduate hours to complete the required 36 hours may be selected from other disciplines upon the recommendation of the Committee on Graduate Studies and approved by the Division Director and Dean.

COURSE DESCRIPTIONS

MATHEMATICS

MAT 5003 Modern Mathematics for Teachers
(3-0) 3 hours credit.
A practical orientation concerned with the classroom uses of mathematics for teachers of
5013 Mathematics for Inservice Teachers
(3-0) 3 hours credit.
General topics course for practicing teachers wherein the orientation is selected by both the instructor and the teacher participants. This course cannot be applied to the major in Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.

5053 Methods in Calculus I
(3-0) 3 hours credit. Prerequisite: MAT 1011 or the equivalent.
This is the first semester of a two semester course in calculus and its applications. Areas of study include differentiation, integration, partial derivatives, multiple integration, and Taylor series. This course cannot be applied to the major in Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.

5063 Methods in Calculus II
(3-0) 3 hours credit. Prerequisite: MAT 5053.
Areas of study include concepts in differential equations, calculus of variations, Lagrange multipliers and approximation techniques. This course cannot be applied to the major in Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.

5073 Methods of Statistics I
(3-0) 3 hours credit.
Emphasis on methods and applications of statistics. Measure of location, variability and association. Interpretation of categorical data. Hypothesis testing. Use of package programs. Applications. This course cannot be applied to the major in Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.

5083 Methods of Statistics II
(3-0) 3 hours credit. Prerequisite: MAT 5073.
A continuation of MAT 5073 with emphasis on linear statistical models. Use of packaged programs. Applications. This course cannot be applied to the major in Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.

5153 Real Analysis I
(3-0) 3 hours credit. Prerequisite: MAT 2213; MAT 3213 recommended but not required.
A study of the foundations of analysis, rigorous treatment of continuity, differentiation and integration.

5163 Real Analysis II
(3-0) 3 hours credit. Prerequisite: MAT 5153.
Continuation of MAT 5153. Areas of study include sequences and series of functions, the Stone-Weierstrass theorem, special functions, differentiation and integration of functions of several variables.

5173 Algebraic Structures
(3-0) 3 hours credit. Prerequisite: MAT 4233 or consent of instructor.
Development of basic theory of algebraic structures. Areas of study include finite groups, isomorphism, direct sums, polynomial rings, algebraic numbers, number fields, unique factorization domain, prime ideals and Galois groups.

5203 Theory of Functions of a Real Variable I
(3-0) 3 hours credit. Prerequisite: MAT 4223 or MAT 5163 or consent of instructor.
Lebesgue measure and integration theory.

5213 Theory of Functions of a Real Variable II
(3-0) 3 hours credit. Prerequisite: MAT 5203.
Further development of Lebesgue measure and integration theory, metric space topology, and elementary Banach space theory.
5223 Theory of Functions of a Complex Variable I
(3-0) 3 hours credit. Prerequisite: MAT 2213.
Complex integration. Cauchy's theorem, calculus of residues, power series.

5233 Theory of Functions of a Complex Variable II
(3-0) 3 hours credit. Prerequisite: MAT 5223.
Infinite products, entire functions, Picard's theorem, Riemann mapping theorem, functions of several complex variables.

5243 General Topology I
(3-0) 3 hours credit. Prerequisite: MAT 4273 or consent of instructor.
Topological spaces, metric spaces, continua, plane topology.

5253 General Topology II
(3-0) 3 hours credit. Prerequisite: MAT 5243.
Areas of study include introductory algebraic topology, introduction to topology of manifolds.

5263 Applied Algebra I
(3-0) 3 hours credit. Prerequisite: MAT 4233 or the equivalent.
Areas of study include Boolean algebras, lattice theory and graph theory, finite fields, Lie groups, Lie algebras.

5273 Applied Algebra II
(3-0) 3 hours credit. Prerequisite: MAT 5263 or the equivalent.
Ideas and techniques of modern algebra applied to the area of computer science.

5283 Linear Algebra and Matrix Theory I
(3-0) 3 hours credit. Prerequisite: MAT 2233 or the equivalent.
A study of linear algebraic structures and algebraic properties of matrices.

5293 Numerical Linear Algebra
(3-0) 3 hours credit. Prerequisite: MAT 2233 or consent of instructor.
Study of stable numerical methods for the solution of linear systems of equations, least square problems and matrix eigenvalue problems. Applications in statistics and in the numerical solution of differential equations.

5313 Abstract Algebraic Structures
(3-0) 3 hours credit. Prerequisite: MAT 4233 or MAT 5173.
Algebraic structures. Areas of study include groups, rings, fields, Galois theory, ideal theory and representations of groups, module theory, homological algebra.

5333 Hilbert Space
(3-0) 3 hours credit. Prerequisites: MAT 3213 and MAT 5283 or their equivalents.
Hilbert space as a generalization of n dimensional Euclidean space, normed linear spaces and inner product spaces, completeness, bases, dimension, bounded linear operators.

5353 Metric Geometry I
(3-0) 3 hours credit. Prerequisite: MAT 4263 or consent of instructor.
A detailed study of the geometry of metric spaces which leads to metric characterization of Banach and Hilbert spaces.

5363 Metric Geometry II
(3-0) 3 hours credit. Prerequisite: MAT 5353.
Continuation of MAT 5353, including metric characterizations of the classical non-euclidean spaces.

5413 Bioassay
(3-0) 3 hours credit. Prerequisite: MAT 3523 or consent of instructor.
Estimation of relative potency, quantitative or quantal responses, probits, normits, logits. Methods for analyzing data based on counts.

5423 Applied Time Series Analysis
(3-0) 3 hours credit. Prerequisite: MAT 3523 or consent of instructor.
MATHEMATICS

5503 Probability and Statistical Theory
(3-0) 3 hours credit. Prerequisite: MAT 3523 or consent of instructor.
Axioms of probability, random variables and their distributions, mathematical techniques.

5513 Mathematical Statistics and Inference
(3-0) 3 hours credit. Prerequisite: MAT 5503 or consent of instructor.
Theory and applications of statistics. Sampling distributions, tests of hypotheses, point and interval estimation.

5523 Applied Stochastic Processes
(3-0) 3 hours credit. Prerequisite: MAT 3523 or consent of instructor.
Basic theory of stochastic processes and applications. Second order processes, Markov chains and processes, renewal theory, queueing theory.

5543 Multivariate Statistical Analysis
(3-0) 3 hours credit. Prerequisite: MAT 3523 or consent of instructor.

5553 Non-Parametric Statistics
(3-0) 3 hours credit. Prerequisite: MAT 5513 or consent of instructor.
Methods and theory of non-parametric statistics.

5563 Linear Models I
(3-0) 3 hours credit. Prerequisite: MAT 5513 or consent of instructor.
Theory, analysis and interpretation of regression and analysis of variance models. Use of packaged programs. Applications.

5573 Linear Models II
(3-0) 3 hours credit. Prerequisite: MAT 5563 or consent of instructor.
A continuation of MAT 5563.

5583 Seminar in Statistics
(3-0) 3 hours credit. Prerequisites: MAT 3513 and 3523, or consent of instructor.
Topics of interest in applied and categorical data, design of experiments, sampling techniques, sufficiency, estimation theory, topics in multivariate analysis, Hypothesis testing theory.

5593 Statistical Consulting
3 hours credit. Prerequisite: MAT 3523 or consent of instructor.
Consulting apprenticeship under the faculty member responsible for this course. Statistical consulting is strongly recommended for students interested in statistics.

5603 Numerical Analysis
(3-0) 3 hours credit. Prerequisite: MAT 3643 or consent of instructor.
Emphasis on the mathematical analysis of numerical methods. Areas of study include solution of nonlinear equations and function optimization, approximation theory and numerical quadrature.

5613 Numerical Solution of Differential Equations
(3-0) 3 hours credit. Prerequisite: MAT 5603 or the equivalent.

5653 Differential Equations I
(3-0) 3 hours credit. Prerequisite: MAT 2213.
Solution of initial value ordinary differential equations, first order equations, higher order linear equations, series solutions, Laplace transforms, systems of first order equations, nonlinear differential equations and stability.

5663 Differential Equations II
(3-0) 3 hours credit. Prerequisite: MAT 5653.
Boundary value ordinary differential equations, partial differential equations, Fourier series and other orthogonal function expansions.
5673 **Partial Differential Equations I**  
(3-0) 3 hours credit. Prerequisite: MAT 5663 or MAT 3623 or consent of instructor.  
Classical theory of initial value and boundary value problems for partial differential equations.

5683 **Partial Differential Equations II**  
(3-0) 3 hours credit. Prerequisite: MAT 5673.  
Modern topics in partial differential equations.

5813 **Methods of Applied Mathematics I**  
(3-0) 3 hours credit. Prerequisite: MAT 3613 or MAT 5653 or consent of instructor.  
Areas of study include Fourier analysis, Laplace transforms, curvilinear coordinates, applications of complex variables, conformal mappings.

5823 **Methods of Applied Mathematics II**  
(3-0) 3 hours credit. Prerequisite: MAT 3613 or MAT 5653 or consent of instructor. MAT 3623 or MAT 5663 recommended but not required.  
Areas of study include tensor and vector analysis. Calculus of variations. Equations of mathematical physics.

5833 **Perturbation Theory in Applied Mathematics**  
(3-0) 3 hours credit. Prerequisite: MAT 3613 or MAT 5653 or consent of instructor.  
Perturbation theory, asymptotic analysis and boundary layer expansions.

5843 **Mathematical Modeling of Physical Systems**  
(3-0) 3 hours credit. Prerequisite: MAT 3613 or MAT 5653 or consent of instructor.  
Deterministic mathematical modeling with examples from engineering and the life and physical sciences. Stability considerations.

5853 **Mathematical Methods of Continuum Mechanics**  
(3-0) 3 hours credit. Prerequisite: MAT 3613 or MAT 5653 or consent of instructor.  
Basic concepts of elasticity, fluid flow and lubrication theory with applications to physical and biological systems.

6951-3 **Independent Study**  
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.  
Independent reading, research, discussion, and or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6971-3 **Special Problems**  
1 to 3 hours credit. Prerequisite: Consent of instructor.  
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when topics vary, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6983 **Master's Thesis**  
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate Advisor and thesis director.  
Thesis research and preparation. May be repeated for credit, but not more than 6 hours will apply to the Master's degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.

**COURSE DESCRIPTIONS**

**COMPUTER SCIENCE (CS)**

5003 **Computers and Human Relations**  
(3-0) 3 hours credit.  
For teachers of all disciplines who must acquire a basic course in computers so as to be able to put into perspective the issues and problems associated with computers; society; and the various disciplines. This course cannot be applied to the major in
Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.

5023 **Computers and Mathematics for Teachers**  
(3-0) 3 hours credit.  
A course, for in-service mathematics teachers, which is a study of how mathematics may be structured and developed through computer oriented algorithms. This course cannot be applied to the major in Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.

5053 **Concepts of Computing Systems I**  
(3-0) 3 hours credit. Prerequisite: Consent of instructor.  
Computer programming using a high level language, algorithm design, interfacing and assembly language. This course is designed for entering graduate students in Computer Science and Systems Design who have not had the equivalent of CS 1723, CS 2734 and CS 3713.

5063 **Concepts of Computing Systems II**  
(3-0) 3 hours credit. Prerequisite: CS 5053 or consent of instructor.  
Programming methodology for processing; structuring data, job control language, utility programs, data storage, retrieval, data structures, data access application. Intermediate high level language and assembly language programming. This course is designed for entering graduate students in Computer Science and Systems Design who have not had the equivalent of CS 2734, CS 3723 and CS 3783.

5131 **Job Control Language**  
(1-0) 1 hour credit. Prerequisite: Graduate standing.  
Job control language required to effectively utilize computing systems. This course cannot be applied to the major in Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.

5141 **COBOL Programming I**  
(1-0) 1 hour credit. Prerequisite: Graduate standing.  
An overview of file structure and design to enable students to develop an understanding of COBOL’s main features. This course cannot be applied to the major in Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.

5151 **COBOL Programming II**  
(1-0) 1 hour credit. Prerequisite: CS 5141 or consent of instructor.  
Program organization and elements will be covered. Assignments will illustrate COBOL’s ability to manipulate different types of files. This course cannot be applied to the major in Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.

5161 **PL/I Programming I**  
(1-0) 1 hour credit. Prerequisite: Graduate standing.  
An introduction to PL/I programming for students with some computer knowledge but who have never learned a programming language. The course cannot be applied to the major in Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.

5171 **PL/I Programming II**  
(1-0) 1 hour credit. Prerequisite: CS 5161 or consent of instructor. An intermediate level course in PL/I for students who know another programming language or who have some experience in a high level computer language. This course cannot be applied to the major in Mathematics, Computer Science, and Systems Design without the recommendation of the Committee on Graduate Studies and the approval of the Division Director and Dean.

5181 **FORTRAN Programming I**  
(1-0) 1 hour credit. Prerequisite: Graduate standing.  
An introduction to FORTRAN programming for persons with some computer knowledge
but who have never learned a programming language. This course cannot be applied to
the major in Mathematics, Computer Science, and Systems Design without the recom-
mendation of the Committee on Graduate Studies and approval of the Division Director
and Dean.

5191 FORTRAN Programming II
(1-0) 1 hour credit. Prerequisite: CS 5181 or consent of instructor.
An intermediate level course in FORTRAN for students who know another language or
have some FORTRAN experience. This course cannot be applied to the major in
Mathematics, Computer Science, and Systems Design without the recommendation of
the Committee on Graduate Studies and approval of the Division Director and Dean.

5233 Artificial Intelligence and Cognitive Science, an Appreciation
(3-0) 3 hours credit. Prerequisite: CS 5063 or consent of instructor.
This course is a study of topics in Artificial Intelligence such as state space, backtracking,
heuristic search, game playing, automatic theorem proving, and pattern recognition; it is also a study of topics in cognitive science such as machine learning, concepts
formation, representing knowledge and natural language understanding.

5303 Structure of Programming Languages I
(3-0) 3 hours credit. Prerequisite: CS 5063 or consent of instructor.
Study of the features of a variety of current programming languages including list
processing language and compiler design.

5313 Structure of Programming Languages II
(2-2) 3 hours credit. Prerequisite: CS 5303 or the equivalent.
An introduction to the design and implementation of assemblers, compilers, interpreters
and translator writing systems.

5333 Formal Grammars and Programming Languages
(3-0) 3 hours credit. Prerequisite: CS 5313 or consent of instructor.
Models of computation, formal models of syntax and semantics for programming lan-
guages.

5413 File System Design
(3-0) 3 hours credit. Prerequisite: CS 5063 or consent of instructor.
System design, data base design, management system analysis and management
techniques.

5443 Information Retrieval Systems
(3-0) 3 hours credit. Prerequisite: CS 5413.
Design and implementation of information retrieval in data base management systems
and file systems.

5463 Data Base Management Query Languages
(3-0) 3 hours credit. Prerequisite: CS 5513 and CS 5413 or the equivalent.
This course consists of the study of a variety of data base query languages, their relation
to natural languages and methods or natural language to logical and computer language
translation.

5513 Operating Systems and Architecture I
(3-0) 3 hours credit. Prerequisite: CS 4753 or consent of instructor.
This is the first semester of a two-semester integrated course on operating systems and
computer architecture which covers the structure, function and management of pro-
cessors, processes, memories, files and I/O devices.

5523 Operating Systems and Architecture II
(3-0) 3 hours credit. Prerequisite: CS 5513
Areas of study include multiprocessor systems, stack processors, networks and others.

5553 Performance Evaluation and Measurement of Information and Computing Sys-
tems
(3-0) 3 hours credit. Prerequisite: CS 5523, CS 5413 or consent of instructor.
This course consists of (1) a study of the major purposes for evaluating and measuring
the hardware and software performance of computing systems, including selection,
evaluation, performance projection and performance monitoring, and (2) a study of
techniques which may be used for performance evaluation and projection including
benchmarks, traces, synthetics workloads, analytic modeling and simulation using
simulation languages such as GPSS and SIMSCRIPT.
6133 Technology of Information Systems Administration: Design and Implementation
(3-0) 3 hours credit. Prerequisite: CS 5523.
This course focuses on the issues and management techniques of administering a computer information systems activity. The course explores both the technological and management tools which can help computer information systems managers to optimize information systems performance.

6951-1 Independent Study
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student’s Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master’s degree.

6971-3 Special Problems
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings. Special Problems courses may be repeated for credit when the topics vary but not more than 6 hours, regardless of discipline, will apply to a Master’s degree.

6983 Master’s Thesis
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate Advisor and thesis director.
Thesis research and preparation. May be repeated for credit, but not more than 6 hours will apply to the Master’s degree. Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.

COURSE DESCRIPTIONS
SYSTEMS DESIGN
(SD)

5203 Mathematical Methods for Process Control
(2-2) 3 hours credit. Prerequisite: MAT 2213 or consent of instructor.
Applications to data acquisition and process control of Fourier series and Fourier transforms, the fast Fourier transform, digital filtering, parameter estimation techniques.

5703 Microprogramming I
(3-0) 3 hours credit. Prerequisite: SD 3843.
Computer design philosophies based on microprogrammed architecture. Microprogram control organization, design of microprograms to implement the full instruction set of a typical minicomputer.

5713 Microprogramming II
(3-0) 3 hours credit. Prerequisite: SD 5703.
A continuation of SD 5703. Topics include simulation and emulation of processors; microcode optimization.

5723 Microcomputer Systems I
(2-2) 3 hours credit. Prerequisites: SD 4813 and SD 4853.
An in-depth study of microcomputers and related LSI devices, to include most major commercially available devices. Areas of study include the use of microcomputers for logic design, particularly I/O controllers and for process control applications.

5733 Microcomputer Systems II
(2-2) 3 hours credit. Prerequisite: SD 5723.
A continuation of SD 5723. Areas of study include the design of systems using multiple ROM/RAM LSI devices and multiprocessor systems.

5743 Input-Output Subsystems for Minicomputers
(2-2) 3 hours credit. Prerequisite: SD 3843.
An in-depth study of the organization and design of input-output controllers such as for discs, printers, teleprocessing; special controllers for process control applications.
6503 **Operations Analysis in the Health Sciences**
(3-0) 3 hours credit. Prerequisite: CS 1723 or consent of instructor.
An introduction to systems analysis and operations research in the health sciences.
Applications of deterministic and probabilistic models for decision making.
Problems and methods in the design and evaluation of health care programs.

6603 **Optimization Techniques in Operations Research**
(3-0) 3 hours credit. Prerequisite: SD 4623 or consent of instructor.
Analysis and application of optimization techniques in operations research.
Emphasis on linear programming, non-linear programming, integer programming and dynamic programming.

6613 **Probabilistic Models in Operations Research**
(3-0) 3 hours credit. Prerequisite: MAT 3513 or consent of instructor.
Analysis and application of basic probabilistic models in operations research.
Queueing theory, inventory theory, Markov decision processes, reliability theory, decision analysis.

6633 **Simulation Techniques**
(3-0) 3 hours credit. Prerequisites: CS 1723 and MAT 3513, or consent of instructor.
Techniques in simulation on a digital computer. Generation of random numbers from a distribution,
Monte Carlo techniques, use of simulation languages. Development of simulation models for specific problems.

6951-3 **Independent Study**
1 to 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available)
of the instructor, the student's Graduate Advisor, and the Division Director and Dean of the College in which the course is offered.
Independent reading, research, discussion, and/or writing under the direction of a faculty member.
For students needing specialized work not normally or not often available as part of the regular course offerings.
May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the master's degree.

6971-3 **Special Problems**
1 to 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering specialized study not normally or not often available as part of the regular course offerings.
Special Problems courses may be repeated for credit when the topics vary but not more than 6 hours, regardless of discipline, will apply to a Master's degree.

6983 **Master's Thesis**
3 hours credit. Prerequisites: Admission to candidacy and permission of the Graduate Advisor and thesis director.
Thesis research and preparation. May be repeated for credit, but not more than 6 hours will apply to the Master's degree.
Credit will be awarded upon completion of the thesis. Enrollment is required each term in which the thesis is in progress.
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Requests for information should be directed to the offices shown below. The University's address is: The University of Texas at San Antonio, San Antonio, Texas 78285. The main telephone number of UT San Antonio is (512) 691-4011. Offices and classrooms of the Division of Continuing Education are located in the Institute of Texan Cultures on HemisFair Plaza in downtown San Antonio. The telephone number for the Division is (512) 227-9147.

Academic Advisement
  Declared majors ........................................... College Deans
  Undeclared majors ........................................ Dean of Students

Academic Degree Programs
  and Courses ................................................ College Deans

Admission
  Undergraduate and Graduate ............................ Director of Admissions

Career Planning ........................................... Director of Career Planning
  and Placement Center

Changes of Enrollment ..................................... Registrar

Continuing Education ....................................... Dean of Continuing Education

Credit by Examination ..................................... Dean of Students

Degree Application ......................................... Registrar

Financial Aid, Loans, or Scholarships ................ Director of Student Financial Aid

Financial Matters .......................................... Director of Accounting

General Information ........................................ Director of Admissions

International Students .................................... Director of Admissions

Parking ........................................................ University Police

Placement Service
  Teacher ........................................................ Director, Office of Teacher
  Certification and Placement
  Non-Teacher ................................................ Director of Career Planning
  and Placement Center

Psychological Counseling ................................. Director of Counseling Center

Refunds ....................................................... Director of Accounting

Registration .................................................. Registrar

Residency ..................................................... Registrar

Student Employment ......................................... Director of Student Financial Aid

Student Services ............................................ Dean of Students

Teacher Certification Program ............................ Director, Office of Teacher
  Certification and Placement

Transfer of Credit .......................................... Registrar

Transcripts ................................................... Registrar

Veterans' Affairs .......................................... Registrar

Withdrawal from University ................................ Registrar