

GRADUATE CATALOG

1989-91

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I. CALENDAR

GRADUATE

*FALL SEMESTER, 1989

May 22-July 14	Touch Tone Telephone Registration for Fall Semester, 1989.
June 1	Tuesday. Deadline for Foreign Student admission applications for Fall 1989.
July 1	Saturday. Deadline for applying for admission and providing supporting documents for Fall 1989.
August 22	Tuesday. New Student Orientation.
August 23	Wednesday. New Student Orientation and New and Returning Former Student Registration.
August 24	Thursday. Late Registration.
August 28	Monday. Classes begin. Continuing Late Registration.
August 31	Thursday. Last day of Late Registration.
September 1	Friday. Last day to withdraw and receive an 80% refund of tuition and fees. Last day to add a class.
September 4	Monday. Labor Day Holiday.
September 11	Monday. Last day to withdraw and receive a 70% refund of tuition and fees.
September 13	Wednesday. Last day to drop or withdraw without a grade; drop a class and receive a refund. Census date.
September 15	Friday. Last day to request excused absence for Religious Holy Day observance.
September 18	Monday. Last day for students to withdraw and receive a 50% refund of tuition and fees.
September 25	Monday. Last day to withdraw and receive a 25% refund of tuition and fees.
October 1	Sunday. Deadline for Fall 1989 degree candidates to apply for graduation.
October 15	Sunday. Foreign Student admission application deadline for Spring Semester, 1990. Spring 1990 deadline for filing Petition of Reinstatement for students who have been academically dismissed.
October 27	Friday. Last day for students to drop an individual course or withdraw from The University and receive an automatic "W".
November 23-25	Thursday-Saturday. Thanksgiving Holidays.
December 4	Monday. Last day to withdraw from The University.
December 11-16	Monday-Saturday. Final Examinations.
December 16	Saturday. Semester closes.

*SPRING SEMESTER, 1990

October 15	Sunday. Foreign Student admission application deadline for Spring Semester, 1990.
October 30-December 8	Touch Tone Telephone Registration for Spring Semester, 1990.
December 1	Friday. Deadline for applying for admission and providing supporting documents for Spring 1990.
January 9	Tuesday. New Student Orientation.
January 10	Wednesday. New and Returning Former Student Registration.
January 11	Thursday. Late Registration.

*For a more detailed calendar of semester events, see the schedule of classes for each semester.

January 15	Monday. Classes begin. Continuing Late Registration.
January 16	Tuesday. Last day of Late Registration.
January 19	Friday. Last day to withdraw and receive an 80% refund of tuition and fees. Last day to add a class.
January 26	Friday. Last day to withdraw and receive a 70% refund of tuition and fees.
January 30	Tuesday. Last day to drop or withdraw without a grade; drop a class and receive a refund. Census date.
February 1	Thursday. Deadline for Spring 1990 degree candidates to apply for graduation.
February 2	Friday. Last day for students to withdraw and receive a 50% refund of tuition and fees. Last day to request excused absence for Religious Holy Day observance.
February 9	Friday. Last day to withdraw and receive a 25% refund of tuition and fees.
March 1	Thursday. Foreign student admission application deadline for Summer 1990.
March 15	Thursday. Summer 1990 deadline for filing Petition of Reinstatement for students who have been academically dismissed.
March 16	Friday. Last day for students to drop an individual course or withdraw and receive an automatic "W".
March 19-24	Monday-Saturday. Spring Break.
April 30	Monday. Last day for all students to withdraw from The University.
May 7-12	Monday-Saturday. Final Examinations.
May 12	Saturday. Semester closes.
May 13	Sunday. Commencement.

***SUMMER SESSION, 1990**

March 1	Thursday. Foreign student admission application deadline for Summer Sessions 1990.
March 19-May 4	Touch Tone Telephone Registration for Summer Sessions I and II, 1990.
May 1	Tuesday. Deadline for applying for admission and providing supporting documents for Summer 1990.
May 29	Tuesday. New Student Orientation.
May 30	Wednesday. New Student Orientation. New and Returning Former Student Registration for Summer Sessions I and II, 1990.
May 31	Thursday. Late registration for Continuing Students.
June 4	Monday. Classes begin for Summer Session I. Continuing Late Registration.
June 5	Tuesday. Last day of Late Registration. Last day to add a class.
June 6	Wednesday. Last day to withdraw from courses in Summer Session I and receive an 80% refund of tuition and fees.
June 7	Thursday. Last day in Summer Session I to: Drop or withdraw without a grade; drop and receive a refund; Census date.
June 11	Monday. Last day for students enrolled in Summer Session I to withdraw and receive a 50% refund of tuition and fees.
June 15	Friday. Fall 1990 deadline for filing Petition for Reinstatement for students who have been academically dismissed.

*For a more detailed calendar of semester events, see the schedule of classes for each semester.

June 22	Friday. Last day for students enrolled in the first five-week term to drop an individual course. Last day to withdraw and receive an automatic "W".
June 26	Tuesday. Deadline for filing original approved thesis with the Dean's Office for students registered in thesis during the first five-week term.
June 29	Friday. Last day for students enrolled in the first five-week term to withdraw from the University.
July 1	Sunday. Last day for Summer 1990 degree candidates to apply for graduation.
July 5-6	Thursday-Friday. Final examinations for courses in the first five-week term.
July 6	Friday. Close of the first five-week term.
July 9	Monday. Classes begin for courses in Summer Session II. Late Registration for Summer II.
July 10	Tuesday. Last day to late register for Summer Session II. Last day to add a Summer II class.
July 11	Wednesday. Last day to withdraw from courses in Summer Session II and receive an 80% refund of tuition and fees.
July 12	Thursday. Last day in Summer Session II to: Drop or withdraw without a grade; drop and receive a refund; Census Date.
July 13	Friday. Last day for students enrolled in ten-week courses to drop an individual course. Last day to withdraw and receive an automatic "W".
July 16	Monday. Last day for students enrolled in Summer Session II to withdraw and receive a 50% refund of tuition and fees.
July 27	Friday. Last day for students enrolled in the second five-week term to drop an individual course. Last day to withdraw and receive an automatic "W".
July 31	Tuesday. Deadline for filing original approved thesis with Dean's Office for students registered in thesis during the ten-week and second five-week terms.
August 3	Friday. Last day for all students enrolled in Summer Session II and the ten-week term to withdraw from The University.
August 9-10	Thursday-Friday. Final examinations for courses in the ten-week and second five-week terms.
August 10	Friday. Close of Summer Session 1990.

***FALL SEMESTER, 1990**

May 21-July 13	Touch Tone Telephone Registration for Fall Semester, 1990.
June 1	Friday. Deadline for Foreign Student admission applications for Fall Semester, 1990.
July 1	Sunday. Deadline for applying for admission and providing supporting documents for Fall 1990.
August 21	Tuesday. New Student Orientation.
August 22	Wednesday. New Student Orientation and New and Returning Former Student Registration.
August 23	Thursday. Late Registration.
August 27	Monday. Classes begin. Continuing Late Registration.
August 30	Thursday. Last day of Late Registration.

*For a more detailed calendar of semester events, see the schedule of classes for each semester.

August 31	Friday. Last day to withdraw and receive an 80% refund of tuition and fees. Last day to add a class.
September 3	Monday. Labor Day Holiday.
September 10	Monday. Last day to withdraw and receive a 70% refund of tuition and fees.
September 12	Wednesday. Last day to: drop or withdraw without a grade; drop a class and receive a refund. Census date.
September 14	Friday. Last day to request excused absence for Religious Holy Day observance.
September 17	Monday. Last day for students to withdraw and receive a 50% refund of tuition and fees.
September 24	Monday. Last day to withdraw and receive a 25% refund of tuition and fees.
October 1	Monday. Deadline for Fall 1990 degree candidates to apply for graduation.
October 15	Monday. Foreign Student admission application deadline for Spring Semester, 1991. Spring 1991 deadline for filing Petition of Reinstatement for students who have been academically dismissed.
October 26	Friday. Last day for students to drop an individual course or withdraw from The University and receive an automatic "W".
November 22-24	Thursday-Saturday. Thanksgiving Holidays.
December 3	Monday. Last day to withdraw from The University.
December 10-15	Monday-Saturday. Final Examinations.
December 15	Saturday. Semester closes.

*SPRING SEMESTER, 1991

October 15	Monday. Foreign Student admission application deadline for Spring Semester, 1991.
October 29- December 7	Touch Tone Telephone Registration for Spring Semester, 1991.
December 1	Saturday. Deadline for applying for admission and providing supporting documents for Spring 1991.
January 8	Tuesday. New Student Orientation.
January 9	Wednesday. New and Returning Former Student Registration.
January 10	Thursday. Late Registration.
January 14	Monday. Classes begin. Continuing Late Registration.
January 15	Tuesday. Last day of Late Registration.
January 18	Friday. Last day to withdraw and receive an 80% refund of tuition and fees. Last day to add a class.
January 25	Friday. Last day to withdraw and receive a 70% refund of tuition and fees.
January 29	Tuesday. Last day to: drop or withdraw without a grade; drop a class and receive a refund. Census date.
February 1	Friday. Deadline for Spring 1991 degree candidates to apply for graduation. Last day for students to withdraw and receive a 50% refund of tuition and fees. Last day to request excused absence for Religious Holy Day observance.
February 8	Friday. Last day to withdraw and receive a 25% refund of tuition and fees.

*For a more detailed calendar of semester events, see the schedule of classes for each semester.

March 1	Friday. Foreign student admission application deadline for Summer 1991.
March 15	Friday. Last day for students to drop an individual course or withdraw and receive an automatic "W". Summer 1991 deadline for filing Petition for Reinstatement for students who have been academically dismissed.
March 18-22	Monday-Saturday. Spring Break.
April 29	Last day for all students to withdraw from The University.
May 6-11	Monday-Saturday. Final Examinations.
May 11	Saturday. Semester closes.
May 12	Sunday. Commencement.

***SUMMER SESSION, 1991**

March 1	Friday. Foreign student admission application deadline for Summer Session 1991.
March 18-May 3	Touch Tone Telephone Registration for Summer Sessions I and II, 1991.
May 1	Wednesday. Deadline for applying for admission and providing supporting documents for Summer 1991.
May 28	Tuesday. New Student Orientation.
May 29	Wednesday. New Student Orientation. New and Returning Former Student Registration for Summer Sessions I and II, 1991.
May 30	Thursday. Late registration for Continuing Students.
June 3	Monday. Classes begin for Summer Session I. Continuing Late Registration.
June 4	Tuesday. Last day of Late Registration. Last day to add a class.
June 5	Wednesday. Last day to withdraw from courses in Summer Session I and receive an 80% refund of tuition and fees.
June 6	Thursday. Last day in Summer Session I to: Drop or withdraw without a grade; drop and receive a refund; Census date.
June 10	Monday. Last day for students enrolled in Summer Session I to withdraw and receive a 50% refund of tuition and fees.
June 15	Saturday. Fall 1991 deadline for filing Petition for Reinstatement for students who have been academically dismissed.
June 21	Friday. Last day for students enrolled in the first five-week term to drop an individual course. Last day to withdraw and receive an automatic "W".
June 25	Tuesday. Deadline for filing original approved thesis with the Dean's Office for students registered in thesis during the first five-week term.
June 28	Friday. Last day for students enrolled in the first five-week term to withdraw from the University.
July 1	Monday. Last day for Summer 1991 degree candidates to apply for graduation.
July 2-3	Tuesday-Wednesday. Final examinations for courses in the first five-week term.
July 3	Wednesday. Close of the first five-week term.
July 8	Monday. Classes begin for courses in Summer Session II. Late Registration for Summer II.
July 9	Tuesday. Last day to late register for Summer Session II. Last day to add a Summer II class.

- July 10** Wednesday. Last day to withdraw from courses in Summer Session II and receive an 80% refund of tuition and fees.
- July 11** Thursday. Last day in Summer Session II to: Drop or withdraw without a grade; drop and receive a refund; Census Date.
- July 12** Friday. Last day for students enrolled in ten-week courses to drop an individual course. Last day to withdraw and receive an automatic "W".
- July 15** Monday. Last day for students enrolled in Summer Session II to withdraw and receive a 50% refund of tuition and fees.
- July 26** Friday. Last day for students enrolled in the second five-week term to drop an individual course. Last day to withdraw and receive an automatic "W".
- July 30** Tuesday. Deadline for filing original approved thesis with Dean's Office for students registered in thesis during the ten-week and second five-week terms.
- August 2** Friday. Last day for all students enrolled in Summer Session II and the ten-week term to withdraw from The University.
- August 8-9** Thursday-Friday. Final examinations for courses in the ten-week and second five-week terms.
- August 9** Friday. Close of Summer Session 1991.

II. GENERAL INFORMATION

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Division of Foreign Languages

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Jack Himelblau, A.B., M.A., University of Chicago; Ph.D., University of Michigan

Steven G. Kellman, B.A., State University of New York; M.A., Ph.D., University of California

Joseph Michel, B.A., DeSalle College; M.A., Universidad Nacional Autonoma de Mexico; Ph.D., University of New Mexico

Frank Pino, Jr., B.A., M.A., Arizona State University; Ph.D., Northwestern University

ASSOCIATE PROFESSORS

Theodore L. Kassler, A.B., Columbia University; A.M., Ph.D., Princeton University

ASSISTANT PROFESSORS

Mary Ellen Garcia, B.A., Occidental College; M.A., Indiana University; Ph.D., Georgetown University

Division of Music

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- Cody A. Garner**, B.M.E., Baylor University; M.M.E., University of North Texas; D.M.E., University of Oklahoma
Bess E. Hieronymus, B.M., B.A., Mary Hardin-Baylor College; M.A., Smith College; D.M.A., The University of Texas at Austin
Alexander E. Sidorowicz, B.S., Mansfield State College; M.M., Indiana University; Ph.D., Kent State University
Clarence J. Stuessy, B.M., Southern Methodist University; M.A., Ph.D., Eastman School of Music

ASSOCIATE PROFESSORS

- Michael A. Fink**, B.M., University of Southern California; M.M., New England Conservatory of Music; Ph.D., University of Southern California
Donald A. Hodges, B.M.E., University of Kansas; M.M., Ph.D., The University of Texas at Austin
Janice K. Hodges, B.M., University of Kansas; M.M., Temple University; D.M.A., The University of Texas at Austin
Reed K. Holmes, B.M., M.M., University of Tennessee; Ph.D., The University of Texas at Austin
Robert J. Rustowicz, B.M.E., Central Michigan University; M.M., D.M.A., College-Conservatory, University of Cincinnati
John J. Silantien, B.M.E., Hartt College of Music; M.M., The Catholic University of America; D.M.A., University of Illinois

ASSISTANT PROFESSORS

- Mark Fonder**, B.M., M.S., University of Illinois; Ed.D., University of Illinois
Alberto P. Rafols, B.M., M.M., University of Illinois; D.M.A., University of Washington
Rosemary C. Watkins, B.A., Southern Methodist University; M.M., Ph.D., The University of Texas at Austin

COLLEGE OF SCIENCES AND ENGINEERING

Division of Earth and Physical Sciences

PROFESSORS

- Petr Hochmann**, M.S., Charles' University, Prague; Ph.D., Czechoslovak Academy of Science, Prague
Robert D. Renthal, B.A., Princeton University; Ph.D., Columbia University
Robert K. Smith, B.S., Washington State University; M.S., Ph.D., University of Iowa
Phillip L. Stotter, A.B., Harvard College; A.M., Ph.D., Columbia University
B. S. Thyagarajan, B.S., Loyola College, India; M.S., Ph.D., Presidency College, India

ASSOCIATE PROFESSORS

- John W. Adams**, B.S., M.S., Utah State University; Ph.D., Washington State University
Stuart J. Birnbaum, B.S., State University of New York at Stony Brook; Ph.D., University of Cambridge
Weldon W. Hammond, B.A., M.A., Ph.D., The University of Texas at Austin
James O. Jones, B.S., Midwestern State University; M.S., Baylor University; Ph.D., University of Iowa
Eric R. Swanson, B.S., Western Michigan University; M.A., Ph.D., The University of Texas at Austin
Miroslav Synek, B.S., M.S., Charles' University, Prague; Ph.D., University of Chicago

ASSISTANT PROFESSORS

- James M. Gallas**, B.S., Albright College; M.S., Drexel University; Ph.D., University of Houston
Alan P. Morris, B.S., University of London; Ph.D., University of Cambridge

Patrick L. Nash, B.S., University of Arizona at Tucson; Ph.D., University of North Carolina at Chapel Hill
Dennis S. Rushforth, B.S., Brigham Young University; Ph.D., Northwestern University
Dhiraj K. Sardar, B.S., M.S., University of Calcutta; Ph.D., Oklahoma State University
Judith A. Walsley, B.A., Florida State University; Ph.D., University of North Carolina at Chapel Hill

Division of Engineering

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Richard S. Howe, Professor of Civil Engineering, B.S., University of Kentucky; S.M., Massachusetts Institute of Technology; M.S., M.S., Ph.D., University of Wisconsin, P.E.
Chia-Shun Shih, Professor of Civil Engineering, B.S., National C.K. University in Taiwan; M.S., Ph.D., The University of Texas at Austin, P.E.
James H. Tracey, Professor of Electrical Engineering, B.S., M.S., Ph.D., Iowa State University, P.E.

ASSOCIATE PROFESSORS

Marvin L. Chatkoff, Associate Professor of Electrical Engineering, B.A., University of Oklahoma; M.S., University of Southern California; Ph.D., University of New Mexico
Daniel O. Hogenauer, Associate Professor of Civil Engineering, B.S., Haverford College; Ph.D., The Johns Hopkins University

Division of Life Sciences

PROFESSORS

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Helen V. Oujesky, B.A., B.S., Texas Woman's University; M.A., Texas Christian University; Ph.D., Texas Woman's University
Paul H. Rodriguez, B.S., Creighton University; M.S., University of New Mexico; Ph.D., University of Rhode Island
Oscar W. Van Auken, B.S., High Point College; M.S., Ph.D., University of Utah
Matthew J. Wayner, A.B., Dartmouth College; M.S., Tufts University; Ph.D., University of Illinois

ASSOCIATE PROFESSORS

James P. Chambers, B.A., St. Mary's University; M.A., Incarnate Word College; Ph.D., The University of Texas Health Science Center at San Antonio
David M. Senseman, B.S., Kent State University; M.S., Ph.D., Princeton University
Andrew T. C. Tsain, B.S., Dalhousie University; M.S., Ph.D., The University of Alberta

ASSISTANT PROFESSORS

Deborah L. Armstrong, B.A., Hiram College; M.S., Ph.D., Syracuse University
Brenda J. Clalborne, B.A., University of California; M.S., University of Oregon; Ph.D., University of California
James A. Lewis, B.S., The Massachusetts Institute of Technology; Ph.D., University of California, Berkeley
Andrew O. Martinez, B.S., College of Santa Fe; M.S., Ph.D., University of Arizona

Division of Mathematics, Computer Science, and Statistics

PROFESSORS

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Kay A. Robbins, S.B., Ph.D., Massachusetts Institute of Technology
Lucio Tavernini, B.S.E.E., Heald Engineering College; M.S., University of Colorado; M.S., Ph.D., University of Wisconsin at Madison

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

ASSOCIATE PROFESSORS

Youn-Min Chou, B.S., National Taiwan University; M.S., The University of Texas at El Paso; Ph.D., Southern Methodist University

Jerome P. Keating, B.S., M.A., Ph.D., The University of Texas at Arlington

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

Nikos Salingaros, B.S., University of Miami; M.A., Ph.D., State University of New York at Stony Brook

Betty P. Travis, B.A., M.S., St. Mary's University; Ph.D., The University of Texas at Austin

Clifford J. Trimble, B.S., University of Southern Mississippi; M.C.S., Ph.D., Texas A&M University

Neal R. Wagner, B.A., University of Kansas; M.A., Ph.D., University of Illinois, Urbana

Gregory P. Wene, B.A., M.A., The University of Texas at Austin; Ph.D., University of Iowa

Lawrence R. Williams, B.S., Texas Southern University; M.A., Ph.D., University of Michigan at Ann Arbor

ASSISTANT PROFESSORS

Jorge Aragon, B.S., National Autonomous University of Mexico; M.S., The University of Texas at El Paso; Ph.D., University of New Mexico

A. Veronica Czitrom, B.A., M.S., University of California, Berkeley; Ph.D., The University of Texas at Austin

David H. Eberly, B.A., Bloomsburg University; M.S., Ph.D., University of Colorado

Robert L. Fountain, B.A., M.A., The University of Texas at Austin; M.A., Ph.D., University of New Mexico

Dennis M. Kern, B.S., M.S., St. Mary's University; Ph.D., Texas Tech University

Mark Raphael, M.S., Simon Fraser University, Vancouver; Ph.D., Indiana University

Raj Wilson, B.S., M.S., University of Madras, India; Ph.D., Stevens Institute of Technology

COLLEGE OF SOCIAL AND BEHAVIORAL SCIENCES

Division of Behavioral and Cultural Sciences

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Richard E. W. Adams, B.A., University of New Mexico; M.A., Ph.D., Harvard University

Felix D. Almaraz, Jr., B.A., M.A., St. Mary's University; Ph.D., University of New Mexico

Raymond R. Baird, A.B., Eastern New Mexico University; M.A., Ph.D., University of Washington

Dwight F. Henderson, B.A., M.A., Ph.D., The University of Texas at Austin

David R. Johnson, B.A., University of Illinois; M.A., Ph.D., University of Chicago

Woodruff D. Smith, A.B., Harvard University; A.M., Ph.D., University of Chicago

ASSOCIATE PROFESSOR

George D. Bishop, B.A., Hope College; M.S., Ph.D., Yale University

Steven R. Boyd, B.A., Claremont Men's College; M.A., Ph.D., University of Wisconsin at Madison

James R. Dykes, B.A., Ph.D., The University of Texas at Austin

Joel D. Gunn, B.A., M.A., University of Kansas; Ph.D., University of Pittsburgh

Robert M. Hill, II, A.B., M.A., Ph.D., University of Pennsylvania

Gilberto M. Hinojosa, B.A., Our Lady of the Snows; M.A., St. Mary's University; Ph.D., The University of Texas at Austin

Linda K. Pritchard, B.A., University of Michigan; M.A., Ph.D., University of Pittsburgh

Michael P. Ryan, B.A., Pomona College; Ph.D., Stanford University

James C. Schneider, B.A., St. Lawrence University; M.A., Ph.D., University of Wisconsin at Madison

Maria-Luisa Urdaneta, B.A., M.A., The University of Texas at Austin; Ph.D., Southern Methodist University

ASSISTANT PROFESSORS

- Lolita G. Brockington**, B.A., M.A., Ph.D., University of North Carolina
Antonio Calabria, A.B., Brown University; M.A., Ph.D., University of California at Berkeley
Ann R. Eisenberg, B.A., M.A., The Johns Hopkins University; Ph.D., University of California at Berkeley
Daniel J. Gelo, B.A., M.A., M.Phil., Ph.D., Rutgers, The State University of New Jersey
John F. Reynolds, B.A., M.A., Michigan State University; Ph.D., Rutgers, The State University of New Jersey
Richard M. Wenzlaff, B.A., The University of Texas at San Antonio; M.A., Trinity University; Ph.D., The University of Texas at Austin

Division of Bicultural-Bilingual Studies

PROFESSORS

- Curtis W. Hayes**, B.A., M.A., California State University at Long Beach; Ph.D., The University of Texas at Austin
Carolyn L. Kessler, B.A., St. Mary-of-the-Woods College; M.S., Ph.D., Georgetown University
Albar A. Pena, B.S., The University of Texas at Austin; M.A., Texas A&I University; Ph.D., The University of Texas at Austin

ASSOCIATE PROFESSORS

- Mauricio E. Charpenel**, B.A., Central Missouri State University; M.A., Universidad Nacional Autónoma de México; M.L.S., Ph.D., The University of Texas at Austin
Robert D. Milk, B.A., M.A., Ph.D., Stanford University

Division of Education

PROFESSORS

- Richard A. Dlem**, B.S., Bradley University; M.S., Southern Illinois University; M.A., Colorado State University; Ph.D., Northwestern University
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Marian L. Martinello, B.S., M.S., Queens College; Ed.D., Teachers College, Columbia University
Berry Sutherland, B.S., The University of Texas at Austin; M.S., Ed.D., University of Houston
Elwood B. Traylor, B.A., Greenville College; M.A., Ed.D., Washington University at St. Louis
Leonard A. Valverde, B.A., California State University at Los Angeles; Ph.D., Claremont Graduate School
James W. Wagener, B.A., Southern Methodist University; M.A., Ph.D., The University of Texas at Austin
Paul H. Westmeyer, B.S., M.A., Ball State University; Ed.D., University of Illinois

ASSOCIATE PROFESSORS

- Ronnie N. Alexander**, B.S., M.Ed., Central State University; Ed.D., University of Kansas
Anthony J. Arabia, A.B., M.Ed., M.L.S., Ph.D., University of Pittsburgh
George R. Colfer, B.S., Lock Haven State College; M.S., Ithaca College; Ph.D., Texas A&M University
Gillian E. Cook, B.A., Sir George Williams University; Ed.M., Ed.D., Harvard Graduate School of Education
Larry B. Golden, B.Ed., University of Miami; M.S., City University of New York; Ph.D., Arizona State University
Barbara M. Gonzalez-Pino, B.A., M.A., Ph.D., The University of Texas at Austin
Richard L. Henderson, B.A., M.A., Wichita State University; Ed.D., Oklahoma State University
Rosalind Horowitz, B.S., M.A., Ph.D., University of Minnesota
Tony W. Johnson, B.A., Western Carolina University; M.A., Ph.D., George Peabody College for Teachers
William H. Teale, B.A., Pennsylvania State University; M.Ed., Ed.D., University of Virginia

- Sue Clark Wortham**, B.S., University of Houston; M.A., Southwest Texas State University; Ph.D., The University of Texas at Austin
Kenneth W. Wunderlich, B.A., Ph.D., The University of Texas at Austin
Jesse T. Zapata, A.A., San Antonio College; B.A., The University of Texas at Austin; M.Ed., Texas Tech University; Ph.D., Arizona State University

ASSISTANT PROFESSORS

- Aurella D. De Silva**, B.A., M.Ed., Ph.D., The University of Texas at Austin
Ruth Galaz, B.S., Memphis State University; M.Ed., Ph.D., University of Oklahoma
David S. Katims, B.A., University of South Florida; M.S., Barry University; Ed.D., Boston University
Lawrence L. Lane, B.S., M.Ed., Trinity University; Ed.D., Texas A&M University
Craig S. Morrison, B.P.E., University of New Brunswick; M.S., Springfield College; Ed.D., Brigham Young University

Division of Social and Policy Sciences

PROFESSORS

- Thomas J. Bellows**, B.A., Augustana College; M.A., University of Florida; M.A., Ph.D., Yale University
Ronald H. Rogers, B.S., Florida State University; M.S., Michigan State University; M.P.A., University of Southern California; Ph.D., Claremont Graduate School

ASSOCIATE PROFESSORS

- Thomas A. Baylis**, A.B., Duke University; M.A., Ph.D., University of California, Berkeley
James D. Calder, B.A., University of Maryland; M.S., California State University, Long Beach; Ph.D., Claremont Graduate School
Richard A. Gambitta, B.A., M.A., Ph.D., Syracuse University
Richard J. Harris, B.A., Macalester College; M.A., Ph.D., Cornell University
Richard C. Jones, B.S., Austin Peay State University; M.A., Indiana University; Ph.D., Ohio State University
Richard A. Lawrence, B.A., Bethel College; M.A., St. Mary's University; Ph.D., Sam Houston State University
Michael V. Miller, B.S., M.S., Ph.D., Texas A&M University
Edgar W. Mills, Jr., D.B., Ph.B., University of Chicago; Ph.D., Harvard University
Avelardo Valdez, B.S., M.A., University of Wisconsin, Milwaukee; M.A., Ph.D., University of California, Los Angeles

ASSISTANT PROFESSORS

- Stephen Amberg**, B.A., Tufts University; Ph.D., Massachusetts Institute of Technology
John R. Bauer, B.A., M.A., St. Mary's University; Ph.D., Duke University
Juanita Firestone, B.S., Blackhills State College; M.A., Ph.D., The University of Texas at Austin
Alfredo Garcia, B.A., Jacksonville University; M.A.T., J.D., University of Florida
Mark A. McBriarty, B.S., St. Joseph's College, Pennsylvania; M.B.A., D.P.A., George Washington University
Jeffrey B. Roet, B.A., State University of New York at Buffalo; M.A., Ph.D., Northwestern University

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 Texas Higher Education Coordinating Board, approved the academic organization and degree programs recommended for the new university. These degree programs, additional degree programs subsequently approved, as well as additional changes in UT San Antonio's organizational structure are described in the institutional catalogs.

The second phase of campus construction was initiated in Summer 1977. This phase consisted of a classroom and office building; an addition to the Arts Building, including a sculpture and ceramics studio building; ten outdoor championship tennis courts; and an outdoor multi-purpose playing field with 400 meter running track.

The Student Representative Assembly had its constitution approved by the Board of Regents on October 1, 1976, and the first slate of officers was elected in November 1976.

The Alumni Association was chartered in Fall 1977.

A University Center Building opened in the Summer of 1986. The first residence hall on the UTSA campus opened in Fall 1986.

MISSION

UT San Antonio, a comprehensive public metropolitan university, is committed to freedom of inquiry and the creation of an environment in which people can teach, discover, learn and enrich their individual and societal lives. Through its instructional, research and public service programs, UT San Antonio seeks to carry out its mission, to serve the needs of the multicultural population of San Antonio and the South Texas region, emphasizing programs that contribute to the technological, economic and cultural

development of the city and region. UT San Antonio also serves the broader geographical communities of the state, the nation, and the world with selected programs reflecting specialized University strengths.

UT San Antonio, offering a wide range of academic degree programs leading to the bachelor's and master's degrees, and selected doctoral programs (upon approval), strives to guide students toward achieving knowledge and skills required to succeed in their chosen fields. In addition, The University provides the opportunity for all graduate students to develop those characteristics of a truly educated person.

UT San Antonio provides access to its various degree programs to a broad constituency, and maintains rigorous academic standards in requirements for successful completion of its programs. Through flexible scheduling, varied course offerings and student support services, The University encourages attendance by both traditional and nontraditional students.

UT San Antonio emphasizes excellent teaching, research and creative activities, and scholarship. To this end, The University recruits and retains faculty who exemplify this balance. At the same time, it encourages faculty to engage in public service activities appropriate to their academic fields. UT San Antonio encourages and facilitates multi-disciplinary instructional, research and public service efforts, where appropriate, through its administrative structure, degree programs and personnel policies.

Through its broad research efforts, UT San Antonio both creates new knowledge through its basic research programs and applies that knowledge to today's problems through its applied research activities. UT San Antonio seeks to facilitate the transfer of research findings into the work environment through continuing education and graduate level programs for maintaining and upgrading specialized skills of professionals employed in San Antonio and the South Texas region.

UT San Antonio seeks to enrich the cultural environment not only of The University but also of the community through its fine arts and humanities programming.

ORGANIZATION

The University of Texas at San Antonio is a component institution of The University of Texas System. Governance of The University is vested in the nine-member Board of Regents of The University of Texas System whose members are appointed biennially by the Governor, with the advice and consent of the Senate, for six-year staggered terms.

The Board of Regents delegates administrative authority to the Chancellor of The University of Texas System. The administrative authority of each component institution, such as The University of Texas at San Antonio, is in turn delegated to the President of that component.

The President at UT San Antonio is assisted by a staff including a Vice President for Academic Affairs, a Vice President for Administration, a Vice President for Business Affairs, and an Executive Director of the Institute of Texan Cultures. The Vice President for Academic Affairs provides the President with advice and counsel on academic matters and acts as a liaison between the President's Office and faculty committees concerned with academic matters. The Vice President for Academic Affairs chairs the Deans' Council. With approval of the Board of Regents of a non-traditional administrative structure for graduate education at UT San Antonio, the administrative functions that ordinarily are the responsibility of a Graduate Dean are carried out by the Vice President for Academic Affairs. As the administrative officer responsible for graduate education, this officer chairs the Council on Graduate Education. The Vice President for Administration provides the President with advice and counsel on the general administrative services of The University and acts as liaison between the President's Of-

fice and all University standing committees. This officer is responsible for sponsored research and contracts, affirmative action, and the duties performed by the Director of Media Resources, the Director of Libraries, and the Dean of Students. The Vice President for Business Affairs provides the President with advice and counsel on fiscal affairs and has direct responsibility for the business operation of The University including operation of the physical plant. This officer is responsible for budget preparation and analysis. The Executive Director of the Institute of Texan Cultures is responsible to the President for the planning, organization, operation, administration and supervision of The Institute, its programs and its operations.

Operational administration of the graduate and undergraduate programs of The University is the responsibility of the Deans of the four Colleges. The Deans report to the Vice President for Academic Affairs. They provide leadership in program, faculty, and staff development.

Instructional programs within the Colleges are organized by Divisions, headed by Division Directors, who have responsibility under the Dean for the operation of their Divisions. Division Directors also are expected to provide leadership in faculty and staff development and in academic program development.

Continuing Education activities of The University are coordinated within each of the four colleges. Through the college deans, the University develops, promotes, coordinates, evaluates, and provides financial and logistical support for conferences, institutes, short courses, workshops, seminars, and special training programs. While no permanently assigned faculty are employed, instructors for the various activities are selected from one or more of the four colleges within The University of Texas at San Antonio, or from institutions or organizations outside The University.

ACCREDITATION

The University of Texas at San Antonio is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools as a Level III, General postsecondary institution.

THE UTSA LIBRARY

The UTSA Library is housed in the John Peace Library Building, named in 1974 in honor of the late former Chairman of The University of Texas System Board of Regents. The library has developed rapidly in the 15 years since it initially opened its doors in temporary quarters to serve a few pioneering faculty and students. As of Fall 1988, the collections of the library include 379,140 cataloged volumes; 98,642 United States, Texas, and San Antonio government publications; and 381,788 volume equivalents held in microform. The library has approximately 3,716 subscriptions to periodicals and receives as a designated federal and state depository a wide variety of documents. All materials have been selected to support the teaching and research missions of The University.

The UTSA special collections and rare books focus on Western Americana and on Texana. Notable among the special collections are the John Peace Collection of books and documents in the period of the Texas Republic and the Kathryn Stoner O'Conner Collection of early Texas and Mexican materials on permanent deposit in the Special Collections Department from the Sons of the Republic of Texas.

The public services staff includes professional librarians with subject expertise who assist students and faculty in using the library's collections. On-line catalog and on-line or on-disk computer searching are available as is a full range of interlibrary loan services. Circulation, acquisitions, and cataloging procedures are highly automated. The library is a member of OCLC, a national cataloging service. It is also a member of the

Council on Research and Academic Libraries (CORAL), a library network which has as its goal the developing and strengthening of information resources and services in the greater San Antonio area.

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 UTSA Library also has full audio-visual capability, music listening facilities, and a curriculum materials center. Carrels, group study rooms, lounges, and faculty studies are conveniently located through the building to provide ideal study conditions. Copiers for paper and microfilm materials are available to library users.¹

INSTITUTE FOR THE ARTS AND HUMANITIES

The Institute for the Arts and Humanities is located in the College of Fine Arts and Humanities. The Institute activities encompass the fine arts (visual and performing arts) and humanities (art history, architectural history, art criticism, literature, and foreign languages). The goals of the Institute include providing assistance to faculty, students and other persons interested in pursuing research and further studies, and making available general information on the arts of Western Europe and the Americas.

The Institute fosters professional research in the fine arts and humanities. It provides opportunities for faculty and students in the College to continue their research and to serve the community of scholars within and outside The University.

RESEARCH CENTER FOR THE VISUAL ARTS

The activities of the Research Center for the Visual Arts encompass the visual arts, art and architectural history, and art criticism. The Center will have a primary focus on historical disciplines with special reference to the study of Iberian and Interamerican arts.

INSTITUTE FOR STUDIES IN BUSINESS

The Institute for Studies in Business is the research center of the College of Business. The major objective of the Institute is to offer the opportunity for students and faculty of The University to have an adequate environment for problem solving and community-related research. While the Institute 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 Institute 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 human resource utilization.

INSTITUTE FOR RESEARCH IN SCIENCES AND ENGINEERING

The Institute for Research in Sciences and Engineering (IRSE) addresses the research functions of the College of Sciences and Engineering. The major goals of IRSE are to

¹Additional information on the John Peace Library and on its borrowing regulations may be obtained in the library.

offer opportunities for expanded research in the science and engineering fields for faculty and graduate students, to nurture interdisciplinary, mission-oriented team research projects, and to provide an educational opportunity whereby individual skills can be developed to fill employer's needs for scientific, engineering and technical fields. Although IRSE is a part of the College of Sciences and Engineering, it interacts with the faculty of the other Colleges and with the local research community through the Southwest Research Consortium.

IRSE serves as a focal point for science and engineering activities at The University by providing contract and grant management and by furnishing services and research support for faculty and students. Exceptional students have an opportunity to gain valuable work experience through the various research and educational programs supported by IRSE.

IRSE seeks to support the individual involved in research, as well as to nourish team research for projects requiring the strength of individuals drawn from many disciplines. Individual research projects are active in all areas of the College, ranging from the life sciences, chemistry, computer science and systems design, physics, civil engineering, electrical engineering, and mechanical engineering to geology.

CENTER FOR HUMAN ORIENTED SCIENCES AND ENGINEERING

Because of the strength of the team effort addressing the application of the sciences and engineering to problems relating to human characteristics and requirements involved in complex systems including both physical and social aspects of the environment, the Center for Human Oriented Sciences and Engineering (CHOSE) has been formed within IRSE. CHOSE emphasizes studies in applied mathematics and statistics, information and computer science, cognitive science including artificial intelligence and computer-aided instruction, and human physiology and performance.

Team efforts have been conducted in the past in diverse areas involving pharmacological chemistry, health related issues, and energy and environmental studies. When the effort is of appropriate magnitude, centers such as CHOSE will be formed as a mechanism for enhancing the research effort.

CENTER FOR GROUND-WATER RESEARCH AND TECHNOLOGY

The Center for Ground-Water Research and Technology (in the College of Sciences and Engineering) was established in January 1987 as a research facility which is structured and managed to address research activities in the general area of the hydrologic sciences and specifically in the various scientific disciplines involved in ground-water studies. The Center for Ground-Water Research and Technology at UTSA has principally directed its research efforts in the hydrogeology of carbonate aquifer systems with special emphasis on the Cow Creek, Glen Rose, and Edwards aquifers in south-central Texas. Current research areas include: stable isotope geochemistry, seismic geophysical studies, mathematical modeling of aquifer flow systems, well hydraulics, structural geologic controls on ground-water movement, contaminant transport and attenuation studies, and porosity geometry determinations.

INSTITUTE FOR RESEARCH IN SOCIAL AND BEHAVIORAL SCIENCES

The Institute for Research in Social and Behavioral Sciences coordinates the activities of two Centers and two Offices located in the College of Social and Behavioral Sciences. The Centers and Offices are designed to promote faculty and student research and to assist local agencies and citizens who need professional services from areas represented in the College.

CENTER FOR ARCHAEOLOGICAL RESEARCH

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

The Center's staff includes a number of graduate and undergraduate students, who, 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. Other research by the Center has included the study of the ancient Maya at the sites of Colha, Belize and Rio Azul, Guatemala. Results of Center investigations are published in nearly 200 volumes in 10 publications series: *Archaeological Survey Reports; Regional Studies; Special Reports; Guidebooks in Archaeology; Choke Canyon Series; Colha Project Interim Reports, Colha Project, Belize; Working Papers; Papers of the Colha Project; Rio Azul Reports, Rio Azul Project, Guatemala; Archaeology and History of the San Juan Bautista Mission Area, Coahuila and Texas.*

The Center has administered more than 300 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, a multi-year study of the prehistory and history of the Choke Canyon Reservoir area in southern Texas, five seasons of excavation at the Maya site of Colha in Belize, Central America, and studies of the Rio Azul site in Guatemala. Several projects have also been carried out in Louisiana and New Mexico. In addition, the Center has helped to organize and support regional archaeological surveys and excavations and has participated in local, state, and international archaeological conferences.

In 1985, the Center launched its "Friends of Archaeology" program of public participation in archaeological research. Through the "Friends" program, the Center is able to provide seed grants for faculty and students, and research assistant stipends for graduate and undergraduate anthropology majors, as well as the sponsorship of special lectures.

CENTER FOR LEARNING AND DEVELOPMENT RESEARCH IN EDUCATION

The Center for Learning and Development Research in Education, located in the College of Social and Behavioral Sciences, is designed to stimulate basic and applied research in learning and development, particularly as it applies 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 involves 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.

OFFICE OF PROFESSIONAL DEVELOPMENT IN EDUCATION

The Office of Professional Development in Education, located in the College of Social and Behavioral Sciences, is designed to promote professional development activities

for educators. The development of advanced academic training programs (AAT), the coordination of UTSA faculty in staffing advanced academic training programs, the presentation of professional training programs for educators as identified by Chapter 75 of the Texas Education Code and the evaluation of advanced academic training programs are at the core of its activities. The office seeks to work with schools to develop advanced academic training programs that will fit the needs of both the professional educator and the local community.

Three delivery systems are available to meet these objectives: (1) graduate or undergraduate coursework for university credit in subject matter or professional education areas; (2) advanced academic training in subject matter areas; and (3) advanced academic training in areas such as classroom management training, pedagogy, and strategies and techniques for teaching.

Each of these programs can be offered on UTSA's campus, at HemisFair Plaza or at selected off-campus locales. Credit for graduate and undergraduate coursework is accumulated via standard academic procedures including conformity to graduate, special graduate or undergraduate admission requirements. All advanced academic training programs conform to Texas legislative guidelines whereby 15 hours of AAT is equivalent to 1 hour of graduate coursework.

OFFICE OF RESEARCH ON TEACHING PERFORMANCE

The Office of Research on Teaching Performance (in the College of Social and Behavioral Sciences) was established in response to the 1985 Texas educational reform legislation which mandates the performance appraisal of teachers. The Office has three main purposes: (1) to collaborate with educating institutions for the explication of effective teaching processes to promote students' learning, (2) to study teaching performance in varied instructional settings, and (3) to interpret and disseminate research findings on the processes of teaching and teacher evaluation to the profession and the public.

The Office promotes collaboration among researchers, teachers, and administrators in school settings and in other educating institutions for the design, support, and conduct of research into variables of teaching performance and teaching effectiveness.

A major purpose of the Office is to interpret research on teaching for the profession and the public. The Office designs and develops workshops, conferences, and media productions among other delivery systems, to broadly disseminate the meanings of research on teaching and to promote understanding of the complexities and dimensions of teaching performance.

THE UNIVERSITY BOOKSTORE

The University Bookstore, owned and operated by UT San Antonio, is located on the first level of the Science Building. The Bookstore attempts to maintain a complete inventory 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 FOOD SERVICE

Two cafeterias, one on the first level of the John Peace Library Building and the other located in the University Center, provide food and beverage service to the University community. Owned and operated by UT San Antonio, the cafeterias provide breakfast, lunch, dinner and snacks. Daily specials and salad bars are available at these facilities.

The Subway Sandwich Shop, located on the lower level of the Humanities-Business Building, features many kinds of hot and cold sandwiches for a quick lunch or coffee break. The Roadrunner Roost in the University Center serves beverages and snacks in a relaxed "Pub" environment. The University Food Service also provides catering for large and small groups. A declining balance cash card system, the Roadrunner Express Card, is available to all students, faculty and staff. Information on this program may be obtained by contacting the Food Service Office in the John Peace Library Building.

COMPUTING RESOURCES

Computing services at UT San Antonio are provided by three host systems located in a central computing facility in the John Peace Library Building. Two of the hosts, an IBM 4300 series system and an DEC VAX system, support academic activity with both on-line and batch capabilities. Interactive terminals are available to students in "Terminal Laboratories" located in several buildings. Dial-in support is also provided for access to these academic systems. Each of the Colleges has established "Microcomputer Laboratories" which provide its students access to this leading edge technology applied to problems specific to its curriculum.

Administrative processing is provided by the third host, an IBM 4300 series system, which supports the Integrated Student Information System as well as an automated library system and the University's financial systems.

OFFICE OF MEDIA RESOURCES

The Office of Media Resources is a university-wide media unit for UTSA located with offices, production studios, and the audiovisual center in the Multidisciplinary Studies Building. A-V sub-centers are located in the Humanities-Business Building and the Science Building.

The Office of Media Resources offers a variety of services in support of academic activities. Some of these services include film selection and ordering assistance; graphic art production including typesetting, laminating, overhead transparency design and original artwork; photography in black and white and color; scheduling and distribution of audio-visual equipment for classroom and research use; television and audio production, public address sound support; equipment maintenance; and technical-consultative services for instructional and professional development.

THE UNIVERSITY CENTER BUILDING

The University Center Building, located on the West Paseo between the Humanities-Business Building and the Physical Education Building, opened in Summer 1986. The two-story, 42,000 square foot facility houses a lounge, cafeteria, recreation room, television rooms, and cafe. Additionally, a large multipurpose room, meeting rooms, and print shop are available in the Center. A student activity complex on the second floor provides work space for registered student organizations, student government offices, the University Center Program Council office, and the Student Activities Office.

The Ticketmaster outlet is located at the Information Desk in the University Center.

VETERANS' ASSISTANCE

Financial assistance is available to veterans, eligible dependents of veterans, and personnel on active service in the Armed Forces. The Office of Veterans' Affairs, located in The Office of Admissions and Registrar, assists those eligible for this program by pro-

viding all the necessary forms and current information about the benefits provided under the law.

It is the responsibility of every student who receives veterans' assistance to be informed of the academic standards of progress that apply to all eligible VA recipients. These standards comply with Veterans Administration regulations and are monitored by the Texas Education Agency.

COUNCIL ON GRADUATE EDUCATION

The Council on Graduate Education at The University of Texas at San Antonio is the governing body of the Graduate Faculty. The Council's responsibilities include: all matters of academic policy in the area of graduate education; establishment of qualifications for membership on the Graduate Faculty; review and approval of faculty members as recommended by the Committees on Graduate Studies, Division Directors and Deans of the Colleges to participate in the graduate program; coordination of graduate education in The University and maintenance of its quality by recommending minimum university-wide graduate academic standards; monitoring of the quality of graduate education through a periodic evaluation of graduate programs and review of and recommendation on proposals for new graduate programs and courses and revisions of existing programs and courses.

Members are selected to the Council on Graduate Education by the Members of the Graduate Faculty in Committees on Graduate Studies for each graduate degree program in The University. There is a student representative to the Council on Graduate Education from each College elected by the Members of the Graduate Faculty in each College and from these representatives, one student is elected to represent the Council on the University Assembly. The Vice President for Academic Affairs chairs the Council on Graduate Education and is the administrative officer responsible for graduate education.

INSTITUTE OF TEXAN CULTURES

The Institute was established as the official State of Texas exhibit at the 1968 San Antonio world's fair (HemisFair) and was transferred to the U. T. System Board of Regents by the 61st Legislature in 1969. On February 14, 1986, the regents approved an enhanced educational mission for the University of Texas Institute of Texan Cultures along with an administrative affiliation of the Institute with The University of Texas at San Antonio.

Since its inception, the Institute has grown into a learning and communication center for the interpretation of Texas history and folk culture. Displays of art and artifacts become a teaching laboratory as professionally trained staff members and volunteers use the exhibits as a setting for "living history". The annual Texas Folklife Festival, held on the Institute's grounds for four days each August, attracts more than 5,000 participants and 100,000 visitors every year.

III. TUITION, FEES, CHARGES, PENALTIES AND DEPOSITS

PAYMENT AND REFUND POLICIES

All policies regarding the payment or refunding of tuition, fees, and charges are approved by the Board of Regents of The University of Texas System and comply with applicable state statutes. If a person desires clarification of any matter relating to payment or refund of such charges, he or she should contact the office or administrative unit from which the charge or refund originated.

PAYMENT

Students are entitled to enter class or laboratory only after payment of their tuition and fees has been arranged using one of the following alternatives:¹

- a) Full payment of tuition and fees in advance of the beginning of the semester.
- b) One-half payment of tuition and fees in advance of the beginning of the semester and one-half payment prior to the start of the eighth class week.
- c) One-fourth payment of tuition and fees in advance of the beginning of the semester and separate one-fourth payments prior to the fourth, eighth, and twelfth class weeks.

A student may choose option (b) or (c) only during the fall and spring semesters. A service charge of \$16.00 will be added to the student's bill if alternative (b) or (c) is chosen.

If the student chooses to use the installment options, a promissory note must be completed and be on file in the Bursar's office before the registration process can be considered complete.

No change in the payment plan chosen by the student at Registration will be allowed during the semester.

A student who fails to provide full payment of tuition and fees, including late fees assessed, to the University when the payments are due is subject to one or more of the following actions at the University's option:

- a) Bar against readmission or enrollment for future semesters at this institution.
- b) Withholding of grades, degree and official transcript; and
- c) All penalties and actions authorized by law.

All Financial Aid will be applied to total tuition and fees before calculation of payment plan. Partial installment payments will not be accepted. However, prepayment in full of an installment or of total installments will be accepted at any time after registration.

Refunds from the Add/Drop process will be prorated to remaining installments. Additional fees incurred from the Add/Drop process will be added to the balance due from Registration and the installment payments will be recalculated according to the installment plan chosen at Registration.

A late fee of \$10.00 will be added to the student's bill if an installment payment is not paid by the due date. A student who fails to make full payment prior to the end of the semester will not receive credit for the work done that semester and will not be allowed to register for future semesters until the delinquent amount is paid.

Payment may be made by credit card or 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

¹Tuition and fees are subject to change by Legislative action. Changes in tuition or fees will be effective upon date of enactment and will be reflected in fees and tuition charged. The availability of installment payment options is also subject to change by Legislative action.

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 Returned Check Fee. If a check is returned, which has been used for payment of an advanced registration, and this check is not cleared before the start of the semester, a late registration fee of \$15.00 will be charged to the student.

Personal checks may be cashed in the University Bookstore for an amount up to \$5.00. 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 tuition² 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 on the following pages:

TUITION EACH SEMESTER

Number of Hours Taken ³	Residents of Texas	Nonresidents Fiscal Year 89-90	
	Fiscal Years 89-90 & 90-91	U.S. Citizens	Foreign Students
1	100.00	122.00	122.00
2	100.00	244.00	244.00
3	100.00	366.00	366.00
4	100.00	488.00	488.00
5	100.00	610.00	610.00
6	108.00	732.00	732.00
7	126.00	854.00	854.00
8	144.00	976.00	976.00
9	162.00	1,098.00	1,098.00
10	180.00	1,220.00	1,220.00
11	198.00	1,342.00	1,342.00
12	216.00	1,464.00	1,464.00
13	234.00	1,586.00	1,586.00
14	252.00	1,708.00	1,708.00
15	270.00	1,830.00	1,830.00
16	288.00	1,952.00	1,952.00
17	306.00	2,074.00	2,074.00
18	324.00	2,196.00	2,196.00
19	342.00	2,318.00	2,318.00
20	360.00	2,440.00	2,440.00
21	378.00	2,562.00	2,562.00
Each Additional Hour	18.00	122.00	122.00

²See Exemption from Tuition and Fees in this section of the catalog.

³Tuition for thesis or dissertation credit only is \$18.00 for residents of Texas and \$122.00 for nonresidents.

TUITION SUMMER SESSION

Number of Hours Taken ⁴	Residents of Texas		Nonresidents Fiscal Year 89-90	
	Each Summer Term Fiscal Years	Entire Summer Session Fiscal Years	U.S. Citizens	Foreign Students
	89-90 & 90-91	89-90 & 90-91		
1	50.00	100.00	122.00	122.00
2	50.00	100.00	244.00	244.00
3	54.00	100.00	366.00	366.00
4	72.00	100.00	488.00	488.00
5	90.00	100.00	610.00	610.00
6	108.00	108.00	732.00	732.00
7	126.00	126.00	854.00	854.00
8	144.00	144.00	976.00	976.00
9	162.00	162.00	1,098.00	1,098.00
10	180.00	180.00	1,220.00	1,220.00
11	198.00	198.00	1,342.00	1,342.00
12	216.00	216.00	1,464.00	1,464.00
13	234.00	234.00	1,586.00	1,586.00
14	252.00	252.00	1,708.00	1,708.00
15	270.00	270.00	1,830.00	1,830.00
Each Addi- tional Hour	18.00	18.00	122.00	122.00

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.

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.⁵ If the applicant has any doubt about his/her status, he/she should consult the Director of Admissions and Registrar prior to registration. There can be no change in residence classification without the express authorization of the Registrar.

GENERAL FEE

The General Fee is a compulsory fee authorized by statute for the use and availability of University buildings and facilities as set forth in the following table.

⁴Tuition for thesis or dissertation credit only is \$18.00 for residents of Texas and \$122.00 for nonresidents.

⁵For residence regulations, consult the Office of Admissions and Registrar.

STUDENT SERVICES FEE

A compulsory Student Services Fee is charged to all students enrolled at The University as set forth in the following table. This fee provides services and activities which are separate and apart from the regularly scheduled academic functions of The University and directly involve or benefit students. These services and activities include recreational activities, health services, intramural and intercollegiate athletics, artists and lecture series, cultural entertainment series, student government, and any other student activities and services specifically authorized and approved by the Board of Regents. Please see the following table of General and Student Services Fees.

GENERAL FEE AND STUDENT SERVICES FEE TABLE

Each student who registers at UT San Antonio is required to pay general fees and service fees⁶ according to the number of semester credit hours for which registration is completed, as set forth in the table below:

SEMESTER HOURS	GENERAL FEE	STUDENT SERVICES FEE
1	6.00	9.00
2	12.00	18.00
3	18.00	27.00
4	24.00	36.00
5	30.00	45.00
6	36.00	54.00
7	42.00	63.00
8	48.00	72.00
9	54.00	81.00
10	60.00	90.00
11	66.00	90.00
12	72.00	90.00
13	78.00	90.00
14	84.00	90.00
15	90.00	90.00
Each Additional Hour	6.00	-0-

UNIVERSITY CENTER FEE

University Center Fees are as follows:

\$15.00 per student, each regular session; \$7.50 each summer session.

DEGREE APPLICATION FEE

A \$12.00 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 according to the specific dates listed under Application for the Degree. This fee is not refundable and must be paid each time an application for a degree is filed. Cap and gown rental is not provided as part of the degree application fee.

⁶See the Exemption from Tuition and Fees in this section of the catalog.

THESIS AND DISSERTATION BINDING FEE

A fee of \$10.00 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 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.⁷

RETURNED CHECK FEE

A charge of \$10.00 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.

STUDENT PHOTO IDENTIFICATION CARD CHARGES

A one time charge of \$5.00 is assessed for the issuance of a student photo identification card. A charge of \$10.00 is assessed for the issuance of a replacement photo identification card. This charge must be paid at the time the application for the replacement is made.

TRANSCRIPT FEE

A charge of \$4.00 is made for each UT San Antonio transcript to be processed and mailed within 48 hours. A charge of \$6.00 is required if the transcript is to be provided within 1 hour. This fee must be paid before a transcript will be issued.

INSTRUMENT USERS FEE

In certain biology courses, an instrument users fee of \$10.00 per course may be charged. When this fee is charged, the schedule of classes indicates the associated fee.

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 \$30.00, may be charged. When a laboratory fee is charged, the schedule of classes indicates the associated fee.

COMPUTER USE FEE

In certain courses a computer use fee of \$5.00 per hour may be charged. The minimum fee is \$15.00 and the maximum fee is \$40.00 per semester. When a computer use fee is charged, the schedule of classes indicates the associated fee.

⁷Borrowing and fine regulations of the UTSA 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.

PRINT MAKING FEE

A fee is assessed students enrolled in print making courses in the Art and Design curriculum to defray the cost of supplies and materials.

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 filling out a Friend of the UTSA Library application at the Circulation Desk in the UTSA Library (John Peace Library Building, second floor) and paying a non-refundable donation. Donations are \$15.00 September through August or \$7.50 for the months of June through August only. There are limits on the services offered to Friends of the UTSA Library card holders; further details are available from the Circulation Desk.

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

All auditors of courses must register their vehicles and obtain parking permits from the University Police Traffic Office.

PARKING FEES

All vehicles parked on the campus must be in compliance with the UTSA Parking and Traffic Regulations. Copies of these regulations are available during registration, and in the University Police office.

Parking fees for students are as follows:

Class G & *Class D	\$22.00	General & Dormitory parking permit, if purchased during the fall semester.
	10.00	General & Dormitory parking permit, if purchased during spring semester.
	5.00	General & Dormitory parking permit, if purchased during the summer session.
Class C	\$12.00	Motorcycle, motor scooter, motorbike parking permit, if purchased during the fall semester.
	5.00	Motorcycle, motor scooter, motorbike parking permit, if purchased during the spring semester.
	3.00	Motorcycle, motor scooter, motorbike parking permit, if purchased during the summer session.
Class W	3.00	Bicycle parking permit, if purchased any time during the academic year.

*Dormitory permits are valid in Dormitory lot and any unrestricted lined parking space in other parking lots.

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- Class M \$15.00 Mini-car parking permit if purchased during the fall semester.
7.00 Mini-car parking permit if purchased during the spring session.
5.00 Mini-car parking permit if purchased during the summer session.
- Class S Carpool fees vary by semester and by number of primary vehicles in carpool.

Parking permits are available for handicapped and disabled persons in accordance with applicable statutory law and UT San Antonio Parking and Traffic Regulations.

Refunds for unused portions of parking permits must be requested on the "Refund Request Form" available in the University Police Traffic office. Refunds will be made in accordance with the current UTSA Parking & Traffic Regulations, Article II, Subdivision II, Section 7.

FIELD TRIP FEE

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

PHYSICAL EDUCATION FEES

Physical Education Activity Fee. A fee of \$8.00 for a semester or summer term is required of every student registering for a physical education course or activity. Lockers, towels, and locks are provided.

Equipment and Lane Fee. A fee of \$60 for a semester or summer term is required of every student registering for a physical education *bowling* course.

TENNIS CENTER FEE

Dependents of full-time students, UTSA full-time faculty and staff and their dependents, and the general public may use the Tennis Center at specified hours and are charged fees according to the schedule listed below. By paying the Tennis Center fees, the person is entitled to use any of the other athletic facilities.

Student Dependents. The spouse and children of full-time students are entitled to use the Tennis Center and all other athletic facilities according to the schedule listed below. A full-time graduate student is one enrolled for at least 9 semester hours in the fall or spring semester and for 3 semester hours in a five-week summer session or 5 hours in a ten-week summer session.

CATEGORY

ANNUAL FEE

- | | |
|-----------------------------|--------------------------------------|
| 1. Full-time student spouse | \$6.00 per semester or entire summer |
| 2. Full-time student child | 6.00 per semester or entire summer |

Lockers and locks are provided. In order for a spouse or child to use the Tennis Center, the faculty or staff member must first pay his/her use fee. Children must be accompanied by a parent or guardian.

UTSA Personnel and Dependents. Full-time faculty and staff desiring to use the Tennis Center and all other athletic facilities are charged fees under the following schedule:

CATEGORY	ANNUAL FEE
1. Faculty-staff member	\$12.00
2. Faculty-staff spouse	12.00
3. Faculty-staff child	12.00 (maximum of \$40.00 per family)

General Public and Guests. The general public and guests of UTSA students and personnel may use the Tennis Center at certain hours for \$1.50 per person for a 1-1/2 hour reservation. Part-time faculty and staff, and dependents of part-time faculty, staff and students are also in the category of general public. The University of Texas Health Science Center at San Antonio faculty/staff/students are also classified in the category of general public. The University reserves the right to give the general public lowest priority in use of the Tennis Center. General public and guest fees are payable at the Tennis Center office.

UTSA FACULTY AND STAFF GYMNASIUM AND FACILITY USE FEE

Faculty and staff gymnasium and facility use fees are required. Faculty and staff (including guests) desiring the use of the Convocation Center and Gymnasium and other recreational facilities (excluding Tennis Center) may use the facilities, at specified hours only, and are charged fees according to the following schedule. Lockers and locks are provided. In order for a spouse or child to use the facilities, the student, faculty, or staff member must first pay his/her use fee. Children must be accompanied by a parent or guardian.

CATEGORY	ANNUAL FEE
A. UTSA Personnel	
1) Faculty-staff member	\$12.00
2) Faculty-staff spouse	6.00
3) Faculty-staff child	3.00 (maximum of \$25.00 per family)
4) Student spouse	3.00
5) Student child	1.00
B. Guest Fee	\$ 1.00
Guest of UT San Antonio student, faculty member, or staff member	

These fees are non-refundable.

DUPLICATE FEE RECEIPT

A service charge of \$2.00 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.

DUPLICATE CLASS SCHEDULE

A service charge of \$2.00 is assessed for the issuance of a duplicate class schedule. This charge must be paid at the time the application for a duplicate class schedule 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 reenrollment, and in refusal to issue the student's transcript by The University.

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 the student scholarships.

CAREER PLANNING AND PLACEMENT REGISTRATION FEE

UT San Antonio students and alumni interested in establishing a credential file for an employment search or for graduate or professional school applications, are invited to use the services of the Career Planning and Placement Center. There is no registration fee for students currently attending UT San Antonio. There is a \$3.00 fee for alumni who are interested in using the Center's services after leaving The University. Active registrants may use the full range of services offered by the Center, e.g., on-campus interviewing, part-time job service, resume and interview seminars, vacancy listings, direct job referral, and duplication and mailing of credential file materials to prospective employers.

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. Non-students and alumni will be charged an annual \$5.00 registration fee. The registrant receives the preparation, duplication and maintenance of three sets of credentials. A handling fee of \$5.00 plus copying charges will be assessed for each additional set requested.

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 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.

DESCRIPTION	ELIGIBILITY	FEES EXEMPTED
Accredited School Scholarship	Highest ranking graduate of an accredited Texas high school	Tuition during first two semesters (long session) following graduation
Texas Ex-Servicemen	<ol style="list-style-type: none"> (1) Resided in Texas for 12 months prior to registration (2) A bona fide legal resident of Texas at time entered service (3) Served in armed forces in World War I, World War II, Korean Conflict, or the Cold War (4) Honorably discharged (5) Not eligible for Federal Educational benefits 	Tuition Laboratory fees Supplementary fees General fee
Children of Disabled Texas Firemen and Peace Officers	For children under 21 years of age of disabled full-paid or volunteer firemen, full-paid municipal, county, or state peace officers, or custodians of the Department of Corrections, or game wardens	Tuition Required fees ⁸
Blind and Deaf Students	A blind disabled person, or a person whose sense of hearing is nonfunctional	Tuition Required fees ⁹ General Property Deposit
Children of Texas Veterans	For children of members of the armed forces who were killed in action in World War II, Korean Conflict, or the Cold War, and to orphans of members of the Texas National Guard killed since January 1, 1946, while on active duty. Children cannot be eligible for Federal Educational benefits.	Tuition Laboratory fees Supplementary fees General fee
Good Neighbor Scholarship	<ol style="list-style-type: none"> (1) Native-born students from other nations of the American hemisphere—limited to 235 students each year (2) Furnish certified evidence of native-born citizenship and scholastic qualifications 	Tuition

^{8,9}Required fees include laboratory fees, supplementary fees, the general fee, student services fee, and the University Center fee.

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Firemen Enrolled in Fire Science Courses	Enrolled in course offered as part of fire science curriculum	Tuition Laboratory fees Supplementary fees
Children of Prisoners of War or Persons Missing in Action	Dependent person under 25 years of age who receives majority of support from parent. Parent classified by Department of Defense as a Prisoner of War or Missing in Action at the time of registration	Tuition Required fees ¹⁰

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

A student who officially withdraws from The University prior to the first class day will be refunded 100% of collected tuition and returnable fees.

In a Fall or Spring semester 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. If a student is using the installment payment plan, the student's refund is calculated on the total tuition and fees assessed for the semester and then netted against the balance still owed to the University.

Summer terms are considered as one session for refund/drop purposes. If courses are to be dropped in either term, please refer to census dates for refund purposes. A student who wishes to withdraw from the summer session must withdraw from the total courses registered for in both terms of the summer session. In the summer session, 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, general 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 provided the student remains enrolled for the semester or term. Tuition and applicable fees for added courses are collected daily, net of dropped courses, during the add/drop period.

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.

¹⁰Required fees include laboratory fees, supplementary fees, the general fee, student services fee, and the University Center fee.

¹¹These refund percentages are applicable to tuition, the supplementary fees, the general fee, laboratory fees, University Center fee, and the student services fees.

No refunds are made until 15 days have elapsed from the census date. 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.

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.
5. Withholding of grades.

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

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 Part One, Chapter VI, of the *Rules and Regulations* of the Board of Regents of The University of Texas System and in the UT San Antonio *Institutional Rules on Student Services and Activities*.

The Regents' *Rules* and the *Institutional Rules on Student Services and Activities* 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 *Institutional Rules on Student Services and Activities* may be obtained in the Office of the Dean of Students.

STUDENT ACTIVITIES

Student activities revolve around a variety of student organizations reflecting the social, service, cultural, political and academic interests of the diverse student community. Student activities are designed to enhance classroom education, to assist students in developing leadership qualities, to develop interpersonal skills and to create a stimulating campus environment.

Various programs, activities and services are coordinated through the Student Activities Office. They include University Center Programs, UTSA Alumni Association functions, Cheerleaders, a Student Activity Calendar, and liaison with VIA Metropolitan Transit. The *Student Organizations Guide*, *Parliamentary Procedures Simplified*, and *Factbook for Student Organizations* are publications made available through this office. An inner-campus message center for registered student organizations is located in the Student Activities Complex in the University Center.

HAZING

Hazing in state educational institutions is prohibited by state law (Section 4.19, Chapter 4, Title I, *Texas Education Code*). Hazing with or without the consent of a student is prohibited by The University of Texas System, and a violation of that prohibition renders both the person inflicting the hazing and the person submitting to the hazing subject to discipline. (Regents' *Rules and Regulations*, Chapter VI, Section 3.6).

STUDENT HEALTH SERVICES

The application for admission to The University of Texas at San Antonio includes a Health Information Form. This form should be completed by the student 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 normal 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 students.

Services offered include individual sessions for personal, educational, and vocational concerns as well as services to couples with relationship difficulties. Group sessions are offered on a regular basis on topics such as assertion training, interpersonal communication skills and self-esteem.

In addition, self-help cassette tapes are available for listening in person or by phone on a variety of topics ranging from friendship-building to suicidal crisis.

Counseling psychologists in the Center deal with a variety of student concerns and utilize counseling techniques, psychological assessment, and other aids to assist students. All counseling is free, confidential, and on a voluntary basis.

TESTING CENTER

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

FINANCIAL AID

Programs to assist students and parents in financing an education at UT San Antonio are administered by the Office of Student Financial Aid. Students may apply for financial assistance through scholarship, grant, work study and loan programs.

Eligibility for the majority of financial aid programs is determined through an analysis of a family's financial need. This analysis is made after the student completes and submits a financial statement to an agency approved by the Federal government. Before a student can be considered for most forms of financial aid, he or she must:

1. be officially admitted to The University;
2. file a Financial Aid Form with the College Scholarship Service;
3. file a UT San Antonio Application for Financial Aid with the Office of Student Financial Aid;
4. meet deadlines set by the Office of Student Financial Aid;
5. not be in default on any Title IV, HEA loan made for attendance at any institution nor owe a refund on any Title IV, HEA grant received for attendance at any institution;
6. provide proof of eligibility if not a citizen of the United States;
7. provide documents which support the information reported on the application for aid, if requested;
8. if a transfer student, submit a Financial Aid Transcript from each post-secondary school attended whether financial aid was received or not (contact the Financial Aid Office for forms), and
9. make satisfactory academic progress as required for financial aid eligibility to fulfill federal requirements;
10. be working toward a degree and classified by the Admissions Office as seeking a degree.

Financial aid programs available to undergraduate students include College Work Study, Pell Grant, Supplemental Educational Opportunity Grant, Texas Public Education-State Student Incentive Grant; the Perkins Student Loan, Teacher Education Loan, Future Teacher Loan, several Guaranteed Student Loan programs, and

various scholarships. The same programs are available to graduate students except the Pell and Supplemental Grants.

Consideration for the Pell Grant and the Guaranteed Student Loan programs is automatically given to any undergraduate student who completes the application process. However, all other major financial aid programs have a limited amount of funds which must be granted on a first-come, first-served basis. Therefore, students are strongly encouraged to have their completed application at the Office of Student Financial Aid by March 31st of each year.

Application forms and detailed instructions on applying are available through the Office of Student Financial Aid.

CAREER PLANNING AND PLACEMENT CENTER

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

Placement programs available at the Center are designed to assist students in the development of effective job hunting skills and methods, e.g., effective letter writing, effective mail campaigns, resume development, and interview-skills training. Students are seen on a "drop-in" or appointment basis at the Career Planning and Placement Center.

The Center also provides the following services: part-time and summer employment opportunities; career placement for students and alumni after graduation. Students and alumni may establish a placement file and use the on-campus interview schedule to meet the representatives from business, industry, and government to explore professional employment opportunities.

To assist students in career development activities, the Center provides information on employment opportunities related to their college majors. This information includes an annual report on the placement activities of UT San Antonio graduating students, average starting salary, the type of positions accepted, and when available, the relationship between fields of study and accepted positions.

Students and alumni are encouraged to use the career, vocational, and educational counseling services of the Center and its Career Resource Library. Students who have not decided which college major they wish to pursue can participate in the life planning workshops, value clarification labs, decision-making seminars (labs), and career exploration symposia offered by the Center. Vocational testing, including aptitude and interest inventories, also is available.

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.²

INTERCOLLEGIATE ATHLETICS

UT San Antonio fields men's and women's teams for intercollegiate competition in Division I of the NCAA. Men's sports include: basketball, cross country, indoor track,

¹Fees for services of the Career Planning and Placement Center are set forth in Section III of this catalog.

²Fees for the Teacher Placement Service are set forth in Section III of this catalog.

The services of the Teacher Placement Service are available to all presently enrolled students, as well as alumni of The University of Texas at San Antonio.

outdoor track, tennis, golf, and soccer. Women's sports include: basketball, cross country, volleyball, tennis, and indoor track.

INTRAMURAL AND RECREATIONAL ACTIVITIES

UT San Antonio offers a wide range of intramural programs and recreational activities. The facilities available in the Convocation Center and the Physical Education Building include gymnasiums for basketball and volleyball, weight machines, badminton and shuffleboard courts, and a jogging path. Also available is the 400-meter synthetic track with a grass playing infield, two intramural fields for soccer, touch football and softball, and a tennis center. Students are able to participate in tennis, track, volleyball, badminton, shuffleboard, table tennis, softball, soccer and touch football.

LIVING ACCOMMODATIONS

Resident student facilities consist of a 520 student resident hall and an activity center. Rooms in Chisholm Hall are furnished with desks, chairs, and twin beds. All rooms are double occupancy and include a private bath. The activity center includes a snack bar, lounge, and indoor swimming pool. For more information concerning on-campus housing, contact: Housing Office, The University of Texas at San Antonio, San Antonio, Texas 78285 or call 512/694-6700.

An off-campus housing directory is available in the Division of Student Services to assist students in finding living accommodations in the San Antonio community.

IDENTIFICATION CARDS

Student identification cards are mandatory. A non-refundable \$5.00 charge for the student photo ID card is assessed at the time of registration. The \$5.00 charge is a one-time charge and the card is valid as long as the student is currently enrolled. A \$10.00 charge is assessed to replace a lost card. A \$2.00 charge is assessed to replace a lost temporary card.

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
- Participation in Officially Recognized Activities and Sports
- Weight and Height of Members of Athletic Teams
- Dates of Attendance
- Degrees and Awards Received
- Most Recent Previous Educational Agency or Institution Attended

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 the disclosure, review, release, and confidentiality of student records under the Family Educational Rights and Privacy Act of 1974, 20 U.S.C. Section 1232g, consult the *Institutional Rules on Student Services and Activities* 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, and with the academic advisement and registration procedures. This program is planned and implemented through the Division of Student Services.

LOST AND FOUND

All abandoned articles found on The University campus are turned in to the University Police office. Items can be claimed upon proper identification of ownership. Any article not claimed within sixty (60) days will be turned over to the Business Manager for final disposition.

HANDICAPPED STUDENTS

Handicapped students requiring special assistance should contact the Division of Student Services.

INTERNATIONAL STUDENTS

Foreign students who are enrolled at UT San Antonio should contact the Division of Student Services for assistance.

THE UNIVERSITY CENTER BUILDING

The University Center Building, located on the West paseo between the Humanities Business Building and the Physical Education Building, opened in summer 1986. The two-story, 42,000 square foot facility houses a lounge, cafeteria, recreation room, television rooms, and cafe. Additionally, a large multi-purpose room, meeting rooms, and print shop are available in the center. A student activity complex on the second floor provides work space for registered student organizations, student government offices, The University Center Program Council office, and the Student Activities Office.

The Ticketmaster outlet is located at the Information Desk in the University Center.

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. Graduate study is much more than a mere continuation of undergraduate work and should be considered only by those students with the capacity for independent thought and investigation. All graduate programs at The University of Texas at San Antonio use selective entrance requirements in their admission of students. 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

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.

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 normally 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;¹ (5) be in good standing at the last institution attended; and (6) submit scores from the Graduate Record Examination Aptitude Test (GRE) or, for those applying for the Master of Business Administration program, scores from the Graduate Management Admission Test (GMAT). These scores will be used as one element in the evaluation of applicants. 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.

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

¹An 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.

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, 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.

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).

Note: For Teacher Certification a student must obtain admission as either a graduate degree-seeking student or a special graduate student.

ADMISSION AS A SPECIAL STUDENT AT THE GRADUATE LEVEL

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. An applicant who does not elect to enter a graduate-level degree program must seek permission to be admitted to one of the colleges of The University. Special graduates seeking permission to take graduate courses in the College of Business must meet the same admission criteria as those students applying for admission to the graduate degree-seeking programs in the College of Business. To be eligible for admission as a special student at the graduate level, an applicant normally 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 60 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. Even though admission is based on the last 60 hours attempted, students must list all colleges and universities attended on the application for admission.

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, they have the approval of the course instructor, and permission from the Dean of the college in which the courses are taught. Students who wish to take a course in a college other than that to which they have been admitted must obtain the signed approval of the Dean of the college in which the course is taught. 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.

A maximum of 12 hours credit earned as a special student may be applied toward a Master's degree, and 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. When teacher certification is involved, approval by the Director, Office of Teacher Certification and Placement, is required before the student enrolls, to ensure that credit earned as a special student can be applied to a graduate-level teacher certification program. Students admitted as transient and subsequently as special students may not apply more than 12 semester hours of approved credit toward a Master's degree.

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 SUMMER TRANSIENT STUDENT AT THE GRADUATE LEVEL

An applicant who wishes to enroll for a summer session only, without pursuing a degree at The University of Texas at San Antonio should apply for admission as a transient student. In order to qualify as a summer 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. Even though admission is based on good standing at the last institution attended, students must list all colleges and universities attended on the application for admission.

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

A maximum of 6 hours of credit earned while a transient student may be applied to a degree program and 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. When teacher certification is involved, approval by the Director, Office of Teacher Certification and Placement, is required before the student enrolls, to ensure that credit earned as a transient student can be applied to a graduate-level teacher certification program. Students admitted as transient and subsequently as special students may not apply more than 12 semester hours of approved credit toward a Master's degree.

ADMISSION OF INTERNATIONAL STUDENTS

All applications from persons holding non-permanent visas will be processed as International. This includes both applications received from other countries and requests to transfer from a U.S. college or university. All applicants must:

1. Meet the graduate admission requirements for degree-seeking students. Applicants who will be on a student visa may not be admitted other than as degree-seeking students. (An I-20 form is not issued to transient or special students.)
2. Submit scores from the Test of English as a Foreign Language (TOEFL). 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. 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 where English is the primary language of instruction and the language spoken in the home by the indigenous population, nor are TOEFL scores required for non-citizens of the United States graduating from United States high schools, colleges, or universities with at least a high school diploma or a baccalaureate or higher degree.
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 anti-

pated. 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.

4. Have applications and supporting credentials on file in the Office of Admissions and Registrar by application deadline: Fall, June 1; Spring, October 15; Summer, March 1.

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 Admissions office, 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.

ADMISSION PROCEDURES FOR TEACHER CERTIFICATION OR FOR CERTIFICATE ENDORSEMENTS AT THE GRADUATE LEVEL

Applicants who desire to work on teacher certification requirements and who hold a Bachelor's degree should apply for admission to the Division of Education in one of the categories described above—graduate degree-seeking student or special graduate student (not special undergraduate student). When unconditional admission has been granted, the student should apply to the Office of Teacher Certification for an analysis of his/her transcripts and for an official outline of a program that will insure meeting the requirements to obtain a teacher's certificate or a certificate endorsement. In some cases it may be possible to meet certification requirements within a degree program; in other cases the student may need to take additional work for the certificate beyond that required for the Master's degree. The student's Program Advisor and the Office of Teacher Certification will assist the student in planning an appropriate program of study. Recommendations for the teacher certification (to the Texas Education Agency) are made by the Office of Teacher Certification only after all requirements have been met and the student has officially requested such recommendation.

A brochure summarizing Education Certificate and Endorsement Requirements is available from the Office of Teacher Certification in the Division of Education.

APPLICATION DATES

Students applying for admission as degree-seeking, 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. Because of the time needed to prepare graduate summaries, students are encouraged to have their admission file complete at least one month or more prior to the application deadline. 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 by July 1 for the Fall Semester, December 1 for the Spring Semester, and May 1 for the Summer Sessions. Failure to comply with these admission deadlines will cause deferment of admission until a subsequent term.

ADMISSION PROCEDURES

Each applicant for admission is responsible for ensuring that all required support documents (e.g., application form, test results, required transcripts, etc.) are on file in the Admissions Office, in accordance with admission deadlines, 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.

DECLARATION OF PREVIOUS COLLEGE WORK ATTEMPTED

Students are not at liberty to disregard previous college work attempted. All students transferring to The University of Texas at San Antonio *must* list *all* colleges attended on their UT San Antonio application for admission. Failure to do so will result in the rejection of the application, withdrawal of any offer of acceptance, cancellation of enrollment, permanent dismissal from The University or other appropriate disciplinary action.

RE-ADMISSION POLICIES AND PROCEDURES

Former UT San Antonio students who have not been in attendance for one full year must file an application for readmission by the application deadline.

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 admitted students to register during the allowed time indicated in the schedule of classes issued each 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. A special or transient student should seek approval of the course instructor and Dean of the College in which the course is offered. A certification student [or "a student seeking certification only"] should seek approval of the course instructor and the Director, Office of Teacher Certification and Placement. 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. A special or transient student and a certification student [or "a student seeking certification only"] should seek the additional approval of the Dean of the College in which the course is offered. 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 (Census Date) do not appear on the student's transcript. A student who drops courses after the add/drop period and through the first nine weeks of a semester or the first three weeks 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.*

Students may not drop an individual course later than the last day of the ninth week of classes or the first three weeks of a summer term.

The University Calendar indicates the deadline dates for students to drop courses each term.

During the first nine weeks of a semester or the first three weeks of a summer term, the instructor may drop a student from class for non-attendance. The student will receive a grade of "W". After these periods, the instructor may recommend to the Dean that a student be dropped from class when the instructor can show that unusual circumstances exist to warrant such action. The Dean, with the approval of the Vice President for Academic Affairs, may drop a student from class; the student will receive a grade of "W" if the student was passing at the time of the drop or a grade of "F" if the student was failing at the time of the drop.

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 Director of the Division 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. Unless you are enrolled in courses at The University, you are not allowed to audit courses which require a computer use fee. Non-student auditors who wish library privileges may receive them by filling out a Friend of the UTSA Library application at the Circulation Desk in the UTSA Library (John Peace Library Building, second floor) and paying a non-refundable donation. Donations are \$15.00 September through August or \$7.50 for the months of June through August only. There are limits on the services offered to Friends of the UTSA Library card holders; further details are available from the Circulation Desk. Persons over 65 are permitted to audit without paying an auditing fee, if space is available.

Permission to audit may be obtained and fees paid beginning the first day of class through Census date. No official record is made of enrollment in classes on an audit basis.

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, irrespective of level of courses taken;
- 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 one 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, registration, or financial requirements or who otherwise fails to adhere to academic regulations is subject to having his/her enrollment for that term cancelled. Application for readmission 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) is required to go through The Office of Student Information and Retention prior to their withdrawal. The student must then file the form with the Registrar's Office in order to withdraw officially. Students who officially withdraw from The University during the first nine weeks of a semester or during the first three weeks 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 nine weeks of classes in a regular semester or after the first three weeks 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 may not withdraw from The University later than the first day of the week preceding final examinations. 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. Normally, such reinstatement would be after remaining out of school one long semester, however, under exceptional circumstances, a petition may be considered earlier. A letter containing all explanations, recommendations, or doctors' statements in support of the student's request for reinstatement should be submitted to the Vice President for Academic Affairs on or before June 15 for Fall, October 15 for Spring or March 15 for Summer.

If the Petition for Reinstatement is disapproved, the student may not file another petition until the following semester.

GRADUATE STUDENT CLASSIFICATION SYSTEM

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

Special Graduate 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 program.

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

NOTE: A graduate student who desires to work on a program to meet the requirements for Teacher Certification or for a certificate endorsement must be admitted as either a degree-seeking or special graduate student. He/she must then apply to the Office of Teacher Certification for an official analysis of the requirements that must be met before he/she can be recommended for certification.

DEFINITION OF A FULL-TIME GRADUATE STUDENT

A full-time graduate student (degree, special, or transient) is one enrolled for nine or more semester hours of graduate credit during a regular semester or for five or more hours of graduate credit during the entire summer term.

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.

The number of lecture and laboratory hours per week are provided in parentheses in the course description sections immediately following the course number and title. For example, (3-0) indicates three hours of lecture and zero hours of laboratory per week.

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.

<i>Symbols</i>	<i>Grade Points</i>
A	4
B	3
C	2
D	1
F	0
CR	0
EP	0
W	0
IN	0
NR	0
RP	0
EX	0
NC	0

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 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 no later than the end of the final exam period, one year from the semester the incomplete was 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.

"RP" or "Research in Progress." The symbol RP may be used to denote research in progress, only for ACC 6963, ART 6846, MUS 6913 and for Master's Thesis in those areas where a thesis is available. When the project or thesis is completed the RP will be changed to a letter grade up to the maximum number of semester credit hours approved for the specific degree.

"EX" or "Expelled." The symbol "EX" is used to indicate that the student has been expelled from The University.

"NC" or "No Credit." The symbol is used to indicate unsatisfactory progress.

REPORTING OF GRADES BY THE FACULTY

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. Grade reports will be withheld for any student who owes tuition and fees to The University.

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 Dean and the Director of the Division in which the course is offered before the Registrar will make the change on the student's record.

GRADE GRIEVANCE PROCEDURE

In attempting to resolve any student grievance regarding grades or evaluations, it is the obligation of the student first to make a serious effort to resolve the matter with the faculty member with whom the grievance originated. Individual faculty members retain primary responsibility for assigning grades and evaluations. The faculty member's judgment is final unless compelling evidence shows discrimination, differential treatment, or factual mistake. If evidence warrants appeal, then normal academic channels are: Division Director, Dean, Vice President for Academic Affairs, and President.

Grade appeals above the level of the Dean must be submitted in writing on the "Student Academic Grievance Form for Appeal of a Grade" which is available in the Office of the Division Director.

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 be 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 recommended 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.

Instructors shall allow a student who is absent from classes for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence. A student who is absent from class for the observance of a religious holy day (means a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20, Tax Code) shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence if, not later than the 15th day after the first day of the semester, the student notifies the instructor of each class the student had scheduled on that date that the student would be absent for a religious holy day.

Notifications of planned absences must be in writing and must be delivered by the student either (a) personally to the instructor of each class, with receipt of the notification acknowledged and dated by the instructor, or (b) by certified mail, return receipt requested, addressed to the instructor of each 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.

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. (Regents' *Rules and Regulations*, Part One, Chapter VI, 3.(17).

"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 faculty member may initiate disciplinary proceedings through the Division Director, the Dean of the College, and the Dean of Students.

TRANSCRIPTS

Official transcripts of all course work taken at The University of Texas at San Antonio are available at the Registrar's Office. Requests must be in writing and must bear the signature of the student whose record is requested. A fee is charged for each copy and must be paid in advance. Transcripts from other institutions submitted to UT San Antonio become the property of The University and are not reproduced and/or mailed to other institutions, agencies, or individuals as an official transcript. Requests for unofficial copies of transcripts from other institutions may be made in accordance with the open record laws by filling out the required forms in the Registrar's Office and paying the fee.

Request for official transcript service will not be honored 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 under the Family Educational Rights and Privacy Act of 1974 and when payment of the appropriate fee is made. Exceptions may be made in response to a subpoena or court order, under other circumstances as allowed under the Family Educational Rights and Privacy Act of 1974, 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. The official University transcript will carry the current name and the most immediate previous name, if any. Name change requests should be supported by appropriate legal documentation, 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. Students who have a degree application on file in the Registrar's Office should specify if the address change also affects the address to which the diploma is to be mailed.

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. 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;
4. The student must formally apply for the degree and pay the required fee in the Registrar's Office no later than the deadline for the semester in which he/she intends to graduate. Deadlines are published in all class schedules;
5. The student must complete satisfactorily the comprehensive examination, except as provided by the M.B.A. degree;
6. 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;
7. No 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;
8. The student must be in good standing at the close of the semester in which the degree is to be received.

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. The Registrar's Office evaluates transcripts and designates which graduate courses are acceptable under the above provisions for transfer toward a Master's degree at UT San Antonio. Whether or not a course is 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, 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 which can 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. 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 examination or by UT Challenge Examination for any courses used to meet minimum requirements for a graduate degree or graduate teacher certification program. Graduate degree-seeking students in the College of Business 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. The only exception is that persons holding a Master of Arts degree in Art from another institution seeking admission to the Master of Fine Arts degree program may have up to 24 semester hours applied toward the M.F.A. degree *exclusive of the thesis and/or degree project* upon recommendation of the Division Committee on Graduate Studies and approval of the Dean of the College. 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 course below the upper-division level or with other grades may be applied to the degree.

CATALOG OF GRADUATION

Graduate students have six years from the term of original registration to complete a graduate degree program under the catalog in effect at the time of initial registration at UTSA provided they are continuously enrolled at UT San Antonio. If a student drops out for one or more long semesters, he/she has the option of re-enrolling under a subsequent catalog. These students will have six years to complete degree requirements under the new catalog. 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.

COMPREHENSIVE EXAMINATION

A candidate for a Master's degree, other than candidates for the M.B.A. degree who are required to complete MGT 5903 with a grade of B or better, must, in addition to all other requirements, pass a comprehensive examination which may be oral or written

or both. Students must be registered during any semester or summer term that they are taking required examinations. Comprehensive examinations are given only to those students who have complied with the following requirements:

1. completed all conditions of admission, if any were assigned at the time of admission;
2. completed 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; and
6. be enrolled in 6961 Comprehensive Examination in the semester the comprehensive examination is taken if registered for no other courses that semester.

OPTIONS FOR MASTER'S DEGREES

Two options are available for most Master's Degree Programs. Students should refer to the chapter on Graduate Degree programs to determine whether a specific program offers both options.

Option I. The candidate for a Master of Arts, Master of Science, Master of Business Administration or Master of Professional Accounting 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 Program Advisor, Thesis Committee, Graduate Advisor, and Dean.

Students receiving advice and assistance from a faculty member in the preparation of a thesis 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's degree program he/she should, in consultation with his/her Program Advisor, select the option most suitable to his/her needs. Should a student elect to change options he/she should consult with his/her Program Advisor.

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. Prior to submission of the thesis to the Dean for final acceptance, the Office of the Vice President for Academic Affairs must certify that it conforms to the format prescribed in the *Format for the Master's Thesis* and approve the method of duplication.
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 \$10.00 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 are the responsibility of the student. Copyright may be arranged by the author and will be at the student's expense.

APPLICATION FOR A DEGREE

It is the student's responsibility to apply officially for his or her degree at the Registrar's Office no later than October 1 for the Fall Semester; February 1 for the Spring Semester; July 1 for the Summer Session. The application of any student applying for graduation after the established deadlines for that semester will be processed for graduation for the following semester.

Students who apply for the degree in a given term but who do not fulfill all requirements must file a new degree application (on or before the appropriate deadlines) for the next term in which they intend to graduate. An additional application fee is required for the second and all subsequent degree applications.

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. Students may not participate in ceremonies prior to their actual date of graduation.

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 degree opens up an additional area, field, or concentration;

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- 2) that the proposed second Master's degree 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.¹ 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.

¹The only exception is the M.F.A. Degree. Students should refer to "Courses Counted for Another Degree" in this section of the Catalog.

VIII. SUMMARY OF GRADUATE DEGREE PROGRAMS

The following graduate degree programs are available during 1989-1991.¹ Detailed requirements for each degree are found in Section IX of the present catalog.

Master of Business Administration Degree

Business
International Business

Master of Professional Accounting Degree

Master of Public Administration Degree

Master of Arts Degree

Anthropology

Bicultural-Bilingual Studies

Concentrations: (1) Bicultural-Bilingual 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 Leadership
(5) Educational Psychology/Counseling and Guidance
(6) Educational Psychology/Special Education
(7) Adult and Higher Education

English

History

Spanish

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

Master of Fine Arts Degree

Art

Master of Music Degree

Master of Science Degree

Biology

Biotechnology

¹Course offerings in graduate degree programs may be postponed if enrollments or resource and space limitations do not warrant scheduling or continuation of a particular course.

Chemistry

Computer Science

Geology

Natural Resources

Mathematics

- Concentrations:** (1) Mathematics
(2) Statistics
(3) Mathematics Education

Doctor of Philosophy Degree

Educational Leadership

(Cooperative degree with The University of Texas at Austin)

Programs leading to teacher certification or to certificate endorsements are also available, in conjunction with or independent of Master's degrees in Education.

IX. GRADUATE DEGREE PROGRAMS AND SUPPORT COURSES

COLLEGE OF BUSINESS

The Master of Business Administration Degree is accredited by the American Assembly of Collegiate Schools of Business and conforms to its recommended guidelines.

MASTER OF BUSINESS ADMINISTRATION DEGREE IN BUSINESS

The Master of Business Administration Degree in Business is designed to offer the opportunity for 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, the courses of the common body of knowledge. Students whose background is in business but who have completed the common body of knowledge courses five or more years prior to entering the program will be required to complete successfully or test out of the common body of knowledge courses. The courses of the common body of knowledge 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 the following College of Business requirements.

- 1) An approximate overall average of 3.0 in all work completed at the undergraduate level,
- 2) An approximate composite score of 500 on the Graduate Management Admission Test (GMAT)¹ with results submitted to the Office of Admissions and Registrar prior to being considered for admission.
- 3) Completion of the courses of the common body of knowledge or their equivalents, and
- 4) Favorable recommendation by the M.B.A. Admissions Committee to the Dean of the College of Business.

Those who do not meet the admissions requirements will be considered on a conditional basis.

The following courses of the common body of knowledge are required for students with undergraduate curriculum deficiencies; however, no credit for these courses may count toward degree requirements of the M.B.A. in Business:

ACC 5003	Financial Accounting Concepts
ACC 5023	Accounting Analysis for Decision Making
BLW 5003	Legal Environment of Business
ECO 5003	Economic Theory and Policy
FIN 5003	Administrative Finance
MGT 5013	Quantitative Methods for Business Analysis
MGT 5083	Computer Applications in Business
MKT 5003	Marketing Theory

Degree Requirements. The M.B.A. Program in Business requires 36 semester hours of work beyond any hours acquired in the common body of knowledge courses. MGT

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.

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Master of Business Administration Degree in International Business

5113 must be the first course taken in this 36 hour program. All candidates for the M.B.A. Degree in Business are required to complete successfully the following 24 semester hours.

ACC 5123	Advanced Managerial Accounting Topics
ECO 5023	Managerial Economics
FIN 5023	Financial Management
MGT 5023	Decision Analysis and Production Management
MGT 5043	Behavior in Organizations
MGT 5113	Management Perspective
MGT 5903	Management Policy, Problems, and Trends ²
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 above, 6 semester hours of electives as recommended by the Committee on Graduate Studies and approved by the 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 above and 12 semester hours of electives as approved by the Committee on Graduate Studies and the Dean.

**MASTER OF BUSINESS ADMINISTRATION
DEGREE IN INTERNATIONAL BUSINESS**

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 International Business. 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. This program is designed to offer students from the United States or foreign countries the opportunity to study business administration while developing special expertise in its international aspects. To achieve this end, specific international content courses have been developed in the disciplines of management, marketing and finance. There may be opportunities to study outside the United States and to apply the credit earned to the degree program at UTSA. The international content courses and possibilities for foreign study are supplemented by research and workshop opportunities in the area of international business. Students entering the degree program must meet the normal admission requirements for the College of Business.

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

Degree Requirements. The M.B.A. program in International Business requires 36 semester hours of work beyond any hours acquired in the common body of knowledge courses. MGT 5113 must be the first course taken in this 36 hour program. All candidates for the M.B.A. Degree in International Business must complete the following 24 semester hours:

ACC 5123	Advanced Managerial Accounting Topics
ECO 5023	Managerial Economics
FIN 5023	Financial Management
MGT 5023	Decision Analysis and Production Management

²MGT 5903 students who earn a grade of "B" or better in the course will satisfy the comprehensive examination requirement. A student who receives a grade of "C" may still satisfy this requirement by successfully passing a comprehensive examination as set out in this catalog.

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MGT 5043	Behavior in Organizations
MGT 5113	Management Perspective
MGT 5903	Management Policy, Problems, and Trends ³
MKT 5023	Marketing Management

In addition to the above courses, students desiring an M.B.A. Degree in International Business must complete 12 semester hours from the following list of courses:

International Content Elective Courses:

ECO 5303	International Trade and Finance
ECO 5423	Problems of the Latin American Economies
FIN 5833	International Managerial Finance and Accounting
MKT 5673	International Marketing and Management
BLW 5173	Legal Environment of International Business
MGT 5173	Comparative International Administration
ACC 6133	Seminar in International Accounting

Foreign course work may be taken as:

FIN 5963-6	International Business Internship or
MKT 5963-6	International Business Internship
MKT 5983	International Business Essay

Students choose either an elective program of 12 semester hours in international content courses as listed above or a combination of elective international content courses and foreign study as recommended by the Committee on Graduate Studies and approved by the Dean of the College. Normally the foreign study will be taken at a cooperating foreign institution. Foreign study is encouraged, and efforts will be made to assist students to complete a portion of their work outside the United States.

³MGT 5903 students who earn a grade of "B" or better in the course will satisfy the comprehensive examination requirement. A student who receives a grade of "C" may still satisfy this requirement by successfully passing a comprehensive examination as set out in this catalog.

DIVISION OF ACCOUNTING AND INFORMATION SYSTEMS

MASTER OF PROFESSIONAL ACCOUNTING DEGREE

The Master of Professional Accounting (M.P.A.) Degree is designed to accommodate applicants with a degree in any field. Such applicants must complete the equivalent of a B.B.A. degree in accounting from an accredited institution or must enroll in the courses of the common body of knowledge plus certain accounting courses set out by the Advisor. The courses of the common body of knowledge may be taken simultaneously with M.P.A. requirements, subject to course prerequisites and approval of the M.P.A. Program Advisor.

Special Admission Requirements. In addition to satisfying the university-wide graduate admission requirements for unconditional admission, applicant seeking unconditional admission to the M.P.A. program must meet the following requirements:

1. A baccalaureate degree in accounting from an accredited college or university in the United States or equivalent training at a foreign institution; this degree must include the equivalent of Corporate Taxation, Advanced Accounting, and the equivalent of UTSA's MGT 4893 Business Policies and Management.
2. An approximate overall average of 3.0 in all work completed at the undergraduate level.
3. An approximate composite score of 500 on the Graduate Management Admission Test (GMAT) with results submitted to the Office of Admissions and Registrar prior to being considered for admission.⁴
4. Favorable recommendation by the M.P.A. Admissions Committee to the Dean of the College of Business.

Those who do not meet all of the admission requirements stated above will be considered for admission on a conditional basis. All admission deficiencies must be removed before enrolling for the last semester before graduation and will be in addition to degree requirements.

The following courses are required for students with undergraduate curriculum deficiencies; however, no credit for these courses may be counted toward the M.P.A. degree requirements:

ACC 5003	Financial Accounting Concepts
BLW 5003	Legal Environment of Business
ECO 5003	Economic Theory and Policy
FIN 5003	Administrative Finance
MGT 5013	Quantitative Methods for Business Analysis
MGT 5083	Computer Applications in Business
MKT 5003	Marketing Theory
ACC 5023	Accounting Analysis for Decision Making
ACC 5103	Financial Accounting Concepts & Practices I
ACC 5113	Financial Accounting Concepts & Practices II
ACC 5013	Survey of Federal Taxation of Business Entities
ACC 4013	Principles of Auditing

Degree Requirements. The minimum number of semester hours required for this degree, exclusive of course work or other study required to remove admission deficiencies, is 36 hours.

⁴Applications for the GMAT, or information on the test may be obtained from GMAT, Educational Testing Service, P.O. Box 966R, Princeton, New Jersey 08540.

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Accounting**

All candidates for the M.P.A. degree must select one of the following two concentrations:

TAX CONCENTRATION

OPTION 1: 18 hours of approved graduate tax courses	18 hours
12 hours of approved electives ⁵	12 hours
6 hours of approved accounting courses	6 hours
	<hr/>
	36 hours

or

OPTION 2: 18 hours of approved graduate tax courses	18 hours
6 hours of approved accounting courses	6 hours
6 hours of approved electives ⁵	6 hours
ACC 6983 Master's Thesis ⁶	6 hours
	<hr/>
	36 hours

ACCOUNTING (Public/Management) CONCENTRATION

OPTION 1: 6 hours required: ACC 6013 & ACC 6043	6 hours
3 hours approved graduate tax course	3 hours
15 hours approved accounting electives	15 hours
12 hours of approved electives ⁵	12 hours
	<hr/>
	36 hours

OPTION 2: 6 hours required: ACC 6013 & ACC 6043	6 hours
3 hours of approved graduate tax course	3 hours
15 hours approved accounting electives	15 hours
6 hours of approved electives ⁵	6 hours
ACC 6983 Master's Thesis ⁶	6 hours
	<hr/>
	36 hours

In addition to the semester hour requirements set forth above, all candidates are required to pass a comprehensive examination before graduation.

COURSE DESCRIPTIONS

**ACCOUNTING
(ACC)**

5003 Financial Accounting Concepts

(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.

5013 Survey of Federal Taxation of Business Entities

(3-0) 3 hours credit. Prerequisite: ACC 5003 or consent of instructor.

Federal taxation of sole proprietorships, partnerships, and corporations with an emphasis on compliance with federal tax laws and business planning to acquaint students with the tax consequences of the forms of doing business and make them aware of the tax considerations in business operations.

⁵Approved electives may not include ECO 5043, FIN 5043, or any courses assigned to make up deficiencies. If courses are from outside the College of Business, special approval is needed (form available).

⁶See requirements for thesis in this catalog.

- 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: ACC 5113 or the equivalent.
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 Research Issues In Auditing**
(3-0) 3 hours credit. Prerequisite: ACC 4013 or the equivalent.
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.
- 5053 Nonprofit Accounting**
(3-0) 3 hours credit. Prerequisite: ACC 5113 or the equivalent.
A study of accounting principles and practices of not-for-profit organizations including federal, state and local governments.
- 5073 Managerial Accounting — Current Issues & Decision Analysis**
(3-0) 3 hours credit. Prerequisite: ACC 5023 or the equivalent, or consent of instructor.
Study of contemporary issues, cost concepts, and procedures in managerial accounting to include analysis and application of techniques in the generation of data for management information systems.
- 5083 Seminar In Internal Auditing**
(3-0) 3 hours credit. Prerequisite: ACC 4013 or the equivalent.
Case study course involving: (1) in-depth study of internal control; (2) operation auditing; (3) field studies in the San Antonio environment.
- 5093 Advanced Accounting Information Systems**
(3-0) 3 hours credit. Prerequisite: IS 3013 or the equivalent, or consent of instructor.
Comprehensive study of those systems which interface with the accounting function, including investigation of complex systems through analysis and flowcharting techniques, review of selected topics including: (1) information theory; (2) systems design; and (3) computer controls.
- 5103 Financial Accounting Concepts & Practices I**
(3-0) 3 hours credit. Prerequisite: ACC 5003 or the equivalent.
A concentrated study of financial accounting theory and practices. Analysis of various accounting practices and procedures as they apply to financial accounting and reporting.
- 5113 Financial Accounting Concepts & Practices II**
(3-0) 3 hours credit. Prerequisite: ACC 5103 or the equivalent.
A continuation of the study of financial accounting theory and practices, ACC 5103, Financial Accounting Concepts & Practices I.
- 5123 Advanced Managerial Accounting Topics**
(3-0) 3 hours credit. Prerequisite: ACC 5023 or the equivalent.
Advanced study of the applications of managerial accounting including cost analysis, variance analysis, pricing decisions, transfer pricing, and budgeting.
- 6013 Seminar In Current Accounting Theory**
(3-0) 3 hours credit. Prerequisite: ACC 5113 or the equivalent.
A study of the nature of accounting, the nature of theory, and an explanation of the history of the development of "generally accepted accounting principles." A critical analysis of the validity of such principles. Research into the field of current accounting literature, with the objective of critically evaluating the present status and future course of accounting thought.
- 6023 Seminar In Contemporary Accounting Thought**
(3-0) 3 hours credit. Prerequisite: ACC 5113 or the equivalent.
A study of contemporary accounting issues in accounting research; cases and readings of current accounting literature; and the development and presentation of accounting research.

6043 Comprehensive Tax and Research Problems

(3-0) 3 hours credit. Prerequisite: ACC 5013 or the equivalent.

Advanced study of tax accounting and research including cash installment method of reporting gain, accrual systems of accounting, inventory, earnings and profits, net operating losses, carryovers, and allocations. Student will become acquainted with various tax materials available and their use, including the tax services, case reporters, and treasury publications.

6053 Estate, Trust and Gift Taxation and Administration

(3-0) 3 hours credit. Prerequisite: ACC 6043 or consent of instructor.

Emphasis on estate and gift planning and income taxation of trusts and estates. Taxation of gratuitous transfers under the federal estate and gift tax codes including inter vivos gifts, marital deduction, powers of appointment, retained interest, the concept of distributable net income, fiduciary taxation, and the concept of an estate.

6073 Corporate Taxation

(3-0) 3 hours credit. Prerequisite: ACC 6043 or consent of instructor.

Study of federal income taxation of corporations and shareholders, with emphasis on formation, distributions, personal holding companies, accumulated earnings tax, capital gains and losses, net operating losses, and capital and debt structure.

6083 Seminar in Advance Tax Procedural Problems

(3-0) 3 hours credit. Prerequisites: ACC 6043, and ACC 6073 or consent of instructor.

Advance case studies of tax audits, administrative appeals, settlement technique, appellate jurisdiction, choosing forums, ruling and technical requests, civil litigation, collection process, offers in compromise, interest and civil penalties, indirect methods of proof, criminal penalties.

6093 Seminar In Developmental Issues of Accounting Information Systems

(3-0) 3 hours credit. Prerequisite: ACC 5093.

A study of current issues in the development of computer-based accounting information systems. Emphasis will be placed on a structured approach to information requirements analysis, design alternatives, implementation considerations, and system evaluation.

6113 Partnerships and Subchapter S Corporations

(3-0) 3 hours credit. Prerequisite: ACC 6043 or consent of instructor.

A study of the special tax attributes of partnerships and Subchapter S corporations, with a comparison of these forms of doing business. Formation, operation, and dissolution of partnerships and Subchapter S corporations.

6123 Advanced Corporate Taxation

(3-0) 3 hours credit. Prerequisite: ACC 6043 and 6073 or consent of instructor.

Corporate liquidations, divisions and reorganizations, and consolidated tax returns.

6133 Seminar in International Accounting

(3-0) 3 hours credit. Prerequisite: 9 hours of accounting or consent of instructor.

An analysis of the issues involved in accounting for multinational corporations, including environmental influences, foreign currency translation, management accounting, and international accounting standard setting. A brief study of accounting history is included in the course.

6233 Design of Automated Accounting Systems

(3-0) 3 hours credit. Prerequisite: ACC 6213.

Concepts of planning, developing, implementing, and operating business information systems. Emphasis on reporting objectives, auditing and security controls, and integration of systems. Use of team projects in the areas of design and implementation.

6253 Advanced Data Base Administration

(3-0) 3 hours credit. Prerequisite: ACC 6233 or equivalent.

Discussion and in-depth analysis of topics associated with the definition, creation, and management of data bases for accounting oriented business applications. Topics will include current developments in the field of data base management systems with emphasis placed on internal control aspects.

6273 Seminar in Computer Security and Internal Control

(3-0) 3 hours credit. Prerequisite: ACC 5113 and ACC 6213 or equivalent.
In-depth analysis of topics related to control and security during system development and operation of accounting information systems. Emphasis on techniques associated with auditing in an EDP environment. Use of Generalized Audit Software Package.

6943 Accounting Internship

(3-0) 3 hours credit. Prerequisite: Graduate standing, 15 semester hours of upper-division accounting or equivalent.

Internship must be approved in advance by the Internship Coordinator, Division Director of Accounting, and the Dean of the College of Business. Supervised full-time or part-time, off-campus training in public accounting, industry, or government. Individual conferences and written reports required.

Note: Credit hours may not be counted toward the M.P.A. degree.

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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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: Permission of the Graduate Advisor and thesis director (form available).

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
INFORMATION SYSTEMS
(IS)**

6973 Special Problems

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. Special Problems 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.

DIVISION OF ECONOMICS AND FINANCE

COURSE DESCRIPTIONS BUSINESS LAW (BLW)

5003 Legal Environment of Business

(3-0) 3 hours credit.

Study of the socio-economic, political, ethical, and legal environment of business. Topics include the development of law, court systems, business torts and crimes, corporate social responsibilities to the consuming public, employees, and competitors; real and personal property transactions; and the governmental regulations of business.

5173 Legal Environment of International Business

(3-0) 3 hours credit. Prerequisite: BLW 5003 or the equivalent.

Essentials of international commercial law; recognized forms of business organization; corporate structure and liability; government regulation and antitrust policy; law of international commerce.

5913 Antitrust—Legal and Economic Analysis

(3-0) 3 hours credit. Prerequisite: ECO 5003 or the equivalent.

A study of cases and materials dealing with the historical economic development of anti-trust legislation and the jurisprudential regulation of the economic market structures through legislation and the court system.

COURSE DESCRIPTIONS ECONOMICS (ECO)

5003 Economic Theory and Policy

(3-0) 3 hours credit.

The opportunity for 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 MGT 5013 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. Credit cannot be earned for both ECO 5023 and ECO 5043.

5033 Economic Policy and Business Issues

(3-0) 3 hours credit. Prerequisite: ECO 5003 or equivalent.

A discussion of the impact of public policies on issues affecting businesses such as inflation, unemployment, productivity, economic stability, growth, investment strategies, technological change, and competition in the light of contemporary economic theories. Economic indicators are used to interpret business trends and evaluate the effect of national policies on business activity.

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.

5413 Economics of Health Systems

(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 in the Latin American Economies

(3-0) 3 hours credit. Prerequisite: ECO 5023 or the 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.

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.

6103 Economic and Business Forecasting

(3-0) 3 hours credit. Prerequisite: ECO 5003 and MGT 5013 or their equivalents or consent of instructor.

An examination of forecasting methods and a discussion of their application in the business world.

6313 Managerial 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 Employment and Training Policy

(3-0) 3 hours credit. Prerequisite: ECO 5003 or the equivalent.

Study of the effects of monetary, fiscal, and human resource development policies on the supply and demand for labor and on the efficiency of labor market mechanisms. Evaluation of present employment and training policies. Forecasts of the impact of present policies on American industry and on State and local labor markets.

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, housing, poverty, land use, and crime.

6563 Regional Economics

(3-0) 3 hours credit. Prerequisite: ECO 5003 or the equivalent.

Economic analyses of location decisions, growth processes, and economic impact assessment; discussion of analytical tools such as input-output, export base theory, and various location theories.

6953 Independent Study

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.

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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.

(3-0) 3 hours credit.

6983 Master's Thesis

3 hours credit. Prerequisite: 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

FINANCE (FIN)

5003 Administrative Finance

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

5023 Financial Management

(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. Credit cannot be earned for both FIN 5023 and FIN 5043.

5033 Cases in Financial Management

(3-0) 3 hours credit. Prerequisite: FIN 5023 or the equivalent. A case approach will be used to illustrate the applications of financial management to actual business situations as well as to integrate the different topical areas. The primary areas of focus will include planning, current asset management, capital budgeting, mergers and acquisitions, and financing alternatives.

5043 Budgeting and Finance in the Public Sector

(3-0) 3 hours credit. An examination of public finance and budgeting. Concepts of public goods, analysis of public expenditures, concepts of capital budgeting, public budgeting techniques, assessment of taxation structures and other revenue sources, and intergovernmental fiscal relations. Credit cannot be earned for both FIN 5023 and FIN 5043.

5633 Investment Theory and Problems

(3-0) 3 hours credit. Prerequisite: FIN 5023 or the equivalent. 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.

5713 Financial Institutions and Markets

(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 Operations 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 depository and non-depository 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. The techniques and issues involved in making long-term capital investment decisions. Topics include the concepts of the cost of capital and financial structure and how they relate to the capital budgeting decision, dividend policy, risk assessment and management, forecasting, and cash flow analysis.

5833 International Financial Management

(3-0) 3 hours credit. Prerequisite: Fin 5023 or the equivalent.

The theory of business finance as applied to the operations of multinational firms. The determinants of exchange rates and the management of exchange rate risk are analyzed in terms of their impact on how a multinational corporation functions in the international setting. Topics include the financial analysis and control of foreign investment decisions, management of working capital, participation in the international capital markets, financing of international trade and management of corporate risk.

5913 Portfolio Theory and Efficient Capital Markets

(3-0) 3 hours credit. Prerequisite: FIN 5633 or the equivalent.

A comprehensive survey of 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 markets and its implications on the analysis of securities and portfolio management.

5963 International Business Internship

3 hours credit. Prerequisites: Consent of Division Director and Dean.

Opportunity for work experience in international business or public agency.

5983 International Business Essay

3 hours credit. Prerequisites: Consent of Division Director and Dean.

Opportunity for work experience in international management topic.

6953 Independent Study

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.

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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: 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 for 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.

The opportunity for intensive study of the various theoretical constructs of the spectrum of organization and management theories including the process, empirical, behavioral and quantitative approaches. Credit will not be given for both MGT 5113 and MGT 5003.

5013 Quantitative Methods for Business Analysis

(3-0) 3 hours credit. Prerequisites: MAT 1033 and STA 1064 or their equivalents, or consent of instructor.

Study of quantitative methods used in business analysis. Emphasizes statistical analysis using computer assistance.

5023 Decision Analysis and Production Management

(3-0) 3 hours credit. Prerequisites: MGT 5013 and MGT 5083 or their equivalents.

Study of applications of quantitative approaches (such as probabilistic, programming, and simulation) to business decision analyses. Emphasis is given to practical applications (such as resource allocation, scheduling, inventory control, capital budgeting, etc.) and the use of computerized decision support systems.

5033 Business Research Methods

(3-0) 3 hours credit. Prerequisites: MGT 5013 and MGT 5083 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 problems in the major forms of business research.

5043 Behavior in Organizations

(3-0) 3 hours credit. Prerequisite: MGT 5003 or MGT 5113, 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 Communication

(3-0) 3 hours credit. Prerequisite: MGT 5003 or MGT 5113, or the equivalent.

A survey of theoretical and functional aspects of organizational communication stressing interpersonal, intra and interorganizational, and intercultural communication.

5073 Interpersonal Communication In Organizations

(3-0) 3 hours credit. Prerequisite: MGT 5003 or MGT 5113, 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 perception.

5083 Computer Applications In Business

(3-0) 3 hours credit. Prerequisite: CS 1043 or the equivalent, or consent of instructor.

Survey of modern business computer hardware, software, and applications. Computer languages of BASIC and PASCAL are used predominantly. Emphasizes computer use in business decision analysis. Extensive problem and project work.

5113 Management Perspective

(3-0) 3 hours credit. Prerequisites: Graduate standing and acceptance into the M.B.A. program.

This course provides a strategic perspective for studying general management processes based on historical, cultural, and philosophical contributions to management thought. The student will be introduced to decision making and communication skills through the use of case analysis, written assignments, and oral presentations. This course must be taken first in the 36 hour M.B.A. core. Credit will not be given for both MGT 5113 and MGT 5003.

- 5153 Social Issues in Business**
(3-0) 3 hours credit. Prerequisite: MGT 5003 or MGT 5113, 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 MGT 5113, 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 MGT 5113, 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.
- 5213 Organizational Systems for Management of Technology and Innovation**
(3-0) 3 hours credit. Prerequisite: MGT 5043 or consent of instructor.
Focuses on organizational designs commonly found in modern organizations dealing with technology, innovation, and creativity. The course will cover project and program organization, matrix organization, interfacing mechanisms, and integrating techniques.
- 5223 Management of Professional and Technical Personnel**
(3-0) 3 hours credit. Prerequisite: MGT 5043 or consent of instructor.
The study of behavior in professional and technical organizations. Focuses on the characteristics of professional and technical personnel, status and role systems within the professional organization, and communication and conflict within and between professional groups.
- 5323 Statistical Methods for Business Analysis**
(3-0) 3 hours credit. Prerequisites: MGT 5013 and MGT 5083.
Study of statistical methods (such as regression, analysis of variance, time series, discriminant analysis, etc.) for the analysis of business data. Emphasizes the use of computer statistical packages such as SPSS and SAS.
- 5333 Small Business Development and Operation**
(3-0) 3 hours credit. Prerequisite: MGT 5003 or MGT 5113, 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.
- 5363 Computer Graphics for Management**
(3-0) 3 hours credit. Prerequisite: MGT 5023.
Survey of the hardware and software available for computer graphics applications in business and industry (such as CAD/CAM). Study of procedures for generating graphic displays and animated output. Emphasis is given to managerial applications of graphic displays of information.
- 5373 Simulation Analysis of Business Systems**
(3-0) 3 hours credit. Prerequisite: MGT 5023.
Study of computer simulation techniques in the analysis of business decision situations. DYNAMO, GPSS, and VISICALC type simulation packages are employed. Emphasizes applications in accounting, finance, economics, marketing, and management.
- 5383 Microcomputer Applications in Business**
(3-0) 3 hours credit. Prerequisite: MGT 5083.
Survey of microcomputer hardware, software, and applications. Emphasis on available financial planning, word processing, graphics, networking, program generation, and data base systems and their applications in business.

5393 Production Management

(3-0) 3 hours credit. Prerequisites: MGT 5003 or MGT 5113 and MGT 5023 or their equivalents.

An analysis of the management functions related to the 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.

Study of relational, hierarchical, and simple information system designs and applications using microcomputer data base management systems and decision support systems. Survey of available data base management techniques and packages. Emphasis on applications in management.

5443 Software Entrepreneurship

(3-0) 3 hours credit. Prerequisite: MGT 5083 or consent of instructor.

Study of the business of commercial software development and the processes for moving computer software from design to implementation and, subsequently, to the marketplace. Topics will include surveying existing software and hardware, legal considerations, packaging and documentation, and economics of software development and marketing alternatives. Emphasis will be given to actual software development during this course.

5623 Industrial Relations

(3-0) 3 hours credit. Prerequisite: MGT 5003 or MGT 5113, or consent of instructor.

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 MGT 5113, 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.

5723 Labor Relations in the Public Sector

(3-0) 3 hours credit. Prerequisite: MGT 5003 or MGT 5113, or consent of instructor.

An analysis of the unique role of labor relations at the federal, state and local level. Consideration will be given to relevant legislation and how and why public employees organize for collective bargaining. Emphasis will be placed on the practical aspects of bargaining and contract administration and how it relates to the public in general.

5903 Management Policy, Problems, and Trends

(3-0) 3 hours credit. Prerequisite: Semester of graduation or consent of the graduate advisor.

A case study course intended to provide a capstone coverage of material taken in the M.B.A. program, as well as to broaden the horizons of the student beyond the focus on the firm. The macro-economic aspects of the economy and contemporary problems and trends of business are covered. This course will only be taught during the Fall and Spring semesters.

6953 Independent Study

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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no

other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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

(3-0) 3 hours credit. Prerequisite: 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.

5053 Marketing Technological Innovations

(3-0) 3 hours credit. Prerequisite: MKT 5023.

The decision process for the management of innovations is introduced, and analytical tools to aid this process are developed. An industrial marketing viewpoint is emphasized.

5063 Marketing Research Design and Application

(3-0) 3 hours credit. Prerequisites: MKT 5023, MGT 5013, and MGT 5083, or their equivalents.

Problems in obtaining and analyzing internal and external marketing information using various instruments, designs and techniques germane to marketing.

5083 Promotion Management

(3-0) 3 hours credit. Prerequisite: MKT 5023 or the equivalent.

Use of communication processes and programs to attain promotional goals; examination of mass and interpersonal forms of communication and the uses of sales promotion tools.

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.

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.

5963-6 International Business Internship

3 to 3 hours credit. Prerequisites: Consent of Division Director and Dean.
Work experience in international business or public agency.

5983 International Business Essay

3 hours credit. Prerequisites: Consent of Division Director and Dean.
Original research report on international 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 available as part of the regular course offerings. May be repeated for credit, but no more than 6 hours, regardless of discipline, will apply to the Master's degree.

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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: 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 ARTS AND HUMANITIES

DIVISION OF ART AND DESIGN

MASTER OF FINE ARTS DEGREE

The Master of Fine Arts degree is the terminal degree in the field of studio art. The M.F.A. degree program of the Division of Art and Design is fully accredited by the National Association of Schools of Art and Design. Graduate study in the MFA Program is much more than a mere continuation of undergraduate work and should be considered only by those students with the capacity for successful independent thought and investigation. Technical competence in the area of concentration is expected upon admittance. The emphasis in the Program is on conceptual development and its harmony with formal concerns. The objective of this degree is to offer the opportunity for advanced study in the field of art in preparation for careers as practicing artists, as artist/teachers at the college or university level, or as professionals 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 a minimum of 45 semester hours in studio art and 15 semester hours in art history.

Applicants who do not meet the special admission requirements should consult the catalog for the criteria for admission 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. A minimum of 60 semester hours is required for the Master of Fine Arts degree, exclusive of course work or other study required to remove admission deficiencies. Full-time enrollment of nine or more semester hours during regular semesters is expected of degree-seeking students.

Major field (ceramics, drawing, painting, photography, printmaking, sculpture, and Graduate Studio Seminar)	30 hours
Electives in the Division of Art and Design. (12 hours must be selected in studio art courses outside the major field).	15 hours
Art history and criticism including AHC 5123	12 hours
Master of Fine Arts Exhibition. (If this work is not completed in one semester a grade of "RP" will be given indicating "research in progress." The student must register for the course for the additional semester or semesters necessary to bring the work to completion, at which time a letter grade will be recorded. Only three semester hours of credit will apply to the degree requirements regardless of the number of semesters a student enrolls in the course.)	3 hours

60 hours

COURSE DESCRIPTIONS

ART

- 5153 Painting**
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent.
Concerned with the development of personal imagery as well as the broader understanding of painting traditions. May be repeated for credit.
- 5253 Drawing**
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent.
Emphasis on traditional and contemporary drawing problems including various approaches for the development of imagery. May be repeated for credit.
- 5353 Printmaking**
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent.
Emphasis on intaglio, lithography, mono, and photogravure printing in black and white and color. Experimentation in processes and imagery is encouraged. May be repeated for credit.
- 5453 Photography**
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent.
Emphasis on the medium as an art form and practice of the demands of the discipline, including black and white, color, and nonsilver processes. May be repeated for credit.
- 5553 Sculpture**
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent.
Emphasis on the creative development of sculptural ideas in a variety of materials and technical methods and approaches. May be repeated for credit.
- 5753 Ceramics**
(0-6) 3 hours credit. Prerequisite: B.F.A. or equivalent.
Emphasis on the discipline as an expressive art form using a variety of technical processes and materials and approaches to ceramics. May be repeated for credit.
- 6013 Practicum in the Visual Arts**
3 hours credit. Prerequisite: Consent of instructor.
Student will participate in projects on an individual basis. These may include community-oriented activities such as workshops for community centers, special art programs for public or private educational organizations, service projects for displays, murals and exhibitions for special environments, and supervised assistance in instructional activities. The instructor will supervise and evaluate the student's activities. May be repeated for credit once.
- 6023-6 Graduate Studio Seminar**
3 to 6 hours credit. Prerequisite: Graduate standing.
An organized class concerned with the exploration of formal problems in art through discussions, critiques, and work executed for the class in the student's major field: painting, drawing, printmaking, sculpture, photography, or ceramics. No more than 15 semester hours may be applied toward degree requirements.
- 6843 Master of Fine Arts Exhibition**
3 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 in consultation with the graduate advisor upon recommendation of the Graduate Studies Committee and the approval of the Division Director. Enrollment is required each term in which the exhibition is in progress.
- 6953 Independent Study**
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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination. Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor. An organized course offering the opportunity for 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
ART HISTORY AND CRITICISM
(AHC)**

5123 Seminar in Research Methods and Writing

(3-0) 3 hours credit. Prerequisite: Graduate standing. A basic methodology course designed to offer the opportunity for the graduate student to gain an introduction to all facets of the discipline of Art History and Criticism, including research, documentation, historical, and critical writing.

5813 Topics in Art History

(3-0) 3 hours credit. Prerequisites: Graduate standing and AHC 5123. A course designed to deal with specialized areas in art history. May be repeated for credit as topics vary.

Areas include:

Renaissance Arts
Baroque Arts
Spanish Arts
New World — Hispanic Art
Pre-Columbian Arts
19th Century Art
20th Century Art
Contemporary Art

6813 Practicum in Art History and Criticism

3 hours credit. Prerequisite: Graduate standing, consent of instructor, and AHC 5123. 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 information functions and publications. Projects will be initiated by the students with close supervision and evaluation by the instructor. May be repeated for credit up to a maximum of 6 hours.

6833 Art Gallery and Museum Practices

3 hours credit. Prerequisite: Graduate standing, consent of instructor and AHC 5123. Students will be offered an introduction to the organization and operation of gallery and/or museum activities: cataloging, research, and preparation and installation of art exhibitions.

6863 Art Theory and Criticism

(3-0) 3 hours credit. Prerequisite: Graduate standing and AHC 5123. A study of systems and philosophies of art and aesthetics as exemplified in writings and works by artists, philosophers, scientists, and critics, examining the methods and principles of critical analysis and creative expression in the visual arts.

6953 Independent Study

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 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.

DIVISION OF ENGLISH, CLASSICS, AND PHILOSOPHY

MASTER OF ARTS DEGREE IN ENGLISH

The Master of Arts Degree in English offers the student an opportunity to acquire a general knowledge of English and American literature, to understand the historical context in which that literature was produced, to develop skills in critical analysis, and to investigate the principal kinds of literary, rhetorical, and linguistic research.

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 Dean of the College of Fine Arts and Humanities.

Degree Requirements. The minimum number of semester hours required for this degree, exclusive of course work or other study required to remove admission deficiencies, is 36.

All candidates for the degree must complete:

- A. 24 semester hours in the *major*, distributed as follows:
 1. Core Courses — 6 semester hours required
 - ENG 5013 Introduction to the Graduate Study of Literature
 - ENG 5053 Topics in Genre Study (3 hours)
 2. Historical Periods — 9 semester hours required
 - ENG 5223 Medieval Literature
 - ENG 5313 Renaissance Literature
 - ENG 5413 Restoration and Eighteenth-Century Literature
 - ENG 5513 Romantic and Victorian Literature
 - ENG 5613 Nineteenth-Century American Literature
 - ENG 5733 Twentieth-Century British and American Literature I
 - OR
 - ENG 5743 Twentieth-Century British and American Literature II
 3. Major Authors — 6 semester hours required
(3 hours of which must be Chaucer, Milton or Shakespeare)
 - ENG 5073 Topics in Individual Authors
 - ENG 5213 Chaucer Studies
 - ENG 5323 Shakespeare Studies
 - ENG 5343 Milton Studies
 4. 3 semesters hours required from any one of the following groups:
 - a. Literature
 - ENG 5123 Theory of Literature
 - ENG 5173 Theory and Practice of Teaching Literature
 - ENG 5633 Topics in the Study of Literature
 - b. Language
 - ENG 5813 History of the English Language
 - ENG 5823 Principles of English Linguistics
 - c. Rhetoric and Writing
 - ENG 5133 Contemporary Rhetorical Theory
 - ENG 5143 Creative Writing: Fiction
 - ENG 5153 Creative Writing: Poetry

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English

ENG 5163 Topics in Professional Writing

ENG 5183 Theory and Practice of Teaching Composition

- B. 12 semester hours of *electives* in English or, with the approval of the Committee on Graduate Studies, in a related discipline as part of a coherent program of study. Students who wish to emphasize composition and rhetoric are encouraged to take their elective hours in Rhetoric and Writing and Language; these hours should include ENG 5133.

In addition to the semester-hour requirements set forth above, all candidates for the degree are required to pass the comprehensive examination. 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 Master of Arts Degree in English.

COURSE DESCRIPTIONS
ENGLISH
(ENG)

5013 Introduction to the Graduate Study of Literature

(3-0) 3 hours credit.

Introduction to the premises, concepts, and methods of literary study, including literary history, terminology, bibliography, and various critical approaches to literature. Normally the course will be taken in the first 12 hours of the student's graduate program.

5053 Topics in Literary Genres

(3-0) 3 hours credit.

Consideration of texts selected to illustrate the structural and conceptual properties of a given genre, e.g., poetry, fiction, or drama. May be repeated for credit when topics vary.

5073 Topics in Individual Authors

(3-0) 3 hours credit.

Reading and analysis of the works of one or more major authors. May be repeated for credit when authors vary.

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.

5133 Contemporary Rhetorical Theory

(3-0) 3 hours credit.

Study of contemporary theories of writing and their historical development.

5143 Creative Writing: Fiction

(3-0) 3 hours credit. Prerequisite: Consent of Instructor.

Intensive workshop in creative writing for students interested in developing their ability to write fiction.

5153 Creative Writing: Poetry

(3-0) 3 hours credit. Prerequisite: Consent of Instructor.

Intensive workshop in creative writing for students interested in developing their ability to write poetry.

5163 Topics in Professional Writing

(3-0) 3 hours credit.

Workshops for students interested in developing skills in various types of professional writing such as business writing and technical writing. May be repeated for credit when topics vary.

5173 Theory and Practice of Teaching Literature

(3-0) 3 hours credit.

Discussion of literary interpretations which illuminate classic and contemporary texts to form the basis of teaching. Applications of theory and research to the teaching of literature.

5183 Theory and Practice of Teaching Composition

(3-0) 3 hours credit.

Survey of rhetorical principles as related to student writing. Applications of theory and research to the teaching of composition.

5193 Internship

3 hours credit. Prerequisite: ENG 5183 or equivalent.

Supervised experience in teaching writing to individual students and groups.

5213 Chaucer Studies

(3-0) 3 hours credit.

Critical study of Chaucer's major poetry in the context of his times. To be read in Middle English.

5223 Medieval Literature

(3-0) 3 hours credit.

Critical study of major works from the Anglo-Saxon period through the fifteenth century, excluding Chaucer. Some readings in modern translation, some in Middle English.

5313 Renaissance Literature

(3-0) 3 hours credit.

Critical survey of verse, drama, and prose of the sixteenth and seventeenth centuries, excluding Shakespeare and Milton; emphasis on writers such as Spenser, Marlowe, Donne, Jonson, Herbert, and Marvell.

5323 Shakespeare Studies

(3-0) 3 hours credit.

Reading and analysis of representative plays.

5343 Milton Studies

(3-0) 3 hours credit.

Reading and analysis of the major poems and selected prose.

5413 Restoration and Eighteenth-Century Literature

(3-0) 3 hours credit.

Study of the transition from Neo-classicism to Romanticism; emphasis on writers such as Dryden, Pope, Swift, Thomson, Fielding, Johnson, and Burns.

5513 Romantic and Victorian Literature

(3-0) 3 hours credit.

Reading and analysis of verse and prose of major nineteenth-century writers; emphasis on writers such as Austen, Wordsworth, Coleridge, Scott, Tennyson, Eliot, Arnold, and Dickens.

5613 Nineteenth-Century American Literature

(3-0) 3 hours credit.

Reading and analysis of verse and prose of nineteenth-century American writers; emphasis on writers such as Hawthorne, Emerson, Thoreau, Melville, Dickinson, Whitman, and Twain.

5633 Topics in the Study of Literature

(3-0) 3 hours credit.

Exploration of the ways that intellectual movements, theories, and seminal texts shaped literature and literary study. Topics may be drawn from such disciplines as classics, philosophy, and religious studies. May be repeated for credit when topics vary, but not more than 6 hours will apply to the Master's Degree.

5733 Twentieth-Century British and American Literature I

(3-0) 3 hours credit.

Critical survey of British and American poetry, fiction, and drama from 1900 to 1940; emphasis on writers such as Eliot, Joyce, Woolf, O'Neill, Faulkner, Lawrence, Hemingway, and Thomas.

5743 Twentieth-Century British and American Literature II

(3-0) 3 hours credit.

Critical survey of British and American poetry, fiction, and drama from 1940 to the present; emphasis on writers such as Nabokov, Bellow, Singer, Miller, Beckett, Lowell, Plath, Ellison, and Lessing.

5813 History of the English Language

(3-0) 3 hours credit.

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 Principles of English Linguistics

(3-0) 3 hours credit.

Introduction to the principles of English phonology, syntax, morphology, semantics, and pragmatics.

6951 or 6953 Independent Study

1 or 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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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 an opportunity for 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 offer an opportunity to further the student's grasp of the Spanish language in its geographical, cultural, and social variations. Within the M.A. degree in Spanish, concentrations are offered in Hispanic Culture, Hispanic Literatures, and Spanish Language.

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 a demonstrably adequate command of both written and oral Spanish.

Degree Requirements. The number of semester hours required for this degree, exclusive of course work or other study required to remove admission deficiencies is 36.

All candidates for the degree must complete:

A. 18 semester hours of core courses in the major.

- SPN 5003 Hispanic Cultural Periods and Traditions I
- SPN 5013 Hispanic Cultural Periods and Traditions II
- SPN 5203 Hispanic Literary Traditions I
- SPN 5213 Hispanic Literary Traditions II
- SPN 5843 History of the Spanish Language
- SPN 5893 Hispanic Dialectology

B. 6 semester hours of concentration courses, elected from one of the concentration areas.

Hispanic Culture:

1. SPN 5413 History of Ideas in the Hispanic World
 2. SPN 5463 Spanish Civilization
- or
- SPN 5473 Spanish-American Civilization

Hispanic Literatures:

1. SPN 5633 Spanish Golden Age Literature
- or
- SPN 5643 Don Quijote
2. SPN 5703 Modern Spanish Literature
- or
- SPN 5773 Contemporary Spanish-American Literature

Spanish Language:

1. SPN 5863 Spanish Phonetics and Phonology
2. SPN 5883 Spanish Syntax

C. 6 semester hours of *electives*, as approved by the Division Graduate Advisor of Record.

D. 6 semester hours from Option I or Option II.

Option I

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

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Spanish

Option II

An additional six (6) semester hours of course work in Spanish graduate courses as approved by the Division Graduate Advisor of Record.

In addition to the semester-hour requirements set forth above, all candidates for the degree are required to pass the comprehensive examination. The comprehensive examination, both written and oral, is designed to test the student's general knowledge in the chosen field as well as to evaluate critical abilities and is normally administered in the term in which the candidate expects to receive the degree.

COURSE DESCRIPTIONS

**SPANISH
(SPN)**

- 5003 Hispanic Cultural Periods and Traditions I**
(3-0) 3 hours credit.
The cultural history and traditions of Spain from the Middle Ages through the Renaissance, the Baroque Period, the Enlightenment, and the Romantic Movement to modern times. Credit cannot be earned for 5003 and 5453.
- 5013 Hispanic Cultural Periods and Traditions II**
(3-0) 3 hours credit.
The cultural history and traditions of Spanish America from its discovery and conquest through colonization and Independence to the present. Credit cannot be earned for 5013 and 5453.
- 5203 Hispanic Literary Traditions I**
(3-0) 3 hours credit.
The development of Spanish literature as manifested in selected works representative of literary periods, movements, styles, and genres. Credit cannot be earned for 5203 and 5613.
- 5213 Hispanic Literary Traditions II**
(3-0) 3 hours credit.
The development of Spanish-American literature as manifested in works representative of literary periods, movements, styles, and genres. Credit cannot be earned for 5213 and 5613.
- 5373 Approaches to Hispanic Studies**
(3-0) 3 hours credit.
Readings in and applications of research methods demonstrating main theoretical and critical approaches to texts and problems in Hispanic language, literature, and culture.
- 5413 History of Ideas in the Hispanic World**
(3-0) 3 hours credit.
Selected works by Spanish and/or Spanish-American authors representative of major currents of thought affecting the evolution of Hispanic cultural history.
- 5463 Spanish Civilization**
(3-0) 3 hours credit.
A study of the social, political, and cultural history of Spain.
- 5473 Spanish-American Civilization**
(3-0) 3 hours credit.
A study of the social, political, and cultural history of the Spanish-American countries.
- 5483 Studies in Hispanic Culture**
(3-0) 3 hours credit.
Studies of different facets of Hispanic culture, 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.

5633 Spanish Golden Age Literature

(3-0) 3 hours credit.

The trajectory of poetry, prose, and drama in the sixteenth and seventeenth centuries. May be repeated for credit when topics vary.

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.

5703 Modern Spanish Literature

(3-0) 3 hours credit.

Selected literary works of the twentieth century. May be repeated for credit when topics vary.

5773 Contemporary Spanish-American Literature

(3-0) 3 hours credit.

Selected literary works from the vanguard movement to the present: prose, poetry, and/or drama. May be repeated for credit when topics vary.

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.

5813 Studies in Hispanic Literature

(3-0) 3 hours credit.

Reading and analysis of representative works of individual authors, literary genres, literary periods, literary movements, geographical areas, or literary theory. May be repeated for credit when topics vary.

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 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 variations of Spanish with regard to pronunciation, grammar, and vocabulary. Special attention to San Antonio, Mexican American, and Mexican Spanish.

5903 Studies in Hispanic Linguistics

(3-0) 3 hours credit.

Study in selected areas of Hispanic linguistics not normally available as part of regular course offerings. May be repeated for credit when topics vary.

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Foreign Languages

5953 A Functional Notional Approach to Contemporary Hispanic Culture

(3-0) 3 hours credit.

Identification of the segments of contemporary Spanish pertinent to the major functions or purposes of language use in a given part of the Spanish-speaking world. Identification of the extended vocabulary clusters or notions pertinent to major topics or situations in contemporary life in a given part of the Spanish speaking world. Relation of these elements to approaches to any of the four skills. May be repeated for credit when topics vary up to a maximum of six hours.

6813 Seminar in Hispanic Studies

(3-0) 3 hours credit. Prerequisite: 18 semester credit hours of graduate level Spanish.

In-depth study and major research project in topics such as Hispanic culture, literature, and/or language. 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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 or 6 Special Problems

3 or 6 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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: 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
FOREIGN LANGUAGES
(FL)**

5003 Foreign Language Instruction

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

Consideration of foreign language instruction and curriculum and the teaching of language, literature, and culture with special emphasis on Spanish, French, and German.

5013 Foreign Language Testing

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

Consideration of content and approaches for testing achievement and proficiency, at the various levels, in listening, speaking, reading, writing, vocabulary, structure, and culture in the foreign languages, with special emphasis on Spanish, French, and/or German.

COURSE DESCRIPTIONS

FRENCH (FRN)

5813 Topics in French Linguistics

(3-0) 3 hours credit. Prerequisites: Consent of instructor.

A course focusing on a selected area of French Linguistics, such as grammar, stylistics, phonetics, or applied linguistics. May be repeated for credit when topics vary.

5913 Topics in French Literature and Culture

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

A course focusing on a selected period or aspect of French literature and culture, such as contemporary France, the nineteenth century novel and society, or twentieth century theater. May be repeated for credit when topics vary.

COURSE DESCRIPTIONS

GERMAN (GER)

5913 Topics in German Literature and Culture

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

Selected topics relative to German literature and culture including such areas as contemporary Germany and profiles of particular segments of German society. May be repeated for credit when topics vary.

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.

5153 Topics in Contemporary Linguistics

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

Theoretical approaches to language analysis and description. May be repeated for credit when topics vary.

DIVISION OF MUSIC

MASTER OF MUSIC DEGREE

The Master of Music degree program of the Division of Music is fully accredited by the National Association of Schools of Music.

The Master of Music Degree offers the opportunity for advanced study for qualified students who wish to emphasize either music performance or music education.

Special Admission Requirements. In addition to satisfying the university-wide admission requirements, applicants are expected to (1) hold the Bachelor of Music Degree or Bachelor of Music Education Degree with a major in their intended area of graduate emphasis, or the equivalent; (2) submit three recommendations from established professionals commenting on the appropriateness of graduate study in music for the applicant; (3) complete one of the following:

Music Performance: Audition in person or provide a recent tape demonstrating the level of mastery in the proposed performance medium.

Music Education: Music Education Entrance Examination.

Students are required to take advisory examinations in music theory and music history. The student's advisor will counsel the student in correcting deficiencies and in selecting courses for the student's degree program.

Degree Requirements. Two options are available in the Master of Music Degree program for the students in the music education emphasis. Option I consists of 24 semester hours of course work, and a thesis for which 6 semester hours of credit are given. Option II consists of 36 semester hours including a project for which 3 semester hours of credit are given.

Students selecting the music performance emphasis are required to complete 30 semester hours of credit including 1 semester hour of credit for a recital. Voice principals must demonstrate proficiency in French, Italian, and German diction.

To qualify for admission to candidacy all music performance emphasis students must, in addition to satisfying university-wide requirements, perform a qualifying recital of 30 minutes length.

Music Performance Emphasis

All candidates for the Master of Music Degree with an emphasis in music performance must complete:

- A. 9 semester hours of music performance as follows:
 - MUS 5554 Music Performance-Performance Emphasis (two semesters)
 - MUS 6941 Recital
- B. 15 semester hours of music electives (approved by advisor) to include the areas of theory and analysis, history and literature, research, pedagogy, and performance.
- C. 6 semester hours of electives (approved by advisor) of which no more than two semester hours may be in a music ensemble.

Music Education Emphasis

All candidates for the Master of Music Degree with an emphasis in music education must complete:

- A. 9 semester hours in the area of emphasis as follows:
MUS 5403 Psychological Foundations of Music Education
MUS 5413 Research in Music Education
MUS 6423 Seminar in Music Education
- B. *Option I* (with thesis):
The satisfactory completion of MUS 6983 Master's Thesis (6 hours) in accordance with university regulations as stated under "Options for Master's Degrees."
Option II (with project):
MUS 6913 Project in Music Education
- C. *Option I* (with thesis):
15 semester hours of electives (approved by advisor) to include the areas of theory and analysis, history and literature, and performance (no more than two semester hours may be in a music ensemble). The remaining hours of electives are to be taken in the area of specialization (instrumental music education, choral music education, general music education, piano pedagogy) and must be approved by the advisor.
Option II (with project):
24 semester hours of electives (approved by advisor) to include the areas of theory and analysis, history and literature, research, and performance (no more than two semester hours may be in a music ensemble). The remaining hours of electives are to be taken in the area of specialization (instrumental music education, choral music education, general music education, piano pedagogy) and must be approved by the advisor.

Special Degree Requirements. All graduate students are required to participate in an ensemble appropriate to their program of study for two semesters.

Students selecting the performance emphasis will complete a recital document and oral examination. Students selecting the music education emphasis will complete both written and oral examinations.

COURSE DESCRIPTIONS

MUSIC (MUS)

- 5103 Applied Systems of Analysis**
(3-0) 3 hours credit. Required of all students for a Master of Music Degree.
A study of techniques designed to assist the conductor-performer-analyst in a better understanding of music through the application of differing analytical systems, with an emphasis on the Schenker-Salzer System of Analysis.
- 5223 Ensemble Repertoire**
(3-0) 3 hours credit. Prerequisite: Graduate standing in music.
A study of repertoire for ensembles including an historical perspective. Section 1. Choral. Section 2. Instrumental. May be repeated for credit.
- 5233 Introduction to Music Research**
(3-0) 3 hours credit. Prerequisite: Graduate standing in music.
A survey of references and sources consulted in graduate music courses; format for papers and thesis, including footnotes and bibliography. Research methods in music are explored.
- 5263 Topics in Music History**
(3-0) 3 hours credit. Prerequisite: Graduate standing in music.
A study of works and styles appropriate to the topics listed below. Topics are: 1. Middle Ages. 2. Renaissance. 3. Baroque Period. 4. Classic Period. 5. Romantic Period.

6. Twentieth Century. 7. Music Practices and Styles. Course may be repeated for credit when topics vary. Topics may be taken concurrently.

5403 Psychological Foundations of Music Education

(3-0) 3 hours credit. Prerequisite: Graduate standing in music.

A study of the psychological foundations of music education. An investigation of such topics as perception of and responses to music, the nature of musical attributes, music learning, and the measurement of musical behavior.

5413 Research in Music Education

(3-0) 3 hours credit. Prerequisite: Graduate standing in music.

An introduction to historical, philosophical, descriptive, and experimental research in music education. Students will conduct a research study and prepare a final report.

5433 Performance Repertoire

(3-0) 3 hours credit. Prerequisite: Graduate standing in music.

A study of the solo, chamber, and orchestral repertoire.

5511 Secondary Performance

(1-0) 1 hour credit. Private instruction for graduate students desiring secondary study in the following areas: baritone, bassoon, clarinet, conducting, contrabass, cornet, flute, classical guitar, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violoncello, voice. Seminar attendance may be required. May be repeated for credit.

5523 Rehearsal Techniques

(3-0) 3 hours credit. Prerequisite: Graduate standing in music.

A study of rehearsal techniques including tone development, phrasing, rehearsal score study, style, and rehearsal organization. Topics are: 1. Choral. 2. Instrumental. Course may be repeated for credit when topics vary. Topics may be taken concurrently.

5533 Pedagogy of Musical Performance

(3-0) 3 hours credit. Prerequisite: Graduate standing in music.

Techniques and materials of teaching musical performance to the college level student. A critical comparison of existing materials is included. Each student is required to demonstrate teaching techniques.

5542 Music Performance

(2-0) 2 hours credit.

Private instruction in the following areas: baritone, bassoon, clarinet, conducting, contrabass, cornet, flute, classical guitar, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, voice. Seminar attendance may be required. May be repeated for credit.

5554 Music Performance-Performance Emphasis

4 hours credit. Prerequisite: Graduate standing in music and successful audition.

Private instruction for graduate students with emphasis in performance. Instruction offered in baritone, bassoon, clarinet, conducting, contrabass, cornet, flute, classical guitar, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, violin, viola, violoncello, voice. Seminar attendance may be required. May be repeated for credit.

5572 Class Piano Practicum

(2-0) 2 hours credit. Prerequisite: Graduate standing in music.

A study of pedagogical techniques and materials used in teaching class piano. Students will have an opportunity to tutor individual students under the supervision of the instructor.

5583 Advanced Instrumental Techniques

(3-0) 3 hours credit. Prerequisite: Graduate standing in music.

A study of advanced playing and teaching techniques, selection of materials, and maintenance care for woodwind, brass, and percussion instruments. Designed primarily for instrumental music teachers.

5593 Elementary Music

(3-0) 3 hours credit. Prerequisite: Graduate standing in music.

A study of the current methods and materials used in teaching elementary music. Classroom instruments will also be studied.

- 5711 Graduate Ensemble**
(0-3) 1 hour credit. The study of selected ensemble works through participation in rehearsal and performance. May be repeated for credit.
- 5721 Orchestra**
(0-3) 1 hour credit.
The study of selected works for the orchestra through ensemble participation in rehearsal and performance. May be repeated for credit.
- 5731 Chamber Chorale**
(0-3) 1 hour credit.
The study of selected works for mixed voices through ensemble participation in rehearsal and performance. May be repeated for credit.
- 5791 Opera Workshop**
(0-3) 1 hour credit. Open to all graduate students by audition. The study and performance of opera and other types of musical theatre from the Baroque period to the present. May be repeated for credit.
- 6233 Twentieth Century Analytical Techniques**
(3-0) 3 hours credit. Prerequisite: Graduate standing in music.
Applied analysis of contemporary music using techniques designed to aid the performer and music educator in a fuller understanding of music of our century. Interpretation of new notation and specific performance techniques for both solo and ensemble are emphasized.
- 6313 The Use of Microcomputers in Music Education**
(3-0) 3 hours credit. Prerequisite: Graduate standing in music.
A study of the role of microcomputers in music education. Students will be given the opportunity to learn basic programming techniques with specific applications to music instruction. Currently available software and hardware applicable to music instruction will be examined.
- 6423 Seminar In Music Education**
(3-0) 3 hours credit.
Studies in the philosophy, historical background, and current trends in music education.
- 6543 Diction For Singers**
(3-0) 3 hours credit. Prerequisite: Graduate standing in music.
A study of performance diction for singers. The pronunciation of the languages listed below as it applies to public performance. Topics include: English and French; Italian and German. May be repeated for credit when topics vary.
- 6913 Project In Music Education**
(3-0) 3 hours credit. Prerequisite: Admission to Candidacy and permission of the Graduate Advisor and project director.
Offers the opportunity to complete a professional project in music education relevant to the student's background, interests, and/or needs. The project should include, but not necessarily be limited to, appropriate written documentation. May be repeated for credit, but not more than 3 hours will apply to the Master's degree. Enrollment is required each term in which the project is in progress.
- 6941 Recital**
(1-0) 1 hour credit. Prerequisite: Admission to Candidacy and permission of the Graduate Advisor and music performance instructor. Concurrent registration required in MUS 5554. A recital of approximately one hour in length is required of all students in the performance emphasis.
- 6951-3 Independent Study**
1-3 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 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 will apply to the Master's degree.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6971-3 Special Problems

1-3 hours credit. Prerequisite: Consent of instructor.

Offers the opportunity for 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

(3-0) 3 hours credit. Prerequisites: 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 SCIENCES AND ENGINEERING

DIVISION OF EARTH AND PHYSICAL SCIENCES

MASTER OF SCIENCE DEGREE IN CHEMISTRY

The purpose of the graduate program in chemistry is to offer the student the opportunity to acquire a sound preparation of the fundamentals in several areas of chemistry, to introduce the student to recent advances in chemical theory and methods, and to encourage research in a specific area of study.

Graduate study in chemistry is offered leading to the M.S. degree with the following interest areas: analytical and environmental chemistry, bio-organic chemistry, biophysical chemistry, inorganic chemistry, macromolecular chemistry, organic chemistry, physical chemistry and chemical physics.

Faculty expertise in each of the interest areas offers the opportunity for direct student-faculty interaction for Thesis development through course work and research. Additional cooperative projects and programs are available with other area research institutions.

Qualified students are encouraged to apply for teaching and/or research assistantships and fellowships. Requests should be directed to the Director of the Division of Earth and Physical Sciences at the same time application is made for admission to The University.

Thesis Option in Chemistry

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 with the appropriate laboratories. All undergraduate chemistry courses must be completed with a grade-point average of B or higher.

A minimum of two letters of recommendation from persons familiar with the applicant's undergraduate scholastic record must be sent directly to the Division of Earth and Physical Sciences at the same time application is made for admission to The University.

Degree Requirements. The Master of Science program requires the successful completion of a minimum of 33 semester hours. The following plan must be followed by all candidates:

A. Required Courses (24 semester hours)

CHE 5113	Advanced Organic Chemistry I	(3 semester hours)
CHE 5133	Advanced Inorganic Chemistry	(3 semester hours)
CHE 5163	Advanced Instrumental Analysis	(3 semester hours)
CHE 5183	Advanced Spectral Measurement and Interpretation	(3 semester hours)
CHE 5213	Chemical Thermodynamics	(3 semester hours)
CHE 5271	Graduate Seminar in Chemistry	(3 semester hours)
CHE 6983	Master's Thesis, including an oral defense of the written thesis.	(6 semester hours)

Registration for Graduate Seminar in Chemistry is required for each semester of residence, although no more than 3 semester hours of credit can be applied to the Master's Degree.

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- B. A minimum of 6 semester hours in Chemistry, as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean, is required.

The following interest areas are available for study:

1. Analytical and Environmental Chemistry
 2. Bio-organic Chemistry
 3. Biophysical Chemistry
 4. Inorganic Chemistry
 5. Organic Chemistry
 6. Physical Chemistry and Chemical Physics
- C. A minimum of 3 semester hours of supportive electives are required in chemistry, advanced mathematics, computer science, earth and physical sciences, and/or biology as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean.
- D. Students must successfully defend their thesis research results before their Graduate Committee prior to the submission of the thesis to the Dean of the College for approval.

Non-Thesis Option in Chemistry

Admission Requirements:

General university-wide graduate admission requirements.

Degree Requirements:

Required 36 hour degree program:

- A. Required courses (24 semester hours)
- | | | |
|----------|--|--------------------|
| CHE 5113 | Advanced Organic Chemistry I | (3 semester hours) |
| CHE 5133 | Advanced Inorganic Chemistry | (3 semester hours) |
| CHE 5163 | Advanced Instrumental Analysis | (3 semester hours) |
| CHE 5183 | Advanced Spectral Measurement and Interpretation | (3 semester hours) |
| CHE 5213 | Chemical Thermodynamics | (3 semester hours) |
| CHE 5271 | Graduate Seminar in Chemistry | (3 semester hours) |
| CHE 5973 | Directed Research | (6 semester hours) |

Registration for Graduate Seminar in Chemistry is required for each semester of residence, although no more than three semester hours of credit can be applied to the degree.

- B. Six semester hours of laboratory work in Chemistry covering advanced organic and inorganic/physical laboratory techniques normally to be taken as Independent Study and completed prior to enrolling in CHE 5973.
- C. Six semester credit hours of elective organized course support work within the College of Sciences and Engineering, as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean, are required.

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 stereochemistry; conformational analysis; nonbenzenoid aromaticity; organic reaction mechanisms.

- 5133 Advanced Inorganic Chemistry**
(3-0) 3 hours credit. Prerequisite: CHE 4263 or its equivalent.
Modern theories of chemical bonding; structure of inorganic compounds, reaction mechanisms, organometallic chemistry, and cluster compounds.
- 5163 Advanced Instrumental Analysis**
(3-0) 3 hours credit. Prerequisites: CHE 3224 and CHE 3232.
The physical and chemical principles of modern instrumental techniques used for chemical analysis with emphasis on absorption, emission, magnetic resonance, and Raman spectroscopies; mass spectrometry, chromatography, and electrochemical techniques.
- 5183 Advanced Spectral Measurement and Interpretation**
(1-4) 3 hours credit. Prerequisite: CHE 5163.
Theory of and selected laboratory experiments and spectral interpretations of NMR, IR, UV, AA, x-ray, and mass spectrometry as well as gas and liquid chromatography.
- 5213 Chemical Thermodynamics**
(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 chemical thermodynamics. Discussion of chemical, electrochemical, and interphase equilibria.
- 5223 Chemical Kinetics**
(3-0) 3 hours credit. Prerequisite: CHE 3224 or its equivalent.
An advanced study of topics in chemical kinetics, such as formal kinetics, theory of rates of chemical reactions and reaction mechanisms.
- 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.
Current research seminars presented by faculty, visiting lecturers, and Master's candidates. Chemistry Master's Degree seeking students must register every semester while in residence, but only 3 hours of credit will apply towards the Master's Degree.
- 5503 Bio-Organic Chemistry**
(3-0) 3 hours credit. Prerequisite: CHE 5113 or consent of the instructor.
Chemical transformations of biologically important organic compounds; examination of enzyme active sites. Discussion of theories of catalysis, stereochemistry, electron-transfer, and molecular structure in the context of biological systems.
- 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 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.
- 5623 Statistical Thermodynamics**
(3-0) 3 hours credit. Prerequisite: CHE 3224 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.
- 5973 Directed Research**
3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, the Division Director and Dean of the College in which the course is offered.
The directed research course may involve either a laboratory or a theoretical problem. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6113 Advanced Organic Chemistry II

(3-0) 3 hours credit. Prerequisite: CHE 5113 or consent of the instructor.
Study of organic reaction mechanisms.

6123 Methods of Organic Synthesis

(3-0) 3 hours credit. Prerequisite: CHE 5113 or consent of the instructor.
A study of modern methods of organic functional group transformation and of simple carbon skeleton construction; introduction to the synthon concept and to retrosynthetic analytical methodology for designing rational synthetic approaches to complex organic molecules.

6153 Advanced Topics in Inorganic and Physical Chemistry

(3-0) 3 hours credit. Prerequisite: Consent of the instructor and graduate advisor.
An organized course offering the opportunity for a specialized study of advanced aspects of inorganic and/or physical chemistry. The course may be repeated for credit, but not more than 6 credit hours may be applied to the Master's degree.

6163 Advanced Topics in Analytical and Structural Chemistry

(3-0) 3 hours credit. Prerequisite: Consent of the instructor and graduate advisor.
An organized course offering the opportunity for a specialized study of advanced techniques of chemical analysis and/or determination of molecular structure. The course may be repeated for credit, but not more than 6 credit hours may be applied to the Master's degree.

6173 Advanced Topics in Organic, Bioorganic and Biophysical Chemistry

(3-0) 3 hours credit. Prerequisite: Consent of the instructor and graduate advisor.
An organized course offering the opportunity for a specialized study of advanced aspects in organic, bioorganic and/or biophysical chemistry. The course may be repeated for credit, but not more than 6 credit hours may be applied to the Master's degree.

6183 Topics in the Chemistry of Natural Products

(3-0) 3 hours credit. Prerequisites: CHE 5113 and CHE 6123; CHE 5503 is recommended.
Selected topics in the chemistry and biochemistry of natural products and related compounds of biological and medicinal interest. Course may be repeated for credit when topics vary, but no more than 6 hours may apply to the Master's degree.

6903 Progress In Chemistry

(3-0) 3 hours credit. Prerequisite: Consent of instructor.
An organized course offering the opportunity for a specialized study of current aspects of chemistry not normally available as part of the regular course offerings. The course may be repeated for credit, but not more than 6 credit hours may be applied to the Master's degree.

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, 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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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 for more than 6 hours, regardless of discipline, will apply to a Master's Degree.

6983 Master's Thesis

3 hours credit. Prerequisites: 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.

MASTER OF SCIENCE DEGREE IN GEOLOGY

The purpose of the graduate program in geology is to offer the student the opportunity for advanced study and research leading to the M.S. degree in the following emphasis areas: (1) Water Resources (Hydrogeology) and (2) Applied Geology.

Qualified students are encouraged to apply for teaching and/or research assistantships and fellowships. Requests should be directed to the Director of the Division of Earth and Physical Sciences at the same time application is made for admission to The University.

Special Admission Requirements. In addition to satisfying the university-wide graduate admission requirements, applicants are expected to have completed an undergraduate degree in Geology (equivalent to UTSA's) or a bachelor's degree in Chemistry, Physics, Mathematics, Computer Science, Life Sciences, or Engineering from an accredited institution of higher education. Applicants with deficiencies in their academic background are required to consult with the graduate advisor to establish an acceptable program of study with the approval of the graduate faculty. In such cases, students should anticipate that additional time will be required to complete the degree. All applicants must submit three letters of recommendation to the Director, Division of Earth and Physical Sciences.

Degree Requirements. The Master of Science program in Geology requires the successful completion of a minimum of 33 semester hours.

All candidates for the degree must complete:

- A. 8 semester hours minimum in the Geology Core Curriculum:
GEO 5991 Graduate Seminar in Geology (2 hours)
GEO 6983 Master's Thesis (6 hours)

No more than 2 semester hours of Graduate Seminar and 6 semester hours of Master's Thesis can be applied to the Master's Degree.

B. **Water Resources Emphasis (Hydrogeology)**

1. 12 semester hours minimum to include the following courses:
GEO 5603 Hydrogeology
GEO 5703 Advanced Hydrogeology
GEO 6203 Aqueous Geochemistry
GEO 6603 Subsurface Fluid Mechanics
2. 13 semester hours minimum selected from the graduate course offerings in Geology or Natural Resources (ENV 6813, ENV 6843, ENV 6893) with approval of the Graduate Advisor.

Applied Geology Emphasis

25 semester hours minimum selected from the graduate course offerings with the approval of the Graduate Advisor.

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- C. Under special circumstances students may take up to 6 hours of upper division undergraduate work (excluding geology courses) or graduate courses within the College of Sciences and Engineering with approval of the Graduate Advisor.
- D. Students must successfully defend their thesis research results before their Graduate Committee prior to the submission of the thesis to the Dean of the College for approval.

COURSE DESCRIPTIONS
GEOLOGY
(GEO)

5423 Advanced Mineralogy

(2-3) 3 hours credit. Prerequisites: GEO 3043, 3052, or consent of the instructor.
Study of crystal chemistry, thermodynamics, and phase equilibria of various mineral groups; petrology and paragenesis relationships will be examined. Field trips required.

5454 Advanced Paleontology

(3-3) 4 hours credit. Prerequisites: GEO 3083, 3123, 3131 or consent of the instructor.
Study of fossil assemblages, environmental significance of fossil associations, and reconstruction of depositional environments as related to the separation and differentiation of rock units in time and space. Field trips required.

5503 Advanced Stratigraphy

(3-3) 4 hours credit. Prerequisites: GEO 3083, 3123, 3131 or consent of the instructor.
Chronologic study of stratigraphic systems, physical properties and facies, depositional and paleogeographic implications, correlation, nomenclature and biostratigraphy. Field trips required.

5603 Hydrogeology

(3-0) 3 hours credit. Prerequisite: GEO 4623 with a grade of C or better or consent of the instructor.
Geologic principles governing the flow of groundwater, emphasis on hydrology, flow system evolution and aquifer analysis. Field trips required.

5703 Advanced Hydrogeology

(3-0) 3 hours credit. Prerequisites: GEO 5603 and consent of the instructor.
Hydrogeochemical models, finite element flow modeling, contamination transport, environmental isotopes and hydrogeology.

5804 Igneous-Metamorphic Petrology

(3-3) 4 hours credit. Prerequisites: GEO 3043, 3052, 3103, 3111, or consent of the instructor.
Origin and evolution of magmas. Origin and development of metamorphic grade, facies, and textures. Detailed study of igneous and metamorphic rock suites. Field trips required.

5894 Advanced Structural Geology

(3-3) 4 hours credit. Prerequisites: GEO 3103, 3111, or consent of the instructor.
In-depth study of the various aspects of structural geology; stress and strain, behavior of materials, failure criteria, fault analysis, rheological properties of geologic materials, fold analysis, subsurface analysis. Field trips required.

5904 Carbonate Petrology

(3-3) 4 hours credit. Prerequisites: GEO 3043, 3052, 3123, 3131, or consent of the instructor.
Thin-section analysis and hand-specimen study of carbonate sediment and rocks, carbonate classifications, carbonate facies models, and carbonate diagenesis. Field trips required.

5954 Sandstone Petrology

(3-3) 4 hours credit. Prerequisites: GEO 3043, 3052, 3123, 3131, or consent of the instructor.
Thin-section analysis and hand-specimen study of clastic rocks, classifications, interpretation of provenance, clastic sedimentary facies, and clastic diagenesis. Field trips required.

5971-2 Directed Research

1-2 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, the Division Director and Dean of the College in which the course is offered.

The directed research course may involve either a laboratory or a theoretical problem. May be repeated for credit, but not more than 3 hours, regardless of discipline, will apply to the Master's degree.

5991 Graduate Seminar in Geology

(0-3) 1 hour credit. Prerequisite: Graduate standing in Geology or consent of the Division Director.

Current research seminars presented by faculty, visiting lecturers, and Master's candidates. Only 2 hours of credit may be applied towards the Master's Degree.

6153 Depositional Systems

(3-0) 3 hours credit. Prerequisite: GEO 5954 or consent of the instructor.

The processes, characteristics, and relationships among continental, transitional and marine depositional systems; specific relationships that must be understood for each subsystem and how each subsystem relates to the global system. Field trips required.

6203 Aqueous Geochemistry

(2-3) 3 hours credit. Prerequisites: GEO 3373, 3123, 3131, or consent of the instructor. In-depth study and application of chemical concepts to geological problems; analyses of water-rock interaction at various temperatures and pressures.

6403 Advanced Geophysics

(3-0) 3 hours credit. Prerequisites: GEO 4383, 4391, or consent of the instructor.

Seismological and other geophysical methods and data for studying the physical and mechanical properties of the earth's crust, mantle, and core.

6603 Subsurface Fluid Mechanics

(3-0) 3 hours credit. Prerequisites: MAT 2213 and consent of the instructor.

Fluid properties, fluid dynamics, Navier-Stokes equations, laminar flow, stability, boundary-layer theory, and flow nets.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Special Problems

3 hours credit. Prerequisite: Consent of the instructor.

An organized course offering the opportunity for 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. Field trips may be required.

6983 Master's Thesis

3 hours credit. Prerequisites: Permission of the 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.

MASTER OF SCIENCE DEGREE IN NATURAL RESOURCES

The Master of Science Degree in Natural Resources is available to students whose undergraduate degrees are in such areas as earth, physical or biological sciences, engineering, economics or mathematics. This program is for those individuals wanting the opportunity to prepare for careers involving the allocation, regulation, utilization,

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and protection of natural resources and environmental quality and for people in mid-career who want the opportunity to improve their professional qualifications.

Special Admission Requirements. In addition to satisfying the university-wide graduate admission requirements, the applicant must have completed at least eighteen hours (twelve of which must be upper division) of course work in physical or biological sciences, engineering, mathematics, economics, or environmental science and the equivalent of STA 1993.

Degree Requirements. The minimum number of semester hours required for this degree, exclusive of course work or other study required to remove deficiencies, is 36.

All candidates for the degree must complete:

- A. Required Courses (30 semester hours)
 - ENV 5533 Environment and Systems
 - ENV 6603 Environmental Systems Analysis
 - ENV 6613 Environmental Ecology
 - ENV 6623 Economics of Environmental Resources
 - ENV 6643 Concepts for Public and Environmental Management
 - ENV 6813 Water Resources
 - ENV 6823 Land Resources
 - ENV 6853 Energy Resources
 - ENV 6863 Air Quality Management
 - ENV 6873 Project Analysis

- B. Elective Courses (6 semester hours)

Six (6) semester hours of course work from a related field in Natural Resources or from another support area, as recommended by the Committee on Graduate Studies and approved by the Division Director and Dean.

Students who elect to write a Master's Thesis are required to enroll in 6 hours of ENV 6983. Thesis must consist of 6 hours.

All candidates for the degree are required to pass oral comprehensive examinations, which will be scheduled after a student has completed at least 30 semester hours of course work.

COURSE DESCRIPTIONS NATURAL RESOURCES (ENV)

5363 Environmental Geology

(3-0) 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, water resources, and planning.

5533 Environment and Systems

(3-0) 3 hours credit.

Investigates the cultural and physical phenomena that interact in shaping the evolution of urban and regional systems. The climate, geology and hydrology of such systems are studied. Man's role in environmental change is assessed. Urban systems are also examined in light of expanding populations and increased energy demands.

5723 Applied Geosciences

(3-0) 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.

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; assessments of environmental consequences resulting from energy production, conversion, and utilization; technologies applicable to the evaluation of trade-offs among energy, environment, and economic considerations.

6603 Environmental Systems Analysis

(3-0) 3 hours credit. Prerequisites: MAT 1033 and STA 1993 or equivalent, 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 Environmental Ecology

(3-0) 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.

6623 Economics of Environmental 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.

6643 Concepts for Public and Environmental Management

(3-0) 3 hours credit.

Application of management concepts as they relate to development of human and natural resources and urban growth. The initiation, organization, and development of programs to utilize human and natural resources in urban growth are examined.

6813 Water Resources

(3-0) 3 hours credit.

Application of management principles to the efficient utilization of water resources by society. Study water as a resource, its value, uses and changing role over time. Formulation of public policy toward water resources is studied.

6823 Land Resources

(3-0) 3 hours credit.

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.

6843 Groundwater Resources

(3-0) 3 hours credit.

Study of the characteristics, occurrence, distribution, circulation, transport, quality, and consumption of groundwater resources with emphasis placed on protection from toxic wastes. Flow in porous media, well hydraulics, and basin-wide management will be considered, with emphasis on conservation of groundwater resources.

6853 Energy Resources

(3-0) 3 hours credit.

The flow of energy through agricultural, commercial 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.

Introduction to the field of air pollution control; sources and physical, chemical and biological effects of air pollutants. 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 Project Analysis

(3-0) 3 hours credit. Prerequisite: Minimum 21 credit hours of Natural Resources courses completed including ENV 6603, 6623, and 6643.

This course will cover the complex processes and factors involved in the evaluation of large scale projects involving natural resources. It will bring together tools to evaluate the physical, economic, financial, legal, and political constraints of such projects. These involve such issues as physical and environmental suitability, economic and financial viability and legal and political feasibility.

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

(3-0) 3 hours credit. Prerequisite: CHE 5303, a course in fluid mechanics or consent of instructor.

Principles and methods of water pollution control process design and operation; selection and optimization of total treatment processes as well as appurtenances and accessory equipments; methods involved in the design process and the selection of the hardware.

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.

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, 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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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 six (6) hours, regardless of discipline, will apply to a Master's Degree.

6873 Project Analysis

(3-0) 3 hours credit. Prerequisite: Minimum 21 credit hours of Natural Resources courses completed including ENV 6603, 6623, and 6643.

This course will cover the complex processes and factors involved in the evaluation of large scale projects involving natural resources. It will bring together tools to evaluate the physical, economic, financial, legal, and political constraints of such projects. These involve such issues as physical and environmental suitability, economic and financial viability and legal and political feasibility.

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

(3-0) 3 hours credit. Prerequisite: CHE 5303, a course in fluid mechanics or consent of instructor.

Principles and methods of water pollution control process design and operation; selection and optimization of total treatment processes as well as appurtenances and accessory equipments; methods involved in the design process and the selection of the hardware.

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.

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, 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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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 six (6) hours, regardless of discipline, will apply to a Master's Degree.

6983 Master's Thesis

3 hours credit. Prerequisites: 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 LIFE SCIENCES

MASTER OF SCIENCE DEGREE IN BIOLOGY

The graduate program offers opportunities for advanced study and research leading to the M.S. degree in Biology in two general areas: Molecular Cell Biology and General Physiology. A thesis option is offered to students desiring an opportunity to develop expertise in research techniques and data analysis; a non-thesis option is offered for those who desire to have the opportunity to earn the M.S. degree primarily through organized course work. The thesis option is recommended for students who are planning a career in research or who contemplate pursuing a doctorate in one of the life sciences. The non-thesis option might be suitable for students interested in secondary school teaching in the life sciences.

Graduate faculty research interests include Biochemistry, Cellular Biology, Developmental Biology, Ecology, Genetics, Microbiology, Neurobiology, Physiology, and Plant Sciences. The multidisciplinary nature of the program also allows students the opportunity to broaden their educational background at the graduate level. Individual programs are organized around each student's interests in consultation with the student's Graduate Advisor.

Qualified students are encouraged to apply for teaching assistantships and fellowships. Requests should be directed to the Director of the Division of Life Sciences at the same time application is made for admission to the University of Texas at San Antonio.

Special Admission Requirements. In addition to satisfying the University-wide graduate admission requirements, applicants are expected to have completed an undergraduate major in one of the biological sciences, with course work comparable to that required for the Bachelor of Science Degree in Biology at UTSA. Students whose undergraduate preparation is deficient in certain areas, but who meet the minimum University standards for admission, may be admitted and required to complete specific undergraduate or graduate courses as conditions of admission. In such cases, students should anticipate that additional time will be required to complete the degree. All applicants must submit two letters of recommendation directed to the Chairperson of the Graduate Studies Committee, Division of Life Sciences.

Degree Requirements. All candidates for the degree are required to complete a minimum of 36 semester hours of graduate credit that has been approved by the student's Graduate Committee, the Division Director, the Division's Committee on Graduate Studies, and the Dean of the College. 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. This total may include up to 6 hours of approved upper division undergraduate course work, and a maximum of 3 semester hours earned in a graduate seminar (BIO 5053).
2. An additional 18 hours of graduate credit as approved by the Committee on Graduate Studies, the Division Director, and the Dean. This total may include a maximum of 6 hours of Directed Research (BIO 5973). For students electing the non-thesis option, a minimum of 3 hours of Directed Research (BIO 5973) must be included. Students electing the thesis option must complete 6 hours of Master's Thesis (BIO 6983) as part of this total.

As specified by University regulations, all students must pass a comprehensive examination administered by their Graduate Committee. This exam is normally given in the semester prior to the semester during which degree requirements are to be completed. Students electing the thesis option also must successfully defend their thesis research results before their Graduate Committee prior to the submission of the thesis to the Dean of the College for approval.

COURSE DESCRIPTIONS

BIOLOGY (BIO)

- 5053 Seminar In Life Sciences**
(3-0) 3 hours credit. Prerequisite: Graduate standing.
Discussions, current literature and recent advances in specialized areas of the biological sciences. Seminars are organized according to areas of interest. May be repeated but no more than 3 hours may be applied to the degree.
- 5263 Microbial Ecology**
(3-0) 3 hours credit. Prerequisite: BIO 3713 or consent of instructor.
Interrelationships between microorganisms and their environment, including natural habitats of microorganisms, normal human flora and pathogens. Special consideration will be given to application of genetically engineered microorganisms to environmental problems.
- 5313 Cytogenetics**
(3-0) 3 hours 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.
- 5333 Advanced Population Genetics**
(3-0) 3 hours credit. Prerequisites: BIO 2313 and BIO 2322 or the equivalents. Biostatistics highly recommended.
An experimental approach to the interaction of genotype and environment in populations with emphasis on mutagenesis, selection, polymorphism, and adaptive mechanisms.
- 5353 Molecular and Biochemical Genetics**
(3-0) 3 hours credit. Prerequisites: BIO 2313 and BIO 3513 or the equivalents.
Molecular and biochemical aspects of structure, replication, mutation and phenotypic expression of genetic material.
- 5363 Microbial Genetics**
(3-0) 3 hours credit. Prerequisites: BIO 2313 and BIO 3713 or the equivalents.
A study of bacterial, fungal and viral genetics. Emphasis on the current literature, data interpretation and experimental techniques.
- 5403 Advanced Comparative Animal Physiology**
(3-0) 3 hours credit. Prerequisite: BIO 4353 or the equivalent.
Physiology of the organs and organ systems of animals.
- 5423 Neuroanatomy**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
The anatomy of the vertebrate nervous system.
- 5433 Neurophysiology**
(3-0) 3 hours credit. Prerequisite: BIO 4353 or the equivalent.
Physiology of the nervous system. Emphasis on sensory and motor systems and neural correlations of behavior.
- 5443 Neurochemistry**
(3-0) 3 hours credit. Prerequisites: BIO 3513, 3522, and 4433.
An examination of basic biochemical phenomena involved in normal neural processes and some pathological changes associated with neurobiological diseases and disorders.
- 5463 Reproductive Biology**
(3-0) 3 hours credit. Prerequisites: Courses in organ physiology and endocrinology or consent of instructor.
A comparative study of mammalian reproduction with emphasis on vertebrate/mammalian reproduction, including cellular and systems mechanisms, hormonal regulation, and the effects of environmental factors.

5513 Advanced Biochemistry

(3-0) 3 hours credit. Prerequisite: BIO 3513 or the 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.

5523 Enzymes

(3-0) 3 hours credit. Prerequisite: BIO 3513 or the equivalent.

A study of enzyme structure and mechanism, inhibitors, cofactors, kinetics, and regulation.

5543 Pharmacology and Toxicology

(3-0) 3 hours credit. Prerequisites: BIO 3513, 3522, 3413, and 3422.

A review of the beneficial, adverse, and toxic reactions of individuals to a variety of drugs and environmental substances. Chemical, biochemical, pharmacological, toxicological, genetic, teratogenic, and pathological aspects will be examined.

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.

5571-3 Experimental Techniques in the Life Sciences

1 to 3 hours credit. Prerequisite: Consent of instructor.

Topics will include research methods in cell and molecular biology, molecular neurobiology, and microbiology. May be repeated for credit as topics vary.

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.

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.

5973 Directed Research

3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, the Division Director, and the Dean of the College in which the course is offered. The directed research course may involve either a laboratory or a theoretical problem. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6113 Advanced Plant Physiology

(3-0) 3 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.

6133 Methods in Field Biology

(3-0) 3 hours credit. Prerequisite: BIO 3283 or the equivalent.

Examination of techniques to collect, identify, and preserve plants and animals. Field methods used in the analysis of populations and communities will be considered.

6213 Advanced Ecology

(3-0) 3 hours credit. Prerequisite: BIO 3283 or the equivalent.

Interaction of organisms with their environment, allelopathy, competition, distribution, succession, and factors that control growth and dispersal. Special consideration will be given to the concepts of climax, succession, and land management.

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.

6483 Animal Behavior

(3-0) 3 hours credit. Prerequisite: BIO 3413 or consent of instructor.

An examination of neural, endocrine, genetic and environmental determinants of behavior.

6553 Fermentation Science

(3-0) 3 hours credit. Prerequisite: BIO 3713 and 3722 or the equivalent.

The principles and theory underlying industrial fermentations such as vessel design and construction, media design, upscaling fermentations, process control and product isolation.

6563 Food Science and Technology

(3-0) 3 hours credit. Prerequisite: BIO 3713 and 3722 or the equivalent.

The science underlying industrial processes related to foods. The latest applications of technologies such as strain isolation and improvement, raw material selection and storage, process monitoring and the assessment of chemical and microbiological status of products.

6643 Cellular and Molecular Biology

(3-0) 3 hours credit. Prerequisite: BIO 3513 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.

6773 Host-Parasite Interactions

(3-0) 3 hours credit. Prerequisite: BIO 3713 or consent of instructor

A study of infectious disease processes with emphasis on host-parasite relationships of selected microbial pathogens.

6803 Advanced Immunology and Immunochemistry

(3-0) 3 hours credit. Prerequisite: BIO 4743 or consent of instructor.

The study of current concepts of humoral and cell-mediated immunity with emphasis on molecular mechanisms.

6873 Microbial Physiology and Energetics

(3-0) 3 hours credit. Prerequisite: BIO 3713 or consent of instructor.

Consideration of physiological activities of microorganisms with special emphasis on metabolic capabilities of bacteria and other microorganisms.

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.

Supervised research under the direction of a faculty member. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Topics in Modern Biology

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. This course may be repeated for

Master of Science Degree in Biotechnology

credit when the topics vary, but not more than six (6) hours, regardless of discipline, may be applied to the Master's degree.

6983 Master's Thesis

3 hours credit. Prerequisites: 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.

MASTER OF SCIENCE DEGREE IN BIOTECHNOLOGY

The M.S. in Biotechnology offers opportunities for advanced study and research related to the rapidly developing fields of applied biology. A broad common base of knowledge for biotechnology is provided in the M.S. degree by a comprehensive core curriculum that encompasses key areas in Biology, Computer Science, and Statistics. Additional course work for the degree is selected from one of four concentrations from which specialized courses may be chosen. These concentrations are: (1) Molecular Neurobiology, (2) Quantitative Biology, (3) Bioprocessing Technology, and (4) Molecular Toxicology. The opportunity to develop additional technical expertise is also available through Directed Research.

Special Admission Requirements. In addition to satisfying the University-wide Graduate requirements, applicants are expected to have completed an undergraduate major in the sciences with course work comparable to the core required for the Bachelor of Science Degree in Biology at UTSA. Students must also have completed courses equivalent to BIO 3713, 3722 (Microbiology and Laboratory) and CS 1073 (Introductory Computer Programming for Scientific Applications). Students electing the concentration in Quantitative Biology must have had a course equivalent to MAT 1214 (Calculus I). Students whose undergraduate preparation is deficient in certain areas, but who meet the minimum University standards for admission, may be admitted and required to complete specific undergraduate or graduate courses as conditions of admission. If such courses are listed as deficiencies, they will not count toward the graduate degree for the student. In such cases, students should anticipate that additional time will be required to complete the degree. All applicants must submit two letters of recommendation directed to the Chairperson of the Committee on Graduate Studies for the Master of Science Degree in Biotechnology, Division of Life Sciences.

Degree Requirements. All candidates for the degree will be required to complete a minimum of 36 semester hours of graduate credit that has been approved by the student's Graduate Committee, the Division Director, the Division's Committee on Graduate Studies for the Master of Science Degree in Biotechnology, and the Dean of the College. All candidates for the degree must complete the Biotechnology Core Curriculum and the requirements for one Concentration.

1. Biotechnology Core Curriculum (24 Semester Credit Hours)

- BIO 5053 Seminar in Life Sciences — (Biotechnology)
- BIO 5353 Molecular and Biochemical Genetics
- BIO 5513 Advanced Biochemistry
- BIO 6643 Cellular and Molecular Biology
- BIO 6803 Advanced Immunology and Immunochemistry
- CS 5033 Basic Concepts of Computer Science I
- CS 5043 Basic Concepts of Computer Science II or Bio 6973 Topics in Modern Biology (Biotechnology)
- STA 5073 Methods of Statistics I

2. Biotechnology Electives (12 Semester Credit Hours)

Each student must complete 12 semester hours of Biotechnology Electives, at least 9 hours of which must be selected from a single Concentration.

Concentration 1. Molecular Neurobiology

BIO 5423	Neuroanatomy
BIO 5433	Neurophysiology
BIO 5443	Neurochemistry
BIO 5523	Enzymes
BIO 5563	Biochemical Macromolecules
BIO 5571-3	Experimental Techniques in Life Science
BIO 5833	Membrane Structure and Function

Concentration 2: Quantitative Biology

STA 5083	Methods of Statistics II
CS 5103	Software Design Methodology
CS 5143	Software Configuration Management
CS 6633	Simulation Techniques

Concentration 3: Bioprocessing Technology

BIO 5363	Microbial Genetics
BIO 5523	Enzymes
BIO 5563	Biochemical Macromolecules
BIO 5571-3	Experimental Techniques in the Life Sciences — Monoclonal Antibodies and Flow Cytometry
BIO 5571-3	Experimental Techniques in the Life Sciences — Recombinant DNA
BIO 5571-3	Experimental Techniques in the Life Sciences — Tissue Culture and Somatic Cell Genetics
BIO 6553	Fermentation Science
BIO 6563	Food Science and Technology
BIO 6873	Microbial Physiology and Energetics

Concentration 4: Molecular Toxicology

BIO 5423	Neuroanatomy
BIO 5433	Neurochemistry
BIO 5443	Pharmacology and Toxicology
BIO 6483	Animal Behavior

3. Directed Research

Students also may elect to develop expertise in research techniques in a selected emphasis on Biotechnology through Directed Research (BIO 6951-3).

As specified by the University regulations, all students must pass a comprehensive examination administered by a committee appointed by the Dean of the College. This examination will normally be given in the semester prior to the semester during which the degree requirements are to be completed.

DIVISION OF MATHEMATICS, COMPUTER SCIENCE, AND STATISTICS

MASTER OF SCIENCE DEGREE IN MATHEMATICS

The Master of Science Degree in Mathematics is offered with three concentrations:

- Concentration 1. Mathematics
- Concentration 2. Statistics
- Concentration 3. Mathematics Education

Special Admission Requirements. In addition to satisfying the university-wide graduate admission requirements, it is highly recommended that at least a B.A. or B.S. in mathematics or statistics 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 degrees.

Degree Requirements. Candidates for this degree are required to complete successfully 36 semester hours of credit.

1. All candidates for the Master of Science in Mathematics, regardless of concentration, must complete the following 9 hours of course work:
 - MAT 5203 Theory of Functions of a Real Variable I
 - MAT 5283 Linear Algebra and Matrix Theory I
 - STA 5503 Mathematical Statistics I
2. In addition, a candidate for the Master of Science in Mathematics must complete the required courses for one of the concentrations declared by the candidate.
 - (1) Concentration in Mathematics required courses: 9 semester hours.
 - MAT 5173 Algebraic Structures
 - MAT 5223 Theory of Functions of a Complex Variable I
 - MAT 5603 Numerical Analysis
 - (2) Concentration in Statistics required courses: 9 semesters hours.
 - STA 5513 Mathematical Statistics II
 - STA 5713 Linear Models I
 - STA 5413 Non-Parametric Statistics
 - (3) Concentration in Mathematics Education required courses: 9 semester hours.
 - MAT 5023 Problem Solving Seminar
 - MAT 5033 Foundations and Fundamental Concepts of Mathematics
 - MAT 5043 Euclidean and Non-Euclidean Geometry
3. 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.
4. An additional 12 hours of course work must normally be chosen from eligible graduate courses within the Division of Mathematics, Computer Science, and Statistics. However, upon recommendation of the Committee on Graduate Studies and advance approval by the Division Director and Dean, a maximum of 6 semester hours chosen from courses numbered between 3000 and 4999 within the Division of Mathematics, Computer Science, and Statistics and a maximum of 6 semester hours chosen from other disciplines may be applied toward these 12 hours. Students pursuing the concentration in Mathematics

Education may apply a maximum of 9 semester hours chosen from other disciplines, with prior consent of the Committee on Graduate Studies, the Division Director and the 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 K-12. May not be applied toward the Master of Science Degree in Mathematics or to the Master of Science Degree in Computer Science.

5023 Problem Solving Seminar

(3-0) 3 hours credit.

Students will have the opportunity to engage in extensive experience and practice in solving mathematical problems. This course can only be applied to majors in Mathematics with a concentration in Mathematics Education.

5033 Foundations and Fundamental Concepts of Mathematics

(3-0) 3 hours credit.

Topics include the study of mathematics in antiquity as an empirical science, the shift from inductive reasoning to axiomatic structures, the development of geometry in the plane and 3-space, the discovery of analysis, the emergence of axiomatic systems and the focus on algebraic structures. This course can only be applied to majors in Mathematics with a concentration in Mathematics Education.

5043 Euclidean and Non-Euclidean Geometry

(3-0) 3 hours credit.

Topics will be selected from advanced euclidean and non-euclidean geometry, solid analytic geometry and differential geometry. This course can only be applied to majors in Mathematics with a concentration in Mathematics Education.

5173 Algebraic Structures

(3-0) 3 hours credit. Prerequisite: MAT 4233 or consent of instructor.

The opportunity for 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 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 3213 or MAT 4213.

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

(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.

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.

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.

5653 Differential Equations I

(3-0) 3 hours credit. Prerequisite: MAT 2233.

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.

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.

5973 Directed Research

3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, the Division Director and Dean of the College in which the course is offered.

The directed research course may involve either a laboratory or a theoretical problem. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.

6603 Optimization Techniques in Operations Research

(3-0) 3 hours credit. Prerequisites: MAT 2213, MAT 2233 or consent of instructor.

Analysis and application of optimization techniques in operations research. Emphasis on linear programming, non-linear programming, integer programming.

6953 Independent Study

3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, 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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR

(satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.
An organized course offering the opportunity for 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: 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
STATISTICS
(STA)

5073 Methods of Statistics I

(3-0) 3 hours credit. Prerequisite: Knowledge of algebra. This course cannot be applied to the major in Mathematics, Computer Science, and Statistics without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean. Emphasis on methods and applications of statistics. Measure of location, variability and association. Interpretation of categorical data. Hypothesis testing. Use of packaged programs. Applications.

5083 Methods of Statistics II

(3-0) 3 hours credit. Prerequisite: STA 5073. This course cannot be applied to the major in Mathematics, Computer Science, and Statistics without the recommendation of the Committee on Graduate Studies and approval of the Division Director and Dean.
A continuation of STA 5073 with emphasis on linear statistical models. Use of packaged programs. Applications.

5103 Applied Statistical Methods

(3-0) 3 hours credit. Prerequisite: STA 3523 or equivalent.
Topics in applied statistics which may include maximum likelihood estimation and its properties, likelihood ratio tests. Procedures in regression and model fitting. Transformations of data. Analysis of variance and others.

5253 Applied Time Series Analysis

(3-0) 3 hours credit. Prerequisite: STA 5103 or consent of instructor.
Theory and application of discrete time series models. Principles of iterative model building. Representation of dynamic relations by difference equations. Autoregressive integrated moving average models. Identification, fitting and diagnostic checking for models. Seasonal model application to forecasting in various applied areas.

5313 Theory of Sample Surveys with Applications

(3-0) 3 hours credit. Prerequisite: STA 3523.
Basic sampling techniques and their comparisons for finite populations. Topics include: simple random sampling, stratified random sampling, ratio and regression estimates, systematic sampling, cluster sampling, multistage and double sampling.

5413 Non-Parametric Statistics

(3-0) 3 hours credit. Prerequisite: STA 5103 or consent of instructor.
Order statistics, test of goodness of fit, rank-order statistics, linear rank statistics for problems involving location and scale, association in multiple classifications, asymptotic relative efficiency.

5503 Mathematical Statistics I

(3-0) 3 hours credit. Prerequisites: MAT 4213 and STA 3513.
Axioms of probability, random variables and probability distributions, sampling distributions, stochastic convergence.

5513 Mathematical Statistics II

(3-0) 3 hours credit. Prerequisite: STA 5503.

Sufficient statistics, unbiased estimation, likelihood ratio test, sequential probability ratio test, decision theory.

5553 Bayesian Statistics

(3-0) 3 hours credit. Prerequisite: STA 5103 or 5513.

Subjective probability, utility theory, decision theory, prior and conjugate prior distributions, posterior distributions, estimation and tests of hypotheses, linear models, sequential sampling.

5713 Linear Models I

(3-0) 3 hours credit. Prerequisites: STA 5103 and MAT 2233 or equivalents. STA 4723 is strongly recommended but not required.

Generalized inverse of matrix, least squares estimation in fixed models, linear estimable functions and Gauss-Markov theorem, multivariate normal distribution and distribution of quadratic forms, likelihood ratio tests in fixed models, analysis of variance. Applications in full rank models and balanced models.

5723 Linear Models II

(3-0) 3 hours credit. Prerequisite: STA 5713.

Analysis of covariance, unbalanced models, random and mixed models, inference on variance components, use of packaged programs.

5803 Advanced Statistical Quality Control

(3-0) 3 hours credit. Prerequisite: STA 3523 or STA 5503.

Acceptance sampling by attributes and by variables, military standard plans, rectifying inspection: tolerance limits; control chart for fraction defective, number of defects, and variables; cumulative sum control charts, recent advances in control chart and acceptance sampling techniques.

5813 Multivariate Analysis I

(3-0) 3 hours credit. Prerequisites: MAT 2233 and either STA 5103 or consent of instructor.

Multivariate normal distribution, multiple and partial correlation coefficients, estimation of mean vector and covariance matrix, Hotelling's T^2 , classification of observations, Wishart distribution.**5823 Multivariate Analysis II**

(3-0) 3 hours credit. Prerequisite: STA 5813.

Multivariate linear hypothesis and analysis of variance, test of independence, tests concerning covariance matrices, principal components, canonical correlation and factor analysis. Application of packaged programs.

5853 Analysis of Categorical Data

(3-0) 3 hours credit. Prerequisite: STA 5103 or consent of instructor.

Analysis of multi-factor contingency tables: linear and log-linear models, inference in complete and incomplete tables, model selection and assessing goodness of fit, other methods of estimation such as information theoretic approach minimum chi-square and logit chi-square, measures of association. Models of discrete data.

5903 Theory of Reliability and Life Testing

(3-0) 3 hours credit. Prerequisite: STA 5503 or consent of instructor.

Probabilistic failure models, estimation and tests of hypotheses regarding these models, distribution-free methods, accelerated life testing, system reliability and maintenance policies.

5993 Special Topics In Statistics

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. May be repeated for credit when the topics vary, but not more than 6 hours will apply to the Master's degree.

6983 Master's Thesis

3 hours credit. Prerequisites: 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.

MASTER OF SCIENCE DEGREE IN COMPUTER SCIENCE

The graduate program in Computer Science offers integrated studies involving software, hardware and mathematics leading to the M.S. degree. A thesis option is available for those students who desire to have the opportunity to obtain some expertise in research.

Special Admission Requirements. In addition to satisfying the university-wide graduate admission requirements, a B.A. or B.S. in computer science, equivalent to that offered by UTSA, is required as preparation. Those students who do not qualify for unconditional admission may be admitted on a conditional basis. Students who are admitted on a conditional basis may be required to complete specific undergraduate courses as conditions of admission. If such courses are listed as deficiencies, they will not count toward the graduate degree. In such cases, students should anticipate that additional time will be required to complete the degree.

Degree Requirements. Candidates for this degree are required to successfully complete 36 semester hours of graduate course work subject to the following conditions:

1. Twenty-one (21) hours of eligible graduate courses within the Division of Mathematics, Computer Science, and Statistics of which 15 hours must be courses in Computer Science and must include the following four courses:
CS 5513 Modern Computer Architecture
CS 5353 Formal Languages, Automata and Theory of Computation
CS 5363 Structure of Programming Languages and Compilers
CS 5443 Data Base Management Systems I
2. Nine (9) hours of eligible graduate courses within the Division of Mathematics, Computer Science, and Statistics subject to the following restrictions:
With the prior recommendation of the Committee on Graduate Studies and prior approval of the Division Director and the Dean of the College, a student may apply a maximum of 6 hours of upper-division undergraduate courses (courses numbered between 3000 and 4999) in the Division of Mathematics, Computer Science, and Statistics to the M.S. degree and may apply a maximum of 6 hours of courses from other disciplines to the M.S. degree.
3. Each student in the Master's program is required either to write a Master's thesis and enroll in 6 hours of course work in CS 6983, or complete 6 hours of additional graduate course work as recommended by the Committee on Graduate Studies and approved by the Division Director and the Dean of the College. Completion of the Master's thesis requires a successful oral defense.

COURSE DESCRIPTIONS COMPUTER SCIENCE (CS)

5003 Computer Literacy for Educators

(3-0) 3 hours credit.

This course is designed for educators who need a basic computer course so that intelligent decisions may be made concerning the issues of computers in the classroom. Students will have the opportunity to learn the vocabulary, the workings and capabilities of the computer and programming in the BASIC language. May not be applied toward the Master of Science Degree in Mathematics or to the Master of Science Degree in Computer Science.

5023 Computers for Mathematics Teachers

(3-0) 3 hours credit.

A course for mathematics teachers on integrating the computer into the mathematics curriculum with an algorithmic-oriented introduction to computer programming in BASIC.

This course can only be applied to majors in Mathematics with a concentration in Mathematics Education.

5033 Basic Concepts of Computer Science I

(3-0) 3 hours credit. Prerequisite: Knowledge of some programming language. Designed for students who have not taken CS 1711, 1713, and CS 1723 or their equivalents.

The opportunity for intensive study of fundamental concepts of computers, algorithm design, programming and data structures. May not be applied toward the Master of Science Degree in Mathematics or to the Master of Science Degree in Computer Science.

5043 Basic Concepts of Computer Science II

(3-0) 3 hours credit. Prerequisite: CS 5033.

Intensive study of computer organization, file organization, and advanced data structures. May not be applied toward the Master of Science Degree in Mathematics or to the Master of Science Degree in Computer Science.

5103 Software Design Methodology

(3-0) 3 hours credit. Prerequisites: CS 2733 and CS 2743.

Discussion of issues relevant to the development of large software systems such as: specification, design and synthesis of reliable software, proof of correctness, self-checking software, reconfiguration, recovery, fault-tolerant systems, system reliability modeling.

5113 Computer Graphics

(3-0) 3 hours credit. Prerequisites: CS 2743 and MAT 2233.

The course emphasizes generative computer graphics, interactive construction of graphic objects, data base design, composite object construction, and hidden-surface algorithmic techniques. Specifically, the emphasis is on vector graphic devices and on the production of high-resolution images.

5133 Software Testing

(3-0) 3 hours credit. Prerequisites: CS 3233 and CS 5103.

The course considers the various aspects of software testing: test tools, high order testing, debugging, code inspections, passive testing, test plan development, test procedures, documentation, economic issues and management factors.

5143 Software Configuration Management

(3-0) 3 hours credit. Prerequisite: CS 5103.

The course considers the aspects of managing the configuration of software during its lifecycle. Topics include: identification, control, auditing, and status accounting. Simulation of a configuration control board process.

5233 Artificial Intelligence I—Theory

(3-0) 3 hours credit. Prerequisites: CS 5353 and CS 3723, and knowledge of LISP.

This course studies the area of artificial intelligence from the standpoint of a general problem solving technique. Major topics covered include methods of search and knowledge representation. Programming projects will be in Lisp.

5243 Artificial Intelligence II—Application

(3-0) 3 hours credit. Prerequisite: CS 5233.

This course studies the area of artificial intelligence through the analysis of example systems. Major topics covered include expert systems, natural language processing, intelligent tutoring, machine perception, and robotics. Programming projects will use advanced programming tools.

5253 Expert Systems

(3-0) 3 hours credit. Prerequisite: CS 5233.

This course presents an in-depth study of the area of artificial intelligence known as expert systems. Example expert systems will be examined as a means of identifying the generally accepted methodologies for developing such systems as well as the basic research issues involved.

5353 Formal Languages, Automata and Theory of Computation

(3-0) 3 hours credit. Prerequisites: CS 2743 and CS 3233.

Formal models of computation and syntax.

5363 Structure of Programming Languages and Compilers

(3-0) 3 hours credit. Prerequisite: CS 5353.

A study of modern programming languages with emphasis on their implementation. Topics include scanning, parsing, syntax-directed translation, code generation, and optimization. (Formerly CS 5303).

5443 Data Base Management Systems I

(3-0) 3 hours credit. Prerequisites: CS 3233 and CS 3743.

Design and implementation of techniques for information retrieval in data base management systems.

5453 Data Base Management Systems II

(3-0) 3 hours credit. Prerequisite: CS 5443.

Consideration of special problems such as: integrity and security; restructuring adaptive data structures; recovery and restart; distributed data bases; data base hardware architecture; intelligent front-ends.

5513 Modern Computer Architecture

(3-0) 3 hours credit. Prerequisites: CS 3733 and CS 4753.

Study of modern computer architecture, including parallel computers, multiprocessors, pipelines, and fault tolerance.

5523 Operating Systems

(3-0) 3 hours credit. Prerequisite: CS 5513.

Operating systems concepts with emphasis on concurrency, abstraction, security and reliability. Distributed operating systems and network control will be discussed.

5533 Advanced Topics in Computer Systems

(3-0) 3 hours credit. Prerequisite: CS 5523.

Areas of study include advanced architectures, interconnected systems, distributed computer systems, computer networks, and computer communications.

5543 Local Area Networks

(3-0) 3 hours credit. Prerequisite: CS 5523.

A study of networks of interacting computers within local work environments. Topics include standards, equipment, interfaces, protocols, architectures and transmission alternatives. Effective use of local area networks will be covered.

5553 Performance Evaluation and Measurement of Information and Computing Systems

(3-0) 3 hours credit. Prerequisite: CS 4753.

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. Examination of techniques for performance evaluation and projection including benchmarks, traces, synthetic workloads, analytic modeling and simulation.

5563 Continuous Time Simulation

(3-0) 3 hours credit. Prerequisite: MAT 3633.

Mathematical paradigms of simulation: ordinary differential equations, functional differential equations, and differential automata. Modern simulation languages.

5603 Numerical analysis

(3-0) 3 hours credit. Prerequisite: MAT 3633 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.

5633 Analysis of Algorithms

(3-0) 3 hours credit. Prerequisite: CS 3233.

Models of computation, design techniques such as divide-and-conquer and dynamic programming, graph algorithms, sets and union-find. Additional topics chosen from pattern matching, integer and polynomial arithmetic and the fast Fourier transform.

5643 Parallel Algorithms

(3-0) 3 hours credit. Prerequisites: CS 5513 and CS 5633.

Parallel models of computation, sorting, searching, graph algorithms, applications to logic programming and VLSI.

- 5703 Microprogramming**
(3-0) 3 hours credit. Prerequisite: CS 4753.
Introduction to microprogramming concepts. Architectural characteristics of microprogrammed computers. Microprogramming languages and support software. Computers with vertical, diagonal and horizontal microinstruction formats. Developments in microprogramming languages. Applications of microprogramming. Design of microprograms implemented in writable control store. (Formerly SD 5703.)
- 5723 Microcomputer Systems**
(2-3) 3 hours credit. Prerequisite: SD 3813.
An in-depth study of microcomputers and related LSI devices, to include selected major commercially available devices. A review of data formats, digital devices and integrated circuits. Microcomputer architectures. Microcomputer programming. Input/output programming. System bus and I/O control logic. Input/output interfaces. Memory subsystems. Development tools and languages. Single-clip 16-bit microprocessors. Bit-sliced microprocessors. (Formerly SD 5723.)
- 5973 Directed Research**
(3-0) 3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, the Division Director and Dean of the College in which the course is offered.
The directed research course may involve either a laboratory or a theoretical problem. May be repeated for credit, but not more than 6 hours, regardless of discipline, will apply to the Master's degree.
- 6633 Simulation Techniques**
(3-0) 3 hours credit. Prerequisites: CS 1723 and STA 3523, 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.
- 6953 Independent Study**
3 hours credit. Prerequisites: Graduate standing and permission in writing (form available) of the instructor, the student's Graduate Advisor, 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.
- 6961 Comprehensive Examination**
1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.
Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).
- 6973 Special Problems**
3 hours credit. Prerequisite: consent of instructor.
An organized course offering the opportunity for 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: 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 SOCIAL AND BEHAVIORAL SCIENCES

DIVISION OF BEHAVIORAL AND CULTURAL SCIENCES

MASTER OF ARTS DEGREE IN ANTHROPOLOGY

The Master's program in Anthropology at The University of Texas at San Antonio is designed to offer students the opportunity to study anthropology at the graduate level. Two specializations are available:

- a. *Ethnohistory.* Ethnohistory applies the concepts of cultural anthropology to historical documents. Cultural process through time is examined using historical archives as the principal information source. The program at UTSA supplements a foundation in cultural anthropology and ethnohistory with appropriate studies in archaeology, history, and historiography.
- b. *Archaeology.* UTSA's program in Archaeology places particular emphasis on the Texas Borderlands area, and affords an opportunity to conduct systematic research using the abundant archaeological resources in the San Antonio and South Texas region. The archaeology of Mexico and Central America is also emphasized.

Special Admission Requirements. In addition to satisfying The University graduate admission requirements, each applicant must provide three letters of recommendation from persons who can evaluate the applicant's academic background, skills, motivation, and potential. These letters should be directed to the Graduate Advisor of Record, Division of Behavioral and Cultural Sciences, and should arrive as soon as possible after submitting the application for admission. Applicants who are able to visit the UTSA campus are encouraged to meet with the Division's Graduate Advisor of Record and members of the Anthropology faculty in conjunction with the application.

Degree Requirements. In addition to the general requirements for graduate study at The University of Texas at San Antonio, the Master of Arts in Anthropology degree requires the following:

Option I. 33 credit hours including 27 credit hours of coursework and the Master's thesis for which 6 hours of credit are granted. At least 18 of these hours must derive from Anthropology courses.

Option II. Master's degree program without a thesis, containing 36 hours of coursework, may be sought by petition to the Anthropology Graduate Studies Committee. *Permission to take Option II will normally be granted only on presentation of evidence that the student has previously done scholarly work equivalent to that required in an M.A. thesis.*

The Program of Study for either specialization is not rigidly specified, and within each specialization there is some room for individual variation. Student programs are constructed on the basis of consultation between students and faculty advisors within Division guidelines designed to guarantee coherence to the student's achievement in the area selected. Lists of suggested courses are available from faculty advisors and from the Division's Graduate Advisor of Record.

Although there is no program-wide language proficiency requirement, certain specializations and programs of study will require students to demonstrate proficiency in a second language. Students should consult their advisor or the Graduate Advisor of Record regarding this matter.

A comprehensive examination, both written and oral, tailored to the student's program and area of concentration, is scheduled for the final semester before writing the Mas-

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ter's thesis for Option I students, or before enrolling in the last nine semester hours of coursework under the non-thesis option. Satisfactory performance on the comprehensive examination is required prior to enrollment in either ANT 6983 (Master's Thesis) or in the non-thesis option work.

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.
- 5233 Concepts of Ethnohistory**
(3-0) 3 hours credit.
Survey and practicum in methods and objectives of documentary historical research in anthropology.
- 5243 Environment and Culture Change**
(3-0) 3 hours credit.
An examination of mechanisms of geologic, atmospheric, and cultural change. Methods of studying long-term interactions and change.
- 5253 Ethnohistory of Eastern North America**
(3-0) 3 hours credit. Prerequisite: ANT 5233.
An examination of the major interpretive works, and the sources on which they are based.
- 5263 Mesoamerican Ethnohistory**
(3-0) 3 hours credit. Prerequisite: ANT 5233.
An examination of the sources and major interpretive works dealing with the various indigenous populations, their preconquest culture, and post-conquest cultural experience.
- 5413 Seminar in the Prehistory of Texas and Adjacent Areas**
(3-0) 3 hours credit.
Intensive study of prehistoric and early historic aboriginal cultures of Texas and adjacent areas. Focus is on problems of interpretation, current archaeological research of the region, and the impact of Federal legislation on Texas archaeology.
- 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.
- 5556 Field Course in Archaeology**
(2-12) 6 hours credit. Prerequisite: Consent of instructor.
The opportunity for advanced training in field procedures, and their applications to problem-oriented field research. May be repeated for credit.

- 6113 Seminar in the Anthropology of Mesoamerica**
(3-0) 3 hours credit.
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 civilization, roots of Mesoamerican peasant culture, and distribution analysis of cultural and language variance. May be repeated for credit when topics vary.
- 6133 Seminar in Medical Anthropology**
(3-0) 3 hours credit. Prerequisite: ANT 3173 recommended.
Attention is centered on a limited number of significant problems in medical anthropology to which materials from ethnohistory, archaeology, ethnology, paleopathology, and cultural ecology contribute. Topics may include interaction of genetic and cultural influences and health consequences of technological change. May be repeated for credit when topics vary.
- 6313 Ethnohistory Research Practicum**
(3-0) 3 hours credit. Prerequisite: ANT 5233 or permission of the instructor.
An organized seminar in which students analyze a corpus of documents pertaining to a single topic or group. Course emphasizes the confrontation of methodological problems inherent in the documentary record when used for anthropological purposes.
- 6333 Cultural Differences in Aging**
(3-0) 3 hours credit.
Anthropological perspectives on aging and the roles of the elderly in different cultures are presented.
- 6353 Field Research Methods in Cultural Anthropology**
(3-0) 3 hours credit.
The study and practice of field research methods in cultural anthropology emphasizing participant-observation and use of informants.
- 6443 Supervised Field Research**
(0-12) 3 hours credit. Prerequisite: Consent of instructor.
The course is designed to offer the opportunity for intensive training and requires the student to carry out independent research and analysis of field data. May be repeated for credit.
- 6933 Internship in Anthropology**
3 hours credit.
A supervised experience, relevant to the student's program of study, within selected community organizations. May not be taken concurrently with Independent Study.
- 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.
- 6961 Comprehensive Examination**
1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.
Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6971-3 Special Problems

1 to 3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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: 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.

MASTER OF ARTS DEGREE IN HISTORY

The Master of Arts degree program in History offers students the opportunity to study history and the historian's craft. The program is designed to serve the needs of the individual students as well as the educational and intellectual interests of San Antonio and south Texas.

The program has two objectives: first, to give students an understanding of the discipline, and second, to involve them in the process of historical research and writing. Hence, students will become acquainted with the work of historians and will approach their study of local and national societies from the viewpoint of a professional historian.

Each student must select a general field of emphasis (United States or European history) and a specific field. Among the latter are presently included American social history, European expansion, Latin American history, and the Borderlands. Alternative specific fields may be arranged with the concurrence of the Graduate Studies Committee in History. The choice of a readings course and a proseminar-seminar sequence (see Degree Requirements, below) will be governed by the student's choice of fields. The written comprehensive examination will cover both the specific and the general fields.

The History program offers both a thesis and a non-thesis option. The decision whether to complete a Master's thesis is important and requires concurrence of student, advisor, and Graduate Advisor of Record.

Degree Requirements. The minimum number of semester hours required for this degree, exclusive of coursework or other study required to remove admission deficiencies, is 30.

All candidates for the degree must complete:

- A. 3 semester hours chosen from general field readings courses:

HIS 5073 Readings in American History

or

HIS 5083 Readings in Modern European History

- B. 15 semester hours of elective courses, chosen in consultation with the student's advisor. Some of these courses will normally be selected in preparation for the student's specific field on the comprehensive examination. Up to 6 of the elective hours may be taken in disciplines outside history with the prior approval of the student's advisor and the Dean of the College. Such outside courses must clearly support the student's program of study.

- C. 6 semester hours consisting of the sequence:

HIS 6813 Proseminar in History

HIS 6903 Research Seminar in History

This sequence will vary in subject. A student should first take HIS 6813 and then HIS 6903 *in the same subject*. The proseminar-seminar sequence will

define the major part of the material to be covered in the specific field section of the student's comprehensive examination.

D. 6 semester hours to be taken as follows:

Option I (with thesis)

The satisfactory completion of HIS 6983 (Master's Thesis) (6 hours) in accordance with university regulations as stated under "Options for Master's Degrees."

Option II (without thesis)

Another sequence of HIS 6813 and HIS 6903 in addition to the one required under (C) above, on a single subject different from the one pursued under (C).

In addition to the semester-hour requirements set forth above, all candidates for the degree are required to pass a written comprehensive examination covering the student's general and specific fields. The comprehensive examination will be based on a syllabus with which each student will be provided shortly after the naming of the student's examination committee. The comprehensive examination is taken in or after the semester in which the student completes the requirements in Section A, B, and C above; it must be passed before the student can enroll in HIS 6983 (Master's Thesis) under Option I or receive his or her degree under Option II.

Competence in either a foreign language or a technical research methodology is required of all students. The requirement must be fulfilled before a student in Option I enrolls in HIS 6983 (Master's Thesis) and by the time a student in Option II applies for graduation. Normally, the language competence option will be selected by students whose areas of research concentration are deemed by the Graduate Studies Committee to require knowledge of a foreign language. Language competence is demonstrated by passing a one-hour translation examination which requires a knowledge of the language sufficient to read and understand a contemporary historical monograph in the language. Technical research competence is demonstrated by passing HIS 6613 (Technical Methods) and by passing or having passed at least three semester hours of coursework in statistics or a closely related field. The exact nature of the technical research requirement will be determined normally at the end of one semester of full-time study or upon completion of 12 semester hours of graduate work.

COURSE DESCRIPTIONS

HISTORY (HIS)

5073 Readings in American History

(3-0) 3 hours credit.

Overview of important historiographical issues in American history, intended to acquaint the student with current directions in research and interpretation. To be taken by students preparing for the general American history portion of the M.A. comprehensive examination.

5083 Readings in Modern European History

(3-0) 3 hours credit.

Overview of important historiographical issues in European history since the seventeenth century, intended to acquaint the student with current directions in research and interpretation. To be taken by students preparing for the general European history portion of the M.A. comprehensive examination.

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.

5133 A New American Nation, 1789-1850

(3-0) 3 hours credit.

An examination of the impact of economic, political, and cultural changes on the development of American society before the Civil War.

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, neoimperialism, 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.

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 comparative description and analysis of the historical development of Texas, New Mexico, Arizona, and California in the nineteenth and twentieth centuries.

5293 The American West

(3-0) 3 hours credit.

A regional history of the exploration, acquisition, settlement and development of the territory west of the Appalachian mountains in the nineteenth and twentieth centuries, with emphasis on the influences of the frontier and subsequent patterns of development on American society.

5303 Twentieth-Century Texas

(3-0) 3 hours credit.

An examination of Texas society, culture, and politics in modern times. Topics may include the period of reform in the 1890s, the boom in oil, the growth of cities, the politics of the Progressive Era, the developments of the Twenties, the Depression and New Deal, World War II, the era of Lyndon Baines Johnson, and the expansion of industry in the state and the Sun Belt.

5423 Colonial Mexico

(3-0) 3 hours credit.

A detailed examination of the Spanish conquest and colonization of Mexico from 1521 to Independence. Special attention will be paid to the transformation of Indian society under Spanish rule, the development of the colonial economy, and the formation of an interrelated colonial elite. (Formerly HIS 5403; credit cannot be earned for both 5403 and 5423.)

5433 Republican Mexico

(3-0) 3 hours credit.

This course will examine the history of Mexico following Independence from Spain in 1821. Careful consideration will be given to the disintegration of the colonial system, the nineteenth century reforms, the Porfiriato, and Mexican Revolution. Students may have

the opportunity to work in UTSA's special collections on nineteenth-century Mexico. (Formerly HIS 5413; credit cannot be earned for both 5413 and 5433.)

5463 Latin American Society

(3-0) 3 hours credit.

An analysis of the formation of Latin American Society in the colonial and national periods. The course will focus on institutions such as the Church, the family, and the military, as well as the role of Indians, Blacks, women, and ethnic groups. Readings will be drawn from different regions and time periods to provide a comparative perspective.

5473 Brazilian Culture and Society

(3-0) 3 hours credit.

Brazil from 1500 to the present. This course will trace the contours of Brazilian culture in the colonial and independent periods. Special attention will be given to the cultural contributions of the major ethnic groups of Brazil—Indians, Blacks, and Portuguese—as well as to forms of cultural expression such as family life, religion, music, and folklore.

5563 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.

5703 The *ancien régime*

(3-0) 3 hours credit.

An examination of the origins and development of the political systems of the major Western European states in the seventeenth and eighteenth centuries. The relationships among political change, the social order, economic structure, and culture.

5713 European Revolutions

(3-0) 3 hours credit.

A comparative investigation of revolutions in modern European history, including the French Revolution, the revolutions of 1848, and the Russian Revolution.

5723 The Origins of the World Wars

(3-0) 3 hours credit.

An examination of the complex processes leading up to the outbreak of world war in 1914 and 1939. Focuses both on international politics and the internal politics of major warring nations.

6113 Law and Society in America

(3-0) 3 hours credit.

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 seventeenth century slavery to the equal rights revolution of the twentieth century.

6143 American Social History

(3-0) 3 hours credit.

Review of important topics in American social history. Topics may include: wealth and power, social stratification, migration, religion and ethnicity, family, gender roles, professionalization, politics as power, urban development, education, and social conflict.

6153 Community History

(3-0) 3 hours credit.

Using San Antonio as a case study, this course will examine the impact of social, political, and economic changes in the United States on the cultural and physical contexts of the city.

6203 War and Society: Europe

(3-0) 3 hours credit.

An example of the impact of war on the development of European society since the Middle Ages. The emphasis will be on the ways nationalism, the rise of the military as a profession, changes in strategic planning, and actual combat affected European society.

6213 War and Society: United States

(3-0) 3 hours credit.

An examination of the impact of war on the development of American society. The emphasis will be on the ways American attitudes toward the military and toward warfare affected national development and on ways the emergence of a professional military and a standing army influenced American society.

6303 Seminar In American History for Teachers

(3-0) 3 hours credit.

Explores implications of new content areas and approaches in American history for social studies teachers and community-resources people. Specific programs individually-tailored to meet student needs. May be repeated for credit when topics vary.

6613 Technical Methods

(3-0) 3 hours credit.

Introduction of quantitative analysis of historical sources. Students will have the opportunity to gain experience in research design, data collection, data manipulation, and statistical analysis with the aid of mainframe and microcomputers. Prior experience with computers or course work in statistics is desirable but not required.

6813 Proseminar In History

(3-0) 3 hours credit.

A detailed investigation of a major historical subject, with particular attention to current research and major interpretations. Intended as preparation for the specific field portion of the M.A. comprehensive examination and for HIS 6903. May be repeated for credit when topics vary.

6903 Research Seminar In History

(3-0) 3 hours credit. Prerequisite: HIS 6813 in the specific subject of the seminar or consent of instructor.

An examination of research materials pertinent to various topics in history, of methodologies developed to interpret these materials, and of theoretical issues guiding inquiry. Preparation of a research paper required. 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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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: 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 BICULTURAL-BILINGUAL STUDIES

MASTER OF ARTS DEGREE IN BICULTURAL-BILINGUAL STUDIES

The Master of Arts Degree in Bicultural-Bilingual Studies is designed to respond to a variety of societal needs through advanced multidisciplinary study in the fields of language, culture and related disciplines. It has concentrations in:

- Bicultural-Bilingual Education
- Bicultural Studies
- English as a Second Language

Degree Requirements. All candidates for the Master of Arts Degree in Bicultural-Bilingual Studies are required to complete successfully a thirty-six (36) semester hour program. Upon completion of coursework, the candidate will be required to pass a written and oral comprehensive examination. In addition, as a requirement for graduation, candidates for this degree must show proficiency in a second language *or* give evidence of second language learning experiences acceptable to the Division. Candidates are advised to consult with the Division for testing procedures on second language proficiency *or* acceptable evidence of second language learning experiences.

Concentration in Bicultural-Bilingual Education. This concentration is offered for those who are interested in advanced study in the design and implementation of bicultural-bilingual education programs. This interdisciplinary course of study presents systematic instruction in bilingualism, cultural dynamics, and applied linguistics. It also includes an examination of theory and research related to effective bilingual education. The M.A. degree is offered under two options: thesis and non-thesis.

Degree requirements.

A. Required coursework. 30 hours of coursework from *six* major areas as follows:

Socio-Cultural Studies (six required hours)

- BBL 5003 Foundations for Bicultural Studies
- BBL 5013 Multicultural Groups in the United States
- BBL 5023 Cultural Adaptation in Bilingual Societies
- BBL 5073 Psychological Considerations in Bicultural-Bilingual Environments
- BBL 5123 Sociolinguistic Approaches to Education in Multicultural Societies
- BBL 5133 Hispanic Biculturalism in the United States

Bilingual Education Theory (three required hours)

- BBL 5113 Theoretical Foundations of Bicultural-Bilingual Education
- 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 Acquisition

Teaching Methodology: Content and Language (six required hours)

- BBL 5033 Teaching Content in Bilingual Programs
- BBL 5063 Reading in Bicultural-Bilingual Programs
- BBL 5143 Communication in Bilingual Classrooms
- BBL 5193 Children's Literature in Multicultural Societies

Research and Evaluation (six required hours)

- BBL 5053 Tests and Measurements in Bilingual and Second Language Studies
- BBL 6053 Testing Members of Bicultural-Bilingual Societies

- BBL 6063 Research Methodology in Bilingual and Second Language Studies
 BBL 6073 Ethnographic Research Methods in Bicultural-Bilingual Studies

English as a Second Language (six required hours)

- ESL 5053 Second Language Teaching Methods
 ESL 5063 Second Language Teaching and Content-Area Instruction
 ESL 6063 Writing in Second Language Programs
 ESL 6073 Language Teaching Materials

B. Option I. **Master's Thesis.** Six hours of graduate credit.

OR

Option II. **Electives.** Six hours of graduate elective coursework in Bicultural-Bilingual Studies, English as a Second Language, or in **approved** related areas.

Concentration in Bicultural Studies. This program of study offers the student the opportunity to pursue an interdisciplinary approach to the study of socio-cultural dynamics in multicultural societies, with emphasis on the study of biculturalism in the United States. Courses are designed for professional and research interest in education, government, social welfare, other social service areas, and community college instruction. Courses may be complementary to academic programs such as in the humanities, social sciences, and business. The M.A. degree is offered under two options: thesis and non-thesis.

Degree requirements.

A. Required coursework. 30 hours of coursework from *four* major areas as follows:

Socio-Cultural Foundations (twelve required hours)

- BBL 5003 Foundations for Bicultural Studies
 BBL 5013 Multicultural Groups in the United States
 BBL 5023 Cultural Adaptation in Bilingual Societies
 BBL 5073 Psychological Considerations in Bicultural-Bilingual Societies
 BBL 5123 Sociolinguistic Approaches to Education in Multicultural Societies
 BBL 5133 Hispanic Biculturalism in the United States

Historical Foundations (six required hours)

- HIS 5263 The Spanish Borderlands, 1521-1821
 HIS 5273 The Mexican Borderlands Since 1821
 HIS 5293 The American West
 HIS 5423 Colonial Mexico
 HIS 5433 Republican Mexico
 HIS 5463 Latin American Society

Language and Expressive Culture (six required hours)

- AHC 5813 Topics in Art History
 AHC 6813 Practicum in Art History and Criticism
 BBL 6033 Topics in Bicultural Studies
 ESL 5003 Linguistics for Second Language and Bilingual Specialists
 SPN 5003 Hispanic Cultural Periods and Traditions I
 SPN 5013 Hispanic Cultural Periods and Traditions II
 SPN 5483 Studies in Hispanic Culture
 SPN 5803 Mexican-American Literature

Research Foundations (six required hours)

- BBL 6073 Ethnographic Research Methods in Bicultural-Bilingual Studies
BBL 6053 Testing Members of Bicultural-Bilingual Societies
or
BBL 6063 Research Methodology in Bilingual and Second Language Studies

B. Option I. **Master's Thesis.** Six hours of graduate credit.

OR

Option II. **Electives.** Six hours of graduate elective coursework in Bicultural-Bilingual Studies, English as a Second Language, or in **approved** related areas.

Concentration in English as a Second Language. This program of study is designed for those who are concerned with teaching English as a second language to children or adults, in schools and programs in the United States or in international settings. This interdisciplinary program presents systematic instruction in applied linguistics, second language acquisition theory, and ESL program implementation. The M.A. degree is offered under two options: thesis and non-thesis.

Degree requirements.

A. Required coursework. 30 hours of coursework from *four* major areas as follows:

Theory of Language and Language Acquisition (nine to twelve required hours)

- BBL 5123 Sociolinguistic Approaches to Education in Multicultural Societies
ESL 5003 Linguistics for Second Language and Bilingual Specialists
ESL 5013 Psycholinguistic Foundations of Second Language Acquisition
ESL 5023 Language Analysis for Second Language Specialists
ESL 6013 Research in Second Language Acquisition

Methods and Materials (nine to twelve required hours)

- ESL 5033 Reading Acquisition and Techniques
ESL 5053 Second Language Teaching Methods
ESL 5063 Second Language Teaching Techniques
ESL 6023 History of Second Language Teaching
ESL 6063 Controlled Composition and Writing in Second Language Programs
ESL 6073 Language Teaching Materials

Language Assessment, Research and Evaluation (three to six required hours)

- BBL 5053 Tests and Measurements in Bilingual and Second Language Studies
BBL 6053 Testing Members of Bicultural-Bilingual Societies
BBL 6063 Research Methodology in Bilingual and Second Language Studies
BBL 6073 Ethnographic Research Methods in Bicultural-Bilingual Studies
ESL 6053 Assessment of Second Language Proficiency

Socio-Cultural Studies (three to six required hours)

- BBL 5003 Foundations for Bicultural Studies
BBL 5013 Multicultural Groups in the United States
BBL 5023 Cultural Adaptation in Bilingual Societies

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BBL 5073 Psychological Considerations in Bicultural-Bilingual Environments

BBL 5133 Hispanic Biculturalism in the United States

B. Option I. **Master's Thesis.** Six hours of graduate credit.

OR

Option II. **Electives.** Six hours of graduate elective coursework in Bicultural-Bilingual Studies, English as a Second Language, or in **approved** related areas.

**COURSE DESCRIPTIONS
BICULTURAL-BILINGUAL STUDIES
(BBL)**

5003 Foundations for Bicultural Studies

(3-0) 3 hours credit.

A study of basic concepts and principles for an interdisciplinary approach to biculturalism and multiculturalism.

5013 Multicultural Groups in the United States

(3-0) 3 hours credit.

A study of sociocultural diversity, culture maintenance and change, culture revitalization, and other aspects of ethnicity in the past, present, and future of the United States.

5023 Cultural Adaptation in Bilingual Societies

(3-0) 3 hours credit.

A study of the dynamic relationships between culture and language, with emphasis on various adaptations to the American value system.

5033 Teaching Content in Bilingual Programs

(3-0) 3 hours credit.

A study of techniques, methods, and approaches applicable to the teaching of subject area content in bicultural-bilingual programs, with attention to the foundations and the methodology relative to such programs. Offered in Spanish and English.

5053 Tests and Measurements in Bilingual and Second Language Studies

(3-0) 3 hours credit.

A study of language assessment instruments; emphasis on their background, application, and interpretation for assessing language proficiency, in accord with instructional objectives.

5063 Reading in Bicultural-Bilingual Programs

(3-0) 3 hours credit.

A study of the methods and techniques for teaching reading in two languages, with emphasis on the cultural concepts, patterns and regional contributions found in selected reading materials. Offered in Spanish and English.

5073 Psychological Considerations in Bicultural-Bilingual Environments

(3-0) 3 hours credit.

A study of the social and cognitive psychological factors affecting populations in bicultural-bilingual environments.

5113 Theoretical Foundations of Bicultural-Bilingual Education

(3-0) 3 hours credit.

A study and analysis of bicultural-bilingual program alternatives; research perspectives on effective implementation and adaptation to community needs.

5123 Sociolinguistic Approaches to Education in Multicultural Societies

(3-0) 3 hours credit.

A study of the demographic, ethnographic, and sociocultural elements of bilingual 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 Hispanic Biculturalism in the United States

(3-0) 3 hours credit.

A study of twentieth century Mexican-American, Central American, Cuban, and Puerto Rican ethnic self-determination patterns in the context of mainstream cultural diversity and change.

5143 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 survey and philosophical study of bicultural-bilingual education.

5193 Children's Literature in Multicultural Societies

(3-0) 3 hours credit.

A study of children's literature through a comparative, pluri-cultural analysis of the contents in books for children.

6033 Topics In Bicultural Studies

(3-0) 3 hours credit.

Suggested topics include: contemporary chicano arts; chicana women; Mexican-American folklore; teacher roles in multicultural schools; cultural factors in human resources development. May be repeated for credit when topics vary.

6053 Testing Members of Bicultural-Bilingual Societies

(3-0) 3 hours credit.

Issues of testing with non-dominant ethnic populations, research projects in appropriate assessment of language and cognitive abilities for minority group members.

6063 Research Methodology in Bilingual and Second Language Studies

(3-0) 3 hours credit.

Research design for the study of psychological and linguistic variables in bilingual and second language populations; emphasis on designing a research project.

6073 Ethnographic Research Methods in Bicultural-Bilingual Studies

(3-0) 3 hours credit.

Multidisciplinary techniques to survey and analyze bilingual-bicultural dynamics in institutional and community settings, with emphasis on sociolinguistics, unobtrusive research methods, and research ethics.

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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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: 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)

5003 Linguistics for Second Language and Bilingual Specialists

(3-0) 3 hours credit.

Concepts in linguistics, including descriptive and contrastive linguistics, with focus on implications for second language teaching.

5013 Psycholinguistic Foundations of Second Language Acquisition

(3-0) 3 hours credit.

Study of principles, theories and issues in second language acquisition and bilingualism with implications for language teaching.

5023 Language Analysis for Second Language Specialists

(3-0) 3 hours credit.

Study of English grammar from descriptive and discourse perspectives with consideration of cross-linguistic contrasts and of applications for teaching English as a second language.

5033 Reading in Second Language Programs

(3-0) 3 hours credit.

A course on the relationship of reading acquisition to language development including oral language and writing development. The preparation and adaptation of reading materials for various levels of proficiency. Critical evaluation of existing second language reading materials and progressive second language readers available in controlled vocabularies.

5053 Second Language Teaching Methods

(3-0) 3 hours credit.

A critical study of various methodologies in second language teaching.

5063 Second Language Teaching and Content-Area Instruction

(3-0) 3 hours credit.

Theoretical and practical approaches to integration of language teaching with subject matter areas. Emphasis on oral language and literacy for academic purposes.

6013 Research in Second Language Acquisition

(3-0) 3 hours credit.

Investigation of second language acquisition from multiple perspectives through data-based studies.

6023 History of Second Language Teaching

(3-0) 3 hours credit.

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 justification for past methods and techniques.

6033 Topics in Second Language Teaching

(3-0) 3 hours credit.

Suggested topics include: computer-assisted language learning, English for specific purposes, contrastive rhetoric, innovative methodologies, syllabus design. May be repeated for credit when topic varies.

6053 Assessment of Second Language Proficiency

(3-0) 3 hours credit.

Investigation of various approaches for testing second languages, with emphasis on informal assessments in classroom contexts.

6063 Writing In Second Language Programs

(3-0) 3 hours credit.

The development, presentation, and evaluation of materials for the teaching of composition and writing to second language learners in English as a Second Language and Bilingual Programs. Emphasizes relationship of writing development to proficiency in oral language development and reading.

6073 Language Teaching Materials

(3-0) 3 hours credit.

Offers the student the opportunity to develop skills in the revision, adaptation, and utilization of published language teaching materials. Emphasizes materials for oral language and literacy development.

6943 Internship In English as a Second Language

(3-0) 3 hours credit.

Supervised experience in teaching English as a Second Language. Prerequisite: Eighteen (18) hours of coursework in ESL and consent of instructor. May be repeated for credit to a maximum of six (6) hours.

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.

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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: Permission of the Graduate Advisor and thesis director.

Thesis research and preparation. May be repeated for credit, but not more the 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

The Master of Arts Degree in Education offers the student the opportunity for advanced study and professional development programs in seven fields of concentration:

- Cultural Foundations of Education
- Curriculum and Instruction
- Early Childhood and Elementary Education
- Educational Leadership
- Educational Psychology/Counseling and Guidance
- Educational Psychology/Special Education
- Adult and Higher Education

Education concentrations provide specialized degree plans in one or more areas of program emphasis so that students may choose a plan that is suitable to their particular needs and objectives. Degree plans are designed primarily to offer the opportunity to gain advanced levels of knowledge and professional competency for persons engaged in or concerned about educational activity in schools, colleges, and other public or private institutions and agencies. Credit toward graduate-level certificates and certificate endorsements may be earned in conjunction with work toward the Master's degree in most programs. Programs with a thesis option are available which emphasize the development of research competencies critical to continued graduate-level study.

The Concentration in Cultural Foundations of Education

This concentration offers the opportunity for advanced general study of the field of Education, examining the philosophical, sociological and psychological issues that influence institutions and processes of education as well as the disciplines of knowledge and the modes of inquiry that nourish and sustain them.

The Concentration in Curriculum and Instruction

The program emphases in Curriculum and Instruction are focused on the theoretical and practical aspects of curriculum planning, development, implementation, and evaluation in all subject fields and at all educational levels. The concepts of curricular innovation and teaching excellence are stressed in conjunction with expanded knowledge of content fields and applied research. Students who desire to specialize in a teaching field may do so by taking courses in that field to support the concentration in Curriculum and Instruction. Within the concentration in C&I a student may also specialize in the teaching of reading or in the supervision of instruction.

The Concentration in Early Childhood and Elementary Education

The concentration in Early Childhood and Elementary Education focuses on the broad spectrum of development and learning in children from infancy through preadolescence. Emphasis is on translating related research and theory into curriculum development and instruction, with the intent of helping children to realize the most complete development possible for them in a multicultural society. This concentration is designed primarily for experienced classroom teachers at the early childhood and elementary levels, but it is also suitable for personnel in human services and other allied fields.

The Concentration in Educational Leadership

Students seeking the opportunity to apply for management careers in public or private schools and school systems should follow programs in this concentration. The unique

problems, processes, and expertise associated with effective personnel management and curriculum leadership are explored, developed, and tested in practical field-based settings with an emphasis on applied research and human relations methodologies.

The Concentration in Educational Psychology/Counseling and Guidance

This concentration is designed for those students interested in careers in counseling and guidance at the elementary, secondary, or higher education levels and for those students interested in related mental health services. Coursework provides students the opportunity to apply for professional counselor certification (elementary and secondary) and/or for professional counselor licensure.

The Concentration in Educational Psychology/Special Education

This concentration is designed for those students seeking an opportunity for additional or advanced preparation for teaching handicapped children and youth. The student may elect one or more of a variety of specific emphases possible. The program is intended to offer students the opportunity for theoretical understanding and clinical opportunities to develop and apply skills in working with handicapped learners.

The Concentration in Adult and Higher Education

This concentration offers the opportunity for advanced study for careers in educational institutions for adult learners. Program emphases are offered for persons preparing to teach in higher education and adult continuing education programs, and for those whose interests are directed toward administrative/managerial roles in institutions or agencies that serve adult education functions. The program is designed for those for whom the Master's degree is terminal as well as for those pursuing the Master's degree as an intermediate program leading to further graduate study.

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 four required components: a core of common courses, a program emphasis, support work, and a comprehensive examination.

A) A core of courses common to all concentrations

1. EDU 5003, Research Methods in Education
2. EDU 5103, Contemporary Educational Philosophy
3. EDP 5003, Psychological Basis for Learning
4. C&I 5003, Theory and Dynamics of Curriculum and Instruction.

B) A program emphasis

The program emphasis must consist of at least twelve (12) hours in one of the following concentrations. (Courses outside the specific concentration may be used to meet this requirement with advance approval of the student's supervisory committee and the Graduate Advisor.)

1. Cultural Foundations of Education
2. Curriculum and Instruction (Program emphases: Master Teacher, Curriculum Specialist, Instructional Media Specialist, Curriculum Evaluation Specialist, Reading Specialist, Instructional Supervisor)
3. Early Childhood and Elementary Education
4. Educational Leadership
5. Educational Psychology/Counseling and Guidance
6. Educational Psychology/Special Education (Program emphases: Generic Special Education, Severely and Profoundly Handicapped, and Severely Emotionally Disturbed and Autistic)

7. Adult and Higher Education (Program emphases: College and University Teaching, College and University Administration, Adult and Continuing Education)

C) Support Work

Each student is required to select additional courses, with the consent and advice of the Program Advisor and with the approval of the Graduate Advisor, the Division Director, and the Dean, to complete degree requirements of 33 hours (with thesis) or 36 hours (without thesis). Nine hours of courses must be selected to support the concentration. Three additional hours must be taken with the approval of the Graduate Advisor.

Students in the Master Teacher program, in Supervision programs, and in Higher Education: College Teaching programs will take support courses in their teaching fields. Students in teacher certification programs may take their support work courses in areas that meet certification requirements. It is recommended that thesis students take EDU 5053 as part of the support work in the programs, but substitute courses are allowable if recommended by the student's supervisory committee.

D) Comprehensive Examination

The student's supervisory committee is responsible for administering this examination.

Summary of Degree Options

Option I, with thesis

Core

EDU 5003
EDU 5103
EDP 5003
C&I 5003

12 hours

Concentration

Courses required for a program emphasis in a single concentration

12 hours

Support

EDU 5053 or approved substitution
EDU 6983 (six hours)

9 hours

Total: 33 hours

Option II, without thesis

Core

EDU 5003
EDU 5103
EDP 5003
C&I 5003

12 hours

Concentration

Courses required for a program emphasis in a single concentration

12 hours

Support

9 hours of support courses
3 hours of approved electives

12 hours

Total: 36 hours

COURSE DESCRIPTIONS

ADULT AND HIGHER EDUCATION (AHE)

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.

5313 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. Credit cannot be earned for both AHE 5313 and EDL 5313.

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.

5623 Adult and Continuing Education Management Systems

(3-0) 3 hours credit.

Organization for adult and continuing education within a college or university and its relationship to the entire institution. Staffing, training, directing and controlling the continuing education effort. Planning, programming, and budgeting. Marketing and public relations. Methods of determining the market. Evaluation of administrative and academic performance. Credit cannot be earned for both AHE 5623 and EDL 5623.

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.

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.

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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
CURRICULUM AND INSTRUCTION
(C&I)**

5003 Theory and Dynamics of Curriculum and Instruction

(3-0) 3 hours credit.

An examination of theoretical structures underlying curriculum considerations and the implications of these for the work of responsible curriculum decision-makers at all levels, including administrators, instructional supervisors, and classroom teachers.

5103 Diagnosis and Prescription: Individualizing Instruction

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

An in-depth study of the tasks and problems associated with individualized instruction. Students will be offered the opportunity to 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.

5133 Student Learning and Mathematics Instruction

(3-0) 3 hours credit.

Mathematics teaching from the perspective of learning theories. Student characteristics and their theoretical explanations as the basis for mathematics curricula and instructional processes. The relation of learning theories to the acquisition of mathematical concepts and processes.

5313 Instructional Materials Production I: Graphics

(3-0) 3 hours credit. Prerequisite: C&I 5003 or consent of instructor.

The opportunity for 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 offer students the opportunity for preparation 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.

5503 Curricula for Pre-school and Primary Children

(3-0) 3 hours credit.

Opportunity is provided for a systematic analysis of curricula for pre-school and primary grade children, including a critical study of related objectives, organizational schemes, content teaching strategies, and materials.

- 5513 Materials, Methods, and Techniques in Teaching Early Childhood Education**
(3-0) 3 hours credit.
A study of the methodologies and techniques effective in teaching preschool and elementary school children. Construction and use of materials for teaching at the level of student ability.
- 5523 Curriculum Planning for Early Childhood and Elementary Education**
(3-0) 3 hours credit. Prerequisite: C&I 5003 or consent of instructor.
An analysis of the basis for curriculum planning in early childhood and elementary content areas; consideration of developmental levels, domains of learning, and taxonomies of objectives with special attention to the role of the teacher and the student, the uses of materials, the classroom environment, and special student populations.
- 5533 Curriculum for Handicapped Children and Youth**
(3-0) 3 hours credit. Prerequisites: EDP 5403 or consent of instructor.
Opportunity will be provided for analysis of curriculum planning and sequencing and also for students to plan instructional materials appropriate for the implementation of mandated individual educational plans for handicapped children and youth.
- 5543 Curriculum Planning and Development for Severely/Profoundly Handicapped Children and Youth**
(3-0) 3 hours credit.
The study, development and implementations of curriculum appropriate to educating severely and profoundly handicapped children and youth. Includes analysis of commercially available curricula and the development of curricula to meet the educational needs of the severely handicapped.
- 5603 Curricula for Elementary School Children**
(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 grades 1-8.
- 5703 Secondary School Curricula**
(3-0) 3 hours credit.
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 Introduction to Reading**
(3-0) 3 hours credit.
Introduction to the reading process, overview of the development of reading, examination of instructional issues associated with the teaching of reading. Required for students who have completed less than six hours of reading courses at the undergraduate level.
- 5743 Reading in Secondary School**
(3-0) 3 hours credit.
Principles and techniques for teaching higher level reading and comprehensive skills to improve proficiency in learning various academic subjects in middle and secondary schools. Strategies for meeting needs of the wide range of ability levels found in secondary schools.
- 5753 Literature for Children and Adolescents**
(3-0) 3 hours credit.
Examines the selection and uses of children's literature and adolescent literature in the classroom. Emphasizes ways to integrate literature into the elementary and secondary school curriculum.
- 5763 Diagnosis and Remediation of Reading and Learning Problems**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Multidisciplinary approach to diagnosis and remediation of reading disabilities with attention to neurological, physical, perceptual, mental, emotional, cognitive, and linguistic aspects which may impede learning.

5773 Clinical Practicum In Reading

(3-0) 3 hours credit. Prerequisite or concurrent enrollment: C&I 5763 or consent of instructor.

Application of diagnostic and remedial procedures with individual children; guided field based experiences with weekly seminars designed to enrich the field experience.

5783 Survey of Reading Research

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

A review of past and current literature and research concerning the reading process, curricula, and instructional practice. Opportunity for students to acquire critical analysis skills in evaluating research.

5793 Seminar In Reading Supervision

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

Organization of developmental and remedial reading and writing programs. Selection of appropriate materials. Techniques and procedures for maintaining quality programs, including staff selection and inservice training. The role of research in improving the teaching of reading and writing.

5803 Higher Education Curricula

(3-0) 3 hours credit.

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. Prerequisite: Consent of instructor.

An application of curriculum development theory, educational planning theory, learning theory, and human relations theory to instructional supervision; an examination of the role of the supervisor. Credit cannot be earned for both C&I 6003 and EDL 6003.

6013 Supervision: Teaching-Learning Process

(3-0) 3 hours credit. Prerequisite: C&I 6003 or consent of instructor.

The analysis and application of models of the teaching-learning process to instructional supervision; the study and application of content, interaction, and climate analysis techniques. Credit cannot be earned for both C&I 6013 and EDL 6013.

6023 Supervision: Tools and Techniques

(3-0) 3 hours credit. Prerequisite: C&I 6003 or consent of instructor.

A study of impact strategies in instructional supervision, and the development of communication and interpersonal skills needed for working with teachers. Credit cannot be earned for both C&I 6023 and EDL 6023.

6153 Occupational Information and Resources

(3-0) 3 hours credit. Prerequisite: EDP 5203 or consent of instructor.

A study of theories of occupational choice and vocational development and their application to the guidance process. Investigation of career education and its implication for career guidance services in schools. Identification and utilization of various types of occupational information and resources for students (including handicapped students).

6203 Instructional Procedures for Handicapped Children and Youth

(3-0) 3 hours credit.

Opportunity to study instructional methodologies and procedures effective in educating handicapped children and youth within a variety of administrative arrangements.

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 offer students the opportunity to develop 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
6. Physical Education

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Early Childhood and Elementary Education

7. Philosophy for Children

May be repeated for credit when disciplines vary.

6403 Instructional Procedures for Severely/Profoundly Handicapped Children and Youth

(3-0) 3 hours credit.

A study of theories, methodologies and instructional practices for educating severely handicapped children and youth (including emotionally disturbed and autistic) in a variety of delivery arrangements.

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.

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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 (ECE)

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.

5133 Language Development in Preschool-Primary Children

(3-0) 3 hours credit.

Study of early acquisition and development of language skills. Emphasis on identifying the sequence of normal expressive and receptive language development in terms of the child's related abilities and learning experiences.

5453 Classroom Behavior Problems In Children

(3-0) 3 hours credit. Prerequisite: EDP 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 curricula considerations affecting or affected by classroom behavior.

5473 Specialized Instruction in Early Childhood and Elementary Education

(3-0) 3 hours credit. Prerequisite: C&I 5503 or consent of instructor.

Identification, description, analysis, and evaluation of examples of specialized instruction as related to needs of learners, characteristics of subject matter, and/or demands of an environment.

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.

6163 Biological Basis of Child Development

(3-0) 3 hours credit. Prerequisites: One course in general biology or general psychology or consent of instructor.

Analysis of biological and psychological perspectives on child growth and development. Emphasis on theoretical aspects of biopsychological and social factors influencing cognitive and learning 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; limit 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 Assessment and Evaluation in Early Childhood and Elementary Education

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

Evaluation and research on educational programs, processes, products, instructional objectives, and alternative approaches to attain objectives. Methods and materials for disciplined inquiry into current significant issues in early childhood and elementary education. The student will systematically examine a major educational issue relevant to his/her specialization.

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 experimentation related to teaching/learning situations.

6953 Independent Study

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 in Early Childhood or Elementary Education

3 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 the opportunity for 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 may be required.

5053 Inferential Educational Statistics

(3-0) 3 hours credit. Prerequisites: EDU 5003 and STA 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. 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.

Philosophical analysis of issues in American education. Consideration is given to ethical and epistemological implications of issues with an emphasis on the evaluation of arguments for the adoption of educational policy.

5113 Philosophical and Ethical Dimensions of Counseling

(3-0) 3 hours credit.

Examination and analysis of philosophical traditions undergirding contemporary counseling. Emphasis given to analysis of ethical issues impacting upon the counseling profession.

5203 Evolution of Educational Thought

(3-0) 3 hours credit.

An examination of the major educational thinkers in Western Civilization and a review of past institutional arrangements for education.

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 cultures 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.

5703 Micro-Computer Applications for Educational Settings

(3-0) 3 hours credit. Prerequisite: CS 5003 or consent of instructor.

A study of the operations and applications of micro-computers in educational settings. Emphasis on the development and testing of these applications in an educational environment.

5803 Juveniles, Schools and the Law

(3-0) 3 hours credit.

An examination of the extent and problem of delinquent behavior particularly as it relates to the school. Designed to familiarize school personnel with the interrelated problems of schools and law enforcement agencies with respect to delinquent behavior, this course explores strategies for dealing with these problems.

6603 Seminar in Educational Research

(3-0) 3 hours credit. Prerequisite: Completion of no less than 30 semester hours of degree program.

Each student will be expected to: (1) develop plans for a research project related to an educational issue, (2) collect and analyze data to carry out the research, (3) prepare a research report, and (4) participate in research seminars.

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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination. Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6971-3 Special Problems

1 to 3 hours credit. Prerequisite: Consent of instructor. An organized course offering the opportunity for 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: 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
EDUCATIONAL LEADERSHIP
(EDL)**

5003 General School Administration

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

5103 General Finance and Taxation in Education

(3-0) 3 hours credit. Prerequisite: Consent of instructor. Survey of current designs in educational finance of public school districts; review of general concerns, and practices of the appropriate local, state, and federal governmental agencies.

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 Administration

(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. Consideration of supportive roles requisite to the supervision of professionals in the educative process.

5313 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. Credit cannot be earned for both EDL 5313 and AHE 5313.

5403 The Principalship

(3-0) 3 hours credit. Prerequisites: One year teaching experience, and completion of EDL 5003 and EDL 5103, or consent of program coordinator. Analysis of the principal's role as he or she interacts with his or her various referent groups. Special emphasis on behavior and on supervision of the instructional program. Applicable to elementary and secondary administration.

5503 Administration and Function of Special Programs

(3-0) 3 hours credit. Prerequisites: EDL 5003 and EDL 5103, or consent of program coordinator.

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 Practicum in Applied Research in Administration

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

Locating and analyzing researchable problems in educational leadership, conducting literature searches basic to planning research, collecting and analyzing data. Each student will be expected to complete a research study and submit a report in such form that would be useful for application in a school system.

5623 Adult and Continuing Education Management Systems

(3-0) 3 hours credit.

Organization for adult and continuing education within a college or university and its relationship to the entire institution. Staffing, training, directing and controlling the continuing education effort. Planning, programming and budgeting. Marketing and public relations. Methods of determining the market. Evaluation of administrative and academic performance. Credit cannot be earned for both EDL 5623 and AHE 5623.

5703 Legal Foundations in Education

(3-0) 3 hours credit.

Survey of current legal basis and practices in the policy administration of education and review of significant court decisions pertaining to educational operations. Emphasis on rights and responsibilities of teachers and students and legislation related to multicultural institutional operations.

5803 The Middle School

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

Origins, 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.

5943 Internship in Building-Level Administration

(3-0) 3 hours credit. Prerequisites: EDL 5603 and consent of instructor.

Individually supervised building level on-the-job experience with an approved administrator or program specialist with related reading and study. Candidates currently in full-time teaching positions must enroll for Summer session only.

6003 Supervision: Theoretical Basis

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

An application of curriculum development theory, educational planning theory, learning theory, and human relations theory to instructional supervision; an examination of the role of the supervisor. Credit cannot be earned for both EDL 6003 and C&I 6003.

6013 Supervision: Teaching-Learning Process

(3-0) 3 hours credit. Prerequisite: EDL 6003 or consent of instructor.

The analysis and application of models of the teaching-learning process to instructional supervision; the study and application of content, interaction, and climate analysis techniques. Credit cannot be earned for both EDL 6013 and C&I 6013.

6023 Supervision: Tools and Techniques

(3-0) 3 hours credit. Prerequisite: EDL 6003 or consent of instructor.

A study of impact strategies in instructional supervision, and the development of communication and interpersonal skills needed for working with teachers. Credit cannot be earned for both EDL 6023 and C&I 6023.

6103 Personnel Administration in Education

(3-0) 3 hours credit. Prerequisite: EDL 5003 or consent of instructor.

Survey of roles, responsibilities and functions of personnel officers in education; studies in general personnel policies; review of administration of insurance, salary, retirement, sick leave and other programs operated under personnel administration.

- 6203 Educational Funds and Facilities Management**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
An analysis of funds and facilities planning, managing, and utilization at the school district level. Emphasis is upon relating funds and facilities management to the needs of local school districts.
- 6403 Survey of Organization and Administration Theory in Education**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
General studies in current theories applicable to educational administration; emphasis includes understanding theory and research from related academic fields; requirements include reviews of related research, and understanding appropriate research designs.
- 6943 Internship in Educational Administration**
(1-8) 3 hours credit. Prerequisites: EDL 5603 and consent of instructor.
Individually supervised district-wide or system level on-the-job experience with an approved district-level administrator or program specialist with related reading and study. Must be taken during the Summer session by full time principals unless arrangements are made in advance.
- 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.
- 6973 Special Problems**
3 hours credit. Prerequisite: Consent of instructor.
An organized course offering the opportunity for 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 growth during the adolescent and adult period.
- 5033 Human Development Across the Lifespan**
(3-0) 3 hours credit.
Major focus on issues related to developmental behavioral change across the human lifespan. Implications for counseling individuals at various stages of their development.
- 5203 The Guidance Function in Education**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
The role of guidance services in education. Focus will be on teacher, counselor, administrator roles, current and emerging practices.

- 5213 Counseling Theories**
(3-0) 3 hours credit. Prerequisite: EDU 5003.
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. Prerequisite: EDP 5203 or consent of instructor.
Offers the opportunity for students to study group tests, with a focus on analysis and interpretation of instruments used to measure achievement, aptitude, interests, and personality.
- 5233 Group Processes: The Individual in the Group**
(3-0) 3 hours credit. Prerequisite: EDU 5003 or consent of instructor.
A study of group structure and theory. Focus on group influences on behavior.
- 5243 Counseling Individuals With Behavioral and Emotional Disorders**
(3-0) 3 hours credit. Prerequisites: EDP 5203 and EDP 5213.
Counseling interventions with behavioral and emotional disorders; symptomatology for psychoses, emotional disorders and maladaptive behavior patterns.
- 5263 Child and Adolescent Counseling**
(3-0) 3 hours credit. Prerequisite: EDP 5203 and either EDP 5013 or EDP 5023 or consent of instructor.
Analysis of factors accounting for abnormal behavior and factors contributing to psychological health in children and adolescents. Counseling procedures are studied. Case work is required.
- 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 Development of Counseling Skills**
(3-0) 3 hours credit. Prerequisite: EDP 5213 or consent of instructor.
A systematic approach to counseling. Focus on sequential learning of counseling skills and their practical application in a field setting. Counseling sessions will be audio-taped and analyzed.
- 5403 The Exceptional Child in School**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
An introduction to and survey of the field of special education. Characteristics, etiology, definition, and prevalence of exceptional children; description of services available; field experiences.
- 5413 Severely/Profoundly Handicapped Children and Youth**
(3-0) 3 hours credit. Prerequisite: EDP 5403 or consent of instructor.
A study of the severely/profoundly handicapped from historical, sociological, psychological, and educational perspectives. The implications of a variety of theories for the education of the severely/profoundly handicapped will be examined. Current trends in service delivery will be studied.
- 5423 Behavior Modification and Classroom Management**
(3-0) 3 hours credit. Prerequisite: EDP 5403 or consent of instructor.
Principles and procedures of behavior modification and classroom management to facilitate the acquisition and improvement of social academic and life skills of handicapped children and youth. Requires an applied project.
- 5443 Parent Conferences and Consultative Skills in Special Education**
(3-0) 3 hours credit. Prerequisite: EDP 5403 or consent of instructor.
The opportunity to acquire knowledge and skills for working with parents, teachers, and other professionals in optimizing the exceptional child's educational and therapeutic experiences. Students will plan, implement, and evaluate a series of parent training and consultative experiences.

5453 Characteristics of the Child with Learning Disabilities

(3-0) 3 hours credit.

A study of the incidence, prevalence, etiology, and characteristics of the child with learning disabilities. The relationship between LLD, child development, school environment, and academic performance will be studied. Special emphasis will be given to a critical analysis of formal and informal assessment techniques.

5463 Language Development and Intervention With the Handicapped Child

(3-0) 3 hours credit. Prerequisite: EDP 5403 or consent of instructor.

Methods of assisting handicapped pupils to achieve communicative competence through language acquisition, remedial and intervention programs, and alternative non-speech language and communication systems.

5473 Behavior Analysis and Intervention with Severely/Profoundly Handicapped Children and Youth

(3-0) 3 hours credit.

Principles and procedures of behavior analysis and intervention for the acquisition and improvement of skills of the severely handicapped. An applied behavior analysis project is required.

5543 The Behaviorally Disordered Child

(3-0) 3 hours credit.

Designed to offer the opportunity for special educators and students in related fields with an understanding of various theories and practices in the field of behavior disorders. Research relative to the education of the behaviorally disordered child as well as its practical implications for the classroom teacher will be considered.

5553 Assessment and Evaluation of Handicapped Children and Youth

(3-0) 3 hours credit.

Designed to offer the opportunity for students to develop the ability to use a variety of instruments and procedures to evaluate the behavior and performance of handicapped individuals. Assessment techniques, instruments, and procedures to evaluate cognitive, educational, psychological, and behavioral domains.

5563 Practicum in Special Education: Mildly and Moderately Handicapped Children and Youth

(3-0) 3 hours credit. Prerequisites: EDP 5403 and consent of instructor.

The application of theoretical principles to field settings. Students will be required to develop, implement, and evaluate educational programs for mildly and moderately handicapped children and youth.

5573 Practicum in Special Education: Severely/Profoundly Handicapped

(3-0) 3 hours credit. Prerequisites: EDP 5403 and consent of instructor.

The application of theoretical principles to field settings. Students will be required to develop, implement, and evaluate educational programs for severely handicapped children. May be repeated for credit one time (6 hours total credit).

5593 Practicum in Special Education: Behavior Disorders

(3-0) 3 hours credit. Prerequisite: Consent of instructor.

The application of theoretical principles to field settings. The student will work in educational settings which will include planning, implementing, and evaluating appropriate experiences with emotionally disturbed students.

5623 Advanced Individual Appraisal

(3-0) 3 hours credit. Prerequisite: EDP 5553 or EDP 5223 or consent of instructor.

Offers the opportunity for the development of skills in the administration and interpretation of major individually administered diagnostic and clinical instruments and procedures: Wechsler Intelligence scales and supplementary tests. Limited enrollment.

5693 Practicum in Counseling

(3-0) 3 hours credit. Prerequisite: 18 hours of coursework in counseling, including EDP 5203, EDP 5213, EDP 5223, EDP 5233, and EDP 5393. Students must apply for permission to enroll one semester in advance.

Offers the opportunity for supervised field work in a counseling setting. May be repeated for credit to maximum of 9 hours.

172 / Educational Psychology
Health and Physical Education
Secondary Education

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.

The opportunity for 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.

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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
HEALTH AND PHYSICAL EDUCATION
(HPE)**

5003 Current Trends in Physical Education

(3-0) 3 hours credit.

Students will have the opportunity to examine current development in theories and practices of physical education. Recent research and literature will be examined for causes and consequences of today's issues, trends, and problems.

5013 The Role of Sport in Society

(3-0) 3 hours credit.

Opportunity to study human behavior in sport and physical activity. Functional approach to a contemporary view of the impact of sport and physical activity on society. Examination of the various aspects of sport and affective roles that it takes as part of social structure and education.

5023 Leadership in Physical Education

(3-0) 3 hours credit.

Opportunity for examination of the various leadership roles in physical education. Analysis of the principles, duties, responsibilities, and processes of leadership for the professional physical educator.

**COURSE DESCRIPTIONS
SECONDARY EDUCATION
(SED)**

6953 Independent Study

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.

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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.

DOCTOR OF PHILOSOPHY DEGREE IN EDUCATIONAL LEADERSHIP

The Doctor of Philosophy degree in Educational Leadership is a cooperative program between The University of Texas at San Antonio and The University of Texas at Austin. However, the degree granting authority is totally with The University of Texas at Austin. This means that the diploma will have on it the name of The University of Texas at Austin. The degree is designed to offer the student an opportunity for advanced study in the administration and governance of educational organizations. Special attention is given to culturally diverse school districts and other agencies, so that graduates may be better able to meet the multicultural needs in the southwest, particularly, South Texas.

Special Admission Requirements. Students must be admitted both to The University of Texas at San Antonio and The University of Texas at Austin. Admission requirements are the same as those listed in The University of Texas at Austin Graduate Catalog. Admission is based on multiple criteria. Individuals not possessing the minimum Graduate Record Examination score or grade-point average are encouraged to apply and present additional information that may be considered in the admission process.

Degree Requirements. The minimum number of semester hours required for this degree is forty eight (48) above the Master's degree. Each student's program of study is based upon the student's prior academic record and degree and career goals. Any changes in the program requirements for the doctoral degree at The University of Texas at Austin will also apply in the cooperative program. During 1989-91, a limited number of courses will be offered by The University of Texas at San Antonio faculty.

Each student will take a written two-day candidacy examination after completing a substantial amount of the program in core areas and designated electives. The examination will include a comprehensive test of generic "core" administrative knowledge and a specialized section. Faculty members from The University of Texas at San Antonio and The University of Texas at Austin will read the examinations. Each student also must complete successfully an oral examination. A student may be admitted to candidacy for the degree only when (1) these examinations have been successfully completed, (2) a program of study has been approved, (3) a dissertation topic has been approved, and (4) a dissertation committee has been appointed. All work in a candidate's proposed program must have been taken within six years of the time the student is admitted to candidacy.

Residence requirements will be consistent with present requirements at The University of Texas at Austin. Residency consists of a minimum of nine semester hours (excluding dissertation registrations) in each of two *consecutive* semesters, one of which may be a full summer session.

A dissertation is required of all candidates for the degree of Doctor of Philosophy. The dissertation shall constitute a contribution to knowledge and will be a product of the thorough investigation of a basic and significant area of educational leadership. A publication listing specific steps in completing the dissertation may be obtained from the office of the Division of Education at The University of Texas at San Antonio.

COURSE DESCRIPTIONS EDUCATIONAL LEADERSHIP (EDL)

- 7103 Contemporary Theory Base in Educational Leadership**
(3-0) 3 hours credit. Prerequisite: EDL 6403 or consent of instructor.
Study of current theories of educational administrative leadership. Application to behavior and educational issues and policy development.
- 7123 Current Issues in School Finance**
(3-0) 3 hours credit. Prerequisite: EDL 5103 or consent of instructor.
Inquiry to school finance issues in local, state and federal arenas; public education as an economic institution.
- 7133 Legal Issues in Educational Administration**
(3-0) 3 hours credit. Prerequisite: EDL 5703 or consent of instructor.
Special topics in legal aspects of executive management and administration of educational institutions. Emphasis on policy and fundamental law associated with institutional and upper level administrative operations.
- 7143 Topics in Personnel Administration**
(3-0) 3 hours credit. Prerequisite: EDL 6403 or equivalent and consent of instructor.
Functions of school personnel offices. Policies affecting personnel development; personnel recruitment, selection, management and evaluation.
- 7203 Organizational Systems Analysis**
(3-0) 3 hours credit. Prerequisite: EDL 7103 or consent of instructor.
A study of systems analysis techniques applicable to human service organizations including organizational development and other techniques of organizational change.
- 7313 Administration of Urban/Multicultural Schools**
(3-0) 3 hours credit. Prerequisite: Consent of instructor.
Provides potential and current practicing administrators/instructional supervisors with knowledge of conditions of urban/multicultural schools and ability to create alternative educational delivery systems.
- 7403 Instructional Leadership and School Management**
(3-0) 3 hours credit. Prerequisite: EDL 6403 or EDL 7103 or consent of instructor.
Examinations of theories and practices of the two concepts, leadership and management, both in educational organizations and in other systems such as politics and military will be undertaken.
- 7433 Advanced Seminar: Administrator as Instructional Leader**
(3-0) 3 hours credit. Prerequisite: EDL 6403 or EDL 7103 or consent of instructor.
A seminar examining strategies, techniques and problems involved in administering and evaluating site based and district instructional leadership programs.
- 7503 Research on Executive Level Educational Management Positions**
(3-0) 3 hours credit. Prerequisite: EDL 6403 or EDL 7103 or consent of instructor.
Advanced study in research and practice of executive level positions in education related fields.

DIVISION OF SOCIAL AND POLICY SCIENCES

MASTER OF PUBLIC ADMINISTRATION DEGREE

The Master of Public Administration (MPA) Degree is designed to offer the opportunity for advanced study to students interested in professional careers in the public sector at all levels of government.

Special Admission Requirements. In order to qualify for unconditional admission, applicants must (a) satisfy university-wide graduate admission requirements; (b) have completed at least eighteen hours (twelve of which must be upper division) of course work in an appropriate academic discipline; and (c) an undergraduate research methods or statistics course (e.g., SSC 3013). Judgment on admission will be based on a combination of the following factors for each applicant: (a) performance on the Graduate Record Exam (GRE) or Graduate Management Admission Test (GMAT); (b) undergraduate transcripts and trend of grades; (c) professional background.

Degree Requirements. The minimum number of semester hours required for the MPA degree, exclusive of course work or other study required to remove deficiencies, is 42.

All candidates for the degree must complete:

- A. 18 semester hours of core courses:
 1. FIN 5043 Budgeting and Finance in the Public Sector
or
PAD 5373 Resource Allocation for the Public Sector
 2. PAD 5003 Contemporary Perspectives on Public Administration
 3. PAD 5323 Public Policy Formation and Implementation
 4. PAD 5903 Quantitative Methods for Public Administration
 5. PAD 6513 Communication Skills for Public Management
 6. POL 5353 Theories of Public Bureaucracy
- B. 12 semester hours in a specialization chosen in consultation with the MPA program graduate advisor.
 1. Administration of Justice
 2. Human Resources Management
 3. International Administration and Policy
 4. Public Health Administration
 5. Public Management and Public Policy
 6. Public Sector Financial Management
 7. Urban Planning Management
- C. 6 semester hours of electives
- D. 6 semester hours of applied coursework (PAD 6703, 6713), internship (PAD 6963-6) or Thesis (PAD 6983-6). Consent of the Dean, the Director and the MPA Graduate Advisor of Record must be received before enrollment in these courses. Students with substantial public sector management experience (normally at least 3 years) may petition to take 6 hours of coursework as a substitute for this requirement.

In addition to the semester hour requirements set forth above, all candidates for the degree are required to pass comprehensive examinations, both written and oral, which will be scheduled after a student has completed at least 30 semester hours of course work.

**COURSE DESCRIPTIONS
PUBLIC ADMINISTRATION
(PAD)**

- 5003 Contemporary Perspectives on Public Administration**
(3-0) 3 hours credit. Prerequisite: Graduate standing.
Provides an introductory overview of major issues in public administration. Examines the roots of the discipline in relation to current trends in public sector management.
- 5223 Urban Management**
(3-0) 3 hours credit.
An examination of the major economic, social, and political processes involved in managing urban government in the United States. Special attention is given to retrenchment, capital budgeting, and intergovernmental financial policies as they relate to municipal government.
- 5303 Ethics In Government Administration**
(3-0) 3 hours credit.
An analytical and normative inquiry into the philosophical and legal foundations of government administration; the propriety, application and enforcement of ethical standards for conduct in government. An empirical inquiry into the behavior of personnel in specific administrations. Topics may include the dilemmas associated with public administration in democracies, multicultural environments, and in societies marked by socio-economic and ideological stratification.
- 5323 Public Policy Formation and Implementation**
(3-0) 3 hours credit.
Processes through which public demands are generated, converted and incorporated into formal policy. Examination of the multiple environmental factors which may affect policy implementations and outcomes.
- 5333 Public Policy Evaluation**
(3-0) 3 hours credit.
The process, politics, and methodology of analyzing and evaluating public programs. Uses, limitations, and biases of particular methods such as cost-benefit analysis. Students are required to produce a report applying diagnostic techniques and value judgments to a particular program.
- 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. (Formerly POL 5343; credit cannot be earned for both POL 5343 and PAD 5343.)
- 5353 Policy Issues In Public Services and Employment**
(3-0) 3 hours credit.
Analyzes current issues of interest such as: 1) evaluation of public services; 2) productivity evaluation; 3) job incentives; 4) public awareness; 5) budget techniques; and 6) revenue generation. May be repeated when subject matter is different.
- 5373 Resource Allocation for The Public Sector**
(3-0) 3 hours credit.
Examines the politics and processes involved in making budgetary decisions. Analyzes the relationship of budgetary and fiscal theories to public management, budget outcomes, and how service distribution in a complex federal system is affected by budget decisions made by elected public officials.
- 5423 Employment and Training Programs**
(3-0) 3 hours credit.
An analysis of public policies and programs designed to deal with the problems of unemployment, inflation, poverty and inequality.

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. Interaction of affirmative action policies with civil service rules, collective bargaining structures, and internal personnel systems are discussed.

5503 Introduction to Urban Planning

(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.

5543 Urban Housing

(3-0) 3 hours credit.

Analysis of housing problems, their causes, and attempted solutions. Specific attention is given to the dynamics of the urban housing market.

5563 Urban Planning Methods

(3-0) 3 hours credit.

This course focuses on the practical application of analytical tools and techniques available to the city planner in addressing social, economic, and environmental problems. Emphasis is placed on the comprehensive plan. Planning tools to be used are: shift-share, input-output, trade area, fiscal impact, and demographic analysis.

5623 Comparative Public Administration

(3-0) 3 hours credit.

Analysis of a variety of contemporary administrative systems in Western, Communist, and developing nations. Special attention to historical development, organization, functioning, and recruitment in selected bureaucracies. Examines relationships between bureaucracies and other components of the political system.

5643 International Security Policy and Administration

(3-0) 3 hours credit.

A comparative examination of governmental functions that provide for defense, internal security, economic and social administration. Topics may include comparative policy formulation; resources and defense postures; defense systems, arms transfers and control; nuclear environment; force in international law; diplomacy; threat perception and strategic surprise; intelligence agencies; deterrence.

5803 Public Health Policies and Administration

(3-0) 3 hours credit.

An examination of the major public health policies (on the federal and state levels), their basis and response to public health services demand, and their implementation programs. Focus is placed on the role of the Public Health Administrator within the policy contexts.

5823 Public Health Finance

(3-0) 3 hours credit.

The course examines and considers issues of the finance of public health programs in the context of public demands and limited resources. Financial interaction between federal, state and local governments and the private health care delivery system will also be explored. Focus will be placed on budgetary measures in the context of major public health problems such as AIDS.

5833 The Aging Population and Public Health Administration

(3-0) 3 hours credit.

The course analyzes the administrative responses needed to address changing public health demands created by demographic shifts in the population, leading to an increasing elderly population.

5843 Epidemiological Demands and Public Health Administration

(3-0) 3 hours credit.

Analyzes the administrative responses needed to address immediate and long term issues of the factors involved in large scale disease prevalence.

5903 Quantitative Methods for Public Administration

(3-0) 3 hours credit. Prerequisite: STA 1064 or SSC 3013 or equivalent.

Quantitative aspects of analysis and decision making, emphasizing research design and use of inferential and descriptive statistics with computer applications. Univariate analysis through multivariate analysis is covered. Cost-benefit analysis, linear programming, and decision trees also may be considered.

6223 Legal Regulation of Urban Systems

(3-0) 3 hours credit. Prerequisite: PAD 5503 or consent of Instructor.

This course focuses on how the law affects municipal management and planning practice. Topics include legal research, real property law, municipal corporations, land use and land development regulation and municipal annexation.

6513 Communication Skills for Public Management

(2-2) 3 hours credit.

Offers the opportunity for students to be introduced to the use of oral, written, graphical, 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.

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 services, water/sewer systems, police systems, fire systems) as interrelated systems by analyzing their measures of effectiveness. The utilization of mathematical models for analyzing these functions is reviewed. Specific attention is given to spatial allocation, risk analysis, municipal deployment analysis, and multi-attribute utility techniques.

6703 Applied Public Management

(3-0) 3 hours credit.

This course provides the opportunity to apply substantive expertise and technical skills to management problems in the public sector.

6713 Applied Public Policy

(3-0) 3 hours credit.

This course provides the opportunity to apply substantive expertise and analytical skills to policy problems in the public sector.

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.

6961 Comprehensive Examination

1 hour credit. Prerequisite: Approval of the appropriate Committee on Graduate Studies to take the Comprehensive Examination.

Independent study course for the purpose of taking the Comprehensive Examination. May be repeated as many times as approved by the Committee on Graduate Studies. Enrollment is required each term in which the Comprehensive Examination is taken if no other courses are being taken that term. The grade report for the course is either CR (satisfactory performance on the Comprehensive Examination) or NC (unsatisfactory performance on the Comprehensive Examination).

6963-6 Internship

3 to 6 hours credit.

An opportunity will be provided for the students to work in a setting which will permit them to apply the knowledge learned in the formal instruction part of the program. May be repeated for credit to a maximum of 6 hours.

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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.

6983-6 Master's Thesis

3-6 hours credit. Prerequisites: 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

CRIMINAL JUSTICE

(CRJ)

5013 Crime and Justice: Theory and Policy

(3-0) 3 hours credit.

An examination of the phenomenon of crime, its impact on victims, social institutions and the criminal justice system. Particular attention will be given to the interactions between theories of crime, the processes for developing policy alternatives and implementation of justice delivery. (Formerly CRJ 5003; credit cannot be earned for both CRJ 5003 and CRJ 5013.)

5423 Seminar In Correctional Administration

(3-0) 3 hours credit.

A study of correctional components of the criminal justice system including institutional and community based. Reviews impact of legal and social change on correctional agencies. Emphasis on planning and evaluation of innovative programs.

5543 Juvenile Justice, Schools and Public Policy

(3-0) 3 hours credit.

An examination of the causes, extent and nature of delinquent behavior, the role of schools and related social institutions. Focuses on juvenile law and the judicial process, school and public policies for delinquency prevention and control; evaluative research on the relative costs and effectiveness of various interventions and programs. (Formerly CRJ 6973 Special Problems: Juvenile Justice and the Schools; credit cannot be earned for both the former and CRJ 5543.)

5753 Legal Dimensions of Criminal Justice

(3-0) 3 hours credit.

A review of recent and contemporary legal issues related to the administration of criminal justice. Examines legal parameters of the criminal justice system in terms of impact on various component parts.

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.

180 / Criminal Justice

Geography

Political Science

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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

GEOGRAPHY

(GRG)

5303 Economics 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.

5323 Seminar in Urban Geography

(3-0) 3 hours credit.

Advanced study of urban structure and urban dynamics viewed from a spatial perspective. Topics may include urbanization, housing and neighborhood space, intraurban migration, the location of economic activity in the city, and urban land use systems. May be repeated for credit when the topics vary.

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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

POLITICAL SCIENCE

(POL)

5153 American Government and Politics

(3-0) 3 hours credit.

An examination of the major issues, problems and processes of American government and administration.

5353 Theories of Public Bureaucracy

(3-0) 3 hours credit.

Students are offered the opportunity to examine some of the major theories of bureaucracy and their effect on the development of public bureaucracy in the United States. The relationship of major sociological and ethical theories to public bureaucracy will also be examined.

5503 Constitutional Law and Judicial Decision-Making

(3-0) 3 hours credit.

An advanced course in constitutional law and interpretation. Special emphasis is placed on written judicial decisions, the political environment of judicial decision-making, and the impact of constitutional policy upon society.

5513 Administrative Law

(3-0) 3 hours credit.

Students are provided the opportunity to examine administrative rules, regulations and procedures from a legal perspective. Topics may include the delegation of authority; administrative rule making, discretion and hearings; freedom of information; and judicial review of administrative rulings.

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, and governmental-nongovernmental relations will all be examined.

5703 American Foreign Policy

(3-0) 3 hours credit.

An intensive analysis of the policy formulation process and the substance of selected contemporary problems in foreign policy. Political and institutional factors affecting foreign policies will be stressed along with the analysis of policy options.

5713 Comparative Political Systems

(3-0) 3 hours credit.

Comparative analysis of institutions, processes and policy objectives in various Western, Communist and developing political 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.

6973 Special Problems

3 hours credit. Prerequisite: Consent of instructor.

An organized course offering the opportunity for 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
SOCIOLOGY
(SOC)

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.

6973 Special Problems

(3-0) 3 hours credit. Consent of Instructor.

An organized course offering the opportunity for 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.

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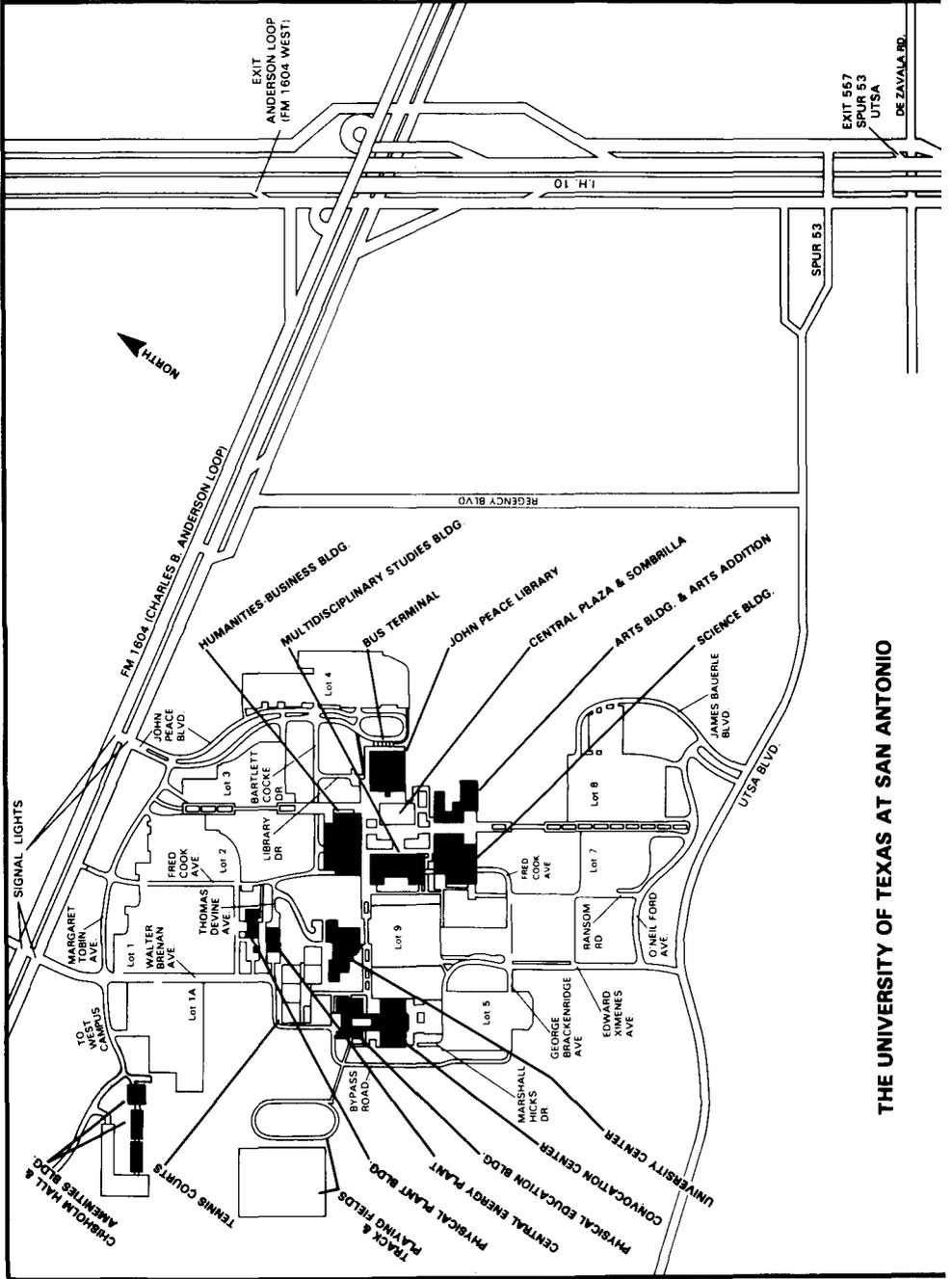
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INFORMATION DIRECTORY

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.

Academic Advisement	College Deans
Academic Degree Programs and Courses	College Deans
Admission Undergraduate and Graduate	Director of Admissions
Career Planning	Director of Career Planning and Placement Center
Changes in Enrollment	Registrar
Continuing Education	College Deans
Degree Application	Registrar
Financial Aid, Loans, or Scholarships	Director of Student Financial Aid
Financial Matters	Business Manager
General Information	Director of Admissions
Handicapped Students	Director of Student Services
Health Services	Student Health Center
International Students	Director of Student Services
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
Recreational Activities	Director of Athletics
Refunds	Business Manager
Registration	Registrar
Residency	Registrar
Student Activities	Director of Student Activities
Student Employment	Director of Financial Aid Director of Career Planning and Placement Center
Student Services, General	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



THE UNIVERSITY OF TEXAS AT SAN ANTONIO

