

# Texas Christian University

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**2010-11  
Graduate Catalog**

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# Academic Calendar

## Fall Semester 2010

Registration	Friday, August 20
First classes meet, 8 a.m.	Monday, August 23
Last day for late registration, changing or adding courses	Friday, August 27
Last day for semester-fee students (only) to drop below 12 hours and receive partial-tuition refund	Friday, August 27
Labor Day Recess	Monday, September 6
Last day to withdraw from class and receive:	
100% tuition refund	Friday, August 27
75% tuition refund	Friday, September 3
50% tuition refund	Monday, September 13
25% tuition refund (no refunds after this date)	Monday, September 20
Mid-semester reports of unsatisfactory work due in the Office of the Registrar, 9 a.m.	Wednesday, October 6
Fall Recess	
Classes recess, 10 p.m.	Friday, October 8
Classes resume, 8 a.m.	Wednesday, October 13
Last day students may withdraw from a class	Thursday, October 14
Last day for electing Pass/No-Credit grading option	Friday, October 15
Schedule advising for spring semester	Monday-Friday, November 1-19
Advance registration for spring semester	Monday-Friday, November 15-19 Monday-Tuesday, November 22-23 Monday-Friday, November 29- December 3
Thanksgiving Recess	
Classes recess, 5 p.m.	Tuesday, November 23
Classes resume, 8 a.m.	Monday, November 29
Last day of classes	Wednesday, December 8
Study days	Thursday-Friday, December 9-10
Final examinations	Monday-Friday, December 13-17
Baccalaureate and Commencement	Saturday, December 18
Residence halls close	Saturday, December 19

## Spring Semester 2011

Registration	Friday, January 7
First classes meet, 8 a.m.	Monday, January 10
Last day for late registration, changing or adding courses	Friday, January 14
Last day for semester-fee students (only) to drop below 12 hours and receive partial-tuition refund	Friday, January 14
Martin Luther King Jr., holiday	Monday, January 17
Last day to withdraw from class and receive:	
100% tuition refund	Friday, January 14
75% tuition refund	Monday, January 24
50% tuition refund	Monday, January 31
25% tuition refund (No refunds after this date)	Monday, February 7
Mid-semester reports of unsatisfactory work due in the Office of the Registrar, 9 a.m.	Wednesday, March 2
Last day students may withdraw from a class	Thursday, March 10
Last day for electing Pass/No-Credit grading option	Friday, March 11
Spring Recess	
Classes recess, 10 p.m.	Friday, March 11
Classes resume, 8 a.m.	Monday, March 21
Good Friday Recess	
Classes recess, 10 p.m.	Thursday, April 21
Classes resume, 8 a.m.	Monday, April 25
Schedule advising for summer session and fall semester	Monday-Friday, March 21 - April 1
Advance registration for fall semester	Monday-Wednesday, March 28-April 8
Last day of classes	Wednesday, April 27
Study days	Thursday-Friday, April 28-29
Final examinations	Monday-Friday, May 2-6
Baccalaureate and Commencement	Saturday, May 7
Residence halls close	Saturday, May 7

## Summer Semester 2011

May (three week) and eight week sessions begin	Monday, May 9
Memorial Day holiday	Monday, May 30
May (three week) session ends	Friday, May 27

June (five-week) session begins	Tuesday, May 31
Independence Day holiday	Monday, July 4
June (five-week) session ends	Friday, July 1
July (four-week) session begins	Tuesday, July 5
July (four-week) session ends	Friday, July 29

## About TCU

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Texas Christian University offers graduate education in numerous fields, ranging from the highly abstract to the applied and professional. Because graduate education should be a broadening experience as well as a deepening of knowledge gained from undergraduate programs, the University offers students many options for their graduate studies. But there is a common thread running through all programs—a commitment to excellence, to the highest standards of scholarship in the disciplines and professions represented in the University.

TCU affords its graduate students many advantages: an excellent library; many outstanding research facilities and laboratories; broad-based computer services; an excellent atmosphere for learning; and, most importantly, the opportunity to study with an outstanding and dedicated faculty, many of whom are scholars of national and international reputation. In all of its graduate programs, TCU seeks to foster teaching, learning and research of the highest quality.

For applications and online information about graduate programs at TCU, see [www.graduate.tcu.edu](http://www.graduate.tcu.edu).

## Accreditation and Affiliations

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Texas Christian University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097; telephone number: 404.679.4501) to award bachelor, master and doctoral degrees.

Other memberships and accreditation directly related to graduate study include:

- Southern University Conference
- Association of American Colleges
- National Association of Schools of Music
- American Chemical Society
- Texas Education Agency
- International Association for Management Education
- American Speech-Language-Hearing Association
- Graduate Management Admissions Council
- The Association of Texas Graduate Schools
- Texas Board of Nurse Examiners
- Council of Graduate Schools
- Conference of Southern Graduate Schools
- Association of Texas Graduate Schools
- Commission on Collegiate Nursing Education
- Association to Advance Collegiate Schools of Business
- Accrediting Council on Education in Journalism and Mass Communication

## Oak Ridge Associated Universities

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Since 1962, students and faculty of Texas Christian University have benefited from its membership in Oak Ridge Associated Universities (ORAU). ORAU is a consortium of 98 colleges and universities and a contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members.

Through the Oak Ridge Institute for Science and Education (ORISE), the DOE facility that ORAU operates, undergraduates, graduates, post-graduates and faculty enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines, including business, earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry and mathematics. Appointment and program length range from one month to four years. Many of these programs are especially designed to increase the numbers of under-represented minority students pursuing degrees in

science and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found in the *ORISE Catalog of Education and Training Programs*, which is available at [www.oraugov/orise/educ.htm](http://www.oraugov/orise/educ.htm), or by calling either of the contacts below.

ORAU's Office of Partnership Development seeks opportunities for partnerships and alliances among ORAU's members, private industry and major federal facilities. Activities include faculty development programs, such as the Ralph E. Powe Junior Faculty Enhancement Awards, the Visiting Industrial Scholars Program, consortium research funding initiatives, faculty research and support programs, as well as services to chief research officers.

For more information about ORAU and its programs, contact:

Monnie E. Champion  
ORAU Corporate Secretary

Bonnie E. Melhart  
Associate Provost  
ORAU Councilor for TCU

865.576.3306 or visit [www.oraugov](http://www.oraugov)

## Nondiscriminatory Policy

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Texas Christian University does not discriminate on the basis of personal status, individual characteristics or group affiliation, including, but not limited to, classes protected under federal and state law.

*Notice:* This catalog is for academic planning purposes and does not constitute a contract between any applicant, student or faculty member and Texas Christian University. Requirements for graduation, as stated in this catalog, will remain in effect for six years from the date of first enrollment.

The University reserves the right to change programs of study, academic requirements, assignment of lecturers, student charges, teaching staffs or the announced academic calendar without prior notice, in accordance with established procedures.

Matriculation is a privilege not a right. The University reserves the right to control enrollment in specific programs by limiting admission of new students, denying requests to change majors, or establishing other requirements specifically to limit the number of students in that degree program.

With the exception of Requirements for Graduation, other policies and procedures may change annually. Those delineated in the current catalog shall be considered in effect at the time.

# Graduate Programs

Graduate degrees are administered by the following schools/colleges after graduate programs:

- M.J. Neeley School of Business
- College of Communication
- College of Education
- College of Fine Arts
- AddRan College of Liberal Arts
- Harris College of Nursing & Health Sciences
- College of Science & Engineering
- Graduate Studies (Master of Liberal Arts)

The policies for graduate study are determined cooperatively by the administration, the Graduate Council, and the vice chancellor for academic affairs. The implementation of these policies is the responsibility of the vice chancellor.

## Graduate Degree Programs

### Master of Accounting

#### Master of Arts

Art History  
Biology  
Chemistry  
English  
Environmental Science  
History  
Physics  
Psychology

#### Master of Arts in Teaching

Mathematics

#### Master of Business Administration

#### Master of Education

Counseling  
–*Child Life*  
–*Licensed Professional Counselor*  
–*Student Affairs*  
Curriculum Studies  
Educational Administration  
Elementary Education  
–*Child Life*  
Elementary Education Early Childhood 4/1  
Elementary Education Middle Grades 4/1  
Secondary Education 4/1  
Science Education  
Special Education

#### Master of Environmental Management

#### Master of Fine Arts

Studio Art  
–*Painting*  
–*Photography*  
–*Printmaking*  
–*Sculpture*

#### Master of International Management

#### Master of Liberal Arts

#### Master of Music

Conducting  
–*Band*  
–*Choral*  
–*Orchestral*  
Musicology  
Performance  
–*Band/Orchestral Instruments*  
–*Keyboard Studies*  
Piano Pedagogy  
Theory/Composition  
Vocal Pedagogy  
Vocal Performance

#### Master of Music Education

#### Master of Science

Advertising/Public Relations  
Biology  
Chemistry  
Communication Studies  
Environmental Science  
Geology  
Kinesiology  
Journalism and Mass Communication  
Mathematics  
Nurse Anesthesia  
Nursing  
–*Clinical Nurse Specialist*  
–*Clinical Nurse Leader*  
–*Nursing Education*  
–*Pediatric Clinical Nurse Specialist*  
Physics  
Psychology  
Speech-Language Pathology

#### Doctor of Education

Educational Leadership

#### Doctor of Musical Arts

Composition  
–*Music History*  
–*Performance*  
Conducting  
–*Music History or Theory*  
–*Performance*  
Performance  
–*Composition*  
–*Theory or History*  
–*Voice Pedagogy*  
Piano Performance  
Piano Pedagogy

#### Doctor of Nursing Practice

#### Doctor of Philosophy

Chemistry  
Educational Studies  
–*Science Education*  
English  
History  
Mathematics  
Physics  
–*Astrophysics*  
–*MBA*  
Psychology  
Rhetoric and Composition

#### Graduate Certificates

Supply & Value Chain Management  
Ranch Management  
Women's Studies

# Degree Requirements

## Master's Degree Requirements

In addition to the general academic regulations, the particular requirements of the master's degree are provided below and in the separate listings for departments and programs.

### Residence Requirement, Master's

There is no general residency requirement. See specific degree listings for program requirements.

### Transfer Credit

Limited graduate credit earned from another accredited college or university will be considered for transfer to a TCU master's program. Written request for transfer credit, with appropriate transcripts, should be made at the time of application for admission. Such credit must be applicable to the student's program as determined by his/her adviser; carry at least a "B" grade (3.0 on a 4.0 scale); and be residence credit, not extension or correspondence. Six semester hours of transfer credit usually is all that will be accepted, but under special circumstances additional hours may be considered, subject to approval by the chair of the major department and the dean of the school/college.

Permission to interrupt residence to earn graduate credit elsewhere for use on a TCU degree must be approved in advance with a formal request addressed to the dean and conferral with the department involved.

### Additional Master's Degree

TCU graduate students who either are currently enrolled in a master's degree program or who have already earned a master's degree from TCU or from an approved program outside of TCU may apply for an additional master's degree from TCU.

Approval of an additional master's degree from TCU must satisfy the following conditions as determined by the academic dean governing the additional master's degree.

- All requirements relevant to the additional master's degree must be satisfied.
- No more than nine hours of approved coursework for the prior (or concurrent) master's degree may be applied.
- Petition for applied course credit must be submitted in writing.
- Applied course(s) must carry at least a "B" grade (3.0 on a 4.0 scale) and must be verified by accompanying official transcripts.
- Only non-thesis credits will be considered.
- All credits applicable to the additional master's degree must be earned within five calendar years following matriculation.

### Advisory Committee\*, Master's

\*Not applicable to the MBA or MLA program.

An advisory committee of three faculty members is appointed by the dean for each graduate student after completion of the equivalent of a full semester of graduate work, usually 12 hours.

Until the student receives notice of the appointment of an advisory committee, he/she should consider the chair of the major department as the adviser, unless the department otherwise makes provision.

### Admission to Candidacy\*, Master's

\*Not applicable to the MBA or MLA program.

A student pursuing a master's degree will have a petition to candidacy prepared by the dean's office after nine or more hours of coursework have been completed and after all conditions to admission have been met, including the pertinent aptitude test records, departmental or other required examinations, and foreign language requirements, if any. The student does not need to make a formal request for candidacy.

Registration for the second half of the thesis will not be accepted until all requirements for candidacy have been fulfilled. Until that time the student is not considered a candidate for a degree.

### Intent to Graduate, Master's

At the beginning of the semester in which the student plans to graduate, the Intent to Graduate form should be filed with the appropriate dean's office. In the event that graduation cannot be completed, a cancellation form must be filed in the dean's office. The Intent to Graduate form must be refiled in case of postponement. A non-refundable graduation fee is charged when the intent is filed.

### Thesis Preparation

The thesis required in many of the master's degree programs represents the climax of a student's program and is expected to demonstrate thoroughness of research, keenness of analysis and effectiveness of expression.

A student is required to register for at least six hours of thesis and must register for at least one hour during any fall or spring semester in which the student is working with committee members or using University facilities. Check specific department listings for further restrictions. During the summer, the student must enroll for at least one thesis hour in at least one of the summer sessions. In addition, the student must enroll for at least one hour of thesis in the semester in which he/she plans to complete the thesis and take the final oral examination.

General instructions for preparing and presenting theses should be obtained from the appropriate dean's office well in advance of the actual thesis writing. The form presented should be followed in all cases unless a recognized professional variation is authorized by the major department under agreement with the dean.

The thesis subject must be approved by the advisory committee, which should be consulted frequently in the progress of the thesis so that proper guidance may be given. All members of the committee should approve the thesis draft before the final version is posted. Students should particularly note the special deadlines for thesis preparation and distribution. These deadlines may be obtained each semester from the dean's office. The usual process requires electronic submission of a PDF file according to the instructions posted at [lib.tcu.edu/NDLTD](http://lib.tcu.edu/NDLTD). Copyright and bound copies may be obtained; fees for these optional services are paid by the student.

### Oral Examinations, Master's

Where master's degrees require a final oral examination the exam will cover all work taken for the degree, including the thesis, if any. The examining committee will be composed of the candidate's advisory committee, and others as may be designated by the major department. The examination may not take place later than the date listed in the deadlines for graduate students each semester.

The candidate must show satisfactory completion of all courses in the degree program, except those in progress, before the oral examination may be given. Only one re-examination on a failed oral will be permitted, the date to be set at the discretion of the examining committee. In addition to the final oral examination, written examinations may be required at the discretion of the major department.

A student must be enrolled for a minimum of one hour of credit during any term (fall, spring or any one of the three summer sessions) in which the student is using University facilities, working with faculty or taking the final oral examination.

### Summer Completion of Degree Programs

A student planning to complete the thesis and/or oral examinations during the summer, particularly during the second five-week term, should check with advisory committee members prior to the end of the spring semester to affirm that their schedules will make them available during that period.

### Time Limit, Master's

The student is expected to complete work, including thesis if required, within a period of five years from the date of the earliest credit to be counted on the degree (including transfer credit, if any). See M.J. Neeley School of Business Program Length for its requirement.

Extension of time must be applied for in writing through the chair of the major department, who will then make a recommendation to the dean of the school/college. The letter should explain why the degree was not completed within the time limit and should present a schedule for completing the program. Additional courses may be assigned to students who do not complete the degree within the time limit.

## PhD Degree Requirements

The PhD degree is essentially a research degree. Although coursework is a necessary part of the program, the mere accumulation of course credits is not sufficient for attaining this degree.

The PhD degree may be completed in three years at the minimum. Under the minimum program, the first two years will be given to coursework, seminars and related research. The third year primarily will encompass dissertation research. Students whose preparation is incomplete or who will be engaged in part-time teaching or paid research will extend their programs accordingly. In such cases, a four- or five-year program is not unusual.

A master's degree is not necessarily prerequisite to candidacy for the PhD degree. A student entering a doctoral program after obtaining a master's degree would normally be classified as being in the second year of graduate study, as defined below.

Departments may, at their discretion, require that a formal minor be included in the total program. A formal minor requires at least six hours credit beyond the master's or 12 hours beyond the bachelor's degree.

All students in the doctoral programs are required to do a certain amount of teaching or research, appropriate to the goals of the student, as part of their training for the advanced degree.

Students must register for coursework or dissertation in each semester or summer session during which they utilize University research facilities or occupy a library carrel.

### Residence Requirement, Doctoral

There is no general residency requirement. See specific degree listings for program requirements.

### Foreign Language Requirement

Individual departments specify the conditions and policies for meeting foreign language requirements. Consult the departmental graduate adviser for this information.

Any one of the following may satisfy the general requirement of the University for proficiency in a foreign language:

1. Recent completion of the second college year of an approved language with an average of 3.0 grade minimum.
2. Demonstration of reading knowledge by an examination administered by the student's major department, with the examination over selected literature in the student's major field.
3. Presentation of a certificate of completion of a similar foreign language examination for another graduate school.
4. Presentation of satisfactory scores on the Graduate Foreign Language Test of the Educational Testing Service.

The foreign language requirement must be satisfied prior to admission to candidacy. International students may request that his/her native language be accepted, but it must be one that is needed for research at TCU. They must demonstrate ability to translate this language into English and, if no examiner is available in the foreign languages department, pay any required fee for employment of an approved interpreter. The substitution must have the approval of the chairman of the major department and the dean of the school/college.

### Advisory Committee, PhD

An advisory committee of at least four persons will be assigned to the doctoral student by the dean on the recommendation of the major department. The committee will be appointed early during the second year and should consist of those persons under whom the student will take his/her qualifying examinations, including at least one person from the minor field, if any. This committee, with the student's dissertation director as chair, formulates the remainder of the student's program of study and submits it to the dean for approval.

### Qualifying or Preliminary Examinations

All doctoral programs require some form of qualifying or preliminary examinations. It is the purpose of these examinations to evaluate the

student's capability for advanced creative analysis and synthesis in the major specialization and related disciplines. The qualifying examination may not be taken earlier than the second semester of the second year of the student's graduate program. If language requirements exist, at least one language requirement must be completed prior to taking the qualifying examination. This examination will cover the major field, designated sub-fields and minor, if any. It must be written, or written and oral.

Only one re-examination will be permitted, and this only after such time interval and under such conditions of additional study as the advisory committee may decide. Each student should consult the departmental requirements provided in the course listings section for specific information regarding the type of examination, the fields to be covered and the expected completion date.

### Admission to Candidacy, PhD

A student becomes a candidate for the PhD degree upon passing the qualifying or preliminary examinations and meeting the foreign language requirements of the department, provided he/she has also made up any course deficiencies and GRE scores have been recorded. The student does not need to make a formal request for candidacy.

### Intent to Graduate, PhD

At the beginning of the semester in which the student plans to graduate, the Intent to Graduate form should be filed with the appropriate dean's office. In the event that graduation cannot be completed, a cancellation form must be filed in the dean's office. The Intent to Graduate form must be refiled in case of postponement. A non-refundable graduation fee is charged when the intent is filed.

### Dissertation Preparation

A dissertation is required in all doctoral programs. It must demonstrate superior research abilities, capacity for sound independent analysis and judgment, and effectiveness of expression. A student is required to register for at least 12 semester hours of dissertation and must register for at least one hour during any fall or spring semester in which the student is working with committee members or using University facilities. Check specific department listings for further restrictions. During the summer, the student must enroll for at least one dissertation hour during at least one of the summer sessions. In addition, the student must enroll for at least one hour during any fall or spring semester in which he/she plans to complete the dissertation and take the final oral examination.

Registration for the first half of the dissertation will not be accepted until the major department notifies the dean's office in writing that the student is eligible for dissertation registration. Registration for the second half will not be accepted until the student has been admitted to candidacy, and until that time the student is not considered a candidate for a degree.

Instructions for preparing and presenting dissertations should be obtained from the appropriate dean's office well in advance of actual dissertation writing. The form given should be followed in all cases unless a recognized professional variation is authorized by the major department under agreement with the dean.

As early as possible, each student should initiate a program of individual reading and study leading to the selection and development of the dissertation research. This program should proceed under the supervision of the chair and other members of the advisory committee. At least three, and preferably all, members of the committee should approve the draft of the dissertation before the final version is posted.

The student should note the special deadlines for dissertation preparation and distribution available each semester. The usual process requires electronic submission of a PDF file, according to the instructions posted at [lib.tcu.edu/NDLTD](http://lib.tcu.edu/NDLTD). Copyright and bound copies may be obtained; fees for these optional services are paid by the student.

### Oral Examination, PhD

Each candidate for a doctoral degree must take a final examination covering the dissertation and related fields. The examining committee will be composed of the candidate's advisory committee and others, as may be designated by the major department. The final oral examination will be announced and open for audit to the graduate faculty and to others invited by the advisory committee. The examination may not take place later than the date listed in the Special Deadlines for Graduate Students.

Only one re-examination on a failed oral examination will be permitted, the date to be set at the discretion of the examining committee.

A student must be enrolled for a minimum of one hour of credit during any term (fall, spring, or any one of the three summer sessions) in which the student is using University facilities, working with faculty or taking the final oral examination.

**Time Limit, PhD**

The work for the PhD degree must be completed within six years after the student has been admitted to candidacy. Extension of time must be applied for in writing through the chair of the major department who will then make a recommendation to the appropriate dean. The letter should explain why the degree was not completed within the time limit and should present a schedule for completing the program.

# Admission

Texas Christian University will admit qualified students without regard to race, color, religion, gender, national origin, age and veteran or handicapped status, in accordance with Title IX and other governmental regulations.

## Admission Requirements

For admission, an applicant must possess a bachelor's degree from an institution regarded as standard by the University and a regional accrediting agency.

For unconditional admission, the student must have satisfactory undergraduate preparation for the particular degree sought. This is determined by the chair of the major department and the dean of the appropriate school/college, and includes a "B" average in either the last 60 hours of undergraduate work or in all undergraduate work; a "B" average in the major field and satisfactory scores on the appropriate tests required by the school/college.

Individual departments or schools/colleges may set higher standards and require other tests. Specific departmental admission requirements are provided at the beginning of the list of departmental course offerings.

A satisfactory application does not guarantee acceptance. An application may be rejected if there are more applicants than openings in the intended major area or if the program TCU provides is not suitable to the applicant's vocational goals, for example.

Complete and certified transcripts (mailed from the registrar's office directly to TCU) from all colleges attended; an application form with application fee (if applicable); and a Report of Health History, including documentation of the required immunizations, are required. These forms may be obtained from the appropriate dean's office. International students must also submit the International and Student Scholar form.

## Graduate Entrance Examinations

Official Scores on the Graduate Record Examination (GRE), Graduate Management Admission Test (GMAT) or other appropriate professional tests must be submitted if required by the major department. The examinations are administered through the Educational Testing Service (ETS). Official scores must be sent to TCU by ETS. See School/College/department listings for required tests and other admission requirements.

Information and registration bulletins for the GRE are available from ETS and in Graduate Studies, 208 Sadler Hall; GMAT applications are available from ETS and in the MBA Office, M J. Neeley School of Business.

## Undergraduate Prerequisites

In most departments, a minimum prerequisite of 24 semester hours is required in the major field.

### Deficiencies in Preparation

A student who lacks certain courses prerequisite to full standing for graduate study must enroll in these as soon as possible by arrangement with the major department. ("Enrolled in" refers to a valid registration for an academic course at TCU.)

## Types of Admission

TCU provides six types of admission:

### Unconditional Admission

Unconditional admission may be granted to applicants who have met all of the general requirements for admission as well as the particular admission requirements of the department and school/college, and who have completed all admission formalities.

### Conditional Admission

Conditional admission may be granted to applicants who have been unable to complete all admission requirements by the application deadline. In each such case, an appropriate, specific deadline for satisfying the explicit conditions is given to the student, not to exceed one semester, and may include restriction of hours to be taken as a conditionally admitted student. Special permission to extend the deadline by at most one semester may be requested in writing from the school/college dean. Students who have not removed the conditions by the extended deadline will not be permitted to register for classes. Schools and colleges may have more stringent policies regarding conditional admission.

### Non-Degree Graduate Admission

Non-degree graduate admission may be given to an applicant who:

1. Meets the general requirements for admission;
2. Is not an applicant for a degree program; and
3. Wishes to enroll for graduate work for credit.

Non-degree admission requires completion of the appropriate application form, a letter stating why the student is requesting non-degree admission, \$50 application fee and submission of one official transcript mailed to TCU from the registrar's office of each college attended showing all work the student has previously completed. Applications for non-degree admission require the approval of the department concerned and the appropriate dean's office. A maximum of nine hours of graduate study is permitted under non-degree admission. Submit applications to the appropriate department/School/College (see Application Procedures Contact Information below).

Courses taken under this status are **not** credited toward requirements for a degree. If, at some later date, degree admission is desired, the student must complete all regular admission formalities. At the time of application for degree admission, courses previously taken as a non-degree student may be evaluated for possible degree credit. Upon recommendation of the department to which the student is admitted and with approval of the appropriate dean's office, a maximum of nine hours taken in non-degree graduate status may be credited toward degree requirements.

### Visiting Graduate Student Admission

Visiting graduate student admission may be granted to students enrolled in graduate programs at other universities, but who desire to take courses from TCU for transfer. Students should get prior approval for this work from their graduate school since the receiving institution has the right to accept or reject transfer courses.

Requirements for visiting graduate student admission are a completed application form, including \$50 application fee, and a letter of good standing mailed to TCU from the registrar's office of the student's institution.

### Admission for TCU Seniors

Admission for TCU seniors is sometimes permitted. A qualified TCU senior may begin graduate work during the final bachelor's semester. The student must be within nine hours of completing all requirements for the bachelor's degree and enrolled for the courses that will fulfill those requirements.

In addition to other application materials a statement of standing indicating that the student is within the nine-hour limit of completing the degree requirements from the registrar or the academic dean is required. These materials must be submitted prior to the registration period. This admission is limited to TCU seniors only and may be for degree admission or for non-degree student admission.

### Workshop Admission

Workshop admission is a simplified admission procedure for students who wish to attend a special graduate seminar or workshop offered by TCU. Admission will be granted to applicants who hold at least a bachelor's degree from an accredited institution in the United States or proof of equivalent training at a non-U.S. institution and are in good standing at all colleges and/or universities previously attended.

Graduate credit will be given for grades of "B" or better. Such a student is not regarded as an applicant for a degree program.

### **TCU Faculty Admission**

TCU faculty members with the rank of instructor or above who meet the regular requirements for admission are eligible to register for individual graduate courses or for graduate work leading to an advanced degree. However, they are not eligible to become candidates for a doctoral degree in the academic unit in which they are employed at TCU.

### **International Student Admission**

Admission standards are the same for all students, regardless of country of origin or residency. However, students on F or J visas are required to show English proficiency via the TOEFL (Test of English as a Foreign Language), with a score of 550 (paper), 213 (computer) or 80 (Internet). The TWE may also be required and it is at the discretion of individual departments to establish higher standards if necessary.

TCU's Intensive English Program staff conducts interviews and exams where necessary in support of TOEFL and TWE requirements and University graduate study expectations. Extra support/needs are reported to the graduate director, and the student will be notified as to courses needed during the students' first term and any subsequent terms of study.

Transfer students within the United States may submit evidence of one year of successful study (within the last two years) in order to have evidence of English requirements waived.

### **Financial Capability and Affidavits**

F and J Visa students are required by U.S. law to provide evidence of sufficient funding to live and study in the United States prior to issuance of any immigration documents. A sufficient financial packet must include:

- A. The TCU Financial Statement accompanied by an original bank statement indicating sufficient funding for ALL expenses. This may be completed by student, family, friend or organization, but must include specific financial data on official financial institution letterhead.
- B. An Affidavit of Support from persons named in sponsorship records, verifying willingness to sponsor student. Students should submit any financial award from TCU as part of their financial portfolio.

All international graduate students must pay a non-refundable \$50 orientation fee, due at the time of application submission. There is an additional application fee for students applying to the Neeley School of Business. The regular graduate school application fee is waived for international applicants to programs not in Neeley. Further information and necessary forms can be found at [wholewideworld.tcu.edu](http://wholewideworld.tcu.edu).

### **Medical Insurance Coverage and University Health Record Requirements**

All students on student visas must have insurance coverage during their entire time at TCU. The Brown-Lupton Health Center provides coverage for international students; enrollment is mandatory and automatic for all students, with the exception of those students in sponsored (J Visa) programs requiring purchase prior to arrival. Students with dependants (F-2/J-2) may request waiver under specific circumstances, but national coverage in home country does not merit waiver and will not be considered.

A medical history form with a record of all immunizations is required prior to registration and is included in the pre-arrival packet for international students.

### **Pre-Arrival Information**

Mandatory orientation for international students occurs several days before other graduate student orientations. New students should plan their arrival accordingly.

[Wholewideworld.tcu.edu](http://Wholewideworld.tcu.edu) contains information on the above requirements and answers many other questions students may have about coming to TCU. Included are Web applications to request a roommate prior to arrival; what students can expect upon arriving in Texas; and useful information that has been selected based upon student input on needed information before, during and after initial arrival in the United States.

## **Application Procedures Contact Information**

In most cases, application may be made online. Visit the appropriate school/college website for specific information.

Paper applications, along with a \$50 application fee, should be sent to the following offices at Texas Christian University, Fort Worth, Texas 76129, depending on the desired field of study:

#### **M.J. Neeley School of Business**

TCU Box 298540

#### **College of Communication**

TCU Box 298040

#### **College of Education**

TCU Box 297900

#### **College of Fine Arts**

TCU Box 298000

#### **AddRan College of Liberal Arts**

TCU Box 297200

#### **Harris College of Nursing & Health Sciences**

TCU Box 298625

#### **College of Science & Engineering**

TCU Box 298960

#### **Graduate Studies**

TCU Box 297024

In addition to the application for admission, prospective students must have **two** official transcripts mailed from the registrar's office, for **all previous colleges attended**, to the appropriate office. If the last school attended was TCU, the appropriate office will obtain the necessary records.

Notices of admission to graduate study are not held for release on any particular date but are sent as soon as action is taken. Successful applicants are notified of the date for which acceptance has been granted.

# Financial Information

## Tuition and Fees

Tuition and fees at TCU are usually set in the spring to be effective with the following fall semester. Current tuition and fee schedules are available from:

**Office of Graduate Studies**  
TCU Box 297024  
Fort Worth, TX 76129  
(817) 257-7515

**Financial Services**  
TCU Box 297011  
Fort Worth, TX 76129  
(817) 257-7834

or any dean's office.

## Payment

Texas Christian University has a monthly billing cycle. Payment in full for each semester's charges is due no later than the due date specified on the first statement on which the charges for the semester appear. If payment in full is not made by the specified due date, an optional monthly payment plan is available for the fall and spring semesters. A minimum payment of 20 percent of total semester charges is due in each monthly installment. No advance notice is required to participate in the payment plan option. However, finance charges will be assessed monthly on unpaid balances under the payment plan. Additional charges will be assessed with the payment plan option. More detailed information about the payment plan option is available from the director of student financial services. The payment plan option is not available for summer sessions. Late fees will be assessed for payments not received within 10 days of the stated due date.

Students receiving financial aid may participate in the payment plan option. The minimum amount due on the statement should be the total semester amount due less any financial aid awarded (except work study, which is paid directly to the student during the semester).

Payment deadlines must be met or the student may be denied advance or current registration. The ability to register in subsequent semesters may be denied if the student account is in arrears. Transcripts will not be released, nor will a degree be awarded, unless the student has satisfied all financial obligations to the University, including loans made through the University. Student accounts must be current to be eligible to make residential housing reservations and to make charges to student accounts using the student's University identification card.

## Miscellaneous Charges

University Store purchases, library and parking fines, health insurance, health center services and medications, parking permits, copying charges, dining add-on charges and finance other miscellaneous charges are billed monthly and must be paid in full each month. Late fees will be assessed for payments not received within 10 days of the stated due date.

## Refunds

For a fall or spring semester, a student who withdraws from a course or from the University on or before the fifth class day may receive a 100 percent tuition refund. If withdrawal occurs on or before the 10th class day, a 75 percent tuition refund is made. A 50 percent tuition refund is made upon withdrawal on or before the 15th class day, and a 25 percent tuition refund is made if withdrawal is made on or before the 20th class day.

## Financial Aid

Several types of financial aid are available to graduate students.

### Fellowships and Assistantships

Graduate candidates for fall admission who are applicants for financial aid should complete all application procedures by March 1 preceding the fall semester they plan to begin study. A financial aid form may be

submitted at the same time as the application for admission and may be obtained from the College/School of the student's major.

Applicants must be admitted to a graduate program, have an outstanding academic record and present favorable recommendations. Students admitted conditionally are not normally eligible for graduate financial aid until all conditions have been met. The academic deans make most graduate financial aid appointments.

No student may hold both a fellowship and any other assistantship concurrently. Inquiries regarding graduate financial aid may be directed to the appropriate school/college. The following appointments are available:

**Teaching, research or graduate assistantships** provide a partial or whole tuition grant and often include a stipend for the academic year for teaching assignments, or equivalent research and/or departmental duties. The maximum assignment is two classes or three labs each semester, or equivalent research duties or a combination of research and teaching duties.

**Fellowships and scholarships** provide tuition grants (fellowships also include a stipend) and require no duties. Most appointments are for nine or 12 months.

**Information services traineeships** provide tuition and stipends for an academic year. These appointments require half-time duties in Information Services and are available to graduate students regardless of field or specialization. Summer half-time appointments are available to holders of these traineeships.

**Tuition grants** are available for some identified majors/groups.

**Part-time students in the College of Education and Harris College of Nursing** may qualify for the Tuition Assistance Program (TAP) in their college. Other part-time students may apply for a Professional Development Grant (PDG), funds permitting. These awards may not be combined with other University-administered financial aid.

For further information about tuition grants, contact the appropriate dean's office or the graduate financial aid adviser, 208 Sadler Hall.

### Residence hall directorships

The hall director is a full-time staff member employed by the Office of Residential Services. Appointments are made annually for the 20 positions, which are available for members of either gender, regardless of marital status. While holding the position of a full-time staff member, the hall director may pursue limited graduate or undergraduate studies in any area of the University.

The hall director receives a nine-month salary. University living quarters are provided during the period of employment. Additionally, this position offers an excellent opportunity to gain experience with students in the University setting. A limited number of residence hall directorships are available for the summer as well. A special application form may be requested from the director of residential services, TCU Box 297360, Fort Worth, Texas 76129.

## Appointment Terms

1. An appointee must enroll as a full-time graduate student each semester and summer session during which a stipend or tuition grant is drawn. In exceptional circumstances, provisions might be made for part-time students. Otherwise, if the appointee drops courses that cause the enrollment to fall below the minimum full-time academic load, he/she will be requested to vacate the appointment.
2. Students enrolled in a 4-1 program must have completed all requirements for the undergraduate degree in order to receive graduate financial aid.
3. If a student's graduate work is not satisfactory, the appointment may be terminated.
4. Recipients of awards are required to pay the fees required of all other students and any tuition not covered by the award.
5. Outside employment for students holding financial aid carrying stipends is discouraged. The University assumes that the student's primary obligation is toward graduate study. The program director and the dean of the appropriate school/college reserve the right to review any outside employment and require that the student modify

the commitment to the outside employment or relinquish the financial aid appointment.

6. The tuition remission grant is to be used during the duration of the appointment and may not be carried over for another term or semester.
7. The tuition remission grant covers courses that will be credited toward the student's degree. This may include prerequisites set by the department.

*Note:* In general, any payment to a student in return for providing services to TCU that are not directly related to the student's overall educational progress, is considered compensation for employment and is, therefore, taxable.

The paragraph above is a statement of general applicability. It is not to be construed as legal advice. Students seeking particular advice should consult with the appropriate University officials and/or seek competent professional assistance.

### Application Procedures

Some departments require a special application form for financial aid in addition to the regular application for admission. This form, available from the appropriate dean's office and/or on the website, may be submitted at the same time as the application for admission.

Fellowship and assistantship applications for the fall semester are due between February 1 and March 15, depending on the department. Contact the appropriate dean's office for deadlines. Appointments are announced by April 15. Initial appointments are not usually available for the spring and summer semesters.

TCU adheres to the following Resolution of the Council of Graduate Schools in the United States:

"Students are under no obligation to respond to offers of financial support prior to April 15; earlier deadlines for acceptance of such offers violate the intent of this Resolution. In those instances in which a student accepts an offer before April 15, and subsequently desires to withdraw that acceptance, the student may submit in writing a resignation of the appointment at any time through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another offer without first obtaining a written release from the institution to which a commitment has been made. Similarly, an offer by an institution after April 15 is conditional on presentation by the student of the written release from any previously accepted offer."

## Ex-Service Men and Women Graduate Education

The benefits available to undergraduate veterans are also available for graduate students. These matters are cleared through the Veterans Certification Officer, Room 17, Sadler Hall.

## Federal and State Student Financial Aid

Financial aid, including student loans and grants are available for full and part-time students with demonstrated financial need. Many of these awards are subsidized by the U.S. Government and, therefore, are available to U.S. citizens or permanent residents only.

Applicants can file the FAFSA (Free Application for Federal Student Aid) after January 1 of every year. The FAFSA should be completed as soon as the required income tax information is available. The FAFSA is processed by the U.S. Government and processing will take two to three weeks before results will be available to TCU. Priority for some grants is given to students who complete the financial aid application process by May 1. Applying after that date will not affect the applicant's loan eligibility.

In addition to the Federal Stafford Loan Program, graduate students may be eligible for the Federal Graduate PLUS Loan or private education loans. Further information is available at [www.financialaid.tcu.edu](http://www.financialaid.tcu.edu). Students are encouraged to borrow no more than is absolutely necessary to cover their educational costs.

Citizens of other countries with a qualified U.S. co-signer may be eligible for private student loans. For information on private educational loans go to [www.financialaid.tcu.edu](http://www.financialaid.tcu.edu) – Loans – Private Education Loans.

Applicants selected for verification are required to submit a copy of their previous year's federal tax return; additional documents may be required in individual cases. Contact the graduate financial aid adviser in the Office of Scholarships and Student Financial Aid for additional information.

The following Financial Aid Satisfactory Academic Policy applies to graduate students receiving state or federal aid (including loans):

All students are required to maintain certain requirements to receive federal or state financial aid. Credit hours attempted, credit hours completed and TCU GPAs are reviewed, in consultation with the appropriate academic dean, to determine whether satisfactory progress is being maintained.

### Return of Federal Financial Aid

A student who withdraws from the University before the 60 percent point in the enrollment period (summer, fall or spring) may have to return a pro-rated portion of the financial aid he/she received or that TCU received on his/her behalf. Detailed information about the federal policy on the Return of Title IV Funds is available in the financial aid office.

### Special Grants

#### Personal/Professional Development Grant

*Eligibility:* Year-round part-time students (enrolled for eight hours or less) who are at least 22 years of age by the final day of late registration may apply. Student must not exceed income limitations stated on the application. Grant may not be combined with other TCU administered aid. Good academic and financial standing at all colleges and universities attended is required. Students receiving this award must maintain satisfactory academic progress.

#### City of Fort Worth Employees Financial Assistance

*Eligibility:* Student must be employed with the City of Fort Worth for at least six months and must be eligible for the employee tuition reimbursement program

#### Tandy Grant

*Eligibility:* Tandy Corporation employees and their lineal descendants are eligible to be considered. Employees may be part-time students. However, descendants must be full-time students.

# Policies and Procedures

## Registration

Students must be enrolled as graduate students to be eligible to receive graduate credit. Graduate students planning to enroll for courses offered outside the unit in which they will receive their degree must receive written permission to enroll from a representative of the unit offering the course. Permission to enroll must be obtained prior to enrollment. Failure to receive prior written permission may result in cancelled enrollment because of space or program requirements.

All students and prospective students are responsible for consulting and following the academic calendar, which includes dates for the registration periods.

### Adding Courses/Schedule Changes

The academic calendar specifies the last day for adding or changing courses each semester and each summer term. Any changes in schedule after the posted deadlines, including section changes, require permission from the student's dean.

### Withdrawal from Class

The purpose of student-initiated withdrawal from courses is to enhance the learning opportunity in a program of study. On recognition that a student may lack the background needed for the mastery of course content, the subject matter in a course does not match student need or interest as anticipated, or that course requirements will limit effective appropriation of learning in a semester's overall program of study, a student may officially withdraw from a course and receive a "W" in accordance with the policy stated below.

Merely absence from a class does not constitute withdrawal. In order to withdraw from a course, a student must go through official established procedure.

By following established procedures, students may withdraw from any class until five academic days (fall and spring semesters only) following the published date mid-semester reports of unsatisfactory work are due to the Office of the Registrar. Consult the official academic calendar for withdraw dates during summer terms. The date of withdrawal for all purposes, including tuition adjustment, shall be the date of official withdrawal.

There will be no withdrawals after this date during the fall and spring semesters, or a comparable period during a shorter term.

Any student who experiences unusual hardship may seek special consideration through a written petition to the dean of the school/college in which he/she is enrolled. Petitions should, where possible, be documented with supporting statements from a doctor, counselor or family member. That a student is doing unsatisfactory work in a course will not be taken as sufficient reason for special consideration. If, in the opinion of the dean, the request is justified, a grade of "Q" (dropped by the dean's permission) may be assigned by the dean after consultation with the instructor of the course, the chair of the department and the dean of the school/college in which the course is offered. Any dean assigning a "Q" will notify the Office of the Registrar.

### Academic Load and Full-Time Status

A student must be enrolled for a minimum of nine hours of graduate courses to be considered a full-time resident student. However, 12 or more hours are required in some programs to meet the special regulations under which some students attend; these cases will be considered individually by the department chair and the appropriate dean. A graduate student registering for a total of six semester hours during the three summer terms will be considered a full-time graduate student.

If a student has successfully completed all coursework, including thesis and dissertation hours and lacks only the thesis or dissertation completion, he/she must be engaged in full-time research and enrolled for a minimum of one hour of thesis or dissertation credit during any fall or spring semester in which the student is working with his/her committee or using University facilities. A student working with the committee or using University facilities during the summer must enroll

for at least one thesis or dissertation hour during one summer session. In addition, the student must enroll for at least one hour of thesis or dissertation in the semester during which he/she plans to complete the thesis or dissertation and take the final oral examination.

A student holding a full-time teaching assistantship or a fellowship may, upon consultation and approval of the department chair and the appropriate dean, be regarded as a full-time student if enrolled for a minimum of nine hours of graduate work for credit or its equivalent in a combination of coursework and research and/or teaching.

A graduate student doing no outside work may carry a maximum of 15 semester hours during each of the fall and spring semesters.

The University reserves the right to suspend or restrict the re-enrollment of any student who demonstrates that he/she is suffering an emotional, nervous or mental disorder or impairment that renders the student unable to profit from or contribute to the educational program of the University or that is harmful or disruptive to others.

### Audit Enrollment

Auditors are admitted to classes on a space-available basis only. A non-refundable audit fee is charged. Students wishing to audit graduate courses must be admitted for graduate study in the appropriate program and have written approval of the instructor of the course for which they wish to register. Non-degree graduate students wanting to audit graduate courses must be admitted to graduate study through the dean of the appropriate school/college and have written approval of the instructor of the course prior to registration. Students wishing to audit MLA courses must be admitted to the MLA Program and have written permission from the instructor of the course prior to registration. The following regulations are applicable:

1. Laboratory and clinical classes; day ranch management classes; laboratory sections of lecture classes; activity and performance classes, such as the various studio art courses; music performance courses; and ballet classes may not be audited.
2. Registration to audit or change a credit class to audit is from the second day of late registration to the last day of late registration as published in the University's academic calendar.
3. Classroom recitation and participation may be restricted at the discretion of the instructor; no grade is assigned and no credit is awarded.
4. If credit is desired, the student must register for and repeat the regular course after paying regular tuition.
5. The student's name will appear on the instructor's class roll. In order for "AU" to appear on the transcript, however, the instructor must certify at the end of the semester that the student has attended as an auditor. Audits not certified by the instructor as a final grade will be omitted from the student record.
6. Students who wish to take courses for audit **in addition** to credit courses should use the add/drop process to add the audit class(es).

### Part-Time Attendance

Although the University encourages full-time graduate study, registration for part-time study is appropriate in several degree programs, including business, education, MLA and others.

### Evening Classes

In some fields, graduate work is offered in evening classes; in others, the work is given in day classes only. Prospective students should consult the schedule of classes for graduate courses offered during the evening. To receive graduate credit for such courses, students must register through the appropriate school/college and not the Office of Extended Education.

### Summer Enrollment

A student may not enroll in more than three hours in the mini-term or more than six hours during either a five-week term or eight-week term. When enrollment includes both an eight-week term and either a mini- or five-week term, the student's enrollment may not exceed a total of nine hours.

## Graduate Credit

Each course is assigned a five-digit number. The first digit indicates the level at which the course is offered (5 for senior and graduate; 6, 7, 8 and 9 for graduate only). The second, third, and fourth digits distinguish one course from another within the same department. The fifth digit indicates semester hour credit; when the fifth digit is zero, it is either variable credit, non-credit or the credit includes a fraction. Thus Biology 50113 is a senior and graduate-level course (first digit) for three semester hours credit (fifth digit). The three middle digits identify it as Cellular Physiology.

All credits applied to a graduate degree must be of graduate level (50000 and above); at least half of all coursework, inclusive of thesis or dissertation, must be courses with a first digit of "6" or higher.

Graduate students taking courses of "50000" rank will be required to do extra work as assigned by the instructor.

In departments listing 50000-, 60000- and/or 70000-level courses, no more than 15 hours may be accrued toward the master's degree at the 50000 level. PhD students must have departmental approval for 50000-level coursework. No 50000-level course may be taken for credit at TCU by an MBA student unless approved on an exception basis by the MBA academic program director.

No graduate credit is given for courses of less than 50000 rank taken at TCU. No graduate credit is given for undergraduate courses taken at TCU or elsewhere.

## Academic Rating System

The definition of grades and grade points is as follows:

Grade	Grade Points	Grade Descriptions
A	4.00	Excellent
A-	3.67	Good
B+	3.33	
B	3.00	
B-	2.67	Marginal
C+	2.33	Unsatisfactory
C	2.00	
C-	1.67	
F	0.00	Failing
I		Incomplete
P		Pass
NC		No Credit
W		Withdrew
Q		Dropped by permission of the Dean
AU		Audit

Graduate students must maintain a GPA of at least 2.75 in accordance with the provisions described under Academic Warning. All grades will be included in the computation of the GPA, but no more than two grades of "C+" or lower may be utilized in satisfying degree requirements. Schools/colleges may have more restrictive policies regarding marginal and failing grades. Students are advised to consult the policies of their specific programs.

An "I" (Incomplete) grade is recorded when the student and instructor have determined that the work required for a course cannot be completed within the term of enrollment due to circumstances beyond the control of the student. Under no circumstances will a grade of "I" be given to avoid earning a grade of "F" for the course.

The "I" grade must be removed within the first 60 days of the regular semester immediately following or it is changed to an "F." Any extension of this time must have the written approval of the instructor and dean. This policy does not apply to graduate thesis, thesis-recital and dissertation hours.

"I" grades on theses and dissertations are removed by special reporting forms when the student completes the work.

The grading policies and regulations of the school/college of a student's major apply to his/her academic studies.

### Grade Point Average

Two GPAs are maintained by TCU:

1. a semester average based on courses taken at TCU during a particular term, and
2. a cumulative average based on all work attempted at TCU.

A student's GPA is computed by dividing the number of grade points (grade points earned per semester hour for the successful completion of academic work) by the number of hours (total credit hours attempted at TCU, excluding those attempted on a pass/no-credit basis). Grade replacement is not allowed for repeated courses. All grades will be included in the calculation of the graduate cumulative GPA.

### Transfer Credit Hours

Transfer credit is added to the total number of cumulative earned hours. Transfer credit hours may satisfy degree requirements but are not used in the calculation of the cumulative GPA.

### Pass/No-Credit

Pass/no-credit courses are disregarded in the calculation of the student's GPA.

## Academic Warning

See specific school/college and program sections for further information regarding grade point requirements.

### Full-Time Students

A graduate student who achieves a GPA of less than 2.75 in any semester or term will be placed on academic warning. A student can be removed from that status by achieving a 2.75 cumulative average by the end of the next nine hours of enrollment. If the student should fail to do so, further enrollment will be granted only by the special recommendation of the chair of the department concerned and with the permission of the dean of the school/college in which the student is enrolled.

### Part-Time Students

Graduate students enrolled for less than a full load will be placed on academic warning when their accumulated part-time course load totals at least nine hours and falls below a 2.75 cumulative GPA. A student can be removed from that status by achieving a 2.75 cumulative average by the end of the next nine hours of enrollment. If the student should fail to do so, further enrollment will be granted only by the special recommendation of the chair of the department concerned and with the permission of the dean of the school/college in which the student is enrolled.

## Dismissal, Suspension or Expulsion

Students may be dismissed from individual courses with a grade of "F" for lack of academic progress or for conduct deemed to be contrary to the professional or ethical standards of a field upon the recommendation of the responsible faculty member and the approval of the appropriate academic dean.

At such times as the student fails to meet acceptable standards of academic performance or has engaged in professional misconduct, at the discretion of the dean of the school/college in which the student is enrolled, the student may be

1. Dismissed or suspended from a program of study, and/or
2. Expelled from the University.

If a student is dismissed, suspended or expelled from the University, an appropriate grade or designation will be recorded for each course in progress as determined by the dean with oversight for the course in consultation with the dean of the school/college in which the student is enrolled.

## Foreign Language Examination

Each student must check on foreign language requirements for their major and any special deadlines for their completion. The language examination, when required, is administered by the student's major department. The student is responsible for scheduling the time of the examination with the department.

## Conferring of Degrees

Degrees are conferred by TCU at the close of the fall and spring semesters and at the conclusion of the summer session. Commencement exercises take place only at the conclusion of the fall

and spring semesters. Students graduating in May or December must make arrangements to have examinations completed 72 hours prior to commencement exercises.

## Transcripts of Academic Records

Students and former students may request official transcripts of their TCU academic record from the Office of the Registrar for a transcript processing fee. All transcript requests must be made by the student and must be in writing. Adequate notice, normally one week, is required for transcript processing. Transcripts will not be released unless the student has satisfied all financial obligations to the University.

## Disabilities Policy and Procedures

Texas Christian University complies with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973 regarding students with disabilities. No otherwise qualified individual shall be denied access to or participation in the services, programs and activities of TCU solely on the basis of a disability. The University shall provide reasonable accommodations for each eligible student who has a physical or mental impairment that substantially limits a major life activity, a record or history of such an impairment, or is regarded as having such an impairment.

Each eligible student is responsible for presenting relevant, verifiable, professional documentation and/or assessment reports to the Coordinator of Student Disabilities Services. Information concerning a student's disability is treated in a confidential manner in accordance with University policies as well as applicable federal and state laws. Documentation presented to the coordinator shall be reviewed by the appropriate University professional(s) to verify the existence of a disability. Further documentation may be required from the student to substantiate the claim of a disability or to assist the University in determining appropriate accommodations.

Eligible students seeking accommodations should contact the coordinator as soon as possible in the academic term for which they are seeking accommodations. The coordinator will prepare letters to appropriate faculty members concerning specific, reasonable academic adjustments for the student. The student is responsible for delivering accommodations letters, conferring with faculty members and returning validation of the receipt of information to the coordinator. The coordinator consults with the student and with University faculty and staff to ensure delivery of appropriate support services, and serves as liaison between the student and the faculty member as needed.

Students who wish to appeal a decision regarding appropriate accommodations shall may do so in writing to the affirmative action officer, who shall decide the appeal, at TCU Box 297090, Fort Worth, TX 76129. The affirmative action officer's decision may be appealed within seven calendar days in writing to the provost, whose decision may be appealed in writing to the chancellor within seven calendar days. At any step during such an appeal, the person requesting the appeal may confidentially consult with appropriate professionals/advisers within or outside the University.

The Coordinator, Student Disabilities Services, may be contacted in the Center for Academic Services, Sadler Hall Room 11 or 817.257.7486.

## The Family Educational Rights and Privacy Act

This Federal law states that:

1. A written institutional policy must be established; and
2. A statement of adopted procedures covering the privacy rights of students be made available.

The law provides that the institution maintain the confidentiality of student education records.

The University accords all the rights under the law to its students. Students wishing access to a complete copy of the regulation and the University policy governing their educational records may do so at these locations:

Provost/Vice Chancellor for Academic Affairs, Sadler Hall Room 302

Vice Chancellor for Student Affairs, Sadler Hall Room 310

Dean of Campus Life Room 101

Office of the Registrar, Sadler Hall Room 17

Scholarship and Financial Aid, Sadler Hall Room 108

There are six rights, which are summarized here:

1. **The Right to Be Informed.** The University gives students an annual notice of their rights and where copies of the policy may be reviewed.
2. **The Right to Inspect.** Students may inspect information contained in their educational record, provided they make a written request to the custodian of the records. The request must be granted no later than 45 days from the receipt of the request.
3. **Right to Limited Control of Release.** No one outside the institution shall have access to, nor will the University disclose identifiable information from the educational records without written consent of the students, except directory information or other exceptions permitted by the act, which he student has not refused to permit the University to disclose.
4. **Right to Request a Change.** Students may request that the record be amended if they feel the information is inaccurate, misleading or in violation of the rights of privacy. The University will decide whether to change the record. The student may place a rebuttal in the record.
5. **Right to a Hearing.** If the University chooses not to amend he record, the student may request a hearing. The request must be made in writing to the vice chancellor for student affairs or the vice chancellor for academic affairs. The student will be notified of the time, date and place of the hearing.
6. **Right to Report Alleged Violations.** Students who feel their rights have been abridged may file complaints with the Family Educational Rights and Privacy Act Office, Department of Education, Washington, D.C. 20201.

At its discretion, TCU may provide directory information in accordance with the provisions of the act to include student name, address, telephone number, email address, image, name of parents of dependent students, date and place of birth, major field of study, dates of attendance, degrees and awards received, the most recent previous educational agency or institution attended by the student, participation in officially recognized activities and sports; and weight and height of members of athletic teams. It is also permissible for the University to release information from a student's educational record to a parent, provided the student is a dependent, as defined in Section 152 of the Internal Revenue Code of 1954. Students may withhold directory information by notifying the Office of the Registrar in writing. Requests for non-disclosure will be honored for only one academic year; therefore, authorization to withhold directory information must be filed annually.

## Drug Abuse Policy

Students enrolled in TCU are subject to disciplinary action for the possession, manufacture, use, sale or distribution (by either sale or gift) of any quantity of any prescription drug or controlled substance, or for being under the influence of any prescription drug or controlled substance, except for the use of an over-the-counter medication or for the prescribed use of medication in accordance with the instructions of a licensed physician. Controlled substances include, but are not limited to, marijuana; cocaine; cocaine derivatives; heroin; amphetamines; barbiturates; LSD; PCP; and substances typically known as "designer drugs," such as "ecstasy" or "eve." Possession of paraphernalia associated with the use, possession or manufacture of a prescription drug or controlled substance is also prohibited.

The minimum penalty for a first-time violation of the Drug Abuse Policy for use or possession of a prescription drug or controlled substance will be disciplinary probation for a full year and a requirement for participation in a drug abuse education and/or treatment program. Any student who violates the Drug Abuse Policy for use or possession of a prescription drug or controlled substance for a second time will be suspended from the University for at least one year. Possession of drug paraphernalia will subject a student to the same penalties as those imposed for use and possession of a prescription drug or controlled substance.

The penalty for a violation of the Drug Abuse Policy for sale, distribution or manufacture of a prescription drug or controlled substance will be permanent expulsion from the University.

Adults and minors who give alcohol to minors or buy alcohol for minors also face stiff penalties. The punishment for making alcoholic beverages available to a minor has been increased from a Class C misdemeanor (fine only) to a Class B misdemeanor (fine and/or jail).

A student who voluntarily seeks help for drug or alcohol abuse is not subject to disciplinary action; in fact, University officials will do everything they can to assist the student in obtaining appropriate treatment. If the student continues to use drugs, then he/she does become subject to disciplinary action.

## Professional Behavior Standards

Graduate students at TCU occupy a unique position in the student body. They are more mature individuals with a defined perspective for the future and a high degree of both motivation and ability. In some instances, they are both seeking advanced knowledge and transmitting knowledge through their assignments as teaching or research assistants. While preparing for the professional models characteristic of their chosen discipline, they also serve as models to others in the graduate student role. All of this brings a special obligation to evidence a level of conduct that is compatible with the University's goals to offer programs of excellence and to enrich both the community and humankind.

Graduate students are expected to be familiar with and adhere to the published academic policies, rules, regulations and procedures of the University, as well as appropriate local, state and federal laws. The guiding principle is to conduct oneself in a manner that reflects well on the individual, the University and the academic process. The student is also expected to be responsible for his/her invited guests.

Violations of conduct relative to expected standards of professional behavior will be subject to disciplinary action up to and including expulsion from the University. Violations are to be reported to the dean of the school/college in which he/she is enrolled, who will be responsible for investigating all allegations and recommending appropriate disciplinary actions.

### Disruptive Classroom Behavior and Lack of Academic Progress

Disruptive behavior is prohibited. Disruptive behavior includes, but is not limited to, conduct that substantially interferes with or obstructs the teaching or learning process. Civil expression of disagreement with the course instructor, during times when the instructor permits discussion, is not itself disruptive behavior and is not prohibited.

When any student, acting individually or in concert with others, obstructs or disrupts, or attempts to obstruct or disrupt any teaching, research, administrative, disciplinary or public service activity, or any other activity authorized to be discharged on behalf of the University or held on the University's premises, the student may be asked to stop the disruptive behavior by an instructor or staff of the University. If the student continues, an instructor/staff member is authorized to tell the student to leave the area or classroom and, if the student will not leave, to call campus police.

The instructor/staff may immediately call campus police, without prior request to the student, if presented with an unsafe situation, threatening behavior, violence or in other appropriate circumstances.

1. **Withdrawal of Student From Class or Other Educational Experience.** When a student disrupts a class or other educational experience, acts in a threatening manner, is not making acceptable academic progress, or if the student's behavior or lack of preparation is detrimental to the educational experience of others or could create an unsafe condition, or if the student is compromising the learning environment, the instructor may take action to withdraw the student from the class or educational experience. To do this, the instructor shall provide the student written notice of intent to withdraw the student from the class or educational experience, with an explanation of the instructor's reason(s), and with a copy to the instructor's department chair (or, when there is no department chair, to the associate dean of the instructor's school/college). The notice should schedule a meeting with the student and the department chair (or, when there is no department chair, with the associate dean or dean of the instructor's school/college) to occur within seven days of the notice. The instructor may bar the student from the class or educational experience pending the result of the meeting, and the written notice should advise the student if there is such a bar. At the

meeting, the student may have one advisor. Following the meeting, the instructor shall decide whether to withdraw the student from the class or educational experience. If a student is withdrawn, his/her grade will be recommended by the instructor to the dean of the instructor's school/college as either a "Q" or an "F." The student may appeal this decision within seven days in writing to the academic dean or designee. During the student's appeal, the student remains withdrawn from and is barred from attending the class. The academic dean or his/ her designee's decision on this appeal is final.

2. **Denying Enrollment, Suspension, Expulsion, and Other Appropriate Action.** When a student disrupts a class or other educational experience, acts in a threatening manner, is not making acceptable academic progress, or if the student's behavior or lack of preparation is detrimental to the educational experience of others or could create an unsafe condition, or if the student is compromising the learning environment, or if the student has acted contrary to the professional or ethical standards of the University, a department thereof, or a particular field, an academic dean, or the dean's designee, may additionally:
  - a. Deny class enrollment to the student; or
  - b. Suspend or expel the student from the University or from one or more of its programs; or
  - c. Take other appropriate action.

The student affected by such a decision by an academic dean, or the dean's designee, may appeal in writing within seven days to the Academic Appeals Committee. The decision of the academic dean (or designee) remains in place during the pendency of the appeal. The Academic Appeals Committee's decision on the matter is final.

A student so suspended or expelled shall have a grade of "Q" or "F" recorded for each course in progress as determined appropriate by the academic dean. The transcript will not record suspension or expulsion.
3. **Non-students and Non-Enrolled Students.** Non-students and students not enrolled in class may be permanently removed by an instructor of the class, without formal review. Non-students who disrupt University activities may be removed from campus and banned from returning.
4. **Other.** Although some disruptive behavior may be due to a mental or physical disorder, as it relates to violence, disruptive or threatening behavior, students with such disorders will be held to the same standards as others.

Nothing in this policy limits a person, including, but not limited to, an instructor, academic dean, associate dean or department chair from referring a matter to the Office of the Dean of Campus Life or pursuing disciplinary action against a student or person through a complaint filed in the Office of the Dean of Campus Life.

This policy is not intended to limit any authorized University employee, staff member, official, vice chancellor, chancellor, members of the Board of Trustees or a member of the Office of Dean of Campus Life, from appropriately addressing behaviors covered by the policy.

## Firearms and Deadly Weapons Policy

Texas Christian University is committed to providing a safe environment for employees, students and campus visitors. Therefore, the University, in accordance with the Texas Penal Code, prohibits the possession of any firearm or deadly weapon on University property or at University-sponsored events, even if an individual has been issued a license by the state. Violation of this policy will result in disciplinary action.

## Medical History/Immunizations

Students attending TCU for the first time must complete a Medical History Form, including a record of immunizations before registration can be completed. All entering students born after 1957 are required to have had two doses of measles (Rubeola) vaccine after 12 months of age or provide proper verification that they have had the disease. The immunization must have been received after January 1, 1968, to be effective. In addition, within the 12 months prior to entering TCU, a Mantoux/TB Skin Test is required of all entering students.

# Academic Conduct

An academic community requires the highest standards of honor and integrity of all of its participants if it is to fulfill its missions. In such a community faculty, students and staff are expected to maintain high standards of academic conduct. The purpose of this policy is to make all aware of these expectations. Additionally, the policy outlines some, but not all, of the situations that can arise that are in violation of these standards. Further, the policy sets forth a set of procedures, characterized by a sense of fair play, which will be used when these standards are violated. In this spirit, definitions of academic misconduct are listed below. These are not meant to be exhaustive.

## I. Academic Misconduct

Any act that violates the spirit of the academic conduct policy is considered academic misconduct. Specific examples include, but are not limited to:

- A. **Cheating.** Includes, but is not limited to:
    1. Copying from another student's test paper, laboratory report, other report, or computer files and listings.
    2. Using in any academic exercise or academic setting, material and/or devices not authorized by the person in charge of the exercise or setting.
    3. Collaborating with or seeking aid from another student during an academic exercise without the permission of the person in charge of the exercise.
    4. Knowingly using, buying, selling, stealing, transporting or soliciting in its entirety or in part, the contents of a test or other assignment unauthorized for release.
    5. Substituting for another student, or permitting another student to substitute for oneself, in a manner that leads to misrepresentation of either or both students' work.
  - B. **Plagiarism.** The appropriation, theft, purchase or obtaining by any means another's work, and the unacknowledged submission or incorporation of that work as one's own offered for credit. Appropriation includes the quoting or paraphrasing of another's work without giving proper credit.
  - C. **Collusion.** The unauthorized collaboration with another in preparing work offered for credit.
  - D. **Abuse of Resource Materials.** Mutilating, destroying, concealing or stealing such materials.
  - E. **Computer Misuse.** Unauthorized or illegal use of computer software or hardware through the TCU Computer Center or through any programs, terminals or freestanding computers owned, leased or operated by TCU or any of its academic units for the purpose of affecting the academic standing of a student.
  - F. **Fabrication and Falsification.** Unauthorized alteration or invention of any information or citation in an academic exercise or academic setting. Falsification involves altering information for use in any academic exercise or academic setting. Fabrication involves inventing or counterfeiting information for use in any academic exercise or academic setting.
  - G. **Multiple Submission.** The submission by the same individual of substantial portions of the same academic work (including oral reports) for credit more than once in the same or another class without authorization.
  - H. **Complicity in Academic Misconduct.** Helping another to commit an act of academic misconduct.
  - I. **Bearing False Witness.** Knowingly and falsely accusing another student of academic misconduct.
- ## II. Procedures for Dealing with Academic Misconduct
- A. **Definitions**
    1. Day refers to a school day on which classes are meeting.
    2. Academic dean refers to the dean of the school/college offering the course in which the academic misconduct is alleged to have taken place.
    3. Department chair refers to the academic administrator responsible for the unit providing the instruction in which the alleged academic misconduct occurred.
    4. Faculty refers to the instructor of the course in which the suspected academic misconduct occurred.
  5. Adviser refers to any person selected by the student who accompanies the student during formal hearings. The adviser may speak with the student, but may not actively participate in the hearings.
  6. The Academic Appeals Committee is a standing University committee. The charge and membership of the committee may be found in the *Handbook for Faculty and Staff*.
- B. **Investigation and Initiation**
    1. Students who know of an act of academic misconduct should report the incident to the faculty member teaching the course. The faculty member will obtain the basic facts of the allegation and ask the student reporting the misconduct to write and sign a statement of facts. The name(s) of the student(s) reporting suspected academic misconduct will remain confidential during the informal faculty/student meeting, but must be revealed to the accused student if the resolution proceeds beyond the faculty member and the accused student.
    2. Faculty who suspect academic misconduct or who have academic misconduct reported to them must initiate an investigation and meet with the accused student within five days of becoming aware of the incident. A faculty member who is made aware by another person of an act of academic misconduct has the responsibility to investigate the allegation, and, if warranted, pursue the issue as outlined below (C.1).
    3. a. In instances where the suspected academic misconduct is discovered during an academic exercise, the faculty member has the right to suspend immediately the student involved in the alleged activity from further work on the academic exercise.
    4. A student, once accused of academic misconduct, will proceed in the course without restriction until resolution of the issue or until the academic dean has taken an action (as specified in III.B) that removes the student from the course.
    5. An "I" grade should be given by the instructor if the alleged misconduct occurs near the end of a semester, for exam (e.g., during finals), and a sanction outlined in Section III has not been applied by the instructor or the dean.
    6. If more than one student is accused of the same act of misconduct (e.g., giving and receiving aid), each individual student is guaranteed the right to have the cases heard separately. With each student's permission, the cases can be combined. The faculty/student conference (C.1) is excepted from this requirement.
  - C. **Resolution**
    1. **Meeting between Faculty Member and Student.** This is the first step to be taken in resolving an incident of suspected academic misconduct.
      - a. Within five days of suspecting misconduct, the faculty member will hold a meeting with the student. At this meeting, the faculty member will inform the student of all allegations against him or her and present any information supporting the allegations.
      - b. The student will be given the opportunity to respond to the allegations. The student has the right not to respond.
      - c. The faculty member will decide whether or not academic misconduct has occurred, and, if warranted, apply any combination of sanctions in III.A below, or refer the matter to the dean for more severe sanctions (probation, suspension or expulsion). Findings of academic misconduct are based on the preponderance of the evidence.
      - d. The faculty member will notify the student in writing of his/her decision and may send copies to the academic dean, the dean of the school/college in which the student is enrolled, the department chair and the dean of campus life. Any such copies of the findings will be kept on file in the college and department offices and in the student discipline files maintained by the dean of campus life.
    2. **Meeting with Department Chair.** This meeting takes place when the student wishes to appeal either the findings of the faculty member or the severity of the sanction(s).
      - a. Within five days of being notified by the faculty member of the disposition of the incident of academic misconduct, the student may request a meeting with the department chair.

- b. The department chair will become acquainted with the facts and meet with the parties involved in the case. The student has the right to meet with the department chair without the faculty member being present.
  - c. The department chair may either support or reverse the findings of the faculty member, and may lessen the sanction(s) imposed by the faculty member, even while supporting the findings. The chair may not increase the severity of the sanction(s).
  - d. The department chair will notify the student and faculty member of his/her decision in writing and may send copies to the faculty member, the academic dean and the dean of campus life. Any copies of the findings will be kept on file in the college and department offices and in the student discipline files maintained by the dean of campus life.
3. **Meeting with Academic Dean.** This meeting takes place if the student wishes to appeal either the findings of the department chair or the severity of the sanction(s), if the faculty member recommends sanctions in addition to those listed in III.A.3 and 4, or if the student has been found guilty of academic misconduct previously.
- a. Within five days of being notified by the chair of the disposition of the incident of academic misconduct, the student may request a meeting with the academic dean.
  - b. The academic dean will hear the facts of the case and make a decision about the alleged act of academic misconduct or the appropriateness of the sanctions administered by the faculty member. The academic dean can issue any combination of sanctions listed in Section III.
  - c. The academic dean will notify the student of his/her decision in writing with copies to the department chair and the faculty member. Copies of the findings will be kept on file in the college office and may be sent to the dean of campus life.
4. **Academic Appeals Committee.** Should the student wish to appeal the decision of the academic dean, he/she has the right to request a hearing before the Academic Appeals Committee.
- a. The student must request this hearing by submitting an appeal letter to the chair of the University Academic Appeals Committee no later than five days from the date of receiving written notification of the dean's findings.
  - b. Upon receipt of the appeal letter, the chair of the Academic Appeals Committee may request materials from the student, the faculty member, the department chair and/or the dean.
  - c. The appealing student has the right to appear before the Academic Appeals Committee. The student may bring one person with him/her as an adviser. The adviser may not speak for the student or to the committee. The adviser may only speak with the student. The student must inform the University five class days in advance if his/her adviser is an attorney in order for the University to also have an attorney present. Each party shall bear the expense of his/her legal counsel. Legal counsel is to provide counsel only and may not participate directly in the meeting. The meeting is an administrative hearing, not a court proceeding, and is not subject to the procedures or practices of a court of law.

**III. Sanctions**

**A. By the Faculty Member**

- 1. Grant no credit for the examination or assignment in question (treat as a missed assignment).
- 2. Assign a grade of "F" (or a zero) for the examination or assignment in question.
- 3. Recommend to the academic dean that the student be dropped immediately from the course with a grade of "F."
- 4. Recommend to the academic dean that the student be placed on probation, suspended or expelled from the University.

**B. By the Academic Dean or Academic Appeals Committee**

- (Previous academic misconduct will be taken into account when either the academic dean or the Academic Appeals Committee considers sanctions for academic misconduct.)
- 1. Apply sanctions in III.A.
  - 2. Drop student from the course with a grade of "F." This grade cannot be changed by student-initiated withdrawal, and the grade will be included in GPA computation even if the course is repeated.
  - 3. Place the student on disciplinary probation at the University for a specified period of time.

- 4. Place the student on suspension from the University for a specified period of time.
- 5. Expel the student from the University.
- 6. In a case where the academic dean as defined above is not the dean of the school/college in which the student is enrolled, he/she shall recommend to the vice chancellor for academic affairs that the student be placed on probation, suspended or expelled.

## Grade Appeals

In the event a student questions the appropriateness of a grade assigned for a course or the results of another critical component of a degree requirement (e.g., oral exam, juried exhibition, thesis, etc.), the student must first discuss the matter with the faculty member(s). These discussions between the faculty member and student should be initiated by the student as soon as possible after the grade is assigned, but no later than five academic days into the next long semester. The faculty member is expected to respond within five academic days of the initiation. If there is no response from the faculty member, the student may present the issue directly to the department chair. In the event that the faculty member(s) agrees to change the grade/decision, the normal process for changing a grade shall be followed. If the student wishes to appeal the faculty's decision after these discussions, he/she must follow the formal grade appeals process outlined below.

*Note:* An academic day is defined as a school day on which TCU classes are meeting. Initiation of the discussion is any attempt to contact the faculty of record, or chair of examination committee in the case of a candidacy exam or thesis/dissertation defense, about the grade. This includes e-mail or other written correspondence (recommended), personal meeting, and telephone call or message.

### Formal Grade Appeal

#### Appeal to the Department Chair or Appropriate Administrator

The student may appeal the faculty decision **in writing** to the department chair/appropriate administrator within 15 academic days of the first day of the next long semester if a satisfactory resolution is not reached in the initial discussion with the faculty (see exceptions in this appeal level). Exceptions to deadlines set forth herein for students in unusual circumstances (e.g., studying abroad) may be granted **in writing** by the dean of the college/school in which the course (or critical component) was offered. An exception may also be granted by the provost/vice chancellor for academic affairs.

The department chair/appropriate administrator will become familiar with the facts of the case by communicating with the student and the faculty member(s). The parties have a right to meet with the chair without the other party present. The faculty member or examination committee chair will respond **in writing** to the department chair concerning the student's appeal.

The department chair/appropriate administrator may either accept or deny the student's appeal. The chair will notify the student and faculty member(s) of his/her decision **in writing** within 10 academic days of receiving the appeal. In the event that the department chair accepts the student's appeal and no further appeals occur, he/she will initiate a grade change through the dean of the college.

*Exceptions:* If the department chair is involved in the appeal as the faculty member (one of the faculty members), the chair of the department advisory committee will assume the department's role in the appeal process. If the department does not have a department advisory committee, the chair of the school/college advisory committee will assume the department chair's role in the appeal process.

#### Appeal to the Academic Dean

The chair's position may be appealed **in writing** by the student or faculty member(s) to the appropriate dean within 10 academic days of the department chair's decision (see exceptions in this appeal level).

The dean will become familiar with the facts of the case by reading the prior appeal documents and communicating with the student, faculty member(s) and department chair. The parties have the right to meet with the dean without the other party present.

The academic dean will notify the student, faculty member(s) and department chair of his/her decision **in writing** within 10 academic days of receiving the appeal. In the event the dean upholds the student's

appeal and no further appeals occur, the change of grade shall be reported by the dean to the registrar's office.

*Exceptions:* If the dean of the college/school is involved in the appeal as the faculty member, the appropriate associate dean will assume the dean's role in the appeal process.

### **Appeal to the Academic Appeals Committee**

The dean's decision may be appealed **in writing** by the student, faculty member(s) or department chair to the Academic Appeals Committee within 10 academic days of the dean's decision.

The appeal by the student, faculty member(s) or department chair will be sent to the Academic Appeals Committee chair **in writing**. The material corresponding to the appeal should include a letter to the committee discussing the reason for the appeal and all pertinent documents that support the appeal. When the appeal is received, the committee chair will ask the appropriate dean for all written documents pertaining to the appeal. Once the chair receives the documents, they will be distributed to the appropriate committee members for review. During the review of the material, the chair may request other documents pertaining to the appeal. The chair will set a date for a hearing that will include the appropriate committee members, the student and faculty member(s). The chair will request that the dean or a designee be present to represent the college/school.

At the scheduled hearing, all parties will have an opportunity to discuss their case, and committee members will ask questions to better understand the appeal.

The committee will confer and come to a decision on whether to support the appeal or not. All parties will be notified **in writing** of the committee's decision within 10 academic days of the hearing. In the event the committee upholds the student's appeal and no further appeals occur, the chair will advise the appropriate dean to report the change of grade to the registrar's office.

The student, faculty member(s) or department chair may appeal the committee's decision to the University provost **in writing** within 10 academic days of the committee's decision.

All questions pertaining to the appeals policy and procedures should be addressed to the chair of the Academic Appeals Committee or the Office of the Provost.

## **Student Grievance Procedure**

The University has established both informal and formal procedures that a student may follow when presenting grievances. A grievance is defined as any dispute or difference concerning the interpretation or enforcement of any provision of University regulations, policies or procedures or state or federal laws applicable on the campus. Administrators, faculty and students are encouraged in all instances to resolve grievances informally and as promptly as possible. However, formal procedures may be followed when needed.

Detailed information about the University Judicial System is given in the Student Handbook, available at the beginning of each fall semester. Individuals who have additional questions about how to gain access to the system may contact the office of the dean of campus life.

## Academic Services

### Mary Couts Burnett Library

Mary Couts Burnett Library provides information resources for inquiry, intellectual discovery and the development of lifelong learning skills in a people-centered environment. Students and faculty have access to more than one million books, CDs, DVDs and videos and nearly 22,000 current journals, electronically and in paper. More than 300 databases, many of which include the full text of journal articles, are available through the library's website, [lib.tcu.edu](http://lib.tcu.edu). Examples of popular databases are LexisNexis, Business Source Premier and PsycINFO.

Materials are arranged according to the Library of Congress system in open stacks for convenient access to most items. Librarians and staff select, maintain and interpret the collections for library users. A music library and audio center and the Brite Divinity Library are also located in the Mary Couts Burnett Library. Particular collections include Texas, U.S. and European community documents; the Archives of the Van Cliburn International Piano Competition; the papers of former Speaker of the House James C. Wright Jr.; the papers of Amon G. Carter Sr.; the University's historical collection; and special collections of rare books and manuscripts, such as the William Luther Lewis Collection of English and American Literature.

Reference librarians (Library and research assistance) and information services consultants (computing assistance) are available at the Information Commons, [www.ic.tcu.edu](http://www.ic.tcu.edu), located within the library over 100 hours a week. TCU's Center for Writing, [www.wrt.tcu.edu](http://www.wrt.tcu.edu), maintains an annex office in the Information Commons Computer Lab and has evening office hours. The Information Commons Computer Lab has more than 104 computers, PC and Macintosh, along with 30 PC laptops available for use in the library on FrogWave (campus WiFi network.)

Through active membership in local, regional and national library consortia the Mary Couts Burnett Library is able to secure for TCU faculty and students the advantages that come with library resource sharing. Our membership in TexShare enables TCU faculty and students to obtain borrowing privileges from more than 150 academic libraries throughout Texas.

### Information Services

The central computing facility, located on the ground floor of the Sid W. Richardson Sciences Building, provides network connectivity throughout the campus and computer services and support for all levels of the University.

Using various client servers, Information Services provides support for all programs used by campus departments and supplies direct access to the Internet, the library and specialized databases, as required.

The Information Services staff is available through the TCU Information Commons Desk (817.257.5855). Services provided include consultation and assistance with computer problems. A newsletter (TCUSER) providing information about new services, products and support activities is published each semester. In addition, a wide selection of training materials for campus-supported software also is available. The Information Services administrative office is located in SWR Room 175, 817.257.7682.

### Information Commons

The TCU Information Commons, located on the first floor of the Mary Couts Burnett Library, provides students, faculty and staff with technical, library reference and writing assistance in an integrated digital environment. Professional staff members and specially trained students staff the TCU Information Commons. A computer lab within the commons provides 110-plus networked Wintel and Macintosh workstations, along with multimedia computers and high-speed laser printers. Wireless laptops are available for checkout and use within the library. Via the Web, a virtual Information Commons provides access to online resources for the university library and information resources.

### The William L. Adams Center for Writing

The Center for Writing offers assistance with writing projects and assignments to all TCU students. Staffed by professional writing instructors and peer consultants, the Center for Writing provides students with one-on-one tutorials free of charge. Conferences usually focus on a particular project or assignment, but may also include general writing instruction.

The 10 PCs in the center's computer lab are available for the use of any TCU student during normal office hours and provide email and Internet access.

Located in Suite 419 of the Rickel Academic Wing of the University Recreation Center, the Center for Writing is open Monday-Friday, 8 a.m.-5 p.m. Students may make an appointment by accessing an online scheduling service through the center's Website, [www.wrt.tcu.edu](http://www.wrt.tcu.edu), or by calling 817.257.6536. Students may also use the Center for Writing's annex at the library Monday-Friday, 2-5 p.m., and Sunday-Thursday, 6-9 p.m. Those who wish to submit a paper online may do so via the center's Web site. A consultant will read the paper and offer feedback within 48 hours.

### William H. Koehler Center for Teaching Excellence and eLearning Initiatives

#### *Mission Statement*

The mission of the William H. Koehler Center for Teaching Excellence is to support faculty and teaching staff in their work to educate students using effective instructional strategies and tools to facilitate student achievement of learning outcomes. The staff of the Koehler Center is dedicated to working with faculty and teaching staff both individually and in small groups to design and implement meaningful learning opportunities and to facilitate ongoing, reflective participation in the scholarship of teaching and learning.

#### *Confidentiality Statement*

The Koehler Center maintains the confidentiality of the faculty or teaching staff with whom we work, mindful that TCU teacher-scholars voluntarily engage our services in order to enhance and enrich their ability to help students achieve learning outcomes.

#### *eLearning Focus Statement*

eLearning provides assistance in the planning, instructional design, instructional support, and development for the use of technology in the classroom. eLearning services assist faculty and teaching staff by increasing their knowledge about effective current technology, course development, course design, and management tools in the traditional as well as distance education environments. Training is provided in small groups or individually to meet faculty and teaching staff needs. Training workshops are offered to support faculty and teaching staff in their use of various technologies to enhance teaching and the ability to transcend the boundaries of the traditional classroom to help students achieve learning outcomes.

The Koehler Center for Teaching Excellence is located in the Sid Richardson Building, Suite 501, located between Tucker Technology Center and Winton Scott Building on Bowie Street. For more information, refer to the center's website at [www.cte.tcu.edu](http://www.cte.tcu.edu) or [www.eLearning.tcu.edu](http://www.eLearning.tcu.edu) or call 817.257.7434.

### Research Support

TCU is committed to creating a campus environment that supports and promotes superior research, premier creative activities and innovative scholarly pursuits.

The associate provost for academic affairs and the Office of Sponsored Research are dedicated to helping University faculty, staff and students continue building TCU's reputation as a nationally recognized scholarly institution.

The **Graduate Student Travel Grant Program** supports travel of graduate students related to research. Funds may be used by graduate students to make presentations at professional meetings or to conduct research related to their field of study. Grants are not made for attendance at a conference where the student is not presenting scholarly results. Information and application are available at [www.research.tcu.edu](http://www.research.tcu.edu).

## Student Services

### Brown-Lupton University Union

The Brown-Lupton University Union (BLUU) is at the heart of the Campus Commons. Entertainment, educational and conference events take place in the Union throughout the year. The BLUU is home to 14 meeting rooms, the Horned Frog Ballroom, a 300-seat auditorium, the TCU Post Office, the Spirit Store and food service venues—Market Square, 1873 Grill and Café and Union Grounds Coffee Shop. The Union also houses the Heritage Center, a student organizations area, and the Governance Chamber; and The Information Desk, located within the Heritage Center, which offers notary service, a lost and found and a variety of ticket discounts to many Fort Worth/Dallas-area attractions. For more information, call 817.257.7927.

### Campus Recreation

Campus Recreation is the community center of the campus. The programs and facilities are available to all students and faculty/staff (with memberships) for the purpose of encouraging the lifelong pursuit of active, healthy lifestyles, and to enhance personal development through participation, interaction with faculty, employment and leadership opportunities.

The 232,000 square-foot facility provides for a variety of recreational opportunities, including swimming, basketball, volleyball, badminton, weightlifting, an indoor track for walking and jogging, cardiovascular training equipment, a games area, a climbing wall, computer access and food service.

The Aquatics Program offers instructional and fitness activities in the water, in addition to recreational swimming. There are three pools in the University Recreation Center: a 25-yard lap pool, 22-foot deep diving well, and an outdoor leisure pool and patio.

Structured, competitive and recreational sporting events are scheduled throughout the academic year. Activities involve team sports, individual or dual events and special events. Only currently enrolled TCU students and faculty/staff may participate in the Intramural Sports Program.

In addition to the Group Exercise Program that offers group fitness classes, the Fitness Program also offers personal training, massage therapy and fitness assessments. Group exercise classes are designed for beginner, intermediate and advanced levels.

Through the University Recreation Center's climbing wall and Through the University Recreation Center's climbing wall and the Challenge Course Program, individuals are allowed to participate in and experience activities that cause them to reflect and learn about their relationship to others as well as their own abilities and limitations. Participants attempt to recognize their own abilities via the philosophy of "Challenge by Choice," support their fellow group members, and possess a desire to learn more about themselves through low and high ropes course elements. This program is open to all student organizations and classes.

The Sport Club Program is designed to serve individual interests in different sport and recreational activities. Membership is open to all students and the club must be a recognized student organization. These interests can be competitive, recreational or instructional in nature, as clubs may represent TCU in intercollegiate competition or conduct intra-club activities, such as practice, instruction, social activities and tournament play.

### Health Services

The Brown-Lupton Health Center is located at 2825 Stadium Drive – west of Colby Hall and next to the University Union. The Health Center houses both the Medical Clinic and the Counseling Center. The Medical Clinic outpatient facility provides ambulatory care for the various needs of TCU students and is staffed by board-certified medical doctors, a physician assistant, a nurse practitioner who specializes in women's health care, and a professional nursing staff

comprising R.N.'s and L.V.N.'s. During the regular academic year, the clinic hours are 9 a.m. to 5 p.m., Monday through Friday.

An independent pharmacy conveniently located within the Health Center offers competitively priced prescriptions and over-the-counter medications. The pharmacy accepts most insurance plans. Co-pays and medication costs can be billed to the student's University account or paid for by cash or check at the time the prescription is filed.

Although not required for graduate students, the TCU Student Health Insurance Plan is available for students attending credit courses by specifically enrolling in the plan. Internet and television (TV) courses do not fulfill the eligibility requirements. To specifically enroll in the University-offered plan, the "elect" choice must be entered online at [healthcenter.tcu.edu](http://healthcenter.tcu.edu) prior to the semester's deadline for electing or waiving.

International students, regardless of classification, are **required** to carry the University-offered student health insurance as a minimum standard of coverage and are not eligible for a waiver of the insurance.

### The Office of Religious and Spiritual Life

The Office of Religious and Spiritual Life offers resources, programs and staff dedicated to supporting faith communities, religious expression and spiritual exploration throughout TCU. TCU has a vibrant history as a University affiliated with the Christian Church (Disciples of Christ), a tradition that values dialogue, freedom of thought and a mutual concern for all people. The Office of Religious and Spiritual Life is committed to respecting the dignity of every individual, celebrating TCU's rich diversity and welcoming all of God's people.

The office is a space to connect, a place to belong and a springboard from which to branch out. Through the office's services, students can connect with a campus ministry or student religious organization; find opportunities for worship, study and fellowship; explore commonalities through interfaith dialogue; and engage in meaningful conversations about life's big questions. The work of the office includes supporting a vibrant religious life; creating dialogue and learning across traditions; meeting student's spiritual needs; and engaging in social justice, community activism and relief work.

Located on the first floor of Jarvis Hall, the Office of Religious and Spiritual Life is open daily and is home to a multi-faith prayer room and RSL Library and Resource Center. A long-standing part of TCU, Robert Carr Chapel is open each day for prayer and personal reflection, and is available for worship and other sacred occasions. In addition to TCU's religious life staff, students will also find more than 10 full-time or part-time campus ministers and religious life partners who offer support, connection and opportunities for growth.

### The Counseling Center

The Counseling, Testing and Mental Health Center provides in-house counseling, psychological assessment and psychiatric services on a short-term basis for TCU students. Students requiring specialized or long-term services will be referred to professionals off campus. The center's counselors are licensed and have extensive training and experience working with college students. The staff includes a psychologist, licensed professional counselors and part-time consulting psychiatrists. Services are provided confidentially.

The center's services are designed to help students cope with personal concerns as they engage in their academic, social and personal activities. Typical student needs and concerns include resolving interpersonal conflicts; managing stress; coping with loneliness; and handling feelings of depression, anxiety and other emotional crises.

Individual and group counseling services are available to assist students. Students in counseling may be referred for psychiatric evaluation for medication, with follow-up appointments if medication is initiated. The Counseling Center provides consultation to concerned parents, faculty and friends. No confidential information about clients of

the center will be shared without a release. The center also provides education and outreach to residence halls, classes and campus organizations on a wide variety of topics in mental health.

The center is located at the west entrance of the Health Center. Services are available by appointment, Monday-Friday, 8 a.m.-4:30 p.m.

## Career Services

### Career Exploration and Job Search Advising

Career Services offers students and alumni hands-on assistance to take their careers to the next level. From creating a resume to mastering interviews, finding internships and making successful career transitions, Career Services provides the tools and techniques to jump start your career. The following services are available free of charge to students and alumni.

- Career Assessments
- Career Advising
- Resume and Cover Letter Assistance
- Video-Taped Mock Interviews
- Job Search Assistance
- Job Listings on FrogJobs
- On Campus Interviewing
- Professional Events and Career Fairs
- Resource Center located in Jarvis Hall
- Career Services' website, [www.careers.tcu.edu](http://www.careers.tcu.edu), including key resources, Optimal Resume and Going global

Career Services is located in BNSF Railway Career Center in Jarvis Hall and is open 8 a.m. to 5 p.m. Monday-Friday. The Alcon Career Center, for Neely School of Business students, is located in Dan Rogers Hall, Room 140 and is also open from 8 a.m. to 5 p.m.

For additional information or to schedule an appointment to meet with an adviser, call 817.257.2222 or email [careers@tcu.edu](mailto:careers@tcu.edu).

## International Student Services

TCU has a comprehensive program to help international students adjust to a new living environment and to share their backgrounds with U.S. students.

The Office of International Student Services provides advice and assistance regarding immigration matters, academic, monetary and other personal concerns. It can help in establishing a relationship with a Community Friendship Family; in understanding U.S. culture, customs and laws; and in student relations with the various administrative and departmental offices of the University.

The International Student Association (ISA) is an integral part of the University's International Student Program, providing social, educational and community opportunities for its members. It is open to all students. International students are encouraged to become active members. All new international students automatically become members of the ISA upon completion of an information form during orientation.

All students who are not citizens or permanent residents of the United States are required to report their arrival to the Office of International Student Services within five days of their initial arrival or within five days after any subsequent re-entry into the United States. They must also report any change of data recorded on the Personal Data Form that is on file in the Office of International Student Services.

All non-immigrant and international students on a visa must be covered by the International Student insurance plan throughout their period of studies at TCU unless a waiver is requested and approved through the International Student Services Office prior to orientation. Waivers are considered solely in the case of students with dependents or students who enter the United States and study with a J visa. The coverage becomes effective one day prior to orientation and the cost for insurance is billed to the student account. All students must also provide the University with a completed TCU Health Record prior to initial registration.

Information on the admission requirements and procedures for international students is in the International Students Admission section of the graduate catalog.

ISS offices are located in Jarvis Hall.

## Student ID Card

The TCU ID card is a student's access key to many University resources. It is permanent and may be used as long as the student is enrolled at TCU. The card is the property of TCU and is non-transferable. If at any time students have questions or problems with their ID card, visit [www.idcenter.tcu.edu](http://www.idcenter.tcu.edu), contact the ID Card Center in Brown-Lupton University Union at 817.257.7856 or e-mail [IDCenter@tcu.edu](mailto:IDCenter@tcu.edu).

The TCU ID card is a computerized plastic card, bearing a student's photo and TCU ID number, with a magnetic stripe on the back. Each time the card is inserted in a card reader, the data encoded in the magnetic stripe is electronically scanned and sent back to a central computer for verification. The system then transmits whether the card is valid and the transaction accepted. Students use their cards for TCU Bookstore charges, and access to the library and Recreation Center, buildings, labs and classrooms across campus, including residence halls. The ID card may be used for making photocopies in the library and Frog Prints and Printing Services. Other uses include ordering computer printouts from the Information Commons and other public computers across campus, admission to athletic and other events, various vending machines and verifying identity if requested by a TCU official.

Card owners are responsible for reporting lost or stolen cards promptly to ensure that no one else uses your card. Card owners can deactivate a lost or stolen card online. Simply log into [my.tcu.edu](http://my.tcu.edu), click on "Helpful Links" click on "Frog Bucks" accept and submit and then "Report A Card Lost." Students can reactivate a found card at the same location. Lost or stolen cards may also be reported to the ID Card Center in the Brown-Lupton University Union, Room 2033, 817.257.7856, or TCU Police 817.257.7777. Until a card is reported lost or stolen you are responsible for any card purchases. There is a replacement charge of \$20 for a lost or stolen card.

The ID card remains the property of TCU at all times, and any misuse of the card could result in loss of privileges or disciplinary action. ID cards should be in a student's possession at all times and must be surrendered upon the request of any University official.

## TCU Police

TCU police officers are commissioned by authority of the Board of Trustees of TCU and are certified as peace officers by the state of Texas to provide police services for the campus. The TCU Police are in service 24 hours a day, seven days a week, and the TCU Police dispatcher can be contacted at any time by telephone at 817.257.7777. The office is located at 3025 Lubbock Avenue.

### Police Programs

#### Froggie Five-O Student Escort Program

The TCU Police Department administers a student escort program, Froggie Five-O, for female students. Froggie Five-O operates between the hours of 8 p.m. and 1 a.m. during the fall and spring semesters. Froggie Five-O escorts female students on foot or by golf carts to all areas of the campus. After 1 a.m., TCU police officers or security guards are available to escort students. Students may request an escort by using any of the 104 emergency telephones located on campus or by calling the TCU Police at 817.257.7777.

#### Campus Crime Watch

These programs are of a neighborhood watch nature with the TCU campus being the neighborhood. Meetings for the programs are open to all students, faculty, staff and friends. The TCU Police Department crime prevention specialist hosts the meetings and provides speakers on subjects of interest to campus community members.

#### Crime Prevention

Crime prevention and other services are offered by the TCU Police Department and the Fort Worth Police Department's Community Service Office and include Sexual Assault/Acquaintance Rape Prevention, Personal Awareness/Campus Alcohol Police Information, Campus Crime Watch Meetings, Crime Prevention Surveys for Home and Business, Operation ID: Property Identification System, Auto Theft Prevention (Window Etching) and Vehicle Jump Starts. (Due to possible problems with electric locks, TCU Police Department is unable to provide vehicle unlocking services.) The crime prevention

office is located in the Rickel Building Room 155B. The phone number is 817.257.7276.

**RAD Systems**

Rape Aggression Defense system (RAD) has been offered on the TCU campus for several years. RAD teaches women defensive concepts and techniques against various types of assault by utilizing easy, effective and proven self-defense/martial arts tactics. RAD provides effective options by teaching women to take an active role in their own self-defense and psychological well being. The RAD program was developed for and is offered to females.

**Lost and Found**

The TCU Police Department is the official lost and found office. Articles lost or found should be reported as soon as possible to help the office in returning property to the rightful owner.

## Automobile Regulations

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All students, faculty and staff who operate a motor vehicle on University property must register that vehicle with the TCU Police Department and comply with the rules and regulations set forth. The annual registration fees and the TCU Campus Parking Rules and Regulations can be found at [www.cap.tcu.edu](http://www.cap.tcu.edu).

Purchasing a parking permit does not guarantee a parking place nor does the lack of a parking space justify violation of any parking regulation. The fact that a citation is not issued when a vehicle is illegally parked does not mean or imply that the regulation or rule is no longer in effect.

Illegally parked vehicles may be ticketed, immobilized or towed by the TCU Police Department. The payment of traffic fines, of immobilization or towing charges does not entitle the violator to accrue an indefinite number of citations. Continued parking offenses may lead to a suspension of campus driving and parking privileges, and may also result in disciplinary action by the University. Whenever it is necessary to move an illegally parked vehicle, an independent wrecker operator will tow the vehicle to the wrecker's storage area. The owner of the vehicle will be responsible for the wrecker fee and storage, plus the fine for the traffic violation.

The University does not assume any liability concerning the protection of the motor vehicle or any responsibility for providing special parking places near a building in which an employee works or a student's residence hall or class.

## Bicycle Regulations

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Bicycle registration forms are online at [www.police.tcu.edu](http://www.police.tcu.edu). Print the form and bring to the TCU Police Department to receive a bicycle permit. Forms may also be obtained at the TCU Police Department 3025 Lubbock Avenue.

Bicycle riders must adhere to all state and local laws. Pedestrians have the right of way.

# University Programs

The Master of Liberal Arts degree (administered by the Office of Graduate Studies) and the graduate certificates in Ranch Management (administered by the Ranch Management Program) and Women's Studies Certificate (administered by the Women's Studies Program) are offered.

## MLA Degree

The Master of Liberal Arts program is designed to offer graduate-level education in the broad areas of liberal studies. It is a multidisciplinary, non-career oriented program that seeks to offer a wide range of educational opportunities to students of diverse educational backgrounds. The intent of the program is to make available to all college graduates an opportunity to satisfy their intellectual curiosity and to broaden their knowledge.

### Application Procedures

A bachelor's degree from a regionally accredited college or university is required for admission. Applications for admission are available in the Office of Graduate Studies and online at [www.mla.tcu.edu](http://www.mla.tcu.edu).

The application is considered complete when the following are received:

- Completed application form;
- Two certified transcripts mailed directly from the applicant's degree granting university to the Office of Graduate Studies, TCU Box 297024, Fort Worth, TX 76129; and
- A \$50 application fee

## Master of Liberal Arts

### MALA 60033 - Outbreak: Infectious Diseases and World History

A broad, integrated view of infectious disease in humans within the context of society and history. Development of medical science and technology, effects of disease in society, and conduct and limitations of historical inquiry will be examined.

### MALA 60043 - Mass Media and Society

As the presidential election campaign gets into full swing, the role of the media will become increasingly important as news coverage, presidential debates, and election advertising bring this important issue to the public. Mass Media and Society will examine not only the presidential campaign, but also the impact of media on individuals, institutions, and community. Participants in this course will probe how and why the media developed the way it did, where the media is today, and where the media seems to be heading in the age of information. The class will explore the cultural context and norms of major media industries such as newspapers, magazines, books, radio, films, television, music recordings, public relations and advertising.

### MALA 60053 - The Asian Enigma: Modern China and Japan

An analysis of the civilization, culture and values of contemporary China and Japan with a view to explaining why each nation reacted so differently to Western impact and what each portends for America and the rest of the western world. The course stresses traditional Chinese and Japanese values, how they are manifested in everyday life as well as national and economic decision-making, and how these values are different from those held by most Americans.

### MALA 60063 - Literature of the American Southwest

The course will investigate the idea of a "sense of place" by working toward a definition of the "American Southwest." We will examine how authors evoke a distinctive sense of place by reading and discussing nonfiction books of travel (e.g., John Graves' *Goodbye to a River* or Richard Shelton's *Going Back to Bisbee*) and a range of fictional works representing several literary modes, ethnicities, and Southwestern perspectives.

### MALA 60073 - The Impact of Computers on Society

This is a non-technical introduction to what a computer is, how it functions, and how they are used in today's society. In addition to

learning about the impact of computers, students will learn to use a browser to access the Internet.

### MALA 60093 - The Literature of Survival: What Tales Teach Us about Living and Dying

Students will read literature and watch films about survival of both everyday crises and life-threatening situations. They will write three papers on topics related to survival of such ordinary crises as divorce or job loss, survival in the outdoors, and the prospects of long-term survival of the human species. Students will examine factors, including personality traits, which either impede or enhance a person's ability to survive a variety of circumstances that put his or her confidence, sanity, or soul in jeopardy.

### MALA 60113 - Myths and Legends: North American Indian Thought

Luther Standing Bear declares, "The Indian, by the very sense of duty, should become his own historian, giving his account of the race - fairer and fewer accounts of the wars and more of statecraft, legends, languages, oratory, and philosophical conceptions." This course is a survey of the legends and myths and the cultural-agricultural practices of the north American Indian tribes and nations with a focus on the nature of the self (person; tribe), the world (nature; cosmos), and their interrelationship(s). These concepts are discussed and comparisons with Western philosophy are made when appropriate.

### MALA 60123 - Global Persuasive Campaigns, Their Influence and Impact

Global communications have created an international community exposed to persuasive campaigns, some advertising and some informational. This course will examine the influence and impact of global persuasive campaigns through an analysis of the structure of the campaign process and the use of images to create familiarity and experience. The ultimate impact and influence of such campaigns is highly variable, depending on the media in which they appear and the cultural context in which they are interpreted.

### MALA 60133 - The Sociology of Deviant Behavior

What is deviance? From a sociological perspective, deviance is a matter of social definition, interpretation, and reaction. This seminar examines the story of deviance, a story involving the struggle between rule breakers and those who seek to define them as outside normative boundaries. The goal is to introduce students to substantive topics and scholarly work within the sociology of deviance while providing an opportunity for discussion and critique. Special emphasis will be placed on the interactional dynamics involved in defining and managing deviance and the development of deviant careers.

### MALA 60143 - Economics of Contemporary Issues

Basic concepts and tools used by economists and applications of those tools to analyze contemporary economic and social issues will be discussed. Included among the issues will be drug prohibition, tax reform, Social Security, the minimum wage, and environmental protection.

### MALA 60153 - Culture and American Cinema

An exploration of cinema as a form of American social expression. As cultural artifacts, films are produced in specific historical contexts by and for cultural groups. Films produced for American audiences reflect American values, myths, and behavior and thus constitute an important form of social expression. We will examine movie genres and directors from the 1930s through present day to see how Hollywood's images of America changed over time.

### MALA 60163 - American Film Genres

This course examines Hollywood genre films from a cultural perspective. Genres such as the western, the musical, the science fiction film, and the crime film change over time, both reflecting and affecting the cultural attitudes of filmmakers and audiences. This course may be taught as an overview of several genres or as a specific analysis of one particular genre.

**MALA 60183 - After Dictatorship: Can Latin American Nations Achieve Democracy?**

The course challenges the facile assumption that because guerrilla wars have ended and the generals have turned power over to civilians, Latin America will necessarily "go democratic." The course focuses on the peace processes in selected Latin American countries in order to explore the serious challenges that confront nations seeking to democratize when they are saddled with deep legacies of authoritarianism.

**MALA 60193 - High Civilizations of the Americas: The Aztecs, the Incas, and the Maya**

An examination of the beginning, development, and decline of the three major aboriginal cultures of the Western Hemisphere. The total culture of each civilization will be explored including religious, social, economic, and military factors. Post-conquest developments will also be examined.

**MALA 60213 - Contemporary Indigenous Literature of Mexico**

A study of literary works by outstanding, contemporary writers hailing from a variety of Mexican indigenous ("Indian") ethnic groups: Nahuatl, Zapotec, Yucatec Mayan, Mazateco, Tzeltal, among others. The pre-Hispanic roots of this new literature will be examined, as will recurring themes and other ancient motifs which persist in today's writers. Short stories, poetry, and drama will be studied within their specific ethnic contexts, and also within a broader literary analytical framework. Recent English translations by Dr. Frischmann and his personal research experiences will make this course accessible to all MLA students.

**MALA 60233 - Controversial Environmental Issues**

Our relationship with the Earth is changing at an unprecedented rate. The pace of change is accelerating not only from our advancing technology, but also from world population growth, economic growth, and increasingly frequent collisions between expanding human demands and the limits of the Earth's natural systems. It appears that catastrophe looms ahead unless major changes are made in a short period of time. Or does it? Fortunately, human beings are capable of changing their behavior and values, which are then reflected in changes in national and international priorities. Such changes happen when people are confronted with new information or new experiences. This is a discussion and debate style course. The objective is to introduce students to controversies in environmental policy and science. The readings, which represent the arguments of leading environmentalists, scientists, and policymakers, reflect a variety of viewpoints and have been selected for their liveliness and substance. They are organized topically around major areas of study within environmental studies, and include environmental ethics, water resources, energy, global climate change, and population.

**MALA 60253 - King Arthur Meets Queen Victoria: Arthurian Literature in the Victorian Age**

An examination of the roots of current American interest in Arthurian legend in Queen Victoria reign. Students will read important literary works, including Alfred Lord Tennyson's *Idylls of the King*, William Morris's "Defense of Guinevere," and Mark Twain, A Connecticut Yankee in King Arthur's Court, and explore the historical and political conditions surrounding the 19th-century medieval revival. The course concludes with a screening of *Excalibur* (1981) and discussion of its indebtedness to the Victorian era.

**MALA 60263 - The US Economy: Analysis and Outlook**

The study of economics involves the learning of abstract theories about the workings of the economic system and the study of various policy tools that may be used to guide the economy toward specified targets. The course will focus on the historical development of the theories developed to explain our major economic issues, on the controversies surrounding these theories, and on the different policy conclusions that arise from different theories. The major economic issues on which the course will focus include inflation, unemployment, business cycles, economic growth and development, international trade deficits and surpluses, federal government budget deficits and surpluses, income distribution, and globalization.

**MALA 60273 - Economic Policy and Its Impact: A Simulation Approach**

Computer simulation models will be used to learn important economic concepts and to analyze current economic problems. Students will assume the role of economic policymakers and as such will initiate

policy changes and examine their effects on various aspects of the economy, such as the national output level, the inflation rate, the unemployment rate, and the distribution of income. No prior computer experience is necessary.

**MALA 60283 - A World of Weather: Fundamentals of Meteorology**

Do you have a fascination with the Weather Channel? Are you interested in a non-mathematical treatment of the principles of meteorology and climatology? Students in this course will develop a working understanding of general meteorological and climatological processes, develop an understanding of the spatial and temporal variability of these processes, and begin to understand how these factors influence the climate of a region. Basic information about the earth/energy system will pave the way for an examination of simple dynamic relationships, synoptic circulation, global climate and climate change.

**MALA 60303 - Seminar in Women's Health**

Explores holistic women's health in the contexts of history, culture, science. Examines the influence of race, gender, age, and class on women's embodied experiences and women's health. Reviews effect of oppression and influence of power and privilege on systems and processes. Analyzes the impact of social construction of gender on women as consumers and providers of health care. Reframes contemporary systems to challenge prevailing social values and actions; suggests alternative practices and research agendas. Promotes women's ownership and self-agency in naming misogyny, understanding health behaviors and selected problems; identifying choices in prevention and care. Introduces global considerations in women's health.

**MALA 60313 - A New American Foreign Policy?**

What foreign policy issues are on the horizon for U.S. policy makers? What should our foreign policy be as we enter the post 9/11 era? How should that foreign policy be made, and by whom? The domestic political environment facing U.S. foreign policy makers changed first after the Vietnam War and then again after the September 11th attacks. With the demise of the Cold War, the external political environment changed as well. This course will look forward to contemporary U.S. foreign policy on both the domestic and external levels. Domestically, the course addresses the various governmental and non-governmental actors who combine to produce foreign policy. Externally, it examines problems that revolve around specific issues (like terrorism and homeland security, the promotion of democracy, foreign trade, etc.) or around particular countries (Afghanistan, Russia, China, Mexico, Cuba, etc.).

**MALA 60323 - The New South, 1877 - Present**

In this course the political, social and economic factors in the New South are examined with attention given to comparative regional history. Particular emphasis will be placed on historical interpretations, showing both the professional and lay image of the South in today's society. The economic modernization of the South will also be a major theme of the course.

**MALA 60373 - The Social Psychology of Crime and Victimization**

This course introduces students to the central ideas in the field of social psychology and the significance of these ideas in providing explanations for criminal behavior and related phenomena. Additionally, classic social psychological theory and research are examined and utilized to understand offenders, victims and criminogenic environments. The course emphasizes the integration and application of course content to understand contemporary criminological issues such as the use of the death penalty for juveniles, treatment and control of sex offenders, criminalizing drug offenders, and the validity of repressed memory.

**MALA 60403 - Global Geopolitics**

In a world subject to war, ethnic conflict, and economic disruption, to what extent does geography explain the unfolding of global events? How do access to waterways, the level of economic development, the blessings of natural defenses, and proximity to other nations determine the stance a country presents to the outside world? Geographer Dr. Jeffrey Roet will introduce geopolitical concepts that help explain conflict and change and show how geography is indeed the stage upon which history is set. He will reveal centuries-old patterns behind the dynamics of war, economic competition, and other current global concerns.

**MALA 60423 - Modern Mexico: A Nation in Crisis**

The emergence of Mexico from colonial status to hemispheric leader and major force among "third-world" countries. Considerable attention is devoted to the Revolution of 1910 and the ongoing revolutionary process it initiated. The role of the United States in the emergence of modern Mexico is discussed in detail. The course concludes with an extensive examination of Mexico's role as a major oil producer and the current financial and economic crisis with which the country is contending.

**MALA 60443 - Contemporary Issues in Human Health**

From the human genome project and cloning to hormone replacement therapy and antibiotic resistance, new issues involving human health as science discovers more about the causes and treatment of human diseases increasingly confront us. Our ability to manage our health depends on our understanding and appreciation of the biological concepts underlying these issues. This course will examine some of these contemporary issues and the underlying biological concepts through readings from a variety of Web resources.

**MALA 60483 - How the Civil War Was Lost: Problems in the Confederate High Command**

This course examines the issues and problems involved within the Confederate government in selecting and using generals and in developing and implementing national strategy during the Civil War. Topics include the personal role of Jefferson Davis, the influence of Robert E. Lee, the problematic service of Braxton Bragg, P.G.T. Beauregard, and Joseph E. Johnston, among others. We will also explore the controversies among Confederate leaders between offensive and defensive strategy and between Virginia the western theater of the war.

**MALA 60523 - The Importance of Plants in Our World**

An investigation into the aspects of plants that make them useful to people from an economic and social perspective. The structure, chemistry, genetics and ecology of plants will be examined. Products derived from flowers, seeds, fruits, stems, leaves and roots are analyzed in light of past, present and future needs of the world community.

**MALA 60533 - American Revolution: A Blessing or a Curse?**

Today's headlines report the failure of revolutions with their civil wars, ethnic massacres, and palace coups. What constitutes a successful revolution? What lessons are there in the American experience? General Washington's startling words in 1783 express his anxiety for the problems of American state-building and give the title to a course that will examine the origins of those problems in the protest to British imperialism, the War for Independence, and the post-war challenges leading to the creation of the federal structure under the Constitution.

**MALA 60553 - Dilemmas in American Politics: Freedom, Order, Equality**

The class will examine the perennial dilemmas between Freedom, Order and Equality especially as they pertain to political ideology and public policy. To understand the dilemmas, we will examine the basic structure of our government with special attention paid to the structural tensions that augment this dilemma. Next we will look at how the dilemmas surface in contemporary debate among liberals and conservatives and how the dilemmas impact the definition of policies in the United States. We will be discussing and debating a number of current issues that pit these three valued ideals against one another to better understand the positions presented by advocates on both sides of the policy debates and to illuminate our personal positions and views.

**MALA 60573 - Aesthetics of Film, TV, Radio Production**

Understanding how media texts are created. The course provides a behind-the-scenes look at film, television, and radio, guiding students to a thorough understanding of the technological and stylistic options available to producers and directors. These options, in turn, form the palate from which directors and others construct mediated texts--the images, sounds, and dramatic tensions necessary for the successful execution of the theatrical film, television, and radio. Examples will be taken from current film, television, and radio programming. Aimed at an educated consumer of the media, this course requires no previous experience in the media arts.

**MALA 60593 - Light, Color, and Space**

Human beings receive over 80% of their information about the spatial environment through vision. The mechanism by which this visual environment is revealed to us is light. It is the quality of that light, in all

of its manifestations, that has inspired mankind for thousands of years. Ranging from the philosophical statement "I see," which has more to do with the act of understanding than the process of seeing, to the psychological aspects of certain three dimensional visual illusions that work, based solely upon stored mental information on the location of our sun and the resultant cast shadows; light has both inspired and guided our relationships with the world that surrounds us. So strongly interwoven is this relationship that it passes for the commonplace. This course seeks to explore and clarify the inter-relationship between man and light. Individual/team investigations will concentrate on the use of light and color to create sophisticated themed environments. The TCU Center for Lighting Education will be used to support the actual demonstration of and investigations into the use of various types of electric lighting devised, ranging from simple track fixtures to computer controlled fixtures that can change color, lighting position, and pattern.

**MALA 60613 - Literature and Film: The Art of Adaptation**

Time and again filmmakers turn to literature for inspiration; we have become accustomed to seeing favorite works of literature "translated" for the screen. This course will ask you to move past the initial reaction--Is the film better than the book, or vice versa?--to analyze the methods used in adaptation. How does each medium establish characters, develop mood and atmosphere, communicate emotions and thoughts? Furthermore, the course will examine how adaptations have been influenced by factors such as changing cultural attitudes and censorship.

**MALA 60633 - The Role of Capital: Business Cycles, the StockMarket, Federal Funding, and Economic Development**

This course explains the factors affecting domestic economic growth, the business cycle, the stock market, social security financing, federal debt financing, and third world development. It does so by focusing on a common theme throughout: the role of capital (physical and financial). As an economics course, emphasis is on policy questions rather than investment or business planning.

**MALA 60653 - The People's Choice: American Presidents**

A history of the issues, conflicts and personalities in the development of the American presidency. An examination of twelve selected presidential administrations from George Washington to the modern presidency will be conducted.

**MALA 60673 - The Jerusalem Jackpot: Understanding Israeli-Palestinian Conflicts**

The struggle for control of Jerusalem and surrounding territories has made violence between Jews and Arabs a recurring phenomenon since the 1920s. The 1948 creation of an independent Israeli state only exacerbated the violence. This course examines contemporary conflict issues between Israelis and Palestinians against the context of a history of past conflicts. Focal points for the course are the underlying reasons for these conflicts, their conduct and resolutions to date, and the various efforts to promote a more lasting peace between Israelis and Palestinians.

**MALA 60693 - The Satiric Vision: From Jonah to Doonesbury**

Study of the literary art of satire, including forms of satire, angles of satiric vision and examination of chief satirists' works and techniques.

**MALA 60713 - The History of War**

In this survey we will seek to understand the influence of war in human history from ancient times to the present. This course will trace the causes and effects of war, the evolution of military technology, and the role played by leadership. To highlight these, we will discuss decisive military battles throughout history. Hopefully, by examining this process we will be able to understand ourselves and our world a little better.

**MALA 60793 - Public Health: Current Biological Issues**

The course examines current biological issues in Public Health through lectures, readings, class discussion and debate. Issues such as vaccines, food safety, use of genetically modified plant crops, environmental toxins, bioterrorism and emerging diseases are examined.

**MALA 60803 - Pax Americana: United States Foreign Relations in the Twentieth Century**

Now that the Cold War is over and the 20th century is coming to a close, how well did the United States fulfill its destiny of making the past hundred years the "American Century" that so many Americans predicted in the 1890s? This course offers some perspectives as

answers by tracing the development of a global American foreign policy from the period following the Spanish-American War until the end of the Cold War. It also examines the forces - both foreign and domestic - that influenced those policies as the United States tried to formulate new diplomacies to meet each of the ever changing challenges in world affairs of this most dynamic century.

**MALA 60903 - British Humor from the Goons to the Young Ones**

"British humor" as exemplified in popular culture by Monty Python's Flying Circus has gained recent acceptance in U.S., but is actually based on a long tradition that has its roots in the special love of wit, puns, paradoxes, and epigrams the English have manifested since the Viking invasions. Even though sensing the laughable and absurd is a universal trait, humor is expressed according to cultural differences and values of class, education, or special interest. Students in the course will look at British Humor on radio, TV, and film and attempt to define its unique attributes.

**MALA 60953 - Modern Astronomy: From the Origin of the Universe to Black Holes**

An introduction to recent developments in astronomy and astrophysics: how the Universe began and how will it end, the age of the cosmos, the origin of galaxies, the birth, life and death of stars; stellar and galactic black holes, millisecond pulsars, supernovae, comets, and quasars, and the worlds of the solar system. Questions to be pondered include: Where and what is the missing mass? Are we alone in the Universe? Are we in danger from a comet colliding with earth? Where and how did life originate? The latest discoveries by the Hubble Space Telescope, Cassini, and other space missions are also discussed.

**MALA 60970 - Special Problems**

Special problems in Liberal Arts.

**MALA 61013 - Themes in Prehistory: Fossils, Dinosaurs and Humans**

Dinosaurs have held the public imagination for almost 200 years now. Beyond an intrinsic interest in animals that lived in an unimaginably distant time, dinosaurs and dinosaur paleontology figured greatly in the development of concepts of geologic time and biology from the Renaissance on and are still centered in the public's appreciation of 'science'. This course will take students through a tangled web of emergent concepts of time, organisms and 'public relations' through the last 300 years or so, focusing on the tangible and intangible impressions that dinosaurs have made on modern civilizations.

**MALA 61023 - The Abortion Debate**

Abortion has been a highly controversial subject in American culture since the 1960's, and it will remain so for the foreseeable future. This course will examine this complex issue from various angles: medical, philosophical, legal, historical, and religious.

**MALA 61033 - Dilemmas in American Politics: Freedom, Order, Equality**

The class will examine the perennial dilemmas between Freedom, Order and Equality especially as they pertain to political ideology and public policy. To understand the dilemmas, we will examine the basic structure of our government with special attention paid to the structural tensions that augment this dilemma. Next we will look at how the dilemmas surface in contemporary debate among liberals and conservatives and how the dilemmas impact the definition of policies in the United States. We will be discussing and debating a number of current issues that pit these three valued ideals against one another to better understand the positions presented by advocates on both sides of the policy debates and to illuminate our personal positions and views.

**MALA 61053 - Parapsychology: Weighing the Evidence**

The field of parapsychology includes phenomenon such as telepathy, clairvoyance, psychokinesis, ghosts and hauntings, spirit communication, and near-death experiences. The claim by many parapsychologists is that these paranormal occurrences have been studied with rigorous research methods, and that there is considerable evidence to support their existence. This course will weigh the evidence for parapsychology by tracing the history of psychical research from the dawn of spiritualism to the present day use of the ganzfeld technique. We will discuss the careers of famous psychics as well as the contributions of many noted parapsychologists. The methods and results from parapsychological studies will be evaluated in the context of the approaches used by researchers in the natural sciences. This course will address the following important issues: are testimonials

useful evidence to support the existence of these phenomena; do fraudulent claims preclude acceptance of the field; can parapsychological research findings be replicated; do probability and chance help explain paranormal events; how have magicians and skeptics affected the perception of parapsychology in the scientific community and the general public. The objective of this course is to present perspectives from both "believers" and "skeptics" such that in the end, each student can make up his/her own mind as to the strength of the evidence.

**MALA 61063 - Light, Color, and Space**

Human beings receive over 80% of their information about the spatial environment through vision. The mechanism by which this visual environment is revealed to us is light. It is the quality of that light, in all of its manifestations, that has inspired mankind for thousands of years. Ranging from the philosophical statement "I see," which has more to do with the act of understanding than the process of seeing, to the psychological aspects of certain three dimensional visual illusions that work, based solely upon stored mental information on the location of our sun and the resultant cast shadows; light has both inspired and guided our relationships with the world that surrounds us. So strongly interwoven is this relationship that it passes for the commonplace. This course seeks to explore and clarify the inter-relationship between man and light. Individual/team investigations will concentrate on the use of light and color to create sophisticated themed environments. The TCU Center for Lighting Education will be used to support the actual demonstration of and investigations into the use of various types of electric lighting devised, ranging from simple track fixtures to computer controlled fixtures that can change color, lighting position, and pattern.

**MALA 61073 - The Supreme Court's Greatest Hits**

"The Supreme Court's Greatest Hits" is an online course featuring student/professor analyses of selections from the most important decisions of the United States Supreme Court in the last fifty years. The topics to be covered during the term include: 1) Freedom of expression, 2) Freedom of religion, 3) Reproductive Freedom, 4) Discrimination based on gender, 5) Discrimination based on sexual orientation, 6) Pornography and the legal test for obscenity, and 7) Highlights from the criminal justice system. Student discussion leaders will be assigned to lead threaded discussions for each of the 27 cases we study, depending on enrollment, this will amount to four times during the term that a student will lead threaded discussions. Topics will run for one, two or three weeks during the term. The course will utilize a CD-ROM disk developed by Professor Jerry Goldman of Northwestern University. Installation of the disk on the hard drive of your computer will bring you the recorded oral arguments made before the Supreme Court of the United States and oral announcements of decisions for the cases included by Professor Goldman on the disk. The disk also contains the full text of the opinions issued by the Court on the included cases.

**MALA 61083 - The Wild West**

Well...was it? When? To whom? What tamed it? This course will wrestle these questions by surveying the history of the trans-Mississippi West from contact to the present (possibly into the future) and considering the significance, or insignificance, of frontiers in American History. Students will read a textbook and analyze the West through extensive use of web sites and representations in popular culture, especially films.

**MALA 61093 - Profiles in Courage: Cinematic Studies of Greatness**

This MALA course capitalizes on great films to investigate the lives of people who achieve greatness. Films such as Amadeus, Braveheart, Glory, Lawrence of Arabia, Patton, and Schindler's List are used as laboratories for studying the principles of greatness as played out in the lives of heroes, creators, commanders, and statesmen. Although the domains of greatness vary, from music to politics to the battlefield, many of the essential ingredients are the same. Chief among these is courage, which Ernest Hemingway defined as "grace under pressure." (Note: Students enrolled in this eCollege course must have access to a video source, either a library or a video outlet such as Blockbuster.)

**MALA 61103 - Psychology of Sex, Violence and Aggression**

Teaches students how to think critically about psychological research on sex, violence, and aggression. The course goal is to educate intelligent consumers of media information and misinformation, teaching them to separate scientifically valid from invalid claims that such factors as genetics, biochemistry, socialization practices, sex differences, ambient temperature, alcohol, television, movies, and video games affect interpersonal violence and aggression.

**MALA 61113 - American Stages: A History of Theatre in the United States**

The United States has a rich theatrical and dramatic heritage often hidden in the shadow of our colonial connection to England and dismissed by the Puritan ideology and ethics that formed the basis of our government. This web-based course shall explore that rich heritage through an in-depth look at the people, historical situations and the drama literature that reflected the growth of this country from our colonial beginning to its maturity as a world leader in the 20th century.

**MALA 61123 - Global Persuasive Campaigns, Their Influence and Impact**

Global communications have created an international community exposed to persuasive campaigns, some advertising and some informational. This course will examine the influence and impact of global persuasive campaigns through an analysis of the structure of the campaign process and the use of images to create familiarity and experience. The ultimate impact and influence of such campaigns is highly variable, depending on the media in which they appear and the cultural context in which they are interpreted.

**MALA 61133 - Aspects and Issues: Health Care Delivery**

The course examines the various aspects of health care delivery in the United States and other countries. The course will provide the student with a critical analysis and overview of health care delivery focusing on factors impacting its access, quality and cost.

**MALA 61143 - Mass Media and Society**

As the presidential election campaign gets into full swing, the role of the media will become increasingly important as news coverage, presidential debates, and election advertising bring this important issue to the public. Mass Media and Society will examine not only the presidential campaign, but also the impact of media on individuals, institutions, and community. Participants in this course will probe how and why the media developed the way it did, where the media is today, and where the media seems to be heading in the age of information. The class will explore the cultural context and norms of major media industries such as newspapers, magazines, books, radio, films, television, music recordings, public relations and advertising.

**MALA 61153 - Texas Political Leadership: Case Studies from the 20th Century**

During the 20th Century and now into the 21st, Texas provided a large share of national leadership in the United States and had some groundbreaking participants in the political change of that century. In this class, we will examine ten of those political figures, including the five chamber leaders of the House from Texas (Speakers Garner, Rayburn, and Wright and Majority Leaders Arney and DeLay), the three presidents from Texas (Johnson, Bush, and Bush) and the two Supreme Court associations (Associate Justice Tom Clark and prospective Justice, as of this writing, Harriet Miers). We will also examine the career of John Tower as founder of the modern Republican Party in Texas, and Barbara Jordan as a groundbreaking public servant. The focus will be on techniques of political leadership and how they changed over the course of the 20th Century and into the 21st.

**MALA 61173 - Troubled Neighbors: US and Latin America**

This course focuses on the imbalance of power that has existed historically between the United States and Latin America and the hemispheric problems that have resulted from that imbalance. From the Monroe Doctrine in 1823 to the military intervention in Haiti in 1994, the United States has asserted a leadership role in the hemisphere, often with little understanding of the impact its actions had on the less-powerful nations of Latin America. Most of the course is devoted to the 20th Century, and major issues are examined from both the U.S. and Latin American perspectives.

**MALA 61183 - Red, White and Green: United States Environmental History**

This course will examine American history from the perspective of the complex relationships between humans and their environment from pre-literate times through the 21st century. Geographically, the course will be bounded by the limits of the present United States. During the term, we will address the following questions: How did the environment shape American history and influence various American societies? How have conceptions of the environment changed? Do humans interact with the environment any differently now than they did 600 years ago? How have environmental concerns shaped politics and political movements?

**MALA 61193 - Health Care and the Quality of Life**

The course will examine the state of health care in the United States and explore how quality is defined in light of it. A brief overview of the structure and processes of health care delivery will be presented followed by a review of the various methods for defining and establishing quality in health care in our society. The role and influence of health care providers (medical and insurance companies) on individual choices will also be examined. Specific issues facing society related to health care decision-making will be reviewed and then related to how and who interprets the concept quality.

**MALA 61203 - Romantic Attractions and Close Relationships**

Teaches students how to think critically about psychological research on romantic attraction and close relationships. The course goal is to educate intelligent consumers of media information and misinformation, teaching them to separate scientifically valid from invalid claims about the causes and consequences of initial romantic attraction, deepening close relationships, sex differences, problems that occur within close relationships, and effective versus ineffective strategies for resolving conflicts in close relationships.

**MALA 61233 - Controversial Environmental Issues**

Our relationship with the Earth is changing at an unprecedented rate. The pace of change is accelerating not only from our advancing technology, but also from world population growth, economic growth, and increasingly frequent collisions between expanding human demands and the limits of the Earth's natural systems. It appears that catastrophe looms ahead unless major changes are made in a short period of time. Or does it? Fortunately, human beings are capable of changing their behavior and values, which are then reflected in changes in national and international priorities. Such changes happen when people are confronted with new information or new experiences. This is a discussion and debate style course. The objective is to introduce students to controversies in environmental policy and science. The readings, which represent the arguments of leading environmentalists, scientists, and policymakers, reflect a variety of viewpoints and have been selected for their liveliness and substance. They are organized topically around major areas of study within environmental studies, and include environmental ethics, water resources, energy, global climate change, and population.

**MALA 61243 - Ecological Principles of the Earth**

This course will explore many aspects of the ecology of the earth. Ecology is the study of the interaction of organisms with their environment. The environment includes both physical (global air patterns, soils, etc.) and biotic (competition, predation, etc.) parameters. Specifically, the course will explore the paleohistory of the earth, biomes of the world, the physical forces of today's biosphere, the dynamics of natural communities and populations, and the global effects of man's presence on planet earth.

**MALA 61253 - Creative Writing: Advanced Fiction Writing**

This is a course in fiction writing, where students will be expected to produce two full-length short stories or two chapters of a novel or novella (about 40-50 pages of writing). Our primary goal will be to provide each other - virtually - with a rigorous, supportive audience for our writing. To get to and through our fiction, we'll read contemporary fiction writing, both short stories and novels, and do shorter, focused exercises on setting, characterization, etc. to help us generate prose and understand how stories are put together. In addition to reading and writing fiction, primary responsibilities of this course will involve careful reading and responding to texts we read, student writing, attending a reading in your community, and reviewing a literary journal. While I will respond extensively to drafts and revisions, as a member of the class you'll assume the responsibility of responding to writing by your classmates.

**MALA 61263 - The US Economy: Analysis and Outlook**

The study of economics involves the learning of abstract theories about the workings of the economic system and the study of various policy tools that may be used to guide the economy toward specified targets. The course will focus on the historical development of the theories developed to explain our major economic issues, on the controversies surrounding these theories, and on the different policy conclusions that arise from different theories. The major economic issues on which the course will focus include inflation, unemployment, business cycles, economic growth and development, international trade deficits and surpluses, federal government budget deficits and surpluses, income distribution, and globalization.

**MALA 61273 - Ethics, Mental Health & Society**

Contemporary approaches to the study of mental health emphasize disorders of the brain as the source for abnormal thinking and behavior. This course examines the ethical considerations inherent in this approach as it applies to the development of new treatments. The major objectives of the course include: an understanding of the journey from basic to clinical research; a familiarity with the ethical issues surrounding animal and human clinical research; the challenges that come with industry-sponsored research; and the ethical concerns with proposed treatments for psychological disorders in the future that may include cloning, gene-therapy, and stem cell research.

**MALA 61283 - A World of Weather: Fundamentals of Meteorology**

Do you have a fascination with the Weather Channel? Are you interested in a non-mathematical treatment of the principles of meteorology and climatology? Students in this course will develop a working understanding of general meteorological and climatological processes, develop an understanding of the spatial and temporal variability of these processes, and begin to understand how these factors influence the climate of a region. Basic information about the earth/energy system will pave the way for an examination of simple dynamic relationships, synoptic circulation, global climate and climate change.

**MALA 61293 - Leadership: An Historical and Literary Study**

This course examines a broad spectrum of leadership issues through the study of historical and literary (both fictional and non-fictional) leaders in a wide variety of societies and historical eras. The study centers on the use of cases from the Hartwick Humanities in Management Institute. Because the cases all focus on well-known leaders, the case represents only a small fraction of the materials (books, movies, etc.) that are available to the student for his/her analysis. Additionally, the course challenges the student to view leadership from multiple perspectives (theoretical, as well as academic).

**MALA 61303 - Vietnam in War and Revolution**

This course examines the causes and consequences of war and revolution in 20th century Vietnam. Concentrating on major events such as the Vietnamese anti-colonial movement, the 1945 August Revolution, Ho Chi Minh and Vietnamese Communism, the Franco-Viet Minh War, the roots of the U.S. involvement and the American War in Vietnam, students explore modern Vietnamese history from a variety of perspectives: Vietnamese, American, and French. Course requirements include assigned readings, book and film critiques, a webiographic essay, and participation in threaded discussion.

**MALA 61323 - The New South, 1877 - Present**

In this course the political, social and economic factors in the New South are examined with attention given to comparative regional history. Particular emphasis will be placed on historical interpretations, showing both the professional and lay image of the South in today's society. The economic modernization of the South will also be a major theme of the course.

**MALA 61333 - Terrorism at Home and Abroad**

This course introduces the graduate students to the practices of terrorism--international and domestic--along with the history and motivations behind it. Particularly, the course will provide insight into terrorism from a historical, geographical, cultural, and ideological basis. Strategies to combat terrorism will also be explored. After completing this course, students will not only be familiar with a variety of terror groups and terrorist acts that have made the news, but will also have a deeper understanding of the hostilities and conflicts which give birth to terrorism around the world and at home.

**MALA 61373 - The Social Psychology of Crime and Victimization**

This course introduces students to the central ideas in the field of social psychology and the significance of these ideas in providing explanations for criminal behavior and related phenomena. Additionally, classic social psychological theory and research are examined and utilized to understand offenders, victims and criminogenic environments. The course emphasizes the integration and application of course content to understand contemporary criminological issues such as the use of the death penalty for juveniles, treatment and control of sex offenders, criminalizing drug offenders, and the validity of repressed memory.

**MALA 61383 - The Politics of Emergency Management**

This course will introduce students to the impact of natural and man-made disasters on society, as well as the principles and practices of modern emergency management efforts in the United States. This includes efforts in planning for disasters, mitigating disasters, responding to them, and recovering from them. An emphasis is placed on the role that FEMA and the department of Homeland Security play in the process.

**MALA 61423 - Modern Mexico: A Nation in Crisis**

The emergence of Mexico from colonial status to hemispheric leader and major force among "third-world" countries. Considerable attention is devoted to the Revolution of 1910 and the ongoing revolutionary process it initiated. The role of the United States in the emergence of modern Mexico is discussed in detail. The course concludes with an extensive examination of Mexico's role as a major oil producer and the current financial and economic crisis with which the country is contending.

**MALA 61523 - Importance of Plants in Our World**

Aspects of plants that make them useful to people from an economic and social perspective. The structure, chemistry, genetics and ecology of plants are examined. Products derived from flowers, seeds, fruits, stems, leaves and roots are analyzed in light of past, present and future needs of the world community.

**MALA 61523 - The Importance of Plants in Our World**

An investigation into the aspects of plants that make them useful to people from an economic and social perspective. The structure, chemistry, genetics and ecology of plants will be examined. Products derived from flowers, seeds, fruits, stems, leaves and roots are analyzed in light of past, present and future needs of the world community.

**MALA 61533 - American Revolution: A Blessing or a Curse?**

Today's headlines report the failure of revolutions with their civil wars, ethnic massacres, and palace coups. What constitutes a successful revolution? What lessons are there in the American experience? General Washington's startling words in 1783 express his anxiety for the problems of American state-building and give the title to a course that will examine the origins of those problems in the protest to British imperialism, the War for Independence, and the post-war challenges leading to the creation of the federal structure under the Constitution.

**MALA 70013 - Men, Women and Society: A New Definition of Roles**

An examination of new ideas, data and theories to interpret changing roles of men and women in contemporary society.

**MALA 70063 - Light and Human Health**

This course examines the relationship between light and human health. Topics will include: the aging visual system, light and the circadian system, yellow jaundice, vitamin D deficiency. A specific focus of the course will be "hands on" experiences of light as it is used for human health.

**MALA 70073 - Energy Resources, Alternatives, and Environmental Issues**

A study of the distribution of the world's energy resources and a look at alternative sources of energy such as wind, tides, geothermal, syngas, solar and nuclear power. Environmental issues including air and water pollution, solid waste, pesticides, toxic substances, etc., will be addressed as will new techniques for finding and evaluating earth resources utilizing satellite data and the internet.

**MALA 70113 - Native Peoples of the American Southwest**

An overview of the Native Americans of the region from pre-contact times to the present. Relations and differences among native groups are emphasized as well as interactions with non-Indian groups. Efforts to "whiten" the native population ranging from Spanish missionary activities in the 16th century to the federal government's "termination policy" in the 1950s are analyzed.

**MALA 70133 - Contemporary Mexican Novels and Their Film Versions**

This course examines three contemporary Mexican novels--The Old Gringo (1985), Like Water for Chocolate (1989), and Esperanza's Box of Saints (Santitos) (1999) and the film version of each book. We will discuss how the works treat crossing borders, and how society is presented differently in the two mediums--novel and film. Each work

also studies the similarities and differences of the two countries (cultures) that seem destined to coexist, according to Alan Riding, as "distant neighbors."

**MALA 70183 - Mass Media and Perceptions of Reality**

The complexity of our society makes it necessary for us to draw what we know, or think we know, from information about events, trends, and even people from the mass media. Yet few people are trained as consumers of information produced by the media. This course examines the various perceptions of reality that the mass media create, exploring some of the reasons why these perceptions occur.

**MALA 70233 - Rise of American Business**

The evolution of the American business system is examined with emphasis on four basic themes: the impact of technological and managerial change, the interaction between business and society, the position of the businessman and businesswoman in society, and the constantly-changing relationships between business and government. Special attention is devoted to the contemporary business scene.

**MALA 70253 - War To Peace: Political Change in Cuba and Central America in the 1990s**

An examination of the dramatic but low profile political transition taking place in countries that only recently were torn by revolution and by counterinsurgency wars. The original causes of those revolutions, including the Cold War ideological divisions that formed the international environment in which they took place will be discussed. We will examine the tentative, fragile steps that are presently being taken to overcome the authoritarian and violent political legacies of the past and to build a more inclusive, democratic political future.

**MALA 70373 - Modern American Society: Global Power since World War II**

This "period" course in American history reviews major political, economic, social, cultural and diplomatic events: World War II, the Truman administration and post-war America, the Eisenhower administration and the consensus of the 1950s, the Kennedy administration, Lyndon Johnson and the Great Society, the civil rights movement, the Republican ascendancy, and the rise of southern power.

**MALA 70393 - Religion and Violence**

This course explores the highly ambiguous relationship between religion and violence. It provides an overview of situations in the world today that are examples of this ambiguous relationship. Ethical teachings regarding violence in Judaism, Christianity, and Islam are examined. Students are exposed to authors who seek to comprehend violent behavior using explanatory theories. Responses to 9/11/2001 written by a Jew, a Christian, and a Muslim are encountered. The goal is to allow students in the course to develop an understanding of various dimensions (ethical, social, psychological, political, and theological) of the relationship between religion and violence.

**MALA 70453 - Religious Cults, Sects, and Millennialism**

This course provides cross-cultural perspectives on the rise, growth, decline, and societal impacts of religious revitalization movements. Readings, discussions, and audiovisuals focus on anthropologically studied cases of religious revitalization, with their prophetic figures and conversion processes, and the relationship of the movements to human struggles over meaning and social identity. The course generates critical insights into five major areas of religious movement inquiry: 1) ideas about how new religions originate, 2) types of new religious movements around the world, 3) dynamics of recruitment and conversion to movements, 4) life inside religious movements, and 5) research in the sectarian setting.

**MALA 70473 - Sinatra and Popular Culture**

This course focuses on the cultural importance of Frank Sinatra, one of the most influential figures in 20th century entertainment. The course examines the Sinatra of recorded music, radio, Hollywood movies, and Las Vegas, politics, and organized crime. Through music, movies, and documentaries, the course explores the changing cultural landscape in the US from the 1930s through the 1980s.

**MALA 70493 - Do the Right Thing: Ethics in International Politics**

The course examines the central question in international politics: What is the 'right' course of action in a given situation? Thus it considers various approaches to the study of ethics and morality as well as the ends pursued, the means used, and the importance of the decision-making strategies employed by policy makers.

**MALA 70543 - Fossils and Man: The Impact of the Fossil Record**

Students will become acquainted with the impact that fossils and paleontology have had on the history of the earth. It was the fact that fossils were finally accepted as a record of ancient life that began to change the way that 17th century naturalists looked at the world. The fundamental notions of change and evolution of natural systems has forever affected man's view of the world and fossils, which, in particular, document "worlds before man." The history of interpretation of fossils in the argument for evolution, and the use of fossils in modern biology and geology will be examined.

**MALA 70583 - Understanding Laughter: Humor in Theory and Practice**

Students who take this course will explore not only the theories that purport to explain why people laugh but also a number of practical, social, rhetorical, and psychological uses for wit and humor. The work of the course will revolve around readings of works about humor, analyzing works of humor, and writing essays related to this topic, including one essay in which students attempt to write humorously and then, using several theories of humor, analyze to what extent they have succeeded or failed.

**MALA 70613 - History Through Literature and Film: Latin America**

This course covers both colonial and national periods of Latin American history through a combination of historical readings, fiction, and full-length feature films and videos. It aims at providing an overview of the past from the late fifteenth century to the recent present. Important institutions, processes, and themes will be studied. Students are presumed to have little or no knowledge of Latin American history and knowledge of the Spanish language is not required. Students will read both primary and secondary accounts of the events covered in the films and will be asked to assess the films in light of historical facts and interpretation and poetic license.

**MALA 70653 - The Second World War: Its Impact on the Contemporary World**

A focus on the impact of World War II as the seminal event of the 20th century that gave rise to or influenced most major contemporary global issues. By examining the war in a broader perspective, issues such as the East-West balance of power, the end of traditional imperialism, the upheavals in the third world, and the proliferation of technology, the effect of the war 50 years later can be better understood and interpreted.

**MALA 70673 - American Cinema: Film Noir and the Detective Film**

This course examines the cultural, narrative and critical impact of literary and cinematic forms of Film Noir and the Detective Film in the United States. The course introduces the student to the technical and aesthetic processes used in developing the style and form found in the American Cinema since 1941.

**MALA 70683 - The American Recording Industry: Technology and Cultural Impact**

This course explores how the American popular music and recording industries and American popular culture have intersected in the years since the invention of audio recording and the impact of recorded music on the culture.

**MALA 70693 - Writing Life: Autobiography as Creative Nonfiction**

Students who take this course will write three full-length pieces (8-12 pages each) of creative nonfiction based on incidents that have occurred in their lives. Students will read selected works of creative nonfiction and from three textbooks on writing (Ann Lamott's *Bird by Bird: Some Instructions on Writing and Life*, Phillip Lopate's *The Art of the Personal Essay*, and Mary Catherine Bateson's *Composing a Life*). The work of the course will revolve around writing the three pieces, reading and responding to fellow students' pieces online, and analyzing reading assignments from the textbooks.

**MALA 70703 - American Music and Culture: From Jazz to Tin Pan Alley**

A study of the historical evolution of jazz styles in the United States from the 1890s through the contemporary scene, including American popular music Tin Pan Alley, protest music, and motion picture/television music. Included is an examination of the correlation of musical styles and cultural changes in America.

**MALA 70713 - Physical Fitness as a Lifestyle**

The physiological changes that take place in the body as a result of acute and chronic exercise. Specifically, the concepts of physical fitness, conditioning programs, wellness, body composition, nutrition, risk factor reduction and the influence of exercise on disease and aging are investigated.

**MALA 70733 - Science, Scientists and Society**

Science, Scientists and Society is a cross-disciplinary course in the natural sciences. It will acquaint you with the workings of science and scientists by examining recurring themes and selected episodes of science. We will consider the nature of the scientific enterprise and how science differs from or is similar to other areas of human endeavor, such as art, religion, philosophy, economics, etc. After taking this course you will have a better understanding of science and how it works and of the complex relationship between science and the intellectual, cultural and social milieu in which it is practiced. You will learn the nature of scientific explanation and the limits of scientific understanding.

**MALA 70743 - Creative Writing: Advanced Poetry Writing**

This is an advanced poetry writing workshop that focuses primarily on the students' own work. Special attention is paid to invention, point-of-view, voice, form, metaphor, and dramatic development. Students and instructor discuss student work in the context of principles that emerge through short lecture and the study of exemplary historical and contemporary models.

**MALA 70753 - Poetry and Contemporary American Culture**

This course focuses on the major developments in American poetry from 1945 to the present to address these central questions: How well does poetry address the needs, concerns, and anxieties of contemporary American culture? Have international crises, domestic political and cultural shifts, and the proliferation of electronic media rendered poetry obsolete, or does poetry still hold particular promise in terms of its ability to shore crumbling values or, better, to envision a new ethics, one more responsive to the complexity of our times?

**MALA 70763 - Geopolitics and World Communications**

The study of global communications in the context of world politics. Overview of world mass media characteristics, impact of British colonialism, role of the United Nations, the New World Information Order, ownership of communication technology, issues in monopoly of knowledge, analysis of information flow and world economy and role of image-makers.

**MALA 70773 - History of Media Sex and Violence**

This course examines the history of sex and violence in film and on television. topics that may be covered include efforts to regulate or restrict film and television program content, how formerly taboo topics relating to sex and violence have been presented in film or on television, how media companies attempt to profit by presenting sex and violence in film and on television, what the manner in which sex and violence are presented in film and on television tell us about the society of the time, and how the First Amendment limits government regulation of film and television content.

**MALA 70783 - History of Television and Television Programming**

Prerequisites: Open to MLA students only. An intensive overview of the history of television and related electronic media from the 1920s to the present. Topics include the rise of the network system, programming, rating and audience research, regulation, and the evolution of television technology. Viewing of significant programming in television history.

**MALA 70813 - The Cold War at Home and Abroad**

From the end of the Second World War in 1945 until the collapse of the Soviet Union forty-five years later, the Cold War dominated the domestic and foreign affairs of the United States. This course examines the origins of the Cold War and some of the consequences, including the development and application of the containment policy, McCarthyism, the wars in Korea and Vietnam, various other interventions, the debates over diplomatic issues, and the various strategies employed by different presidential administrations. Students will have a chance to do some reading on these subjects and to discuss them. Also they will view episodes from CNN's production, "The Cold War". The requirements consist of short weekly papers based on the readings and also a kind of term project, a five-seven page critique of John Lewis Gaddis' book, *We Now Know*. The others readings are T.G. Paterson and J.G. Clifford,

America Ascendant: U.S. Foreign Relations since 1939 and R.J. McMahon and T.G. Paterson, *The Origins of the Cold War*, 4th ed.

**MALA 70843 - The Ethics of Communication**

An examination of contrasting models and standards of communication ethics. Students apply these perspectives to specific situations in politics, advertising, interpersonal communication and writing.

**MALA 70873 - Garage Sale History**

The course explores 20th century American culture through examining the ordinary objects of our lives, from A-1 Sauce to Zippo lighters, studying how, when, and why ordinary objects rise from the culture and in turn, give shape and character to both culture and personal identity.

**MALA 70903 - Preparing for the Challenges of the Twenty-first Century**

The last two decades of the 20th century ushered in tumultuous changes in the economic, social, and political landscape. These transformations would have an indelible impact on the emerging society of the 21st century. This course is designed to provide a forum for analysis and discussion of some of the most significant issues of global politics in the new Millennium. While the attempt is to dissect these issues primarily on their own terms, we also discuss the challenges they pose to the United States and the global community.

**MALA 70923 - Islam and Politics in the Middle East**

Since there is no separation between state and church in Islam, no study of the Muslim World is complete without analyzing the pervasive role of Islam in cultural and political life. The course, however, does not concentrate on Islamic theology; rather, the focus is on politics of Islam and how it molds political discourse and agenda. After the study of origins and historical development of Islamic political theory, the focus would shift to explaining the use of post-World War II Islamic revival. In this connection, the problematics of democratization in the Muslim world and the prospects for Islamic governments are discussed.

**MALA 70933 - Food and Philosophy**

Philosophical examinations of moral, aesthetic, ontological, and epistemological issues concerning food are topics studied and discussed in this course. Such issues as vegetarianism; ethical issues regarding food additives, food politics and feminism; food as art; food as a metaphor of life; cultures (e.g., Mayan and Japanese) characterized by their cuisine; and recipes as a model of justified rational procedures are covered during the semester. One of the key concepts developed to handle these issues effectively is foodmaking as a thoughtful practice, where "practice" is understood by the American pragmatists, Peirce and Dewey.

**MALA 70943 - Ancient Mysteries: Real and Imagined**

In addition to providing an overview of Ancient Mediterranean and Near Eastern History from the Paleolithic age to the fall of Rome, this course explores in some detail various controversial topics that have generated popular interest and often engendered misinformation. These topics are analyzed in a scholarly manner in order to solve the "mystery" or expose common mis-perceptions and pseudo-scholarship. Typical topics include the following: the fall of Rome, the historical Jesus, other Biblical topics, the pyramids, the Neanderthal problem, and the search for the Trojan War.

**MALA 70953 - Mayan Ritual and Drama: Pre-Hispanic Times to the Present**

This course will examine the frequently intertwined traditions of ritual and drama among Mayan peoples of Southern Mexico and Central America, from pre-Hispanic times to the present. The course will combine a historical perspective beginning with pre-Columbian documents and Spanish colonial chronicles. Twentieth-century manifestations will be particularly highlighted, based on the instructor's first-hand research; special emphasis will be given to the work of performance groups based in Yucatan and Chiapas, Mexico. Extensive video material will complement textual analyses.

**MALA 70963 - Of Virgins and Goddesses, from Mesoamerica to Modern Mexico**

The latest research and historical impact of ancient Mesoamerican female deities and their modern-day counterpart "Our Lady of Guadalupe" on contemporary culture and society in modern Mexico are examined. The course attempts to show archaeological and anthropological similarities with mythic-symbolic images of pre-history

from around the world that show the importance of woman's role in all ancient cultures, including Mexico's.

**MALA 70973 - Law and Society**

This course examines the relationship between law and society. Course readings, assignments and discussion will focus on the social and political nature of law; the creation and organization of law in modern societies; social functions of law; the limits of law as an instrument of social change; the legislation of morality; law and mass communication; trends toward equality and democracy in law; social and economic justice; the influence of public opinion on law and lawmakers, and the mediating role of law between individual rights and public good.

**MALA 70983 - Indigenous People of the Andes**

A study of the indigenous inhabitants of the Andes, especially Peru and Bolivia, through archaeological and ethnographic data. Focus is on the development of agriculture and early population centers, particularly the Incas. The course ends with a study of contemporary Quechua and Aymara peoples, and discussion of current political and economic issues.

**MALA 70993 - Critical Issues in Criminal Justice**

The major controversies that exist in law and criminal justice today are discussed with emphasis on the development of critical thought concerning these issues. Both empirical evidence and grounded theory is discussed in such a manner as to help the student formulate thoughtful opinion concerning the selected topics. Topics include but are not limited to: The Death Penalty, Gun Control, The Insanity Defense, Drug Legalization, Prison Privatization, Drunk Driving Laws, Myths of Organized Crime, Crime and the Media, Fetal Endangerment Statutes, and The Jury System.

**MALA 71393 - Religion and Violence**

This course explores the highly ambiguous relationship between religion and violence. It provides an overview of situations in the world today that are examples of this ambiguous relationship. Ethical teachings regarding violence in Judaism, Christianity, and Islam are examined. Students are exposed to authors who seek to comprehend violent behavior using explanatory theories. Responses to 9/11/2001 written by a Jew, a Christian, and a Muslim are encountered. The goal is to allow students in the course to develop an understanding of various dimensions (ethical, social, psychological, political, and theological) of the relationship between religion and violence.

**MALA 71693 - Writing Life: Autobiography as Creative Nonfiction**

Students who take this course will write three full-length pieces (8-12 pages each) of creative nonfiction based on incidents that have occurred in their lives. Students will read selected works of creative nonfiction and from three textbooks on writing (Ann Lamott's *Bird by Bird: Some Instructions on Writing and Life*, Phillip Lopate's *The Art of the Personal Essay*, and Mary Catherine Bateson's *Composing a Life*). The work of the course will revolve around writing the three pieces, reading and responding to fellow students' pieces online, and analyzing reading assignments from the textbooks.

**MALA 71733 - Science, Scientists and Society**

Science, Scientists and Society is a cross-disciplinary course in the natural sciences. It will acquaint you with the workings of science and scientists by examining recurring themes and selected episodes of science. We will consider the nature of the scientific enterprise and how science differs from or is similar to other areas of human endeavor, such as art, religion, philosophy, economics, etc. After taking this course you will have a better understanding of science and how it works and of the complex relationship between science and the intellectual, cultural and social milieu in which it is practiced. You will learn the nature of scientific explanation and the limits of scientific understanding.

**MALA 71813 - The Cold War at Home and Abroad**

From the end of the Second World War in 1945 until the collapse of the Soviet Union forty-five years later, the Cold War dominated the domestic and foreign affairs of the United States. This course examines the origins of the Cold War and some of the consequences, including the development and application of the containment policy, McCarthyism, the wars in Korea and Vietnam, various other interventions, the debates over diplomatic issues, and the various strategies employed by different presidential administrations. Students will have a chance to do some reading on these subjects and to discuss them. Also they will view episodes from CNN's production, "The Cold War". The requirements consist of short weekly papers based on the readings and also a kind of

term project, a five-seven page critique of John Lewis Gaddis' book, *We Now Know*. The others readings are T.G. Paterson and J.G. Clifford, *America Ascendant: U.S. Foreign Relations since 1939* and R.J. McMahon and T.G. Paterson, *The Origins of the Cold War*, 4th ed.

**MALA 71843 - The Ethics of Communication**

An examination of contrasting models and standards of communication ethics. Students apply these perspectives to specific situations in politics, advertising, interpersonal communication and writing.

**MALA 71903 - Preparing for the Challenges of the Twenty-first Century**

The last two decades of the 20th century ushered in tumultuous changes in the economic, social, and political landscape. These transformations would have an indelible impact on the emerging society of the 21st century. This course is designed to provide a forum for analysis and discussion of some of the most significant issues of global politics in the new Millennium. While the attempt is to dissect these issues primarily on their own terms, we also discuss the challenges they pose to the United States and the global community.

**MALA 71943 - Ancient Mysteries: Real and Imagined**

In addition to providing an overview of Ancient Mediterranean and Near Eastern History from the Paleolithic age to the fall of Rome, this course explores in some detail various controversial topics that have generated popular interest and often engendered misinformation. These topics are analyzed in a scholarly manner in order to solve the "mystery" or expose common mis-perceptions and pseudo-scholarship. Typical topics include the following: the fall of Rome, the historical Jesus, other Biblical topics, the pyramids, the Neanderthal problem, and the search for the Trojan War.

**MALA 71973 - Law and Society**

This course examines the relationship between law and society. Course readings, assignments and discussion will focus on the social and political nature of law; the creation and organization of law in modern societies; social functions of law; the limits of law as an instrument of social change; the legislation of morality; law and mass communication; trends toward equality and democracy in law; social and economic justice; the influence of public opinion on law and lawmakers, and the mediating role of law between individual rights and public good.

## Graduate Certificate in Ranch Management

The Graduate Certificate in Ranch Management is designed to offer graduate-level education in ranch management. The curriculum addresses the needs of the modern day ranching business through an interdisciplinary program with an emphasis on beef cattle production and resource management. Five weeklong field trips combine classroom teaching with hands-on exposure.

**Application Procedure**

An applicant must possess a bachelor's degree from an institution regarded as standard by the University and a regional accrediting agency. Further, the student must have at least a 3.0 GPA on a 4.0 scale. Applicants meeting academic enrollment criteria should have sufficient working experience in agriculture to understand the nature of the industry. Selection to the program is made after each applicant completes the application, including transcripts and a professional interview. Applications for admission are available through the Ranch Management Program.

**Graduate Certificate Requirements**

The Graduate Certificate in Ranch Management requires successful completion of 34 credit hours made up of graduate and undergraduate credit. Each of the four graduate credit courses incorporates a graduate-level project into the curriculum.

**Graduate Credit (12 hours):**

- RAMA 50503 Range Management
- RAMA 50603 Ranch Records and Finance
- RAMA 50213 Ranch Business Management
- RAMA 50803 Marketing of Livestock and Meats

**Undergraduate Credit (22 hours):**

- RAMA 30102 Ranch Operations and Development
- RAMA 30403 Soil and Water Conservation
- RAMA 40103 Beef Cattle Production

RAMA 40303	Animal Health Management
RAMA 30703	Animal Nutrition and Feeding
RAMA 40112	Sheep and Goat Production
RAMA 40313	Animal Health and Reproduction
RAMA 40903	Forage Production and Use

*Note:* The student must complete RAMA 50503, RAMA 50603, RAMA 50803 and RAMA 50213 as graduate-level courses to be awarded the graduate certificate.

Students must declare their intention to pursue the graduate certificate program prior to their enrollment in any ranch management course.

**Pass/No Credit**

Courses for the graduate certificate may not be taken on a pass/no credit basis.

For more information on the Graduate Certificate in Ranch Management contact the Ranch Management Program office at 817.257.7145 or by email at ranching@tcu.edu.

## Ranch Management

**RAMA 50213 - Ranch Business Management**

Business law as applied to the livestock producer, business organization, estate planning, labor relations, application of management principles to ranching.

**RAMA 50503 - Range Management**

Principles of plant growth and reproduction; economic characteristics and field identification of range plants; ecology of range plants and animals; management of rangeland for all its uses including setting and adjusting stocking rates, distribution of grazing, grazing methods and supporting practices; preparation of ranch management plan.

**RAMA 50603 - Ranch Records and Finance**

Basic records needed for management and income tax reports - records of income and expense, inventories, net worth statements, budgets, production records; term problem in which all records for a year's operation are recorded and financial statements are prepared; sources of credit for ranch operations.

**RAMA 50803 - Marketing of Livestock and Meats**

Relation of production to marketing, trends in marketing and consumption, meat processing and distribution, U.S.D.A. activities, market outlets and procedures, futures, seasonal and cyclical influences on prices, selection of time and place to market, handling and transportation of livestock to improve weighing conditions and minimize losses, merchandising purebred livestock.

## Women's Studies Certificate

A Certificate in Women's Studies is available on the MA and PhD degrees in English, history, art history, biblical interpretation, education, and pastoral theology and pastoral care. The certificate recognizes a student's intensive investigation of issues in women's studies in the context of her/his regular disciplinary graduate work.

**Admission Requirements**

A student must be enrolled in an MA or PhD program in the above disciplines to participate. Application for admission to the certificate program should be made in writing to the director of women's studies.

**Certificate Requirements**

Completion of the certificate requires 12 hours (four courses), including 60003 Graduate Colloquium in Feminist Theories and Methodologies. The other nine hours may be taken in one or more of the following ways:

- Through pre-approved WOST-designated graduate courses in the student's field of study or in another department (with approval from the director of graduate studies in the student's major field);
- Through an independent study, with approval from the director of women's studies and the director of graduate studies in the student's major field. A memo from the instructor explaining the feminist or gender components in this project must be submitted to and approved by the director of women's studies; and

- Through a course that is not WOST-designated, but that includes a substantial feminist/gender component. The student's individual research in such a course will be directed towards these issues.

No more than three hours in independent study/thesis/dissertation writing may be applied to the certificate.

Interdisciplinary work is encouraged in the certificate program.

An approved list of courses is maintained by the director of Women's Studies. For more information, contact Laura Prestwood, Ph.D., director of Women's Studies.

## Women's Studies Courses

**WOST 60003 - Colloquium on Feminist Theory**

This course aims to provide graduate students with a thorough grounding in the basics of feminist theory since the early modern period. We will cover the major themes of education, biological determinism vs. social constructivism, feminist analysis, psychoanalysis, and language theory, as well as other approaches specific to disciplinary background (visual, historical, literary analysis).

**WOST 90003 - Graduate Colloquium on Feminist Methodology and Theory**

This is the required course in the Women's Studies Certificate program. It is open to Ph.D. and Th.M. students and others on a case-by-case basis. It aims to give graduate students from a variety of disciplines a thorough grounding in the basics of feminist theory and methodology since the early modern period.

# M.J. Neeley School of Business

The Neeley School of Business is fully accredited by the AACSB-International Association for Management Education and is a member of the Graduate Management Admissions Council (GMAC).

The school offers small class sizes and a dedicated, accessible faculty enabling students to fulfill their individual education needs.

## Neeley School Professional Graduate Degrees

The Neeley School offers the following graduate degrees:

Master of Business Administration (MBA)

Master of Accounting (MAC)

Master of International Management (MIM/MMNI)

## Neeley School Dual-Degree MBA

MBA/EdD in Educational Leadership

## The Neeley Advantage

The Neeley School offers a graduate experience that provides myriad unique applied learning opportunities. Students put business theory into practice throughout the curriculum and through several innovative programs:

### Educational Investment Fund

One of the largest student run investment portfolios in the nation, the EIF manages more than \$1.5 million in stock, fixed income and cash. Students selected for the fund gain hands-on experiences in research, analysis and operation of a financial portfolio.

### Neeley & Associates Consultants

Through Neeley & Associates Consultants, teams of students are hired as consultants by organizations to solve real business problems. Neeley & Associates Consultants is unique in that it combines:

- A curriculum delivered by Neeley faculty and staff who have been consultants and/or currently have consulting practices;
- External consultants from global (Accenture, Hitachi, Deloitte, Cap Gemini) and boutique consulting firms who meet with the student teams to critique and offer feedback on each team's plan of action and final report;
- A designated faculty expert available to each team who provides subject matter assistance to the team;
- Second year MBA students serving as coaches, who have previously served as a Neeley & Associate consultant.

Neeley & Associates Consultants have worked on marketing, operations, financial analysis and strategy projects for organizations such as Half Price Books, Sony Electronics, DFW International Airport, Midmark, PSS World Medical, The Davey O'Brien Foundation, The Amon Carter Museum, Bell Helicopter, Lockheed Martin, PepsiCo, Alcon, Texas Instruments, The Alternative Board (TAB), Day Resource Center, University of North Texas Health Science Center, Sabre Travel Network, Calloway's Nursery and Rassai Interactive Solutions.

The work with these clients involved engagements in the areas of international book distribution, electronics' sales channels analysis, air passenger new amenities and new services viability, health care product manufacturing and distribution, sports marketing, nonprofit management and strategic planning processes, international dealership marketing channel, leadership development selection processes, competitor analyses, new product acceptance rate, nursery operations and Internet business modeling.

### Neeley Summer Internship Program

This internship program provides opportunities for professional-level experience in a broad range of industries.

## Professional Development Program

The PDP focuses on development programs of "soft skills" needed to succeed in today's business environment. These skills include self understanding, working with others to develop meaningful solutions to problems, and leadership techniques. Competencies on which this program focuses are identified and updated by key employers of the MBA students and graduates.

## Neeley Entrepreneurship Center

The Neeley Entrepreneurship Center offers programs in entrepreneurship for the external community, provides resources that enhance education in entrepreneurship and supports research in entrepreneurship. The center supports Neeley School students by providing mentoring and internships, sponsoring the Collegiate Entrepreneurs Organization (CEO) Club and the Students in Free Enterprise (SIFE) organization. The Neeley School has been recognized by *Entrepreneur* magazine as being in the second tier of U.S. Schools (No. 13 to 26) and has been the recipient of the 2003 NASDAQ Center for Entrepreneurial Excellence Award.

## Luther King Capital Management Center for Financial Studies

The Luther King Capital Management Center for Financial Studies promotes excellence in financial education by enhancing the quality, prestige and national visibility of finance programs in the Neeley School of Business at TCU. The Finance Center pursues these goals by:

- Providing resources to support a faculty research environment and scholarly activities in finance that are competitive with the very best universities;
- Reaching out to industry for advice and resources for finance programs and employment opportunities for Neeley School students;
- Sponsoring seminars, awards and other activities that enhance the national reputation of finance programs at TCU; and
- Attracting top students into the finance programs at TCU.

## Supply and Value Chain Center

The Neeley Supply and Value Chain Center (SVCC) builds connections between students, faculty and business partners to provide students a real-world perspective and valuable business connections. Specifically, the center focuses on:

- Developing future supply chain leaders with integrative skills and a global perspective;
- Exchanging ideas and best practices between business partners, faculty and supply chain experts; and
- Sponsoring leading-edge research to advance supply chain practices that deliver exceptional business results.

Center activities include an annual Global Supply Chain Conference, executive forums, executive education and numerous student activities that provide exposure to supply and value chain management. The SVCC offers a Certificate in Supply and Value Chain Management at the graduate level.

## Neeley School Industry Ties

The Neeley School's close ties to the business community enrich the student experience inside and outside the classroom. Industry leaders provide input on the knowledge and skills that will give graduates a competitive edge. The *Neeley Speaker Series*, sponsored by PriceWaterhouseCoopers, provides MBA students multiple opportunities to hear industry leaders speak about their careers and what is happening in their industries. Following the presentations, students have

the opportunity to engage the executive in a question-and-answer session. Subsequently, six MBA students enjoy dinner with the guest speaker and a partner from PriceWaterhouseCoopers.

In the past four years, the Neeley Speakers Series has hosted senior executives from The Alternative Board, Perot Systems, NBC/General Electric, FUNimation, Metatropia Institute, PepsiCo, American Airlines, Shakey's Pizza, Critical Technologies, Diesslin & Associates, Sony Electronics, NCPA, Boyd Enterprises and Sabre.

In Fall 2008, the MBA Program launched *C-Level Confidential*, an intimate and confidential forum where a small group of second-year, full-time MBA students interact with host P.D. Shabay, recently retired Textron Bell executive, and an invited C-level executive guest. Discussions focus on business topics and personal perspectives. MBA students gain a unique perspective and understanding of the issues addressed by corporate leaders from the vantage point of those leaders. Likewise, the business leaders also examine and challenge the thinking and thought processes of the MBA students.

C-Level Confidential guests have included executives of Lockheed Martin Aeronautics, BNSF Railroad, Textron, Proctor & Gamble, LKCM, DFW International Airport and Sirius Radio.

For the fourth consecutive year, the Graduate Program office of the Neeley School will host a National Sales and Marketing Business Case Competition sponsored by Sony Electronics. Full-time MBA candidates from TCU and other outstanding business schools, including Harvard, Chicago, Emory, Wharton, Northwestern, Yale, Berkeley and Michigan, will provide senior Sony executives their analysis and specific sales and marketing recommendations to strengthen Sony's position in unique product categories.

**"Neeley Connections"**

In Fall 2008, the MBA Program launched Neeley Connections. Neeley Connections is the first of its kind opportunity for second-year MBA candidates to interact with potential employers as members of an Interactive Advisory Council. The format allows the executives to share an overview of their company at the beginning of each session, followed by an opportunity for the MBA candidates to analyze "live" business issues and to spontaneously demonstrate their business reasoning and problem solving skills, in a collaborative environment. The discussion will vary on case studies, including current relevant topics, ethical scenarios, or current issues or goals of the hiring companies.

**Neeley School Admissions**

The nature of the Neeley School graduate programs requires that a holistic approach be used in the admissions process. Not only must applicants demonstrate academic ability, but also the ability to perform in a highly interactive, team-based environment. Previous academic records, relevant test scores, professional work experience (where applicable), motivation, maturity and demonstrated leadership are all considered in the admissions decision.

Except under extraordinary circumstances, students applying to the MBA Program must have or expect to earn a bachelor's degree from an accredited college or university prior to enrollment.

**Admission Application Checklist**

An application to a Neeley School graduate program will not be considered by the Graduate Admissions Committee until all of the following materials are received:

1. Completed application form and essays
2. An official transcript from each college or university previously attended
3. Three letters of recommendation
4. Application fee of \$75
5. Official GMAT scores
6. Official TOEFL scores (non-native English speakers only)
7. Personal interview (by invitation only)

**Neeley School Graduate Program Academic Policies**

**Transfer Credit**

A student who has, prior to entering the Neeley School, completed a course that is the equivalent of a core course in the Neeley School MBA or MAc Program may substitute an elective in the same functional area, with the permission of the associate dean of graduate programs (MBA students) or MAc program director (MAc students). In order for such substitution to be approved, the course has to have been taken within three years of entering TCU and must have been from a graduate business school accredited by the AACSB. The substitution of a core course will not reduce the number of hours required to complete the MBA or MAc Program. It is the student's responsibility to notify the MBA Program office or MAc Program director prior to the first semester in the program.

A student who has completed, prior to enrollment at the Neeley School, graduate-level business courses that would qualify as electives at TCU may seek the approval of the associate dean of graduate programs or MAc Program director to transfer a maximum of six hours of such coursework. Such approval will only be granted if the courses were taken at an AACSB-accredited program no more than three years before entering TCU. These transfer credits (when approved by the director or chair) will reduce the number of hours required to complete the MBA or MAc Program on a one-to-one basis. When a course is taken outside the Neeley School for which elective credit is sought, the course must be equivalent to a 60000-level course or higher.

A student currently enrolled in the TCU MBA or MAc programs may, under extraordinary circumstances, seek approval from the associate dean of graduate programs or accounting department chair to take a maximum of six hours outside the University.

**Grading Procedures**

The grading policy followed for all graduate business courses is based on the following scale:

Letter Grade	Grade Point Weight
A	4.0
A-	3.67
B+	3.33
B	3.0
B-	2.67
C+	2.33
C	2.0
C-	1.67
F	0.0

**Academic Standards**

All graduate students are required to meet the academic standards of the Neeley School faculty. Failure to do so will result in academic probation or academic suspension.

Graduate students must achieve a grade index of at least 2.75 each semester and on a cumulative basis throughout their program. A student in the MBA or MAc Program who does not meet this standard will be placed on probation for the subsequent semester (excluding summer, for full-time students). During this time, the student must achieve the minimum grade index (2.75) on both a semester and cumulative basis to be removed from probation. Failure to do so will result in dismissal from TCU (with the right of appeal to the Neeley School dean).

A student placed on academic probation for one semester may be dismissed if his/her semester or cumulative grade index falls below a 2.75 in any subsequent semester.

If a student in any of the Neeley School's graduate programs receives six hours of a grade of C+ or lower, the associate dean for graduate programs may dismiss him/her from the program because of a failure to make satisfactory academic progress.

**Dismissal, Suspension or Expulsion for Lack of Academic Progress or Honor Code Violations**

Graduate students in the Neeley School must abide by the Honor Code. Students violating the Honor Code may be dismissed from individual courses with a grade of "F" for lack of academic progress or for conduct deemed to be contrary to the professional or ethical standards of a field.

At such times as the student fails to meet acceptable standards of academic performance or has engaged in professional misconduct, the

student may be dismissed, suspended or expelled from the University at the discretion of the Neeley School dean.

If a student is dismissed, suspended or expelled from the University, a grade of "F" or a designation of "Q" is recorded for each course in progress as determined by the appropriate academic dean.

### Miscellaneous Academic Policies

Academic probation describes the status of a graduate student who is experiencing academic difficulties; this status must change during the next semester of enrollment at TCU subject to the discretion of the associate dean of graduate programs. Academic dismissal describes the action taken by the Neeley School in the case where a student has failed to meet the minimum academic standards of the faculty. Dismissal from the MBA, MAc or MIM Program is permanent; a dismissed student is not permitted to enroll for graduate credit at a later date.

Other academic policies pertaining to graduate students:

1. Graduate students on academic probation are not permitted to enroll in the Educational Investment Fund.
2. In computing a graduate student's grade index, only the most recent grade is counted for courses that are repeated for credit.
3. Grades for non-TCU transfer courses are *not* included in computing a graduate student's grade index.
4. No 50000-level course may be taken for credit at TCU by an MBA student unless approved on an exception basis by the associate dean of graduate programs.
5. Students admitted conditionally must satisfy their condition(s) during the first semester of enrollment or face dismissal.
6. All MBA and MIM students are required to complete the MBA START Workshop prior to commencing graduate studies. MAc students are required to complete the accounting START Workshop prior to their graduate studies. Professional MBA students are also required to complete the PMBA START Workshop as a requirement for BUSI 66100.
7. An MBA student may enroll for a maximum of three hours of independent study credit in one department. (Typically, these courses carry the 70970 number.) No more than a total of six hours can be taken in independent study courses. MAc students may enroll for a maximum of three hours of credit (in total) in independent study courses. Graduate students on academic probation are not permitted to enroll in independent study courses.

### Graduation Requirements

At the beginning of the semester in which the student plans to graduate, he/she must submit an Intent to Graduate form to the Neeley School Graduate Programs Office. Graduation requires a minimum of 2.75 cumulative GPA. Students who do not have a 2.75 average after completing the program have a maximum of two semesters to raise their average to this standard.

MBA students are expected to complete all requirements within five years. MAc students are expected to complete all requirements within two years. Extension of time must be applied for in writing to the associate dean of graduate programs or MAc program director. Additional courses may be assigned to students who do not complete the degree within the time limit.

## MBA Programs

The Master of Business Administration (MBA) degree at TCU is a professional degree designed to provide graduates with the broad business background necessary for a career in management. The emphasis is on the most current concepts, processes and analytical methods of business administration.

Because managers seldom face problems that fit neatly into a single functional area, such as finance or marketing, the Neeley School has designed an MBA curriculum with a strategic, integrated perspective of business. Required courses cover business principles—finance, marketing, operations, business strategy, ethics, accounting, management and information systems. Electives allow for more detailed study in one or more areas. This broad curriculum fosters strategic, managerial thinking and provides our graduates with career flexibility.

The Neeley School recognizes that it takes more than technical expertise to succeed in today's dynamic business environment. Through the combined efforts of its faculty and corporate partners, the school has developed a curriculum that integrates sound business fundamentals with multiple opportunities to round out the academic experience.

Communication skills, leadership, team-building, technology and hands-on learning are equally emphasized at the Neeley School—both inside and outside of the classroom. Instruction is tied to the business world through guest presentations by visiting executives and corporate-based field projects. Hands-on application, team problem-solving, case study and lecture teaching formats are all used by faculty. The environment is highly interactive and team-oriented.

### Neeley MBA Program Options

- Full-Time Program  
Program Length: Two years
- Professional Evening Program  
Program Length: 24-33 months
- Accelerated MBA Program  
Program Length: 12 months
- Executive MBA Program  
Program Length: 16 Months

Applicants must designate at the time of application which program of study they are seeking. Admission to one program is not necessarily valid for another. Students will not be allowed to switch programs except under extraordinary circumstances.

### Full-Time MBA Program

The Full-Time MBA Program must be completed within two academic years in a prescribed sequence. Any variance from this sequence must be pre-approved by the associate dean of graduate programs. If such pre-approval is not obtained and a break in the sequence occurs, the student is subject to dismissal.

A total of 54 credit hours is required in this program.

ACCT 60010	Financial Reporting	1.5
ACCT 60020	Accounting for Managerial Planning and Control	1.5
FINA 60003	Economic Environment of Business	3
FINA 60013	Management of Financial Resources	3
INSC 60010	Statistical Models	1.5
INSC 60023	Manufacturing and Services Operations Management	3
INSC 60040	Managing Information Technology	1.5
INSC 60600	Supply Chain Concepts	1.5
MANA 60023	Legal and Social Environment of Business	3
MANA 60033	Managing People	3
MANA 60063	Strategic Management in a Global Environment	3
MANA 60460	Business Ethics	1.5
MARK 60013	Market Driven Strategy	3

Electives: 24 credit hours

\*Students must also complete an approved concentration in their elective credit hours. The director of graduate programs administration of the MBA Program will maintain lists of approved concentrations and the requirements for each.

### Program Requirements

Students admitted to the MBA program must complete three pre-enrollment requirements prior to registering for their first semester of graduate study. These requirements are:

#### 1. Mathematical Skills Prerequisite

Entering students are expected to have an understanding of *basic* mathematics (i.e., basic algebraic operations, relations and functions, exponents, logarithms, sets and functions, linear equations, differentiation, integration, slope and extrema). This requirement is ordinarily satisfied by *one* of the following:

- Satisfactory (i.e., with a grade of "C" or better) completion of a three-hour course in Introductory Applied Calculus or College Algebra or Mathematics with Emphasis on Business Applications; *or*
- A score corresponding to or better than the 80th percentile on the quantitative portion of the GMAT test; *or*
- Satisfactory evidence of mathematical competence through a combination of courses taken in mathematics, statistics or economics prior to entering the program, and/or a make-up course that may be taken during the first semester of the Neeley School MBA Program. (For specific details, contact the Neeley Graduate Programs Office.)

#### 2. Accounting Skills Prerequisite

Entering students are expected to complete an online accounting module prior to START workshop. Information on enrolling in this module is provided by the MBA admissions department upon a student's decision to enroll in the MBA Program.

**3. START Workshop**

START workshop takes place on campus the week before fall classes begin. During this workshop, students receive instruction in teamwork and leadership; a campus and degree program orientation; self-assessment exercises for purposes of leadership and career development; and meet their program cohort group.

**Career Management and Professional Development (BUSI 66100)**

The objective of this interactive career management and professional development course is to prepare first-year MBA students for ultimately obtaining a summer internship and full-time position after graduation. Students will learn how to stay proactive in their own career development, manage their career search, identify their business interests, articulate their previous and newly acquired transferable and specialized skills, target their most desirable career possibilities, and compete for positions at the MBA level. Students that complete this course will be prepared for the competitive job market and understand the importance of being willing to use a variety of tools that are both within and outside of their comfort zone to identify and achieve appropriate opportunities.

**The Integrative Project-Business Simulation**

At the end of the first semester, full-time MBA students participate in the Integrative Project-Business Simulation. This applied learning experience is intended to challenge students to "integrate" what has been learned to date and develop sound, strategic business decisions in a simulated corporate environment. This project requires student teams to work together to assess a realistic business situation involving a diverse set of business functions within a competitive industry environment. Ultimately, student teams make presentations to several audiences—classmates, faculty, business executives—concerning their experience with the simulation.

Similarly, the Professional/Evening MBA students are required to take Business Simulation (BUSI 60070), which is taught as the final core course. A similar simulation experience requires students to integrate and apply what they have learned in the core curriculum in developing strategic business decisions.

**Professional MBA (Evening) Program**

A total of 48 credit hours is required in this program.

ACCT 60010	Financial Reporting	1.5
ACCT 60020	Accounting for Managerial Planning and Control	1.5
BUSI 60070	Business Simulation	1.5
BUSI 66100	Career Management and Professional Development	1.5
FINA 60003	Economic Environment of Business	3
FINA 60013	Management of Financial Resources	3
INSC 60013	Data Analysis for Managerial Decisions	3
INSC 60023	Manufacturing and Services Operations Management	3
INSC 60040	Managing Information Technology	1.5
INSC 60600	Supply Chain Concepts	1.5
MANA 60023	Legal and Social Environment of Business	3
MANA 60033	Managing People	3
MANA 60063	Strategic Management in a Global Environment	3
MANA 60460	Business Ethics	1.5
MARK 60013	Market Driven Strategy	3

Electives: 13.5 credit hours

**Program Requirements**

Students admitted to the PMBA program must complete three pre-enrollment requirements prior to registering for their first semester of graduate study. These requirements are:

**1. Mathematical Skills Prerequisite**

Entering students are expected to have an understanding of basic mathematics (i.e., basic algebraic operations, relations and functions, exponents, logarithms, sets and functions, linear equations, differentiation, integration, slope and extrema). This requirement is ordinarily satisfied by one of the following:

- Satisfactory (i.e., with a grade of "C" or better) completion of a three-hour course in Introductory Applied Calculus or College Algebra or Mathematics with Emphasis on Business Applications; *or*
- A score corresponding to or better than the 80th percentile on the quantitative portion of the GMAT test; *or*
- Satisfactory evidence of mathematical competence through a combination of courses taken in mathematics, statistics or economics prior to entering the program, and/or a make-up course that may be taken during the first semester of the Neeley School MBA Program. (For specific details, contact the Neeley Graduate Programs Office.)

**2. Accounting Skills Prerequisite**

Entering students are expected to complete an online accounting course prior to START workshop. Information on enrolling in this course is provided by the MBA admissions department upon a student's decision to enroll in the MBA program.

**3. START Workshop**

START workshop takes place on campus in the weeks before fall classes begin. During this workshop students receive instruction in teamwork and leadership; a campus and degree program orientation; self-assessment exercises for purposes of leadership and career development; and meet their program cohort group.

**Leadership Development and Executive Coaching**

This program is designed to assist professional MBA students in the development of their leadership skills and build awareness of the importance of leadership influence and identified competencies. Students attend leadership development workshops in the fall semester and can opt to take a leadership assessment in the spring semester which is followed by one-to-one executive coaching.

The START Workshop is the beginning of this program. Focus is on the "soft skills" needed to succeed in today's business environment. These skills include self understanding, working with others to develop meaningful solutions to problems and leading other people. Competencies on which this program focuses are identified and updated by key employers of Neeley School MBA students and graduates.

The START Workshop, Professional Development Program and other activities are required components of BUSI 66100 Career Management and Professional Development core course. Students begin completing these components upon entry into the program, but they enroll in the course during their second semester.

**Business Simulation (BUSI 60070)**

After completing all required courses, students participate in a complex computer simulation of a realistic business situation. Teams of students make decisions involving a diverse set of business functions and are required to develop an overall business strategy for their firm. This course also builds on the competencies that were the developmental focus of the BUSI 66100 course.

**Accelerated MBA Program**

The Accelerated MBA Program is a 12-month, full-time option designed for individuals with significant professional experience and a distinguished academic background in business. The accelerated MBA Program is designed to build upon the business foundation and experience of these individuals.

Students in the Accelerated MBA Program pursue a fast-paced, individually tailored curriculum that complements their own unique business background. The curriculum includes a subset of the courses offered in TCU's traditional MBA Program, carefully selected in cooperation with the director of graduate programs administration and based on the student's professional and academic credentials. It comprises:

- 36 credit hours of graduate-level business courses;
- 18 to 24 credit hours of graduate business electives; and
- 12 to 18 credit hours selected from the following MBA core classes: ACCT 60010, ACCT 60020, INSC 60003, FINA 60013, INSC 60010, INSC 60023, INSC 60040, INSC 60600, MANA 60023, MANA 60063, MANA 60033, MANA 60460 AND MARK 60013.

Students must include MANA 60460 in their selection of core courses. The 36 semester hours are completed over the course of three consecutive semesters.

Like the traditional program, the objective of the Accelerated MBA Program is to provide graduates with the strategic, integrated perspective of business needed to support managerial decision making and provide career flexibility.

Students in the Accelerated MBA Program also benefit from many of the features of the traditional program. The program integrates sound business fundamentals with multiple opportunities to round out that experience. Communication skills, leadership, team building, technology and experiential learning are emphasized throughout the program. The learning environment is highly interactive and team-oriented.

### Prior Educational and Professional Background

The Accelerated MBA Program is available to individuals with professional experience and a distinguished academic background in business, as evidenced by:

- Completion of the Bachelor of Business Administration (BBA) degree or equivalent with a strong academic record and
- Minimum of three years of post-graduate professional work or military experience.

### Executive MBA Program

The Executive MBA Program is a 16-month accredited MBA program focused on developing strategic business leaders. The program is designed for experienced executives and high-potential managers who wish to strengthen their leadership skills and business knowledge to enhance their performance and advance their careers.

Course content is delivered across all business areas and emphasizes how to improve decision-making using both quantitative and qualitative data. Faculty from across business disciplines engage students in case analysis and discussion, problem solving, applied research projects, simulated decision-making, and a two-week study abroad experience. An interactive classroom environment gives students the opportunity to learn from experienced classmates from across multiple industries.

Each student's personalized leadership development process includes a 360° survey to solicit feedback from his/her management, peers, and direct reports and one-on-one executive coaching. The 360° feedback on critical leadership skills is used to identify areas for improvement and as a basis for developing a personal leadership development plan.

The *In-Residence Seminar*, a three-day orientation session that takes place in mid-August, marks the beginning of the Executive MBA program. This seminar is designed to prepare students to be successful in their coursework, both as individuals and as team members, and provides tools to improve teamwork and leadership skills.

Classes meet all day Friday and Saturday on alternating weekends from August through December of the year following matriculation.

ACCT 65013	Financial Reporting and Analysis	3
ACCT 65023	Accounting for Managerial Planning and Control	3
BUSI 65100	Personal Leadership Development Process	1
BUSI 75974	Managing in a Global Business Environment	4
FINA 65013	Management of Financial Resources	3
FINA 65000	Economic Environment of Business	1.5
FINA 75543	Advanced Financial Management	3
INSC 65013	Statistics for Managerial Decisions	3
INSC 75663	Supply and Value Chain Strategy and IT	3
MANA 65000	Strategic Vision and Analysis	1.5
MANA 65063	Strategy in a Dynamic Environment	1.5
MANA 65023	Legal and Social Environment of Business	3
MANA 75613	Negotiations	3
MANA 75163	Transformational Leadership	3
MARK 65013	Advanced Marketing Management	3

In addition, students are required to complete an additional 6 hours of approved graduate business courses.

## Dual-Degree MBA Programs

### MBA/EdD in Educational Leadership

The purpose of this program is to prepare students to assume major leadership positions in a wide variety of education-related organizations by applying managerial skills and educational leadership in the field of education. The program is designed to prepare students to enter

educational management in school systems, regional, state, or federal governments, research institutions, private foundations, or private sector companies.

### Admission/Degree Requirements

Candidates must be initially admitted to TCU's MBA program. They must then meet all core requirements as well as complete the START Workshop. In the event a student elects to complete the MBA without continuing into the doctoral program, he or she must meet all remaining requirements for the MBA (i.e., elective units in the School of Business). If a student's work is unsatisfactory in MBA courses, and they are not permitted to continue, he or she may not be admitted into the doctoral program. Throughout the program, students must maintain a B average. At the completion of coursework, students will take written and oral comprehensives before proceeding into the dissertation stage.

#### Full-Time MBA Curriculum

ACCT 60010	Financial Reporting	1.5
ACCT 60020	Accounting for Managerial Planning and Control	1.5
FINA 60003	Economic Environment of Business	3
FINA 60013	Management of Financial Resources	3
INSC 60010	Statistical Models	1.5
INSC 60023	Manufacturing and Services Operations Management	3
INSC 60040	Managing Information Technology	1.5
INSC 60600	Supply Chain Concepts	1.5
MANA 60023	Legal and Social Environment of Business	3
MANA 60033	Managing People	3
MANA 60063	Strategic Management in a Global Environment	3
MANA 60460	Business Ethics	1.5
MARK 60013	Market-Driven Strategy	3
Electives		6

#### Professional Curriculum: MBA courses taught in the evening

ACCT 60010	Financial Reporting	1.5
ACCT 60020	Accounting for Managerial Planning and Control	1.5
BUSI 60070	Business Simulation	1.5
BUSI 66100	Career Management and Professional Development	1.5
FINA 60003	Economic Environment of Business	3
FINA 60013	Management of Financial Resources	3
INSC 60013	Data Analysis for Managerial Decisions	3
INSC 60023	Manufacturing and Services Operations Management	3
INSC 60040	Managing Information Technology	1.5
INSC 60600	Supply Chain Concepts	1.5
MANA 60023	Legal and Social Environment of Business	3
MANA 60033	Managing People	3
MANA 60460	Business Ethics	1.5
MANA 60063	Strategic Management in a Global Environment	3
MARK 60013	Market-Driven Strategy	3
Electives		4.5

### EdD Degree Requirements

The College of Education's EdD is a professional degree. It is awarded for demonstrating current competence and exceptional potential in leadership. A general program of study is outlined below. Students are required to take a suitable number and variety of graduate courses and field-based experiences, as described below, to prepare them for the qualifying examination and for the completion of a capstone project. In general, the degree encompasses 51-60 credits after admission to the program.

The EdD in Educational Leadership comprises the following components:

#### Program of Study

The required program of study guides the committee and student, and is a vehicle for ongoing formative assessment and adaptation. Each student will create a doctoral advisory committee of at least three persons. Among the first tasks of the doctoral advisory committee is to develop the student's program of study. While there is latitude intended in this plan, there are also constraints (e.g., a student pursuing Superintendent Certification must meet the program requirements in TCU's approved certification program).

Note: EDUC 70953 Research in Education, or its equivalent, is a prerequisite, or to be taken in addition to the core.

**Core (12 hours)**

EDAD 70003 Foundational Readings in Educational Administration  
 EDUC 60823 Educational Program Evaluation  
 EDAD 70033 Ethical and Moral Dimensions of Educational Leadership

EDAD 70053 Applied Research: Economics of Education or  
 EDUC 70963 Qualitative Inquiry I

**Specialization**

Students will choose one of two specializations as appropriate to their background, academic preparation, professional goals and interests, as determined by their committee. The following cognates are offered:

**Leadership in Schools and Districts (24 hours)**

EDAD 70013 Legal and Social Environment of Education  
 EDAD 70023 Managing Instructional Processes  
 EDAD 70043 Educational Policy and Practice  
 EDSP 60233 Understanding Exceptional Students and Students At-Risk  
 EDUC 60013 Curriculum Theory  
 EDUC 70970 Special Problems in Education: The Superintendency

Elective  
 Elective

**Internship (12-15 hours)**

EDAD 70200 Internship in Educational Administration (school-based internship; required for students seeking principal certification) or  
 EDAD 80206 Internship (school or agency based, or other arranged internship; must be school-district based for students seeking superintendent certification)

**Leadership in Curriculum (24 hours)**

EDUC 50003 Diversity in American Education  
 EDUC 60013 Curriculum Theory  
 EDUC 60213 Thinking, Learning and Teaching  
 EDCS 60813 Curriculum Studies Seminar: Social Construction of Knowledge  
 EDCS 60813 Curriculum Studies Seminar: Power and Authority in Education  
 EDCS 60813 Curriculum Studies Seminar: Critical Pedagogy  
 EDCS 60813 Curriculum Studies Seminar: Feminist Theory in Education  
 EDUC 70973 Qualitative Inquiry II  
 EDSC 70033 Scientific Inquiry and the Nature of Science  
 EDAD 70043 Educational Policy and Practice  
 EDUC 70960 Apprenticeship in Research (may be taken 2 times)  
 EDCS 70963 Apprenticeship in Teaching

**Capstone Seminar and Project**

EDAD 70073 Capstone Doctoral Seminar  
 EDAD 90770 Capstone Project (9 hours)

**Qualifying Process**

As the first step in the qualifying process for candidacy, students will complete EDAD 70073 Capstone Doctoral Seminar. The Capstone Doctoral Seminar is a culminating course aimed at ensuring students are fully prepared to being the capstone project and are able to demonstrate a range of knowledge and abilities, including framing a capstone project; undertaking an appropriate literature review; making a decision regarding design, and implementing the project and being prepared to complete the qualifying process.

The second stage of the process is a submission of a written proposal for a capstone project to the doctoral advisory committee. Once the doctoral committee accepts the written proposal, students will schedule an oral presentation and defense of the proposal to the doctoral advisory committee.

As the third part of the qualifying process, students will present written and/or oral demonstration that they have attained competence in the following domains of leadership performance:

- Strategic planning in education;
- Finance and resource allocation/budgeting in education;
- Competence in political systems at all levels in education;

- Program evaluation;
- Project management;
- Use of data/research in education;
- Professional communication, written and oral; and
- Entrepreneurship in education, including grant and proposal writing.

Upon successful completion of the qualifying process, students are admitted to candidacy.

**Capstone Project**

Students will complete at least nine hours of EDAD 90770 Capstone Project. Students may enroll in additional hours as necessary.

**Physics PhD with Business Option**

The M.J. Neeley School of Business and the Department of Physics offer the Ph.D. in Physics with a business option. Details about this program are provided in the College of Science & Engineering physics and astronomy section of the Graduate Catalog.

**Neeley School Master's Degrees**

**Accounting**

The Master's of Accounting (MAc) is designed for students planning on professional careers in accounting. It complements the educational experience of the Bachelor of Business Administration (BBA) accounting major by providing the additional accounting and business knowledge needed by successful public accounting practitioners. Students who complete the MAc Program are well prepared to handle the subject matter covered in the Uniform CPA Exam. The MAc seeks to provide a solid foundation for entry into the public accounting profession by helping students develop the abilities to:

- Enhance their knowledge of business and accounting, and apply it to give valuable services to clients;
- Communicate clearly and effectively to clients and each other both orally and in writing;
- Work effectively in groups;
- Use information technology effectively and deal with technological developments; and
- Continue to learn with a commitment to lifelong learning and continuing professional development.

**MAc Admissions**

Admission to the MAc Program is open to anyone who has or expects to earn a bachelor's degree from an accredited college or university. While a BBA in accounting is not a prerequisite for admission, applicants must have completed the equivalent of 27 semester hours of accounting, including those courses (or their equivalents) required for the TCU BBA accounting degree. See the *TCU Undergraduate Studies Bulletin* for details.

There is no single formula for admission to the MAc Program. Admission is competitive and seeks excellence. Ideal applicants have high academic potential and achievement, as well as strong motivation and leadership potential. These qualities are assessed through the candidate's GMAT score, accounting and cumulative GPAs, and letters of recommendation. Hence, an individualized approach is followed in which a variety of information is requested to develop a profile of each applicant.

Students in the TCU BBA Accounting Program are encouraged to apply for admission to the MAc Program in the fall semester of their senior year. TCU has adopted a "rolling" admissions policy whereby an application is generally reviewed as soon as it is complete. An applicant would thus be well advised to apply early to the program.

Students may apply to begin in the fall or spring semester. Students admitted for the fall semester may take elective courses in the summer prior to the fall semester based on availability and approval by the program director.

- March 15: General application deadline for fall enrollment.
- September 15: General application deadline for spring enrollment.

After these dates, applications are accepted on a space-available basis.

Prospective students are urged to apply well in advance of application deadlines. The deadlines above apply to all required application

materials, including GMAT scores. International applicants are also required to submit TOEFL scores.

For additional MAc admissions information, contact

Jerry Turner, Ph.D.  
 MAc Program Director  
 Department of Accounting  
 P.O. Box 298530  
 Fort Worth, Texas 76129  
 Phone: 817.257.7122  
 Fax: (817) 257-7227  
 www.mac.tcu.edu

### MAc Program Requirements

The program is comprised of 30 semester hours of graduate-level classes: 18 semester hours of required classes and 12 semester hours of graduate business elective courses. Students are expected to complete the program in one year.

### Prior Educational Background

Students must complete a four-year undergraduate degree and have completed 24 semester hours of accounting before entering the MAc Program. Students who have not completed the TCU BBA accounting major must provide evidence that they have completed a comparable program. Students with deficiencies in their educational backgrounds may be admitted to the MAc Program, but are required to remedy these deficiencies and complete all requirements for the MAc before the degree will be awarded.

#### Fall Semester

ACCT 70053	Contemporary Accounting Issues	3
ACCT 70273	Audit Research	3
ACCT 70303	Advanced Federal Taxation	3
ACCT 70460	Ethics for Accounting	1.5
MANA 60460	Business Ethics	1.5
Electives		3

#### Spring Semester

ACCT 70003	Business Law for Accounting Professionals	3
ACCT 70153	Financial Statement Analysis	3
Electives		9

Graduate business electives are selected in consultation with the MAc Program director.

### International Management with Universidad de las Americas

This is a dual degree with TCU's partner university in Mexico, the Universidad de las Américas (UDLA). The mission of the program is to prepare students for careers in international business. The program's unique two-university, two-country setting is particularly relevant to U.S. students who are interested in doing business in Latin America and to students from Mexico who want to do business in the United States. Upon completion of the program, students receive the Master of International Management (MIM) from TCU and the Maestría en Marketing y Negocios Internacionales (MMNI) from UDLA. The MIM requires 40 credit hours with 20 credits to be taken at TCU and the equivalent of 20 credits to be taken at UDLA. Only students pursuing the dual MIM and MMNI degree program at both TCU and UDLA are eligible for admission.

Admission decisions for the MIM Program are made by the Neeley School, but are contingent upon admission to the MMNI Program by UDLA.

#### Admission

Candidates for admissions to the MIM Program are required to be fluent in both English and Spanish.

Candidates for the MIM/MMNI dual degree with UDLA who live in Mexico should apply to UDLA. All other candidates for the MIM/MMNI with UDLA should apply to TCU. Candidates for the MIM/MBA dual degree with Mayor who live in Chile should apply to Mayor. All other candidates for the MIM/MBA with Mayor should apply to TCU.

To assess a candidate's qualifications, the following materials are needed *in addition* to the normal admission requirements to complete the application process:

- Resume;

- Spanish Language proficiency (If not from a native Spanish speaking country, the applicant must supply proof of fluency by completion of 18 U.S. semester credit hours in Spanish, by examination, or receipt of a degree from a university in a Spanish-speaking country); and
- Official TOEFL scores for international students.

### Program Requirements

Curriculum components are completed at both TCU and UDLA, with 20 semester hours being completed at TCU and the equivalent of 20 semester hours at UDLA. For coursework taken at UDLA, the instructors must have academic credentials for which TCU can provide AACSB justification, as the UDLA coursework is transferred to TCU for the completion of the MIM Program.

Students must submit a plan of study approved by the director of graduate programs administration and endorsed by the associate dean of graduate programs and their UDLA counterparts. Approval is based on coordination of coursework required for UDLA's MMNI curriculum, the student's career interests and remediation of deficiencies in the student's undergraduate background. Students take the bulk of their coursework from existing MBA elective courses. Where there is a weakness in a student's background, core courses may be included. Students are required to complete an internship for two credits. For students entering through TCU (all U.S. students and students from countries other than Latin America), internships are completed in Mexico. Conversely, for students entering through UDLA, the internships are completed in the United States through enrollment in BUSI 77702 International Internship. In the event that an internship cannot be obtained, other coursework can be substituted for the requirement.

Students entering the program with a bachelor's degree in business take a series of MBA core and elective courses at TCU and UDLA that are consistent with their international business interests. For example, those interested in supply chain management would be expected to take several of the supply chain electives offered at TCU, while focusing more on core courses at UDLA.

Students who have bachelor's degrees in other academic areas may enter the dual-degree program, but must have satisfactory undergraduate or graduate coursework in all of the core areas required by AACSB. These core areas are commonly defined as accounting (both financial and managerial or cost), economics, ethics, finance, law, management (organizational behavior or managing people), management information systems, marketing, production operations, statistics and strategy. Such core coursework can be demonstrated with courses taken during their prior undergraduate (or graduate) programs, such as in economics or law, or as core courses at either TCU or UDLA as a part of the 40 hours required for the degree. For such students, fewer electives can be taken as the bulk of the program will consist of core courses.

### International Management with Universidad Mayor

This is a dual degree with TCU's partner university in Chile, Universidad Mayor in Santiago. The mission of the program is to prepare students for careers in international business. The program's unique two-university, two-country setting is particularly relevant to U.S. students who are interested in doing business in Latin America and students from Chile who want to do business in the United States. Upon completion of the program, students receive the Master of International Management (MIM) from TCU and the Master of Business Administration degree from Mayor. The MIM requires 40 credit hours with 20 credits to be taken at TCU and the equivalent of 20 credits to be taken at Mayor. Only students pursuing the dual MIM and MBA degree program at both TCU and Mayor are eligible for admission.

Admission decisions for the MIM Program are made by the Neeley School but are contingent upon admission to the MBA program by Mayor.

#### Admission

Candidates for admissions to the MIM Program are required to be fluent in both English and Spanish.

Candidates for the MIM/MMNI dual degree with UDLA who live in Mexico should apply to UDLA. All other candidates for the MIM/MMNI with UDLA should apply to TCU. Candidates for the MIM/MBA dual degree with Mayor who live in Chile should apply to Mayor. All other candidates for the MIM/MBA with Mayor should apply to TCU.

To assess a candidate's qualifications, the following materials are *needed in addition* to the normal admission requirements to complete the application process:

- Resume;
- Spanish Language proficiency (If not from a native Spanish speaking country, the applicant must supply proof of fluency by completion of 18 U.S. semester credit hours in Spanish, by examination, or receipt of a degree from a university in a Spanish speaking country); and
- Official TOEFL scores for international students.

**Program Requirements**

Curriculum components are completed at both TCU and Mayor, with 20 semester hours being completed at TCU and the equivalent of 20 semester hours at Mayor. For coursework taken at Mayor, the instructors must have academic credentials for which TCU can provide AACSB justification, as the Mayor coursework is transferred to TCU for the completion of the MIM

Students must submit a plan of study approved by the director of graduate programs administration and endorsed by the associate dean of graduate programs. Approval is based on coordination of coursework required for Mayor's curriculum, the student's career interests and remediation of deficiencies in the student's undergraduate background. It is conceivable that such a plan of study might also include EMBA courses. For students entering through TCU (all U.S. students and students from countries other than Latin America), internships are completed in Chile. Conversely, for students entering through Mayor, the internships are completed in the United States. through enrollment in BUSI 77702 International Internship. In the event that an internship cannot be obtained other coursework can be substituted for the requirement.

Students entering the program with a bachelor's degree in business will take a series of MBA core and elective courses at TCU and Mayor that are consistent with their international business interests. For example, those interested in supply chain management would be expected to take several of the supply chain electives offered at TCU, while focusing more on core courses at Mayor.

Students who have bachelor's degree in other academic areas may enter the dual-degree program, but must have satisfactory undergraduate or graduate coursework in all of the core areas required by AACSB. These core areas are commonly defined as accounting (both financial and managerial or cost), economics, ethics, finance, law, management (organizational behavior or managing people), management information systems, marketing, production operations, statistics and strategy. Such core coursework can be demonstrated with courses taken during their prior undergraduate (or graduate) programs, such as in economics or law, or as core courses at either TCU or Mayor as a part of the 40 hours required for the degree. For such students, fewer electives can be taken, as the bulk of the program will consist of core courses.

In some instances, when a TCU faculty member teaches in the Mayor EMBA program, Mayor students would be allowed to take the course in Chile and apply it toward the TCU MIM component of the program in a TCU 70970 enrollment. However, there is no commitment on the part of the Neeley School that any courses will be taught in Chile by TCU faculty members. (Students entering the program through Mayor would be limited to nine hours that could be applied in this manner to the MIM degree offered by TCU, and such courses would not receive double credit in both the TCU MIM and Mayor MBA degrees.)

For the MBA component of the degree offered by Mayor (an EMBA program), students would take MBA core and elective courses equivalent to 18 semester hours of credit as well as a 240- hour internship in Chile equivalent to two semester hours of credit for a total of the equivalent of 20 semester credits. Because the courses are offered at Mayor in an EMBA format (Fridays and Saturdays, on every other weekend), students could work in their internships concurrently with their regular classes. With the current method of converting Mayor credits into TCU credits, students would need to complete eight courses at Mayor plus the internship.

**Accounting Courses**

**ACCT 60010 - Financial Reporting**

1.5 credit hours. A study of the fundamental concepts of financial accounting and reporting by business entities in accordance with

generally accepted accounting principles. The course approaches the material from the perspective of the financial statement user rather than the financial statement preparer. Therefore, emphasis is placed on the use and interpretation of information contained in business financial statements by managers, investors, and creditors.

**ACCT 60020 - Accounting for Managerial Planning and Control**

1.5 credit hours. Prerequisite: ACCT 60010 and INSC 60013. A study of the basic concepts, measures, techniques, and approaches of managerial accounting. The emphasis is on understanding and developing accounting and economic concepts for decision making within profit-making and not-for-profit organizations related to such topics as short-term and long-term planning, performance measurement, transfer pricing, and traditional and contemporary product costing systems. The application of the basic concepts and approaches to small and large-sized domestic and global organizations is emphasized. Where appropriate, contemporary managerial accounting issues are stressed.

**ACCT 65013 - Financial Reporting and Analysis**

3.0 credit hours. Prerequisites: Must be an EMBA candidate. A study of the fundamental concepts of financial accounting and reporting by business entities in accordance with generally accepted accounting principles. The course approaches the material from the perspective of the financial statement user rather than the financial statement preparer. Therefore, emphasis is placed on the use and interpretation of information contained in business financial statements by managers, investors, and creditors.

**ACCT 65023 - Accounting for Managerial Planning and Control**

3.0 credit hours. Prerequisite: Must be an EMBA candidate. A study of the basic concepts, measures, techniques, and approaches of managerial accounting. The emphasis is on understanding and developing accounting and economic concepts for decision making within profit-making and not-for-profit organizations related to such topics as short-term and long-term planning, performance measurement, transfer pricing, and traditional and contemporary product costing systems. The application of the basic concepts and approaches to small and large-sized domestic and global organizations is emphasized. Where appropriate, contemporary managerial accounting issues are stressed.

**ACCT 70003 - Business Law for Accounting Professionals**

Prerequisite: Enrollment in MAc program or instructor permission. An overview of business law relevant to the practice of public accounting, including: contracts, business organizations, debtor-creditor relationships, government regulation of business, property, negligence, fraud, and the Uniform Commercial Code.

**ACCT 70020 - Cost Systems and Analysis**

1.5 credit hours. Prerequisite: ACCT 60020. An examination of the costing systems used to assign costs to products, services, and customers, and how the information produced by the systems is used by managers in their operational and strategic decisions. Topics covered include job-order and process costing systems, activity-based costing, standard costing and variance analysis, absorption vs. variable costing, and non-financial performance metrics.

**ACCT 70053 - Contemporary Accounting Issues**

Prerequisite: Enrollment in MAc program or instructor permission. Study of various aspects of accounting theory and applications. Normally, topics include theoretical frameworks, alternative models, regulation, rule development, and the demand for accounting information.

**ACCT 70153 - Financial Statement Analysis**

Prerequisite: Enrollment in the MBA or MAc program or instructor permission. The analysis and use of information contained in corporate financial statements by equity and credit analysts, management, and auditors, including an understanding of the limitations and inadequacies of published financial statements.

**ACCT 70273 - Research in Audit and Assurance**

Prerequisite: Enrollment in MAc program or instructor permission. An introduction to research methods and applications as they are applied to the planning phase of the audit engagement (specifically business and industry risks) and to the fieldwork phase of the audit engagement (specifically technical issues in both financial reporting and audit procedure) using publicly available financial data, technical accounting and auditing standards, SEC regulations, and best practice in auditing.

**ACCT 70303 - Advanced Federal Taxation**

Prerequisite: Enrollment in MAc program or instructor permission. An overview of the fundamental concepts of the federal tax system that apply primarily to corporations, partnerships, estates, and trusts, with an emphasis on identification of tax issues, tax planning, and tax research.

**ACCT 70353 - Tax Research**

Prerequisite: Enrollment in the MAc Program or instructor permission. An introduction to research methods in taxation. Students learn to identify tax issues, formulate research questions, evaluate the relevant authorities, and communicate the research results.

**ACCT 70460 - Ethics for Accounting Professionals**

1.5 credit hours. Prerequisites: MANA 60460. This course is designed to further enhance students' ethical decision-making in relation to issues faced by accounting professionals. The course focuses on ethical reasoning and decision-making, integrity, objectivity, independence, professionalism and other core values of the accounting profession.

**ACCT 70970 - Special Problems in Accounting**

Special Problems in Accounting.

## Business Courses

**BUSI 50833 - Team Leadership Skills**

3 hours. Prerequisites: BUSI 30833 with a grade of at least "C," and must be a Business major. A developmental approach is taken in this course to build critical skills that support effective team leadership in today's organizations. This course will focus on introducing and cultivating skills such as team building, group process facilitation, dialogue, meeting management, and conflict resolution. Learning through active application and experiential exercises will be emphasized.

**BUSI 50843 - The Leadership Challenge**

3 hours. Prerequisites: A business major, and BUSI 30843, and BUSI 40833 with at least a grade of "C" and departmental permission. This course is the capstone for the Leadership Emphasis program. It will cover content associated with what it takes to successfully lead change efforts. As such, it will cover topics such as overcoming complacency, creating and communicating new direction, development support for leadership initiatives, dealing with resistance, among others. In addition, students will be given a "leadership challenge" in an assigned field placement where they will be expected to use what they've learned in leadership courses to lead a project to a successful completion. Class sessions will help students relate their field experience to topic coverage in this course as well as to other courses in the Leadership emphasis program.

**BUSI 60070 - Business Simulation**

1.5 credit hours. Prerequisite: Enrollment in the PMBA Program or Graduate Program Office approval. This course helps students integrate concepts from the different business disciplines by involving them in a complex computer simulation of realistic business situations. Teams of students are required to make business decisions involving a diverse set of business functions and activities over a series of rounds in which conditions change. Through successive phases of the simulation, students must respond to the actions of competing company teams represented by their classmates and are exposed to the consequences of their previous decisions. The course, which is taught at the end of the required core courses, requires students to draw on the material from those courses in making their decisions. Student performance in the simulation is reflected in a balance scorecard of multiple metrics. At the end of the simulation, students present their rationales for their decisions.

**BUSI 65100 - Personal Leadership Development Process**

1 credit hour. Prerequisite: Must be an EMBA candidate. This course gives each student (1) an understanding of nine critical skills for effective leadership, (2) an assessment of his/her strengths and weaknesses based on feedback from peers, managers, and direct reports; (3) an opportunity to identify and strengthen critical areas for improvement; and (4) an assessment of progress toward personal leadership development goals. A 360-degree feedback survey is used to solicit feedback on each individual's performance in the nine critical skill areas. One-on-one executive coaching will help students

understand opportunities for improvement, set goals, and assess accomplishments toward becoming a more effective leader.

**BUSI 66100 - Career Management and Professional Development**

1.5 credit hours. Prerequisite: Enrollment in the PMBA program. Assesses and develops skills in the following areas: career management, intercultural dynamics, leadership, professional communication, and team building. Students must complete various assessments and attend feedback sessions, and complete the START workshop. Students must also complete several career management requirements and submit a career development plan for approval. Students enroll in this course on a pass/no credit basis.

**BUSI 70970 - Special Problems****BUSI 75970 - Special Problems in Business**

Special Problems in Business. Prerequisite: Must be an EMBA candidate.

**BUSI 75974 - Managing in a Global Business Environment**

4 hours credit. Prerequisite: Must be an EMBA candidate. This course is the study and experience of managing in a global business environment. The course provides background learning in preparation for a study abroad opportunity that includes visits to companies (multinational and local), institutions (financial, educational, political), and cultural sites. Pre-trip classes provide the students an understanding of the risks, opportunities, and challenges of doing business across borders and the impact of differences in legal, political, cultural, social and institution frameworks in different countries. An opportunity analysis is completed and presented in the post-trip class period.

**BUSI 77702 - International Internship**

Prerequisite: Enrollment in the MIM program. This is an international internship that exposes students to cross-country variations in business practices, cultures, work environments, regulatory settings, and other aspects of international business. Students are immersed in a work environment different from that of their native country. MIM students from TCU will intern in Mexican companies while MIM students from UDLA will intern in U.S. companies.

## Finance Courses

**FINA 60003 - Economic Environment of Business**

A contemporary, real-world course focusing on the economic environment within which today's businesses operate taught from the perspective of the practicing manager. Content is both national and international in flavor. Highlights include study of the general economy, market structure and public policy, economic analysis of industries and business cycles, and economics of the firm. International comparative advantage is stressed. The course is taught through the use of materials, tools, and databases readily available to the manager.

**FINA 60013 - Management of Financial Resources**

Prerequisite: ACCT 60010, or concurrent enrollment in ACCT 60010. A study of the acquisition and management of the financial resources of the firm. The emphasis is on developing and understanding decision making concepts related to such topics as valuation, cost of capital, capital budgeting, dividend policy, debt policy, and corporate control. The interaction between investment and financing decisions in the marketplace is emphasized in the context of risk-return considerations, and the obligation of management to security holders is considered. Where appropriate, the global environment of decisions is stressed.

**FINA 65000 - Economic Environment of Business**

1.5 Credit Hours. Prerequisite: Must be an EMBA candidate. A contemporary, real-world course focusing on the global economic environment within which today's businesses operate, taught from the perspective of the practicing manager. Content is both national and international in flavor. Highlights include study of the general economy, monetary/fiscal policy, business cycles, exchange rates, and economic indicators. The impact of domestic and international forces on business strategy is stressed. The course is taught through the use of materials, tools, and databases readily available to the manager.

**FINA 65010 - Managerial Economics for Executive Decision-Making**

1.5 Credit Hours. Prerequisite: Must be an EMBA candidate. This is an applied course intended to prepare executives to understand

microeconomic concepts, interpret economic data, and apply these tools in their working environment. In each section, fundamentals of economic theory will be introduced and then applied to equip executives to make strategic business decisions in a dynamic business environment.

**FINA 65013 - Management of Financial Resources**

3 hours credit. Prerequisite: ACCT 65013, and must be an EMBA candidate. A study of the acquisition and management of the financial resources of the firm. The emphasis is on developing and understanding decision making concepts related to such topics as valuation, cost of capital, capital budgeting, dividend policy, hedging financial exposure, and corporate control. The interaction between investment and financing decisions in the marketplace is emphasized in the context of risk-return considerations, and the obligation of management to security holders is considered. Where appropriate, the global environment of decisions is stressed.

**FINA 70183 - Educational Investment Fund**

Prerequisite: FINA 60013. Admission by approval of the Dean of the Neeley School. Participation in the operation of the Educational Investment Fund student managed investment portfolio. Students participating in the Educational Investment Fund are strongly encouraged to take six (6) additional hours of finance electives beyond the program requirements (with possible exception made in the case of extensive finance background).

**FINA 70193 - Educational Investment Fund**

Prerequisite: FINA 70183. Admission by approval of the Dean of the Neeley School. Participation in the operation of the Educational Investment Fund student managed investment portfolio. Students participating in the Educational Investment Fund are strongly encouraged to take six (6) additional hours of finance electives beyond the program requirements (with possible exception made in the case of extensive finance background).

**FINA 70420 - Options and Futures Markets**

1.5 credit hours. Prerequisite: FINA 60013. Must be a full-time second-year MBA student or equivalent. Introduction to derivatives - financial contracts that "derive" value from other instruments or prices. An in-depth study of the valuation of derivatives. Valuation techniques include methods such as binomials and Black-Scholes models.

**FINA 70470 - Real Estate Finance**

1.5 credit hours. Prerequisite: FINA 60013. An examination of mortgage markets and instruments, including an introduction to basic real estate law, mortgage calculations, loan underwriting, primary and secondary mortgage markets, and securitization.

**FINA 70513 - Security Analysis**

Prerequisite: FINA 60013. Theory of security selection focusing on its economic, financial and accounting aspects. Some attention directed to the role of technical analysis as an adjunct to the more traditional fundamentalist approach. Critical review of significant investment literature is included along with consideration of the Chartered Financial Analyst C.F.A. program and its professional objectives.

**FINA 70520 - Risk Management and Financial Engineering**

1.5 credit hours. Prerequisite: FINA 70420. Study of current usage of derivative instruments in financial engineering. Financial engineering is the science of managing financial risk exposure through derivatives, as well as the construction of new financial products, such as SWAPS. Topics include corporate risk management, hedge fund strategies, and operation of derivative markets.

**FINA 70533 - Portfolio Management**

Prerequisite: FINA 60013. A 'state-of-the-art' examination of the theory and practice of portfolio management. Current literature in leading journals introduces topics such as contemporary techniques of risk-return management, setting portfolio objectives and measuring performance and portfolio selection and revision. Consideration is given to the special problems encountered in management of institutional portfolios.

**FINA 70543 - Advanced Financial Management**

Prerequisite: FINA 60013. Applications of theory of corporate finance to real-world problems through case studies. Topics include financial analysis and planning, forecasting the financial needs of a firm, capital

expenditure analysis, capital structure and distribution policies, merger and acquisition analysis, corporate restructuring, and risk management. Emphasis is placed on the effects of the firm's financial and operating decisions on the value of the firm's securities in financial markets.

**FINA 70563 - International Finance**

Prerequisite: FINA 60013. Financial management of the firm in an international context. The basis of international trade, the management of currency and interest rate risks, international investment decisions, international money and capital markets, financial policy decisions in an international setting. Development of theory via lectures and applications via case analyses.

**FINA 70570 - Real Estate Investment Analysis**

1.5 credit hours. Prerequisites; FINA 70470. A study of the analytical tools and decision-making processes necessary to maximize returns from investment in commercial, industrial and residential income producing real estate. Investment analysis, optimal financial management and portfolio selection of real estate under institutional constraints and in the complex tax environment are considered.

**FINA 70573 - Real Estate Portfolios**

Prerequisite: FINA 60013 or concurrent enrollment. Emphasis will be on real estate investing, particularly as it pertains to real estate portfolios such as REITs. Performance, risk and diversification, including property type and geographic diversity will be studied. Securitization of assets and other methods of financing will be considered.

**FINA 70583 - Topics in Applied Financial Analysis I**

Prerequisites: ACCT 60010 and FINA 60013. This course provides a comprehensive and integrated examination of fundamental topics related to financial analysis, using subject matter from the Candidate Body of Knowledge developed by the CFA Institute for the Chartered Financial Analyst (CFA) Level I program. Specific topics covered include ethics, economics, financial statement analysis, corporate finance, quantitative methods, portfolio management, equity analysis, fixed income analysis, and derivatives.

**FINA 70593 - Topics in Applied Financial Analysis II**

Prerequisites: FINA 70583 or passing CFA Level I exam. This course provides a comprehensive integrated examination of advanced topics related to financial analysis, using subject matter from the Candidate Body of Knowledge developed by the CFA Institute for the Chartered Financial Analyst (CFA) Level II program. Specific topics covered include advanced applications in ethics, economics, financial statement analysis, corporate finance, quantitative methods, portfolio management, equity analysis, fixed income analysis, and derivatives.

**FINA 70970 - Special Problems in Finance**

Special Problems in Finance.

**FINA 75543 - Advanced Financial Management**

Prerequisite: FINA 65013, and must be an EMBA candidate. Applications of theory of corporate finance to real-world problems through case studies. Topics include financial analysis and planning, forecasting the financial needs of a firm, capital expenditure analysis, capital structure and distribution policies, merger and acquisition analysis, corporate restructuring, and risk management. Emphasis is placed on the effects of the firm's financial and operating decisions on the value of the firm's securities in financial markets.

**FINA 75970 - Special Problems in Finance**

Special Problems in Finance. Prerequisite: Must be an EMBA candidate.

**Info Systems & Supply Chain Courses**

**INSC 60010 - Statistical Models**

1.5 credit hours. This course teaches quantitative methods used in data analysis and business decision-making with an orientation towards regression analysis. This course presents the basic topics in regression including Statistical inference from regression output, limitations of regression models and the pitfalls involved in their use. Analysis of both cross-sectional data and time-series data will be discussed. Additional topics include aspects of statistical process control, ANOVA, chi-square tests and logistic regression. The course is taught from an applied

perspective using computer software (Excel and Minitab) to perform statistical analyses.

#### **INSC 60013 - Data Analysis for Managerial Decisions**

Prerequisites: students must have PMBA-MBA plan. Examines statistical techniques helpful in making effective managerial decisions. Deals with applications from business. Topics include descriptive statistics, exploratory data analysis, basic probability concepts, estimation, hypothesis testing, analysis of variance, and regression analysis. The course is taught from an applied perspective using Excel to perform statistical analysis.

#### **INSC 60023 - Manufacturing and Services Operations Management**

Prerequisite: ACCT 60010, and concurrent enrollment in INSC 60013 (for PMBA students) or concurrent enrollment in INSC 60010 (for FT MBA students). Develops concepts and analytical skills to address issues related to the creation and distribution of goods and services. Emphasizes the role of operations functions as competitive weapons and examines how operations strategy can be integrated with corporate strategy and other functional strategies. Discusses the increasingly important role of global competition, technology, and total quality. Other topics include process design, capacity planning, technology choice, planning and inventory control, and just-in-time systems. Technology is emphasized.

#### **INSC 60040 - Managing Information Technology**

1.5 credit hours. Prerequisite: MANA 60003. An investigation of information technology as a facilitator of organizational strategy and business process redesign. The role of information in the evaluation and control of corporate uncertainty at the organizational and interorganizational levels is examined. Particular emphasis is placed on the successful design, implementation, and use of information technologies in both national and international organizations. Technology is emphasized.

#### **INSC 60600 - Concepts in Supply Chain Management**

1.5 credit hours. Effective Supply Chain Management (SCM) has become increasingly important to businesses. This course will provide an overview of the major concepts associated with SCM. Topics include logistics, transportation, procurement, demand forecasting, supply chain operations, information technology and global SCM.

#### **INSC 65013 - Data Analysis for Managerial Decisions**

3 credit hours. Prerequisites: Must be an EMBA candidate. Examines statistical and analytical techniques to analyze data for effective managerial decisions. Deals with applications from business. Topics include description and summarization of data, exploratory data analysis, testing hypothesis, analysis of variance, regression analysis and forecasting, and fundamentals of decision theory.

#### **INSC 65020 - Managing for Operational Excellence**

1.5 Credit Hours. Prerequisite: Must be an EMBA candidate. Operations Management (OM) is the systematic planning, design, operation, control, and improvement of business processes. The course is designed to examine the roles of operations management in creating and delivering value to customers, and thereby creating competitive advantage to the firm. Students will gain an understanding of strategic and tactical approaches for achieving excellence in along with an exposure to some of the latest tools and techniques for analyzing and improving operational processes.

#### **INSC 65023 - Operations Management**

3 credit hours. Prerequisite: Must be an EMBA candidate. This course develops concepts and analytical skills to address the issues related to the creation and distribution of goods and services. It emphasizes the role of operations functions as a competitive weapon and examines how operations strategy can be integrated with corporate strategy and other functional strategies. It discusses the increasingly important role of global competition, technology, and total quality. Other topics include process design, capacity planning, technology choice, planning and inventory control, and just-in-time systems. Technology is emphasized.

#### **INSC 70420 - Regression Analysis**

1.5 credit hours. Prerequisite: INSC 60013. This course serves as an MBA elective. Presents the basic theory of simple and multiple linear regression analysis with applications to business and economic data. Discusses analysis of both cross-sectional data and time-series data. Topics include statistical inference, limitations of regression models, violations of assumptions, use of indicator variables, and variable

selection. Extensive use of computer software. Applications to real business and economic data. Analysis of variance and logistic regression will be covered if time allows. Students cannot receive credit if already completed INSC 60010.

#### **INSC 70430 - Supply Chain Operations Management**

1.5 credit hours. This course serves as an MBA elective. An in-depth study of the theory and practice of supply chain management function in manufacturing and service industries. Supply chain management is the integration of the activities associated with the flow and transformation of goods from the raw materials stage through to the end user, to achieve a sustainable competitive advantage. This course provides insights into the conceptual foundations and facilitates an understanding of the strategic concepts and tools necessary for meeting the challenges in the management of supply chains. Topics include management of logistics networks, material flows and the role of information systems technology.

#### **INSC 70520 - Time Series Forecasting**

1.5 credit hours. Prerequisite: INSC 60013. This course serves as an MBA elective. Presents extrapolative time-series forecasting techniques with applications to business and economic data. Techniques discussed include moving averages, decomposition, exponential smoothing and ARIMA models. Provides an understanding of the limitations of forecasting models and the pitfalls involved in their use. Qualitative forecasting is also discussed. Extensive use of computer software for time series forecasting. Applications to real business and economic data.

#### **INSC 70610 - Logistics and Transportation**

1.5 credit hours. Prerequisites: INSC 60600. Logistics is a core business process that facilitates the creation of value for the external customer and helps to integrate the other functions and processes within the firm. Logistics is defined as that part of the supply chain process that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customers' requirements. This course will cover many aspects of business logistics, including materials management, physical distribution, customer service, order processing, information flows, transportation, warehousing and inventory management.

#### **INSC 70620 - Supply Chain Information Tools and Technologies**

1.5 credit hours. Prerequisites: INSC 60600. Effective supply chain management is heavily dependent on integration of state-of-the-art information tools and technologies. This course will provide an understanding of supply chain models and practical tools for effective decision making and integrated supply chain management (for example ABC segmentation, demand forecasting and planning, inventory management, distribution management and multi-plant coordination). The emphasis will be on exploring tools and off-the-shelf software packages that have been proven effective in many industries, and on identifying and understanding implementation issues associated with the use of such tools.

#### **INSC 70630 - Demand Forecasting Management**

1.5 credit hours. Prerequisite: INSC 60600. This course provides an in-depth study of the processes that balance customer demands with production, procurement, and distribution capabilities. Accurate demand forecasting provides for added flexibility and visibility of inventory, and reduced variability in supply chain outcomes. Core conceptual areas include demand forecasting and management, synchronization of supply and demand, inventory capacity, balancing and positioning, inventory planning, sales and operations planning, and strategic order fulfillment issues.

#### **INSC 70640 - Global Supply Chain Management**

1.5 credit hours. Prerequisites: INSC 60600. This course will deal with (a) the diversity and complexity to be understood and managed in the globalization of supply chain activities, (b) unique characteristics of global transportation (ocean shipping, intermodal, and air) system, (c) legal and regulatory issues impacting global supply chain decisions, (d) import and export processes, (e) documentation requirements, and (f) challenges and integration issues with global supply chain management.

#### **INSC 70650 - Strategic Sourcing and Procurement**

1.5 credit hours. Prerequisite: INSC 60600. This course focuses on the key issues related to the strategic implications of sourcing of products, the purchasing of goods and services, and the role of purchasing in a

supply chain context. Provides students with an understanding of purchasing processes, issues, and best practices. Emphasis areas include supplier quality, relationship management, and global sourcing.

**INSC 70660 - Supply and Value Chain Strategy**

1.5 credit hours. Prerequisites: INSC 60600. This course is designed to be the capstone course for the MBA with a concentration in Supply Chain Management. It will help students integrate all the elements of supply chain management, and examine how they might be applied to achieve strategic advantage for the firm. The course will use a combination of readings on supply chain strategy and case analysis.

**INSC 70773 - Emerging Information Technologies for Decision Support**

Managerial perspective of emerging information technologies for problem solving and decision-making. Examination of decision factors that must be considered when using decision support technologies are examined. Formulation, development and evaluation of decision support systems, expert systems, neural networks, hypermedia, and user interface designs are discussed. Hands-on use of decision support technologies and field trips.

**INSC 70970 - Special Problems in Information Systems and Supply Chain Management**

Special Problems in Information Systems and Supply Chain Management.

**INSC 71000 - Project Management**

1.5 credit hours. Prerequisite: INSC 60023. Presents major concepts and techniques of project management. Familiarizes students with problems and issues confronting project managers and provides vocabulary, concepts, insights, and tools to address these issues. Topics include project planning, execution, control, scope, time, cost, and quality. Integrated processes and risk management perspectives are stressed.

**INSC 71010 - Program Management**

1.5 credit hours. Prerequisite: INSC 71000. A follow-on course to INSC 71000, dealing with larger projects and multi-project enterprises. This course provides an overview of several areas and knowledge of foundational tools. As a generic course in program management, it avoids over-emphasis on the way program management is performed in a single industry. Topics include managing strategic portfolios of independent projects and coordinating large programs of interdependent projects. Integrated processes and risk management perspectives are stressed along with managerial insights and the underlying assumptions.

**INSC 71020 - Six Sigma Green Belt for Managers**

Prerequisites: MANA 60033, INSC 60010, and INSC 60023. This course builds upon concepts and methods from other MBA courses and supplements these to complete the requirements for a Six Sigma Green Belt certification. Topics include the Six Sigma process (DMAIC), process definition and measurement, process analysis and improvement tools, process capability measures and statistical process control. Students will apply their skills to an improvement project in industry (a typical requirement for any Green Belt certification.) Upon successful completion of the course, students will receive a Green Belt Certification from the Neeley School. Students should also be sufficiently equipped to gain a similar certification from other sources.

**INSC 75663 - Supply Chain Strategy and Information Technology**

3 credit hours. Prerequisite: Must be an EMBA candidate. For many companies, supply chain management has become an important element of competitive strategy. However, to achieve a competitive advantage requires effective design and integration of supply chain strategies, processes, and information technologies. Through selected readings and case analysis, this course will examine the linkages between supply chain strategy and competitive strategy, critical elements for effective supply chain management, and current trends in supply chain best practices and information technologies.

**Management Courses**

**MANA 60023 - Legal and Social Environment of Business**

Corporations operate within an environment that is comprised of relationships with customers, investors, employees, competitors, and

suppliers. The primary focus of this course will be to examine those federal and state laws that regulate these relationships. Appropriate attention will be paid to the various social, ethical, and political forces that influence the development and enforcement of laws. Additionally, the course will highlight aspects of the international legal environment of business.

**MANA 60033 - Managing People**

An introduction to leadership concepts and behavioral skills which are used to develop a managerial perspective for organizational problem-solving. General topics include motivation, individual performance, reward systems, leadership, communication, listening, teams, organization cultures, and managing change. Written and oral communication skills are emphasized.

**MANA 60063 - Strategic Management in a Global Environment**

A final integrative course in contemporary global strategic management that integrates the basic business functions. Comprehensive cases deal with global competition in complex changing environments within which the organization seeks to achieve a sustainable competitive advantage. Issues of strategy formulation and implementation are addressed. Technology and communication skills are emphasized.

**MANA 60460 - Business Ethics**

1.5 credit hours. Prerequisite: Admission to the MBA, MAc, or MIM program. Managing Business Ethics addresses moral reasoning and decision making in a business context. Tools for addressing ethical dilemmas are addressed from a personal, managerial, and organizational framework. Case studies are used to develop moral reasoning skills.

**MANA 65000 - Strategic Vision and Analysis**

1.5 Credit Hours. Prerequisite: Must be an EMBA candidate. This course sets the stage for an integrative EMBA experience by providing students with an overall perspective of Strategy and Strategic Leadership from the standpoint of the general manager. Students will examine the role of the strategic visionary and explore how strategic choices are identified and decisions made. Strategic management tools providing insight into competitive and industry analysis and organizational resource and capabilities identification/appropriation will be emphasized.

**MANA 65003 - Business Strategy and Structure**

3 credit hours. Prerequisites: Must be an EMBA candidate. An introduction to business strategy and organization structure. The course presents basic strategic management concepts including industry analysis and competitive positioning, building sustainable competitive advantage, and competitor analysis. Linkages between strategy and structure are examined in the context of organization design. Interfunctional and interorganizational issues are explored and ethical considerations are addressed. Technology and communication skills are emphasized.

**MANA 65023 - Legal and Social Environment of Business**

3.0 credit hours. Prerequisite: Must be an EMBA candidate. Corporations operate within an environment that is comprised of relationships with customers, investors, employees, competitors, and supplies. The primary focus of this course is to examine those federal and state laws that regulate these relationships. Appropriate attention is paid to the various social, ethical, and political forces that influence the development and enforcement of laws. Additionally, the course highlights aspects of the international legal environment of business.

**MANA 65033 - Building High Performance Work Systems**

3.0 credit hours. Prerequisite: Must be an EMBA candidate. High performing organizations gain competitive advantage by putting people first. This course examines via case study discussion and readings how these performance, people-centered organizations focus on: aligning people management with strategy, selective staffing, training as investment, building effective teams, sharing information, and designing effective reward systems.

**MANA 65063 - Strategy in a Dynamic Environment**

3.0 credit hours. Prerequisite: Must be an EMBA candidate. This final course in contemporary global strategic management integrates the basic business functions. Comprehensive cases deal with global competition in complex changing environments within which the organization seeks to achieve a sustainable competitive advantage.

Issues of strategy formulation and implementation are addressed. Technology and communication skills are emphasized.

#### **MANA 65460 - Ethical Business Decision Making**

1.5 Credit Hours. Prerequisite: Must be an EMBA candidate. This course examines ethical challenges frequently faced by business leaders and explores ethical decision-making from both a business and philosophical perspective. We will focus on ethics from both personal and organizational perspectives and look for the best arguments for various positions. We will read and discuss what some of the best minds in Western history have thought about various issues and learn various frameworks that can be useful for ethical decision-making. Students will learn how to think about deep ethical concerns more thoroughly and carefully and make sound ethical business decisions.

#### **MANA 70353 - Private Equity**

Prerequisites: Open to MBA and MAc students; this elective course provides the theoretical background and practical application of private equity in the United States and the world. The principle focus of the course will be early stage venture capital. However, other elements of private equity such as leveraged buyouts and corporate venturing will also be reviewed. To ensure that a realistic perspective of private equity occurs in the class, cases and projects provided by active private equity professionals will be employed to illustrate material.

#### **MANA 70513 - Venture Ideas**

The course provides an in-depth overview of the challenges involved in identifying and systematically evaluating opportunities for creating new ventures across a wide range of contexts, including startups, social enterprises, and large, established corporations. As such, the focus of the course is centered on what should be done before writing a business plan and embarking on the development and launch of a new venture.

#### **MANA 70523 - New Venture Planning**

The course focuses on providing practical experience associated with the business start-up process. Specifically, students working in teams will take an identified business opportunity and develop a proposed new business centered on a product or service. Additionally, discussions centered on the challenges and opportunities associated with new venture creation will be conducted. The overarching goal of the course is to provide students with an understanding of the entrepreneurial process, and the implications of entrepreneurial management for business leaders.

#### **MANA 70603 - Human Resource Management**

Prerequisite: MANA 60033. The study of programs and activities pertaining to personnel management systems. Major topics include fair employment practices, job analysis, human resource planning, performance appraisal, selection and staffing and training and development.

#### **MANA 70610 - Essentials of Negotiation**

1.5 credit hours. Prerequisite: MANA 60033. Study of distributive, integrative/principled, and intraorganizational negotiation. Includes coverage of negotiation strategies, tactics, preparation, errors, cognitive biases, social structure, ethics, and international negotiations.

#### **MANA 70623 - Law and Business in the European Union**

Beginning in 1957 with the signing of the Treaty of Rome, six European countries established a European Economic Community (now Union) whose goal was the elimination of all barriers to the free movement of goods, services, workers, and capital. The European Union, now comprised of 15 countries, is the largest and most integrated regional trading block in the world. This course examines the legal order of the European Union and examines the multitude of ways it affects companies who wish to do business with its citizens.

#### **MANA 70640 - CEO Forum**

1.5 credit hours. Prerequisites: MANA 60033. This course is designed to help students learn directly from successful leaders who are serving as Chief Executive Officers in their organizations. Upon completion of the course students will have more than an intellectual understanding of leadership. They will understand the requirements for self-leadership and leading others. They will also learn what is necessary to successfully lead an organization. The course involves class presentations by CEO's; active verbal interaction and engagement by students; submission of written analyses or reflections on the approaches, styles, and knowledge gained from CEO presenters, and in-depth written reports and presentations on a prominent CEO.

#### **MANA 70740 - Managing Conflict for Results**

1.5 credit hours. Prerequisite: Graduate business student or permission of instructor. This course is designed to give students an understanding of how to manage conflict and confront others in difficult interpersonal situations. A developmental approach is taken in this course to build critical skills that will lead to positive results and stronger performance. We will focus on introducing and cultivating skills necessary for preventing unnecessary conflict, managing emotions, generating resolution alternatives, and other competencies important for confrontational interactions. Learning through active application and experiential exercises will be emphasized.

#### **MANA 70760 - Transformational Leadership**

1.5 credit hours. Prerequisite: MBA student or permission of instructor. This course is designed to give students an understanding of leadership processes that underlie the survival, effective functioning and self-determination of organizations in the 21st century. To this end, we will examine a number of relevant topics that reflect the nature of the challenge being faced, key people and organizational issues in meeting this leadership challenge, and how organizations can select, nurture and develop future leaders.

#### **MANA 70773 - Consulting Applications**

Prerequisites: admission by application; permission of instructor. This course is designed to provide students with an opportunity to be engaged in a real consulting project for an external client. The goal is to provide students with an experiential opportunity that allows them to understand what it means to work in the service of a client's needs. In addition, students will develop a grounded understanding of consulting and consulting processes that will allow them to organize and generalize their learning from the project work.

#### **MANA 70780 - Management Consulting**

1.5 credit hours. Prerequisite: MANA 60033. This course will examine critical issues associated with effective management consultation. Topics will include clarifying the role and types of management consultation, developing a sound understanding of the consultation processes, and identifying key capabilities associated with effective consultation. In addition, this course will explore consulting from the perspective of external consultants (both boutique and large consulting firms) and internal consultants (e.g., who tend to work for large corporations). Finally, we will address key business issues for independent consultants and the factors needed to create, grow and sustain a successful consulting business.

#### **MANA 70970 - Special Problems in Management**

Special Problems in Management.

#### **MANA 75163 - Transformational Leadership**

3.0 credit hours. Prerequisite: Must be an EMBA candidate. This course is designed to give the student an understanding of leadership processes that underlie the survival, effective functioning and self-determination of organizations in the 21st century. To this end, the class examines a number of relevant issues that reflect both the "being and doing" of leadership. The focus is on leading from senior positions, and in particular, on leading change in a corporate context. The class covers topics that reflect the nature of the challenge being faced, how leaders approach those challenges, and key people and organizational issues that help meet them. The participants explore how organizations can nurture and develop future leaders.

#### **MANA 75613 - Negotiations**

3.0 credit hours. Prerequisite: Must be an EMBA candidate. Study of distributive, integrative/principles, and intraorganizational negotiations. Includes coverage of negotiation strategies, tactics, preparation, social structure, ethics, and international negotiations. Errors and breakdowns are also covered along with other conflict resolution techniques such as mediation and arbitration.

#### **MANA 75970 - Special Problems in Management**

Special Problems in Management. Prerequisite: Must be an EMBA candidate.

#### **MANA 75980 - Innovation and Entrepreneurship**

1.5 Credit Hours. Prerequisite: Must be an EMBA candidate. Creativity and innovation are key drivers for economic activity and wealth generation, as well as for individual and community well-being. Entrepreneurs in growing business, large firms, the social sector and government are upsetting the status quo, altering accepted ways of

doing things, transforming industries and finding meaning for themselves and those with whom they work. This course focuses on two key themes. One is creative and innovation and the other is the pursuit of opportunity, which considers the skills and know-how required to exploit opportunity and create social economic value. Students will learn to recognize their own creative talents, apply creative problem-solving techniques to tasks and challenges, (3) recognize and remove blocks to innovation, and (4) understand and apply the elements in the entrepreneurial process.

**MANA 75983 - Entrepreneurship**

This course is the study of entrepreneurial ventures. The focus is on the origination of high growth; high potential ventures, which can obtain venture capital financing. The course will examine both the theoretical and practical background of such ventures. The culmination of the students' efforts being a business plan for such a venture.

## Marketing Courses

**MARK 60013 - Marketing Management**

3 credits hours. Examines the roles of marketing processes in identifying potential customers and their needs, selecting and analyzing market targets, and establishing and maintaining customer relationships. Topics addressed include product planning, distribution, pricing, and promotion strategies designed to produce customer satisfaction. Communication skills are enhanced by written and/or oral presentation assignments.

**MARK 65013 - Advanced Marketing Management**

3.0 credit hours. Prerequisites: Must be an EMBA candidate. This is an examination of the marketing function and how it relates to value creation, strategic corporate management and marketing decisions; the major phenomena underlying marketing strategy formulation and the component divisions of product planning, communication and channels of distribution, both theory and cases to develop a managerial perspective of marketing; linking marketing strategy to financial value.

**MARK 70100 - Integrated Marketing Communication**

1.5 credit hours. Prerequisite: MARK 60013. The integrated planning and implementation of sales promotion, advertising, personal selling, public relations, and other communications tools in supporting the overall marketing strategy is the focus of the course.

**MARK 70110 - Marketing Analytics**

1.5 credit hours. Prerequisites: MARK 60013. This course focuses on helping students develop an analytical and systematic set of skills and processes for making marketing decisions. Marketing decision-making resembles design engineering - putting together concepts, data, analyses, and simulations to learn about the marketplace and to design effective marketing plans. Although many people view marketing as an art and others regard it as science, this course views marketing as a combination of art and science to solve specific problems. Students will learn concepts and will work hands-on with data and software tools for making decisions regarding segmentation and targeting, positioning, forecasting, new product and service design, and the elements of the marketing mix. Through the course, students will learn to take advantage of the massive amounts of data available in most organizations, using that data to make informed decisions, and to create compelling evidence to persuade other executives to support those decisions.

**MARK 70120 - Customer Insights**

1.5 credit hours. Prerequisite: MARK 60013. The most complex aspect of marketing is understanding the mind and heart of the consumer. If consumer behavior was easy to explicate, then all products would sell as well as projected, all ads would be effective, economies would be efficient, and marketing would be a simple prospect. In actuality, consumers are frustrating and irrational and difficult to predict. This course focuses on providing the basic tools to gain insights into consumer behavior. It addresses both managerial and psychological applications of consumer behavior. We apply tools from psychology, economics, and other social sciences to particular marketing problems. The focus will be on specific results, such as what marketing strategies are likely to be effective given a certain consumer response.

**MARK 70130 - Creativity and Innovation in Marketing**

1.5 credit hours. Prerequisite: MARK 60013. This course will focus on methods and tools that facilitate creative problem solving. Students will develop skills that can be applied in any business or other decision-making context.

**MARK 70140 - Managing Service Excellence**

1.5 credit hours. Prerequisite: MARK 60013. To be competitive in today's marketplace, service organizations must provide a quality experience for their customers. This course identifies the key dimensions on which customer perceptions of service excellence are based, and describes strategies for offering superior customer service. Key course concepts include: (1) the drivers of service excellence, (2) reducing gaps in service performance, (3) measuring service quality, (4) service recovery and guarantees, and (5) internal marketing.

**MARK 70200 - Managing Customer Selection and Value**

1.5 credit hours. Prerequisite: MARK 60013. This course focuses on the measurement and management of customer selection, customer acquisition, and customer value. Key concepts explored in the course include: (1) identifying and selecting customers, (2) understanding management of customer acquisition, (3) estimating the value of a customer, (4) linking customer value to shareholder value, and (5) understanding which marketing actions are most appropriate for growing the value of a customer segment.

**MARK 70210 - Managing Customer Satisfaction and Retention**

1.5 credit hours. Prerequisite: MARK 60013. This course focuses on the measurement and management of customer satisfaction and retention. Key concepts explored in the course include: (1) measuring and managing customer satisfaction, (2) identifying and prioritizing the drivers of customer satisfaction, (3) estimating the profit impact of customer loyalty, and (4) aligning the firm's internal value-delivery processes with the voice of the customer.

**MARK 70223 - Field Project in Managing Customer Relationships**

3 credit hours. Prerequisites: MARK 60013, 70110, 70120, 70200, and 70210. Individual or team projects solving real business problems for companies; situation analyses; research proposal composition; field research techniques; statistical analysis; oral and written presentations. Projects will focus on managing customer relationships.

**MARK 70303 - Field Project in Managing Products and Brands**

3 credit hours. Prerequisites: MARK 60013, 70110, 70120, 70720, and 70730. Individual or team projects solving real business problems for companies; situation analyses; research proposal composition; field research techniques; statistical analysis; oral and written presentations. Projects will focus upon managing products and brands.

**MARK 70400 - Pricing Strategy and Tactics**

1.5 credit hours. Prerequisites: MARK 60013. This course focuses on the development of pricing strategies and tactics in a variety of industries and organizational settings.

**MARK 70700 - Sales Strategy and Organization**

1.5 credit hours. Prerequisite: MARK 60013. Students are introduced to issues in planning and organizing a sales force. Planning the sales force involves integrating sales strategy with overall promotion and marketing strategy, developing appropriate implementation methods, and developing proper control mechanisms. Organizing a sales force includes developing a selling mix and managing human and capital resources.

**MARK 70720 - New Product Development**

1.5 credit hours. Prerequisite: MARK 60013. This course provides in-depth knowledge relating to the management of product innovation and new product development strategy. New product development is considered in relation to market opportunity and competitive advantage. We will evaluate changes in competition, customer demands, and technology and their effects upon the product development process. We will employ research skills and methods relating to idea generation, prototype building and commercial production. Case studies of actual firms will be analyzed in order to examine successes and failures in the context of real product development scenarios. A managerial perspective will be taken. The primary emphasis is on understanding theoretical concepts relevant to the subject and applying them to a variety of real world marketing decision making scenarios. In keeping

with current business realities, the course has both a technology and a global focus.

**MARK 70730 - Brand Management**

1.5 credit hours. Prerequisite: MARK 60013. A brand is often a company's most important asset and as such has received immense attention in recent years. This course will provide an overview about branding, and the ways that brands acquire and sustain value in the marketplace. This is a course with a decided point-of-view on the nature of brands and the skills and tasks this requires of the brand manager. We will consider brands as co-creations of consumers and marketers. If brand management is a collaborative process of meaning management, the job of the brand manager then becomes one of navigating the meaning making processes, attaining meanings that resonate therein, and to managing these meanings deftly through time so as to maximize brand value, capture opportunities, and diminish risk. Cases, as microcosm of brand management, deliver the power of real-world, applied setting and reveal concepts and frameworks that can inform management thoughts and actions.

**MARK 70750 - International Marketing**

1.5 credit hours. Prerequisite: MARK 60013. This course introduces the field of international marketing and provides a broad perspective from which to explore and examine various aspects of what changes when firms compete internationally.

**MARK 70760 - Services Marketing Strategy**

1.5 credit hours. Prerequisite: MARK 60013. Marketing a service is different than marketing a tangible good. To address these differences, this course focuses on the unique marketing strategies needed for service organizations. Topics covered include strategies for the service offering (i.e., product), pricing, promotion and distribution, among others.

**MARK 70770 - Marketing Research**

1.5 credit hours. Prerequisites: MARK 60013, MARK 70120 (or concurrent enrollment) and INSC 60010 (FTMBA students) or MARK 60013, MARK 70120 (or concurrent enrollment and INSC 60013 (PMBA students). Marketing research is about providing relevant, accurate and timely information for marketing decisions. This includes information about competition, external environment and current as well as potential customers. Whether or not you ever work in a marketing research function, at some point in your business career, you most likely will need to deal with marketing research, either as a producer or as a user. The course is designed to provide an overview of marketing research and its use in making more effective marketing decisions. The primary emphases are designing research studies that are both valid and pertinent, and accurately interpreting analysis to guide managerial decisions.

**MARK 70800 - Marketing Strategy**

1.5 credit hours. Prerequisites: MARK 60013. An examination of current marketing problems and related problem-solving techniques.

**MARK 70970 - Special Problems in Marketing**

Special Problems in Marketing.

**MARK 75970 - Special Problems in Marketing**

Special Problems in Marketing. Prerequisites: Enrollment in the EMBA program.

# College of Communication

The College of Communication offers the Master Science in three degree plans. Degree plans include advertising and public relations, journalism and communication studies. Students interested either in continuing into a doctoral program or professional development will find programs that prepare them for the future. Research and development are balanced with applied experiences in the communication field. Located in the fifth largest media market in the United States, the graduate programs in the College of Communication at TCU offer diverse opportunities in a supportive and stimulating environment.

## College of Communication Admission Requirements

An applicant must possess a bachelor's degree from an institution regarded as standard by the University and a regional accrediting agency. For unconditional admission, the student must have satisfactory undergraduate preparation for the particular degree sought. This is determined by the departmental graduate coordinator and the College of Communication associate dean and includes a:

- "B" average in the last 60 hours of undergraduate work or in all undergraduate work;
- "B" average in the major field of study; and
- Satisfactory scores on the GRE and TOEFL (if required).

An application that is otherwise satisfactory may still be rejected if the intended major area has already accepted as many new students as its facilities can accommodate, or if it is felt that the program TCU provides is not suitable to the applicant's vocational goals.

### Application Procedure

The application is considered complete when the following are received:

- Completed application form;
- Two certified transcripts mailed directly from the applicant's university. This includes all undergraduate and graduate work from all colleges or universities attended;
- A \$50 application fee;
- A statement of experience and vocational goals, which allows the departmental graduate coordinator to adequately determine the suitability of the applicant with the graduate program; and
- Three letters of recommendation

Additional admission information is available on the College of Communication Graduate Studies web page.

### International Applicants

International applicants must submit TOEFL scores of 550 or better paper based, 213 computer based and proof of financial support. See individual programs for other requirements.

### Conditional Admission Policy

A conditional admission may be granted to students who may be weak in one of the admission criteria if they show strength in all other criteria. The letter of acceptance will state the conditions that must be met in the first nine hours. Special permission to extend this conditional admission must be made in writing through the associate dean's office. Students who have not removed the conditions by the stated deadline will not be permitted to register for classes in the subsequent semester.

## College of Communication Grading Procedures

The grading policy for all graduate communication courses is based on the following scale:

Letter Grade	Grade Point Weight
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67

C+	2.33
C	2.00
C-	1.67
F	0.000

"I" — Course has not been completed and final grade has not been assigned. The "I" must be removed within the first 60 days of the long semester immediately following (with exception to the thesis or project in lieu of a thesis) or it is changed to an "F." Any extension must have written approval of the instructor of record and college dean.

"Q" — Removed from the course by the academic dean

"W" — Officially withdrew from the course

"AU" — Officially audited the course

## College of Communication Academic Standards

All graduate students are required to meet the academic standards set by the College of Communication faculty. Failure to do so will result in academic probation or suspension. Graduate students must achieve at least a 2.75 GPA each semester and on a cumulative basis throughout their program of study. A student who fails to meet this expectation will be placed on probation the following long semester and must achieve a cumulative GPA 2.75. Failure to meet that expectation will result in the removal from the program with the right to appeal to the College of Communication dean. If a graduate student in the College of Communication receives six hours of a grade of "C+" or lower, the associate dean of the graduate programs for the college may dismiss the student from the program because of failure to make satisfactory academic progress.

## College of Communication Financial Aid

**Stipend/Tuition Waiver.** Merit-based financial aid is available. Students must request financial assistance in their application.

Responsibilities tied to stipend awards are departmentally driven. The most common expectation is to assist in undergraduate labs. In all departments, the graduate students on a stipend are assigned to work with a faculty member. Typically, these students are assigned a lab to work in as they mentor students and oversee lab setup and breakdown. The number of hours assigned are directly related to the stipend. Departmental graduate coordinators are responsible for keeping track of the graduate student's time and job as an assistant. The faculty who oversees the student will report to the coordinator.

### Satisfactory Progress

**Candidacy.** This status is awarded when the student has completed a minimum of nine graduate hours, maintained a graduate GPA of at least a 2.75 and secured approval from the departmental graduate coordinator.

## Communication Studies Degree Program

The Department of Communication Studies offers a Master of Science in Communication Studies. Applicants for the Communication Studies program must follow the College of Communication admission procedures as outlined in this catalog.

### Communication Studies Master of Science

To pursue the Master of Science in Communication Studies, a student must have a bachelor's degree, including at least 15 hours in communication studies and nine hours in related areas.

The graduate major consists of 36 credit hours, including two basic plans.

**Plan I**

The *non-thesis* plan includes 36 hours of coursework. A student electing this option must successfully complete oral and written comprehensive examinations as specified by the graduate committee.

**Plan II**

The *thesis* plan includes 30 hours of coursework and six hours of thesis. A student electing this option must successfully complete the thesis and satisfactorily pass an oral defense of the thesis.

**General Information about Plan I and II**

At least 24 hours of a student's program must be at the 60000 level. With special permission from the graduate coordinator, students may take up to six hours outside the department.

**Required Courses**

COMM 60103	Introduction to Graduate Studies
COMM 60113	Interpersonal Communication
COMM 60123	Communication Education
COMM 60133	Communication Measurement
COMM 60173	Communication Research Methods
COMM 60183	Communication Theory

**Communication Studies Courses****COMM 50233 - Measurement of Communication**

1.) Prerequisite: Senior or graduate standing. A study of principles of measurement theory, tactics for measuring communication variables, techniques of analysis and presentation of data, instruments and apparatus, and classic research studies in measuring communication behavior. 2.) Study of principles of measurement theory, tactics for measuring communication variables, techniques for analysis and presentation of data, instruments and apparatus and classic research studies in measuring communication behavior.

**COMM 50243 - The "Dark Side" of Interpersonal Communication**

Prerequisites: COMM 20113. This advanced seminar is designed to provide an introduction to the various messages and message strategies that fall within the purview of the "dark side" of interpersonal communication. Students will examine a variety of interpersonal communication behaviors that problematize that is considered ethical, moral, and/or functional in healthy relationships, including jealousy, envy, revenge, conversational dilemmas, fatal attractions, deception, infidelity, and abuse, among others.

**COMM 50970 - Special Problems in Communication Studies**

Prerequisite: Senior or graduate standing. Specialized work in student's area of concentration. 1-6 semester hours, 3 hours maximum per semester.

**COMM 60103 - Introduction to Graduate Studies**

Overviews the history and scope of the field of Communication Studies; examines the process of research and publication, including an emphasis on APA writing style.

**COMM 60113 - Interpersonal Communication**

Review of advanced theoretical constructs and recent research related to interpersonal communication. Comprehension, critical evaluation and applications will be stressed.

**COMM 60123 - Communication Education**

Review and analysis of communication theory and research in instructional settings.

**COMM 60133 - Communication Measurement**

Study of principles of measurement theory, tactics for measuring communication variables, techniques of analysis and presentation of data, instruments and apparatus, and classic research studies in measuring communication behavior.

**COMM 60143 - Communication and Social Influence**

Explores issues of influence, compliance and resistance in interpersonal relationships from a social science perspective. Influence reciprocity and consequences to relationships are examined as effects of everyday social interaction.

**COMM 60153 - Topics in Communication**

Examines communication in the context of various contemporary social issues. Course topics may vary. Course may be repeated for credit for up to 9 hours.

**COMM 60163 - Organizational Communication**

Addresses advanced concepts, issues and research methodologies applicable to communication processes in contemporary organizations.

**COMM 60173 - Communication Research Methods**

Introduction to philosophy of graduate research; study of inferential and descriptive analysis, as well as correlational and experimental methodology and design.

**COMM 60183 - Communication Theory**

Examination and evaluation of social, psychological and linguistic theory applied to human communication behavior.

**COMM 60193 - Advanced Research Methods in Communication Studies**

Application of communication principles to organizational practice and/or research projects.

**COMM 60203 - Family Communication**

Examines current theoretical perspectives, concepts, and research methodologies applicable to communication processes in families.

**COMM 60970 - Directed Study in Communication Studies**

Opportunity for individual work in a specialized area of concentration within the Communication Studies discipline.

**COMM 70970 - Research Problems**

Advanced research on special problems in Communication Studies. Content will vary according to the needs and interests of students and faculty.

**COMM 70980 - Thesis**

Prerequisite: Permission of chair.

**COMM 70990 - Thesis**

Thesis

**Schieffer School Degree Programs**

The Schieffer School of Journalism offers two degrees designed primarily for working media professionals: the Master of Science in Journalism: News-Editorial (print, broadcast, and Internet journalists) and the Master of Science in Journalism: Advertising/Public Relations.

**Admission Requirements**

Applicants must meet general University requirements as specified in the graduate catalog, as well as having completed 15 semester hours (five courses) in undergraduate journalism or have substantial professional experience in a mass communication discipline as determined by the journalism graduate faculty. The application must also include:

- An application form;
- Two official transcripts from all colleges or universities attended;
- A statement of no more than 250 words describing academic and/or professional objectives;
- Three letters of recommendation; and
- GRE general test scores.

An applicant who does not meet the admission requirements will have to take up to 15 semester hours of undergraduate journalism or advertising/public relations courses that will not count toward the graduate degree. The number of semester hours needed is determined by the graduate journalism faculty.

**Graduate Assistantships**

Graduate assistantships are available. These assistantships, which provide remission for tuition or remission for tuition plus a stipend, are typically made for a full academic year.

**Journalism: News-Editorial (Thesis and non-thesis options) Master of Science**

The Master of Science in Journalism: News-Editorial is for students seeking to broaden their professional and intellectual growth; develop a critical understanding of the institutions, processes and effects of mass communication; while enhancing their knowledge of print, broadcast and media management. The degree is recommended for media professionals and others seeking a more extensive foundation for work in today's growing media markets.

The degree requires 36 hours, including Proseminar in Journalism and Mass Communication (JOUR 50123), Research Methods (JOUR 60113), Media Ethics (JOUR 60133) and Theory (JOUR 60123); 15 additional hours of JOUR courses; and nine hours of approved graduate courses from other academic units.

There are two tracks: one requiring a project and the other a thesis. The thesis track is for students who plan to pursue a doctorate. The Proseminar and Research Methods courses must be taken in the first year after admission to the program. The non-thesis option requires the completion of a project (JOUR 60153 Project in Broadcast Journalism or JOUR 60163 Project in Print/Internet Publications). The thesis requires completion of JOUR 70980 and 70990.

All coursework must be completed before registering for either the project or thesis. The project requires the submission of a CD and/or hard copy, including photographs of exhibits, if used.

**Journalism: Advertising/Public Relations (thesis and non-thesis options) Master of Science**

The Master of Science in Journalism: Advertising/Public Relations is designed for practitioners seeking a broader understanding of research techniques, communication theory, ethics and law, as well as those who want to enhance their understanding of nuances in the practice, of advertising/public relations audiences and issues, and the processes and effects of mass and specialized communication.

The program helps students develop advanced skills and knowledge in problem solving and in dealing with management issues in a global society, as well as understanding the theoretical underpinnings of communication efforts that build better relationships with an organization's publics.

The degree requires 36 hours, including Proseminar in Journalism and Mass Communication (JOUR 50123), Research Methods (JOUR 60113), Media Ethics (JOUR 60133), and Theory (JOUR 60123); 15 additional hours of JOUR courses; and nine hours of approved graduate courses from other academic units.

There are two tracks: one requiring a project and the other a thesis. The thesis track is for students who plan to pursue a doctorate. The Proseminar and Research Methods courses must be taken in the first year after admission to the program.

All coursework must be completed before registering for either the project or the thesis. The project requires the submission of a CD and/or hard copy, including photographs of exhibits, if used.

**Journalism Theses and Projects**

**JOUR 70980**

In the first semester of the thesis, the graduate student should register for JOUR 70980, choose the faculty member who will direct the thesis, select the committee comprising three members from the Schieffer School and one outside the school, complete a proposal for the thesis and submit it to the committee for approval. Then the student must complete a literature review and a research methodology and submit both to the committee for approval.

**JOUR 70990**

In the second semester of the thesis, the student should register for JOUR 70990, complete the research and meet with the committee to share the results, complete the thesis and submit it to the committee at least one month before the deadline for final submission to the committee for a defense. After the committee votes, the student must finalize the work, obtain the committee's signatures and include the signature page with the initial hard copy of the thesis. Once approved, the thesis is to be submitted in electronic form to the college. University instructions for the electronic submission are located at [lib.tcu.edu/NDLTD](http://lib.tcu.edu/NDLTD). Students must be registered for this thesis course the semester the degree is granted.

**Projects (JOUR 60153, JOUR 60163, JOUR 60173)**

All projects involve original research and written presentation of the project so that these efforts will add to the body of knowledge in the discipline. Students must choose a professor to work with on the project. Once that decision is made, the Project Approval Form must be signed by the major professor and two other faculty members (Project Committee). The student will then carry out the project under the direction of the major professor. Upon completion, the project is defended orally in front of the Project Committee.

**Journalism Courses**

**JOUR 50123 - Proseminar in Journalism and Mass Communication**

Seminar devoted to the analysis and discussion of significant issues in journalism and mass communication with a focus on related literature, research areas and policy developments.

**JOUR 50133 - Management of Public Relations and Advertising Departments/Firms or Agencies**

The course will examine management techniques, tactics, concerns and issues in handling public relations and advertising departments within organizations, corporate and nonprofit, and agencies or firms, from small independent operations to subsidiaries of larger entities.

**JOUR 50143 - Social and Cultural History of the Media**

Seminar designed to explore the history of mass media. Issues discussed in this class will improve historical knowledge about the mass media and give a foundation for understanding the professional development of journalism and mass communication.

**JOUR 50163 - Issues and Crises in Public Communication**

The course covers the way issues of public concern are detected by news media and by public relations and advertising strategists as the issues develop, and it examines how communication of government policies as well as corporate and non-profit organization's concerns affect perceptions and subsequently public opinion.

**JOUR 50173 - International Reporting**

Prerequisite: JOUR 30203, or permission of instructor. The course will critically analyze the coverage of international affairs by U.S. and other media. It will help the student develop competency in researching, analyzing and reporting about international issues, including the impact of international communication.

**JOUR 50183 - Media Management and Leadership**

Dramatic changes in technology and in the media's role in converging technologies require new management and leadership techniques and paradigms. Students will discuss existing case studies examining these changes. This course will give students a survey of some of the latest management and leadership theories, including a new sense of social responsibility. They will apply these theories to a number of different competitive, structural, motivational, strategic, and organizational problems of the media, primarily by solving problems in existing case studies and by writing original case studies.

**JOUR 50193 - Economics and Finance of the Media**

The course will examine the economic environment and financial practices of the mass media, including the World Wide Web. The course will also examine how the media are affected by advertisers, competition, financial markets, and other economic forces. Understanding and structuring debt and equity, valuing media companies, and writing a business plan are included in the course work.

**JOUR 50333 - Advertising and the Consumer**

This course presents theories and models from psychology, sociology, marketing and communications to examine consumers -- how they react to advertising and promotion and their subsequent consumer behavior.

**JOUR 60113 - Research Methods in Journalism and Mass Communication**

Introduction to quantitative and qualitative methodologies used in the study of mass communication, including surveys, content analyses, experimental designs, historical research and case studies.

**JOUR 60123 - Mass Communication Theory**

An introduction to the theoretical aspects of how people communicate, investigating the purpose of communication, the variables involved in

communicating and the effects---successes and failures of the communicative act.

**JOUR 60133 - Media Ethics**

Principles of ethical journalism from the articulated ideals, codes and practice in the field. Examines the moral dilemmas facing media professionals from the approach of thinking through ethical problems, considering differences of judgment, and evaluating the performance of the media.

**JOUR 60143 - Literature of Mass Communication**

Examination of literary works in journalism and mass communication. The course is designed to connect a journalism education to broader social science concepts in a manner that should stimulate critical thinking about the role of the media in American and international societies.

**JOUR 60153 - Project in Broadcast Journalism**

This course will allow the student to take a real-world problem or opportunity that has a strong research component and develop it for course credit and for application on the job. The course is designed to afford students interested in broadcast journalism the opportunity to identify and extensively research a community or a broadcast issue or problem.

**JOUR 60163 - Project in Print/Internet Publications**

This course will allow students the opportunity to take a workplace problem that has a strong research element and develop it for application on the job. Such a project could be developing a proposal for a series of stories on a major issue, preliminary work on an investigative series using social science research techniques, performing a management case study, conducting research on readership, or identifying the type of sources used in stories.

**JOUR 60173 - Project in Advertising/Public Relations**

This course will allow students an opportunity to take a workplace problem that has a strong research component and develop it for course credit and for application on the job. Projects could be creating a campaign, developing a program for a special public, such as an ethnic group or a particular age group, exploring new policies to solve workplace difficulties or potential problems, studying the way different publics view the organization with the idea of placing that opinion more in line with management objectives, planning a Web site or any other workplace assignment that lends itself to research and writing a proposal

**JOUR 60183 - Public Relations and Advertising in International Practice**

An in-depth look at determinants that affect the way both nonprofit and profit-making organizations must function based on elements such as government, media ownership, culture and social structures. The course also examines commercial free speech as it functions in the USA and how communication efforts and persuasive strategies must be changed or adapted for other countries and regions.

**JOUR 60193 - Global Cases and Campaigns**

A study of persuasive cases and campaigns that are international in scope. Documented cases will be reviewed for insight into elements that contributed to the effectiveness of the effort, and campaigns, such as some United Nations health campaigns that will be studied for their tactics and strategy as adjusted for different cultures.

**JOUR 60203 - Integrated Marketing Communications**

This course provides an introduction to the components and considerations involved in integrated marketing communications (IMC) strategy decisions. The course will consist of an overview and discussions of assigned readings and cases, guest speakers, and either a research project or applied project for a client.

**JOUR 60970 - Special Problems: Journalism and Mass Communication**

A conference course designed to give an individual student or group of students opportunities for additional specialized work in a particular area of concentration. (Maximum of 3 hours credit per semester may be repeated for maximum of 6 hours credit.)

**JOUR 60980 - Special Problems in Advertising/Public Relations**

A conference course designed to give an individual student or group of students opportunities for additional specialized work in a particular area

of concentration. (Maximum of 3 hours credit per semester; may be repeated for a maximum of 6 credit hours.)

**JOUR 70903 - Graduate Seminar**

Graduate capstone seminar that introduces the concepts used in developing a thesis or professional project. Includes guidance on formulating a proposal, necessary theoretical concepts and organizational structure of the project or thesis.

**JOUR 70980 - Thesis**

Thesis.

**JOUR 70990 - Thesis**

Thesis.

# College of Education

The mission of the College of Education is to develop effective, ethical educators with a passion for learning. We meet that mission by offering excellent graduate programs taught in small classes by professors who know their students well. Educational experiences are designed so that students can grow personally and professionally to become leaders in their field.

## College of Education Programs

Master of Education degrees are offered with majors in:

- Curriculum Studies
- Counseling
- Elementary Education
- Special Education
- Educational Administration
- Science Education

Four/One Programs result in a Master of Education degree and are options for students earning undergraduate degrees at TCU in:

- Elementary Education
- Middle School Education
- Secondary School Education

Doctoral degrees are offered in:

- PhD in Educational Studies: Science Education
- EdD in Educational Leadership
  - Leadership in Schools and District Cognate
  - Leadership in Curriculum Cognate
- MBA/EdD Joint Program in Educational Leadership

## College of Education Admission for Graduate Studies

Texas Christian University's admissions standards stated in the admissions portion of the graduate catalog are used in the College of Education admission process in addition to the following:

### Application Checklist for Admission

Because applications are considered in light of multiple criteria, incomplete applications cannot be accepted. A complete application consists of:

- The completed application form. The application form may be obtained from at [www.coe.tcu.edu](http://www.coe.tcu.edu) or the Office of Graduate Studies.
- A personal essay stating reasons for applying to the graduate program including professional background information and goals. (200 words or less).
- Two official transcripts from each college/university previously attended. Transcripts must be sent directly to the College of Education Office of Graduate Studies from the university or college attended. (TCU transcripts are not required.)
- One letter of recommendation attesting to the student's character and ethical conduct from a person who knows the student well (include contact information for follow-up).
- Two letters of recommendation attesting to the student's competence, character and ethical conduct in professional settings (include contact information for follow-up).
- Official TOEFL scores for non-native English speakers.
- Evidence of current criminal record search.
- Personal interviews for students applying to the Counseling Program.
- Recent acceptable GRE scores for students applying to the PhD in Science Education and the EdD in Educational Leadership.
- A writing sample (10-15 pages, exclusive of notes and works cited) demonstrating appropriate academic writing skills needed for success in a graduate program for the PhD in Science Education.
- An essay, including a short professional background summary, a statement addressing professional goals and a brief philosophy of leadership statement for EdD program.
- \$50 application fee made payable to TCU.

## Admission Deadlines

### MEd Applications

- November 16 for spring admission
- March 16 for summer admission
- July 16 for fall admission

### Joint MBA/EdD in Educational Leadership

- March 1 for fall admission

### PhD in Educational Studies: Science Education and Ed.D. in Educational Leadership (without MBA)

- February 1 for fall admission

### Retention in the College of Education Graduate Programs

Students must maintain acceptable academic performance (minimum 3.0 GPA) in order to advance in the program. The College of Education is dedicated to identifying and intervening to assist students who demonstrate difficulties maintaining these standards.

Any faculty member who has concern about a student's performance and/or professionalism may initiate the Academic Performance and Professionalism Warning (APPW) process. The process operates as follows:

- The faculty member completes the APPW form describing the concerns and indicating potential strategies and solutions to resolve the problem.
- A conference between the student and two faculty members is required to complete the APPW form. During the conference, the parties will discuss the student's understanding of the concerns, generate potential solutions, and agree upon a course of action. The APPW contract will be signed by the student and faculty members. If the student fails to respond or attend a conference, the two faculty members will complete the form and notify the student via certified mail.
- The completed form is submitted to the associate dean, the student and Campus Life.
- Any student receiving two notices through this process may be considered for dismissal from the College of Education.
- Except in an unusually severe or critical situation (e.g., plagiarism, cheating, threat of harm to others, etc.), no single retention notice will result in a student being dismissed from the program.
- These notices do not become part of a student's permanent academic record.

## Master of Education Program Descriptions

### Curriculum Studies

The MEd with a major in curriculum studies is a 36 credit-hour program that arises from a re-conceptualized approach to studying questions such as—What is knowledge?; Who gets to decide?—in light of critical scholarship leading to democratic community building and an ethic of social action that honors diversity and demands respect for all people. Curriculum studies critically examines educational issues and policies in light of scholarship in psychology, philosophy and social foundations as well as scholarship in education. Students come from many professional backgrounds, such as schools, businesses, nonprofit organizations and government agencies. They share a desire to assume leadership roles in solving educational problems in these settings.

#### Core (15 hours)

EDCS 60813	Curriculum Studies Seminar*
EDUC 50003	Diversity in American Education
EDUC 70953	Research in Education
EDUC 70963	Qualitative Inquiry I

\*Two different topics for a total of six hours

#### Emphasis (21 hours)

Students enrolled in the 4/1 option must follow the 4/1 emphasis, otherwise students may select either research or teaching emphasis.

**4/1 Option**

EDSP 50663	Motivating and Managing Students in the Classroom
EDUC 70903	Treatise**
EDUC 70973	Qualitative Inquiry II**
EDEC 60173	Practicum in Early Childhood Education <i>or</i>
EDMS 60980	Internship in Middle School/Secondary Education

\*\*Concurrent enrollment

Nine hours by advisement from the Elementary or Middle/Secondary Program

**Research Option**

EDCS 60813	Curriculum Studies Seminar**
EDUC 60213	Thinking, Learning and Teaching
EDUC 70960	Apprenticeship in Research (1-3 hours variable credit/may be repeated)
EDUC 70973	Qualitative Inquiry II
EDUC 70980	Thesis
EDUC 70990	Thesis

\*\*Select from topic offered and not previously taken as part of the core

Electives: Three hours selected in consultation with adviser

**Teaching Option**

EDCS 60813	Curriculum Studies Seminar **
EDCS 70963	Apprenticeship in Teaching
EDUC 60213	Thinking, Learning and Teaching
EDUC 70903	Treatise
EDUC 70973	Qualitative Inquiry II

\*\*Select from topic offered and not previously taken as part of the core

Electives: Six hours selected in consultation with adviser

**Counseling**

The MEd in Counseling provides three specialization options:

- Specialization I: School Counseling
- Specialization II: Student Affairs
- Specialization III: Child-Life

All specializations are designed to provide students with the necessary counseling skills and external resources to provide individual, preventive, responsive and support services to counseling programs.

Specialization I offers an MEd in Counseling and the option to pursue certification in school counseling. All counseling classes can be applied to Texas professional licensure. The MEd in School Counseling meets the requirements of the State Board of Educator Certification and follows the guidelines for certification in school counseling. The following courses are required.

**School Counseling**

*Major (36 semester hours)*

EDUC 50003	Diversity in American Education
EDUC 60313	Educational Assessment
EDUC 70953	Research in Education
EDUC 50143	Theories of Human Development
EDGU 50223	Helping Relationships
EDGU 60233	Career Development and Information
EDGU 50323	Small Group Dynamics
EDGU 60143	Counseling Interventions (Pre-requisite: EDGU 50223)
EDGU 60383	Counseling Theories and Techniques
EDGU 60613	Guidance and Counseling Programs
EDGU 70103	Practicum I (160 hours)

Three hours of elective study in a similar area field experience

If students choose Specialization I, they must pass the practice TExES exam before taking the state exam for counseling in schools.

**School Counseling Certification Only**

The certification in school counseling meets the 30-hour requirement of the Texas State Board of Education. Students who have completed a master's degree in education or the equivalent may be admitted to the program for school counselor certification. The 30-hour certification program qualifies a student to take the TExES exam for school-counseling certification, provided the student has completed all

coursework successfully and has two years of teaching experience in an accredited public or private school. The following courses are required.

**Professional Studies (36 hours)**

EDUC 50003	Diversity in American Education
EDUC 60313	Educational Assessment
EDGU 50223	Helping Relationships
EDGU 60223	Career Development and Information
EDGU 50323	Small Group Dynamics
EDGU 60143	Counseling Interventions
EDUC 50143	Theories of Human Development
EDGU 60383	Counseling Theories and Techniques
EDGU 60613	Guidance and Counseling Programs
EDGU 70103	Practicum I (160 hours)

**Probationary School Counseling**

Students requesting probationary certification must do so at a school district's request. The student must have successfully completed a minimum of 18 hours of counseling courses, including the following:

EDGU 60613	Guidance and Counseling Programs
EDGU 50223	Helping Relationships
EDGU 50323	Small Group Dynamics
EDGU 60143	Counseling Interventions

**Student Affairs**

This option is designed to prepare students to work in colleges and universities in the area of student affairs. It offers individuals the necessary knowledge and skills to effectively provide counseling, consultation and leadership to individuals and groups, and to enhance learning, as well as personal and professional development in the university setting. The following courses are required in the 36-hour Student Affairs Counseling Program.

**Professional Studies (36 hours)**

EDUC 50003	Diversity in American Education
EDUC 60823	Educational Program Evaluation
EDUC 70953	Research in Education
EDGU 50223	Helping Relationships
EDGU 60223	Career Development and Information
EDGU 50323	Small Group Dynamics
EDGU 60143	Counseling Interventions (prerequisite EDGU 50223 Helping Relationships)
EDGU 60383	Counseling Theories and Techniques
EDGU 60403	Theories of Student Development
EDGU 60423	Organization and Administration of Support Programs
EDGU 70103	Practicum I
EDGU 70203	Practicum II <i>or</i>
EDGU 71103	Program Development in Student Affairs

If students who select Specialization II wish to add a specialization in school counseling, they must successfully complete the following classes and pass the practice and actual TExES exam.

EDGU 60613	Guidance and Counseling Programs
EDUC 60313	Educational Assessment
EDUC 50143	Theories of Human Development

**Child Life**

This specialization prepares students to work as child life specialists in hospitals, community health centers and clinical/medical settings. Individuals develop theoretical and practical knowledge related to prevention, education and intervention approaches for working with children and their families coping with chronic or terminal illnesses.

To complete the MEd in Counseling with an Emphasis in Child Life, students must demonstrate their knowledge and skills through classroom assessments, demonstrations and field application. This is accomplished in two stages. The first stage is admission to candidacy, in which the student must successfully complete a minimum of 12 hours, including: EDGU 50223 Helping Relationships, EDGU 50323 Small Group Dynamics and EDGU 60143 Counseling Interventions.

Students are evaluated on interpersonal skills and therapeutic competencies to determine if they possess the necessary interpersonal and therapeutic skills to support children and families. Any remediation of problems in these areas must be made before the student can be admitted to candidacy. This decision is based on the clinical and professional judgment of the faculty.

The second stage includes successful completion of all courses required for the master's degree, including:

*Professional Studies (36 hours)*

EDUC 50003	Diversity in American Education
EDUC 60313	Educational Assessment
EDUC 70953	Research in Education
EDUC 50143	Theories of Human Development
EDGU 50223	Helping Relationships
EDGU 50323	Small Group Dynamics
EDGU 60143	Counseling Interventions (prerequisite EDGU 50223 Helping Relationships)
EDGU 60383	Counseling Theories and Techniques or
EDGU 60113	DSM: Diagnosis and Treatment
EDEC 60133	Play and Creativity
EDGU 60213	Introduction to Marriage and Family Therapy
EDEL 60813	Infant/Toddler Development and Intervention

*Field Experience (3 hours)*

EDGU 70303	Practicum in Child Life
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Child life specialist certification (not to be confused with school counselor certification) requires additional practicum and internship experiences that are not offered in the TCU program. Students should speak with their advisers about the field work necessary to earn certification.

**Licensed Professional Counselors Program (LPC)**

For those who wish to be an LPC in the state of Texas, 48 hours of graduate coursework in counseling are required, which includes a master's degree or higher in counseling or a related field. For those who have a 36-hour master's degree, an additional 12 hours are required as specified by the Texas State Board of Examiners of Licensed Professional Counselors. Once these requirements are met, students are eligible to sit for the LPC exam administered by the State Board. Once the individual passes the exam, he/she is eligible for the required 3,000-hour supervised internship. This internship is not supported or sponsored by the counseling program at TCU.

Students who wish to pursue the additional 12 hours will meet with their adviser to outline which courses are still needed to meet the state requirements, as these will vary from one individual to another. Course offerings include but are not limited to:

EDGU 70203	Practicum II (160 hours) (Prerequisite: EDGU 70103 Practicum I)
EDGU 60113	DSM: Diagnosis and Treatment (required for LPC)
EDGU 60213	Introduction to Marriage and Family Therapy (highly recommended)
EDGU 60313	Motivating and Managing Students
EDGU 70970	Special Topics in Guidance and Counseling (requires permission from the instructor)
EDGU 70323	Advanced Group Leadership (requires permission from the instructor)
EDGU 60403	Theories of Student Development
EDGU 60463	Organization and Administration of Student Services

**Other Course Offerings**

EDGU 60123	Ethical and Legal Issues in Counseling
EDGU 70223	Supervision in Counseling (Prerequisite: Master's degree in Counseling and permission of the instructor)

**Elementary Education**

Students receiving the MEd in Elementary Education complete a 36-credit hour program that provides a solid knowledge base and background in the theoretical and practical aspects of the educational contexts in which teaching and learning occur. TCU graduate students gain expertise both in current pedagogy and in pedagogical content knowledge that contribute to more effective teaching. The program is designed to allow educators to deepen their understanding of young learners and to increase their skills for working successfully in today's schools or in other non-traditional or community educational environments. The program includes an emphasis on meeting the needs of diverse children in urban environments and a research experience that culminates in either a treatise or thesis.

Prerequisites include completion of a bachelor's degree and initial teacher certification.

*Core (12-15 semester hours)*

EDUC 50003	Diversity in American Education
EDUC 60313	Educational Assessment
EDUC 70953	Research in Education

*Thesis or treatise (3-6 hours)*

*Major (21-24 hours)*

In consultation with an academic adviser, students may choose a major that provides for specialization in English as a second language (ESL) or bilingual education, early childhood education, pedagogy in math/science/technology, literacy, urban education or other areas.

The major must include EDUC 50503 Developing Communication Competencies of Linguistically and Culturally Diverse Students unless the student already holds a state-recognized supplemental certification for teaching ESL students.

**Special Education**

The MEd in Special Education is a 36 credit-hour program that prepares educators to work directly with students with disabilities and as collaborators with families, other professionals and administrators. The program is designed for students who are already certified in elementary education or special education. Students use their elective hours to build resource areas (e.g., early childhood, ESL, technology, educational administration) compatible with their interests in special education.

*Major (24 hours)*

EDUC 60213	Thinking, Learning and Teaching
EDUC 60253	Historical and Philosophical Foundations of Education
EDUC 60313	Educational Assessment
EDUC 70953	Research in Education
EDSP 60313	Educational Programs for Exceptional Children
EDSP 60233	Understanding Exceptional Children and Youth At-Risk
EDSP 50013	Methods for Educating Students in Inclusive Settings
EDSP 50663	Motivating and Managing Students in the Classroom

*Minor (6-9 hours)*

Courses are selected with approval of a graduate adviser to complement the student's interest in special education.

EDUC 70903	Treatise
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**Educational Administration**

The MEd in Educational Administration is a 36 credit-hour non-thesis program that prepares individuals to serve as elementary and secondary principals, supervisors and central office staff in public and private schools.

Students are encouraged to focus electives in another area of education, such as special education, counseling or early childhood. The reason for this marriage is that educational leaders work in educational settings, not as generic managers. This ensures that educational administrators remain active learners in matters of teaching and learning.

EDUC 60253	Historical and Philosophical Foundations of Education
EDUC 70953	Research in Education
EDAD 60103	Administrators, Schools and Districts
EDAD 60113	Administrators and Teachers
EDAD 60123	Administrators, Parents and Children
EDAD 60133	Trends and Issues in Educational Administration
EDAD 60143	Administrative Life
EDAD 70200	Internship in Educational Administration
EDUC 60313	Educational Assessment or
EDUC 60823	Educational Program Evaluation

EDXX 60XXX	Elective
EDXX 60XXX	Elective
EDXX 60XXX	Elective

Students earning principal certification must take and pass the practice exam before being recommended to take the TExES examination for principal certification.

Students earning principal certification only must be graduates of TCU and successfully complete the following courses:

EDAD 60103	Administrators, Schools and Districts
EDAD 60113	Administrators and Teachers

EDAD 60123	Administrators, Parents and Children
EDAD 60133	Trends and Issues in Educational Administration
EDAD 60143	Administrative Life
EDAD 70200	Internship in Educational Administration (30 credit hours, taken once)

## Science Education

The MEd in Science Education is designed to prepare students to teach science in the K-12 arena and to assume leadership roles in science education. Applicants should hold a teaching certificate in a science field from the state of Texas or the equivalent. Applicants who do not hold a teaching certificate in a science field may have to complete a total of 24 hours of science content as required by the state of Texas for a teaching certificate.

### Major (21 hours of education courses)

In consultation with the student's adviser, a minimum of 21 hours of education courses, nine hours of science content courses and six hours of thesis will be taken.

### Major (21 hours)

**EDSC 60333** Theory and Pedagogy in Science Instruction

Select six courses from the following or other approved by adviser:

EDUC 50003	Diversity in American Education
EDUC 50143	Theories of Human Development
EDUC 60013	Curriculum Theory
EDUC 60213	Thinking, Learning, and Teaching
EDUC 60253	Historical and Philosophical Foundations of Education
EDUC 60313	Educational Assessment
EDSC 60810	Seminar: Special Topics in Science
EDUC 60823	Educational Program Evaluation
EDUC 70953	Research in Education

### Minor (9 hours of science content courses)

All courses must be approved by the adviser and have permission from the appropriate person in the department in the College of Science & Engineering.

### Thesis (6 hours)

An oral examination is required with thesis. See Master's Student Handbook. It may take a full year beyond class work to complete thesis.

EDUC 70980  
EDUC 70990

## Education 4/1 Options for TCU Undergraduate Students

### Education 4/1 for TCU Undergraduate Students

This option is available only to TCU undergraduates obtaining a baccalaureate degree and teacher certification in elementary, middle school education or secondary education. The 4/1 option allows outstanding students to combine a bachelor's degree with the Master of Education (MEd) in five years. Students are eligible to apply for admission to the graduate program during the semester they complete 90 hours of undergraduate coursework.

To be considered for admission to the 4/1 option, students must submit a graduate program application packet. Only candidates demonstrating superior undergraduate academic performance and strong recommendations are considered for admission. If admitted to the 4/1 option, students complete up to 12 semester hours of the MEd program during the fourth year of undergraduate study. Candidates must work with their undergraduate advisers to determine how the courses will apply to the undergraduate degree.

At the end of the fourth year, assuming that all other graduation requirements are met, the student earns his/her baccalaureate degree. During their fifth year, the student completes the remaining semester hours toward the MEd degree. Students intending to pursue a 4/1 option should make their plans known as early as possible to faculty members in the College of Education to ensure proper advising.

## Education 4/1 for TCU Elementary Education Undergraduate Majors

### Elementary Education 4/1 Option

The 4/1 option in elementary education allows outstanding students who are earning a baccalaureate degree in elementary education at TCU to earn a MEd by completing a fifth year of study at the graduate level. These students are prepared to work in pre-K through elementary grade settings.

#### Graduate classes taken senior year

EDUC 60313	Educational Assessment
EDSP 50663	Motivating & Managing Students in the Classroom
EDUC 60980	Internship

#### Graduate Classes taken fifth year as full-time graduate student

EDUC 70953	Research in Education
EDUC 60213	Thinking, Learning and Teaching
EDUC 60810	Seminar in Educational Research: Play
EDSP 60233	Understanding Exceptional Children and Youth At-Risk
EDUC 50003	Diversity in American Education
EDEC 60223	The Young Child

#### Two Electives

\*See adviser for program of studies.

### Elementary Education with Child Life Emphasis

The 4/1 MEd in Elementary Education with an Emphasis in Child Life prepares students to work as child life specialists in hospitals, community health centers and clinical/medical settings. Individuals develop theoretical and practical knowledge related to prevention, education, and intervention approaches for working with children and their families coping with chronic or terminal illnesses and medical procedures. Students must speak with their advisers regarding the sequence of coursework. Courses include

#### Professional Studies (12 semester hours)

EDGU 60383	Counseling Theories and Techniques
EDSP 50663	Motivation and Managing Students in the Classroom
EDUC 60980	Internship

#### Specialization (24 hours)

EDUC 70953	Research in Education
EDUC 60313	Educational Assessment
EDUC 60810	Seminar in Educational Research: Play
EDUC 50143	Theories of Human Development
EDEC 60223	The Young Child
EDGU 50323	Small Group Dynamics
EDGU 50223	Helping Relationships
EDEL 60813	Infant/Toddler Development and Intervention

Child Life Specialist Certification requires additional practicum and internship experiences that are not offered in the TCU program. Students should speak with their advisers about the field work necessary to earn certification.

### Special Education 4/1 Option

The 4/1 option in special education prepares outstanding students who are earning a baccalaureate degree in elementary education at TCU to earn a MEd by completing a fifth year of study at the graduate level. These students are prepared to work in pre-K through elementary grade special education settings. Applications to the 4/1 option for undergraduate elementary education majors must be submitted by March 16 for fall admittance.

#### Graduate classes taken senior year

EDUC 60313	Educational Assessment
EDSP 50663	Motivating and Managing Students in the Classroom
EDUC 60980	Internship

#### Graduate classes taken fifth year as full-time graduate student

EDUC 70953	Research in Education
EDUC 60213	Thinking, Learning and Teaching
EDSP 60313	Educational Programs for Exceptional Children
EDSP 60233	Understanding Exceptional Children and Youth At-Risk
EDUC 50003	Diversity in American Education
EDSP 50013	Methods for Educating Students in Inclusive Settings

#### One Elective

*Treatise*  
EDUC 70903    Treatise

*Oral exam*

### Education 4/1 in Middle School Education for TCU Undergraduate Students

The 4/1 option in middle school education prepares students who have a baccalaureate degree to become certified to teach in grades 4-8. It is assumed that persons seeking this degree have already completed at least one teaching field as required for Texas teacher certification. For additional information, see teaching fields for middle school education in the College of Education section of the TCU Undergraduate Studies Catalog.

*Major (30 Hours)*

EDUC 60213	Thinking, Learning and Teaching
EDSP 60233	Understanding Exceptional Children and Youth At-Risk
EDUC 50003	Diversity in American Education
EDUC 60313	Educational Assessment
EDUC 70953	Research in Education
EDUC 60810	Seminar in Educational Research: Middle School Education
EDMS 50023	Effective Teaching and Classroom Implementation
EDSP 50663	Motivating and Managing Students in the Classroom

*Two Electives*

*Internship (6 hours)*

EDUC 60980    Internship

Students in this program are not required to complete a minor.

*Graduate classes taken senior year*

EDMS 50023	Effective Teaching and Classroom Implementation
EDSP 50663	Motivating and Managing Students in the Classroom
EDUC 60980	Internship (6 credit hours or 6 credit hours from the graduate program in consultation with the adviser)

Due to the time commitment, it is recommended that students enrolled in EDUC 60980 Internship do not enroll in more than three additional hours of coursework during the semester.

### Education 4/1 in Secondary Education for TCU Undergraduate Students

The 4/1 option in secondary school education prepares students who have a baccalaureate degree to become certified to teach in grades 8-12. It is assumed that persons seeking this degree already have completed at least one teaching field as required for Texas teacher certification. For additional information see teaching fields for secondary school education in the College of Education section of the TCU Undergraduate Studies Catalog.

*Major (30 Hours)*

EDUC 60213	Thinking, Learning and Teaching
EDSP 60233	Understanding Exceptional Children and Youth At-Risk
EDUC 50003	Diversity in American Education
EDUC 60313	Educational Assessment
EDUC 70953	Research in Education
EDUC 60810	Seminar in Educational Research: Middle Secondary Education
EDSE 50023	Effective Teaching and Classroom Implementation
EDSP 50663	Motivating and Managing Students in the Classroom

*Two Electives*

*Internship (6 hours)*

EDUC 60980    Internship

Students in this program are not required to complete a minor.

*Graduate classes taken senior year*

EDSE 50023	Effective Teaching and Classroom Implementation
EDSP 50663	Motivating and Managing Students in the Classroom
EDUC 60980	Internship (6 credit hours or 6 credit hours from the graduate program in consultation with the adviser)

Due to the time commitment, it is recommended that students enrolled in EDUC 60980 Internship do not enroll in more than three additional hours of coursework during the semester.

### Education 4/1 in Curriculum Studies for TCU Undergraduate Students

The MEd with a major in curriculum studies is a 36 credit-hour program that arises from a re-conceptualized approach to studying questions such as—What is knowledge? Who gets to decide?—in light of critical scholarship leading to democratic community building and an ethic of social action that honors diversity and demands respect for all people. Curriculum studies critically examines educational issues and policies in light of scholarship in psychology, philosophy and social foundations, as well as scholarship in education. Students come from many professional backgrounds, such as schools, businesses, nonprofit organizations and government agencies. They share a desire to assume leadership roles in solving educational problems in these settings.

*Core (15 hours)*

EDUC 70963	Qualitative Inquiry I
EDUC 70953	Research in Education
EDCS 60813	Curriculum Studies Seminar*
EDUC 50003	Diversity in American Education

\*Select two different topics for a total of six hours

*MEd Emphasis (21 hours)*

EDSP 50663	Motivating and Managing Students in the Classroom
EDCS 50001	Colloquium in Curriculum Studies (taken 2 semesters)
EDUC 70961	Apprenticeship in Research
EDUC 60980	Internship
EDUC 70903	Treatise

Electives: Six hours by advisement from the Elementary or Middle/Secondary Program as approved by adviser

## Educational Leadership

TCU's College of Education offers an EdD in Educational Leadership. This EdD prepares students to assume major leadership positions in a wide variety of education-related organizations by applying managerial skills and educational leadership in the field of education. The program is designed to prepare students to enter educational management in school systems; regional, state, or federal governments; research institutions; private foundations; universities; or private sector companies.

The program:

- Provides students the background necessary to complete superintendent certification in Texas. Superintendent certification requires understanding of leadership in the educational, instructional and administrative communities.
- Develops leaders who understand the operations and leadership of organizations.
- Develops leaders prepared to take advantage of increasing opportunities for creating new educational institutions and systems.
- Develops educational leaders who operate with a global perspective in a diverse and rapidly evolving professional field.
- Develops educational leaders who operate with clear-cut ethical and moral commitments for the education of all children.
- Develops educational leaders able to envision and create new settings now possible through the availability of information technologies.

There are two options to the Educational Leadership Program.

**Option I:** Together with the M.J. Neeley School of Business, the College of Education has created a unique option: a comprehensive program that integrates a Master of Business Administration (MBA) with a doctorate in educational leadership (EdD), effectively combining the best of business and educational disciplines.

**Option II:** The EdD in Educational Leadership offers the same high-quality preparation in education as the joint program but without the MBA. Select one of two cognate options:

- Leadership in Schools and Districts
- Leadership in Curriculum

## MBA/EdD Joint Program in Educational Leadership

### Admission and Degree Requirements

Candidates must be initially admitted to TCU's Day MBA Program. They also must meet all 36 hours of core requirements as well as the START Workshop and the Professional Development Program. At the completion of the first year of the MBA program, and a summer of coursework in educational administration, students will apply for candidacy in the educational leadership doctoral program. Admission will depend on their performance in both MBA and education courses at that point. In the event a student elects to complete the MBA without continuing into the doctoral program, he/she must meet all remaining requirements for the MBA (i.e., 18 elective units in the Neeley School of Business). If a student's work is unsatisfactory in MBA courses, and he/she is not permitted to continue, he/she may not be admitted into doctoral program.

Throughout the program, students must maintain a "B" average. At the completion of coursework, students will take written and oral comprehensives before proceeding into the capstone project.

### EdD in Educational Leadership

#### Admission and Degree Requirements

For admission into the program, an applicant must have a Master's in Education or an appropriate field. Applicants must present a strong academic record, acceptable GRE or Miller Analogy scores within the past five years, and a writing sample that documents evidence of leadership skills and experiences and explains motivations and goals for pursuing the EdD degree.

#### EdD Degree Requirements

The College of Education's EdD is a professional degree. It is awarded for demonstrating competence and exceptional potential in leadership. A general program of study is outlined below. Students are required to take a suitable number and variety of graduate courses and field-based experiences, as described below, to prepare them for the qualifying examination and for the completion of a capstone project. The EdD degree will encompass 51-60 credits after admission to the program.

#### Program of Study

The required program of study guides the committee and student, and is a vehicle for ongoing formative assessment and adaptation. Each student will create a doctoral advisory committee of at least three persons. Among the first tasks of the doctoral advisory committee is to develop the student's program of study. While there is latitude intended in this plan, there are also constraints (e.g., a student pursuing superintendent certification must meet the program requirements in TCU's approved certification program).

*Note:* EDUC 70953 Research in Education, or its equivalent, is a prerequisite, or to be taken in addition to the core.

#### Core (12 hours)

EDAD 70003	Foundational Readings in Educational Administration
EDUC 60823	Educational Program Evaluation
EDAD 70033	Ethical and Moral Dimensions of Educational Leadership

EDAD 70053	Applied Research: Economics of Education or
EDUC 70963	Qualitative Inquiry I

#### Specialization

Students will choose one of two specializations as appropriate to their background, academic preparation, professional goals and interests, as determined by their committee. The following cognates are offered:

#### Leadership in Schools and Districts (24 hours)

EDAD 70013	Legal and Social Environment of Education
EDAD 70023	Managing Instructional Processes
EDAD 70043	Educational Policy and Practice
EDSP 60233	Understanding Exceptional Students and Students At-Risk
EDUC 60013	Curriculum Theory
EDUC 70970	Special Problems in Education: The Superintendency

Elective  
Elective

#### Internship (12-15 hours)

EDAD 70200	Internship in Educational Administration
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(school-based internship; required for students seeking principal certification) or Internship (school or agency based, or other arranged internship; must be school-district based for students seeking superintendent certification)

EDAD 80206

#### Leadership in Curriculum (24 hours)

EDUC 50003	Diversity in American Education
EDUC 60013	Curriculum Theory
EDUC 60213	Thinking, Learning and Teaching
EDCS 60813	Curriculum Studies Seminar: Social Construction of Knowledge
EDCS 60813	Curriculum Studies Seminar: Power and Authority in Education
EDCS 60813	Curriculum Studies Seminar: Critical Pedagogy
EDCS 60813	Curriculum Studies Seminar: Feminist Theory in Education
EDUC 70973	Qualitative Inquiry II
EDSC 70033	Scientific Inquiry and the Nature of Science
EDAD 70043	Educational Policy and Practice
EDUC 70960	Apprenticeship in Research (may be taken 2 times)
EDCS 70963	Apprenticeship in Teaching

#### Capstone Seminar and Project

EDAD 70073	Capstone Doctoral Seminar
EDAD 90770	Capstone Project (9 hours)

#### Qualifying Process

As the first step in the qualifying process for candidacy, students will complete EDAD 70073 Capstone Doctoral Seminar. The Capstone Doctoral Seminar is a culminating course aimed at ensuring students are fully prepared to begin the capstone project, and are able to demonstrate a range of knowledge and abilities, including framing a capstone project; undertaking an appropriate literature review; making a decision regarding design, and implementing the project and being prepared to complete the qualifying process.

The second stage of the process is a submission of a written proposal for a capstone project to the doctoral advisory committee. Once the doctoral committee accepts the written proposal, students will schedule an oral presentation and defense of the proposal to the doctoral advisory committee.

As the third part of the qualifying process, students will present written and/or oral demonstration that they have attained competence in the following domains of leadership performance:

- Strategic planning in education;
- Finance and resource allocation/budgeting in education;
- Competence in political systems at all levels in education;
- Program evaluation;
- Project management;
- Use of data/research in education;
- Professional communication, written and oral; and
- Entrepreneurship in education, including grant and proposal writing.

Upon successful completion of the qualifying process, students are admitted to candidacy.

#### Capstone Project

Students will complete at least nine hours of EDAD 90770 Capstone Project. Students may enroll in additional hours as necessary.

## Educational Studies: Science Education PhD

The PhD in Educational Studies: Science Education prepares students who are qualified to engage in high-quality original scholarship. Recipients are prepared to assume faculty positions in science at the community college and university levels, and take science leadership positions at district and state-level education agencies.

#### Admission

For admission into the program, an applicant must have a master's degree in a science or education field. Applicants must present a strong academic record, acceptable GRE scores within the past five years, a writing sample (15-20 pages, exclusive of notes and works cited) that demonstrates appropriate academic writing skills needed for success in a graduate program and three letters of recommendation.

This program requires extensive knowledge from two academic units, including the College of Education and the College of Science & Engineering. Therefore, students may be admitted who lack the prerequisites for some of the courses required in the program. If such is the case, it is necessary for the student to complete the prerequisites in addition to the requirements of the PhD degree.

**Degree Requirements**

A PhD is a research degree. It is awarded for demonstrating competence in research by successfully defending a PhD dissertation. The emphasis is on developing knowledge and skills in science education that result in the ability to conduct original research in science education. A general program of study is outlined below but the College of Education's dean of graduate studies could waive courses if students show evidence of the necessary knowledge and skills. Students are required to take a suitable number and variety of graduate courses and research apprenticeships to prepare them for the qualifying examination and for the writing of the dissertation. Depending on the graduate history of the student, the program would require 45 to 63 hours of coursework after acceptance into the program. The PhD in Educational Studies: Science Education comprises the following components.

*I. Courses*

- a. **Field of Education**  
Students take EDSC 70011 (Colloquium in the Profession of Science Education), EDUC 60980 (Internship) and other courses for the equivalent of 27 hours as approved by the adviser in the College of Education.
- b. **Research**  
Students take the equivalent of 12 hours of research coursework as approved by the adviser in the College of Education.
- c. **Science Content**  
Students take the equivalent of 18 hours of coursework that qualify for science content as approved by the adviser in the College of Education.

*II. Apprenticeships*

Students are required to join at least one research community during their first year in the program, as approved by the adviser in the College of Education. Students continue to have a research apprenticeship each term thereafter.

*III. Comprehensive Qualifying Examination*

Students take a Qualifying Examination to demonstrate their knowledge and ability in science education. Upon the successful completion of the qualifying examination, students are admitted to candidacy.

*IV. Dissertation Research*

Students propose and conduct original research, write a dissertation and defend the dissertation in a final oral examination.

**Education Administration Courses**

**EDAD 60103 - Administrators, Schools and Districts**

Relationships between different organizational patterns and administrative practices will be explored as well as the role of authority and decision making structures. Required of all majors in Educational Administration.

**EDAD 60113 - Administrators and Teachers**

It will include concepts and issues derived from leadership, supervision, and law.

**EDAD 60123 - Administrators, Parents and Children**

Foci will include community relations, communication, creating orderly, productive learning environments, and law.

**EDAD 60133 - Trends and Issues in Educational Administration**

The course will normally be taught collaboratively with practicing administrators.

**EDAD 60143 - Administrative Life**

This course is normally taken concurrently with EDAD 70200 Internship in Educational Administration. The course synthesizes prior course work, integrates new experiences from the Internship, and considers the alternatives each individual confronts in developing an administrative life, the jobs, technical and ethical demands, stresses and satisfactions.

**EDAD 70001 - Doctoral Pro-Seminar**

This course may be taken twice for a total of 2 semester hours.

**EDAD 70003 - Foundational Readings in Educational Administration**

This course will examine the professional and intellectual history of educational administration.

**EDAD 70013 - Legal and Social Environment of Education**

Educational institutions operate within an environment that requires relationships with families, employees, and other private and public institutions. The primary focus of this course will be state and federal laws that regulate these relationships, with attention paid as well to social and political forces that influence the enforcement of laws.

**EDAD 70023 - Managing Instructional Processes**

High achieving districts are led by administrators that focus on academic programs, set attainable goals, continuously assess the curriculum, evaluate staff and teachers, and assess student achievement. This course will highlight the importance of instructional leadership and of developing effective evaluation processes as well as professional development opportunities.

**EDAD 70033 - Ethical and Moral Dimensions of Educational Leadership**

This course emphasizes enduring educational problems and fundamental philosophical issues, concepts that feature centrally in educational discourse, ethical standards and dilemmas, and conceptual analysis as a means for clarifying decisions regarding educational policy and practice.

**EDAD 70043 - Educational Policy and Practice**

Prerequisite: Admission to doctoral studies or permission of the instructor. This course investigates the formation, implementation and evaluation of educational policy in educational systems. The leader's/administrator's role in creating/sponsoring, utilizing and adapting policy will be of core concern. The course will also focus on the political processes associated with policy practice.

**EDAD 70053 - Applied Research: Economics of Education**

Admission to the Ed.D. Program or permission of the instructor. Empirical research on topics in education is frequently conducted using methods particular to the discipline of economics. Given the complex nature of the education process, it is not surprising that studies examining the same issue often reach different, often contradictory, conclusions. This course will systematically examine literature related to the economics of education.

**EDAD 70073 - Capstone Doctoral Seminar**

Prerequisites: Students registered for this course must have either completed doctoral coursework or be enrolled in final doctoral program classes. This culminating course is aimed at ensuring that students are fully prepared to begin work on the capstone project and are able to demonstrate a range of skills and abilities, including an ability to frame a capstone project; undertake an appropriate literature review; make decisions regarding design and implementation of the project, and, in other respects, complete the qualifying process.

**EDAD 70200 - Internship in Educational Administration**

Planned program of leadership responsibilities in an educational institution or agency, commensurate with the student's graduate program, certification objectives, and employment goals. Emphasis on research application in a field-based setting. Responsibilities and projects are under the direction of the academic advisor and on-site supervisor.

**EDAD 80206 - Internship**

A semester-long internship providing leadership experiences in an educational or corporate setting commensurate with the student's doctoral program. This course can be repeated three times for a total of 18 semester hours.

**EDAD 90770 - Capstone Project**

Prerequisites: Completion of all Ed.D. coursework, including EDAD 70073, Capstone Doctoral Project and approval of doctoral advisory committee. Students will propose and execute an approved capstone project, submit the written documentation and publicly present the capstone project as directed by their doctoral advisory committee. The

capstone project replaces the traditional dissertation. A minimum of 9 credit hours are required; more hours may be taken when necessary.

## Education - Curriculum Studies Courses

### EDCS 50001 - Colloquium Curriculum Studies

Prerequisites: Admission into Curriculum Studies graduate program or permission of instructor. Each semester, the colloquium will address a different contemporary problem significant to curriculum studies. Through readings, discussions, and presentations of scholarly activities; student will explore the semester's theme, further their knowledge of curriculum studies, and develop academic talents within a community of scholars. Non-EDCS students may join the colloquium with permission of instructor.

### EDCS 60813 - Curriculum Studies Seminar

A series of seminar classes that explore issues in curriculum studies, their context and connections with learning and education and the scholars who have contributed to our current understanding. Each class in the series will explore particular issues, such as: feminist theory, issues of power, and the like. Specific offerings will be listed as, for example, EDCS 60813: feminist theory and teacher voice. May be repeated for credit.

### EDCS 70963 - Apprenticeship in Teaching

Prerequisites: Permission of advisor in Curriculum Studies and agreement with mentoring faculty. Students apprentice with faculty in the teaching of undergraduate and master-level curriculum studies courses. Apprenticing will include course design, lectures, facilitation, student interaction, and assessment as negotiated with the mentoring professor. Time requirements will include preparation before class, scheduled class periods and events, and follow-up responsibilities after class.

## Education - Early Childhood Courses

### EDEC 50143 - Early Childhood Curriculum

Prerequisite: Admission to the Teacher Education Program or written permission of the Dean, College of Education. The study of basic principles underlying curriculum construction and instructional practices in early childhood and primary education.

### EDEC 60133 - Play and Creativity

Research-based methods for creating experiences and environments for young children that support playful and creative learning opportunities. Current research and issues around appropriate practices with young children will be included.

### EDEC 60173 - Practicum in Early Childhood Education

All-day observation and supervised teaching for a period of six weeks in the public schools. Accompanying regularly scheduled class meetings on the campus for the entire semester for the purpose of developing competencies and professional growth.

### EDEC 60223 - The Young Child

Study of research on behavior of young children and application to planned learning experiences.

## Education - Elementary Courses

### EDEL 60813 - Infant/Toddler Development and Intervention

Examines: the overall development of the infant and toddler from birth to three years; specialized services and early intervention; assessment strategies; collaboration skills; biomedical ethics and issues; care and collaboration of the medically fragile; methods and strategies to support and set up developmentally appropriate learning environments; federal rules and regulations of Part C under IDEA.

## Education - Guidance Counselor Courses

### EDGU 50223 - Helping Relationships

Examination and practice of specific skills and processes essential to the development of helping relationships. Emphasis is placed on the development of interpersonal skills and professional ethics necessary to counseling.

### EDGU 50323 - Small Group Dynamics

Study of the group as an interactional system, including: group process, group roles, guidelines for group selection and guidance, techniques for facilitating interaction, strategies for building credibility in groups, and the impact of life styles on group needs.

### EDGU 60113 - DSM: Diagnosis and Treatment

Overview of DSM disorders, their prevention and treatment.

### EDGU 60123 - Ethical and Legal Issues in Counseling

Prerequisites: Admission into counseling program or graduate degree in counseling; An examination of the ethical and legal concerns in counseling and the implication of these on students, administrators, teachers, parents, and the community at large.

### EDGU 60143 - Counseling Interventions

Prerequisite: EDGU 50223. Examination of techniques, strategies and methods of counseling; strategies to deal with resistant clients and acting out children; approaches to parent and professional consultation; crisis intervention issues and resources, and ethical and legal issues in the practice of counseling.

### EDGU 60213 - Introduction to Marriage and Family Therapy

Examination of systems theory and the varying theoretical constructs, including strategic, structural, experiential, brief, and communication approaches.

### EDGU 60233 - Career Development and Information

Orientation to life planning and the world of work; theoretical models of career choice; examination of career information and resources and systems of career information utilization.

### EDGU 60313 - Motivating and Managing Students

Prerequisites: Admission into counseling program. Provide basic motivational and management procedures, which are applicable to a number of different educational environments. Emphasis is placed on the management of environments, instruction, and children behaviors, especially children with challenging behaviors.

### EDGU 60383 - Counseling Theories and Techniques

Orientation to established theories of counseling by examining and evaluating each theory's philosophical background, goals, and techniques and conceptualizing cases based on one's theoretical approach; consider issues in crisis counseling; and discuss ethical issues as they apply to hypothetical cases.

### EDGU 60403 - Theories of Student Development

Prerequisites: Admission into counseling program. This course explores the cognitive, affective, social, and moral development of young adulthood with a special emphasis on developmental and contextual risks and resiliencies that affect best practices in higher education.

### EDGU 60423 - Organization and Administration of Support Programs

Prerequisite: Admission into counseling program. This course involves the study of the history and philosophy of student development programs; standards of practice; organization, management, and leadership theories; ethical standards and principles; and management of programs and services.

### EDGU 60613 - Guidance and Counseling Programs

Focus the development and implementation of school guidance programs, the services essential for effectiveness, coordination of pupil services with other elements of the educational program, strategies to build community resources and relationships, and program evaluation needs.

**EDGU 70103 - Practicum I**

This course involves the supervised application of counseling and guidance skills and concepts. A minimum of 160 hours is required of onsite experience, with a minimum of 80 hours in direct client contact.

**EDGU 70203 - Practicum II**

Prerequisite: EDGU 70103, Practicum I. This course involves supervised application of counseling and guidance skills and concepts. A minimum of 160 hours is required of on-site experience, with a minimum of 80 hours of direct client contact.

**EDGU 70223 - Supervision in Counseling**

Provide supervision of counselors-in-training under the supervision of supervising professor in class, schools, or agencies; examination of helper-helpee relationships through audiotape, videotape, observation, and in-class performance; the development of personal theory and strategies based on established theories and best practices of supervision in counseling.

**EDGU 70303 - Practicum in Child Life**

Prerequisites: Admittance into the 4/1 Child Life Program or M.Ed. in Counseling with the required 12 hours of course work prior to practicum experience, including EDUC 60813 Infant/Toddler Development and Intervention, EDGU 50323 Small Group Dynamics, EDGU 50223 Helping Relationships, and EDGU 60143 Counseling Interventions. This course involves the supervised application of counseling and guidance skills and concepts in a medical setting and/or with children and their families who are experiencing severe or chronic medical concerns. A minimum of 160 hours is required of on-site experience, with a minimum of 80 hours in direct client contact. This course may be repeated for an additional 3 hours one time.

**EDGU 70323 - Advanced Group Leadership**

Application of advanced methods in group leadership integrating current theoretical knowledge with parallel experiences in intervention and techniques. Use of creative processes to facilitate group exploration in small group dynamics class for counselor trainees.

**EDGU 70970 - Special Topics in Guidance and Counseling**

Focus on topics of interest to guidance counselors in schools and/or colleges and universities. Such topics might include sexual abuse, violence in dating and marriage, building resiliency in youth, family therapy, or other issues being raised by students, researchers, and/or society

**EDGU 71103 - Program Development in Student Affairs**

Prerequisites: Completion of 18 hours including EDGU 50223 Helping Relationships, EDGU 50323 Small Group Dynamics, EDGU 60143 Counseling and Intervention, and EDGU 60423 Organization and Administration in Higher Education. This course requires supervised experience in program developments in student affairs. A minimum of 150 hours is required.

**Education - Middle School Courses**

**EDMS 50023 - Effective Teaching and Classroom Implementation**

Prerequisite: Admission to the Teacher Education Program or written permission of the Dean, College of Education. As a part of the effective teacher model, this course will focus on instructional design and implementation, motivation of students to promote and enhance learning in the classroom; management issues pertinent to student behavior and learning outcomes; and preparation of a variety of formal and informal assessment strategies. (Offered as EDMS or EDSE credit.)

**EDMS 50153 - Literature for Adolescents**

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Survey of reading interests of secondary school youth. Wide reading of classical and contemporary books for adolescents in the several teaching fields with specific attention to principles of selection and use in the middle school and high school.

**EDMS 50173 - Development of Written Communication**

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. This course is a study of the developmental process of written communication as it relates to literacy development in upper elementary, middle school and high

school students. This course will present methods of increasing students' written communication skills.

**EDMS 50223 - Practicum in Reading and ESL**

Prerequisite: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Concurrent enrollment in EDUC 50503, Developing Communication Competencies of Linguistically and Culturally Diverse Students. The reading practicum provides an opportunity to prepare lessons and teach in a sheltered ESL classroom under the supervision of a cooperating teacher and TCU faculty.

**EDMS 50613 - Analysis of Literacy Problems**

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Theory and techniques for using a variety of assessment strategies related to literacy development. Discussion and practice will be based on the interpretation of elementary and secondary students' performance on a variety of literacy tasks.

**Education - Science Courses**

**EDSC 60023 - Education for Sustainability**

"Sustainability" is a broad and complex topic that has recently been emphasized at TCU as an integral part of our mission statement to be ethical leaders and responsible citizens in the global community. Sustainability and Education exposes the overlapping and interwoven nature of a broad variety of disciplines such as economics, sociology, environmental science, business, religion, history, anthropology, and ethics. Specifically, this course explores how vastly different perspectives must be considered when teaching sustainability to a diverse audience. This course is designed for individuals who are seeking to develop their own understanding of "sustainability."

**EDSC 60333 - Theory and Pedagogy of Science Instruction**

This course considers the application of theories of teaching to the learning of science in school classrooms. As such, it utilizes a confluence of theory and evidence about how people learn science and how environments are best constructed to promote learning. This course examines current theories of science teaching in light of their assumptions and related empirical evidence.

**EDSC 60810 - Seminar: Special Topics in Science Education**

May be repeated for up to 13 hours

**EDSC 70011 - Colloquium in the Profession of Science Education**

The Colloquium in the Profession of Science Education is a one-hour course designed as an introduction to practical and theoretical issues of the profession as well as an induction into the practice of science education research as is designed for all graduate students. Class sessions may take the form of presentations made by faculty or students; lectures by guest speakers; roundtable on specific education issues; attendance at professional conferences; or information meetings. Students are required to take EDUC 70011 each fall during their program of study.

**EDSC 70033 - Scientific Inquiry and the Nature of Science**

The Nature of Science is a hybrid arena consisting of aspects of the philosophy, history and sociology of science along with elements of the psychology of scientific observations all targeting the complete understanding of how science actually functions. This course is designed for individuals who are interested in learning more about the methods and goals of science, the role of scientists and the place of science in society science and how philosophical issues can and should be reflected in science teaching and learning. We will read and discuss selections from the works of major philosophers of science and commentaries on science education from a philosophical perspective. Throughout this course we will explore the content of the nature of science and use that knowledge as a guide in improving science instruction and developing philosophically appropriate science curricula.

**EDSC 70043 - Science and Science Education in the Global Community**

Science and Science Education in a Global Community will address different cultural, geographical, philosophical, and epistemological perspectives on educational reform. The history of ideas of science education as it has evolved in different contexts will be explored, along

with the theories of educational change/reform and practical implications, which accompany varying perspectives.

## Education - Secondary Courses

### EDSE 50023 - Effective Teaching and Classroom Implementation

Prerequisite: Admission to the Teacher Education Program or written permission of the Dean, College of Education. As a part of the effective teacher model, this course will focus on instructional design and implementation, motivation of students to promote and enhance learning in the classroom; management issues pertinent to student behavior and learning outcomes; and preparation of a variety of formal and informal assessment strategies. (Offered as EDMS or EDSE credit.)

### EDSE 50153 - Literature for Adolescents

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Survey of reading interests of secondary school youth. Wide reading of classical and contemporary books for adolescents in the several teaching fields with specific attention to principles of selection and use in the middle school and high school.

### EDSE 50173 - Development of Written Communication

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. This course is a study of the developmental process of written communication as it relates to literacy development in upper elementary, middle school and high school students. This course will present methods of increasing students' written communication skills.

### EDSE 50213 - Teaching in Bilingual Classrooms

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Methods and strategies in teaching the bilingual child; including English as a second language and Spanish as a first language. Observation and participation in bilingual classes required.

### EDSE 50223 - Practicum in Reading and ESL

Prerequisite: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Concurrent enrollment in EDUC 50503, Developing Communication Competencies of Linguistically and Culturally Diverse Students. The reading practicum provides an opportunity to prepare lessons and teach in a sheltered ESL classroom under the supervision of a cooperating teacher and TCU faculty.

### EDSE 50443 - Methods for Teaching Secondary School Mathematics

Prerequisites: Admission into College of Education or permission of the Dean. Using the guidelines set forth by the national Council of Teachers of mathematics and the State of Texas for mathematics instruction, the students will develop pedagogical content knowledge for teaching secondary mathematics. The content (number and operations, algebra, geometry, measurement, and data analysis and probability) will be explored from an inquiry perspective to build a conceptual understanding of the mathematics. Students will also be exposed to best practices which promote the process standards (problem solving, reasoning and proof, communication, connections, and representations) through class investigations and discussions, readings, and field placements. The process of developing units and lessons as well as assessment techniques for evaluating students' progress and teacher practice will be integrated into the coursework.

### EDSE 50613 - Analysis of Literacy Problems

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Theory and techniques for using a variety of assessment strategies related to literacy development. Discussion and practice will be based on the interpretation of elementary and secondary students' performance on a variety of literacy tasks.

### EDSE 60073 - Seminar in Mathematics Education

The primary purpose of this course is to help you learn how to teach mathematics in secondary and middle school classrooms. We will learn the appropriate content and pedagogy for the 8-12 students. The course will be based on the available research in how all people learn mathematics. Heavy emphasis is placed on a variety of strategies including cooperative learning, technology, manipulatives, and cultural

influences in mathematics education. Participants in the course are required to explore the research on effective practices.

## Education - Special Courses

### EDSP 50013 - Methods for Educating Students in Inclusive Settings

Prerequisite: Admission to the Teacher Education Program or written permission of the Dean, College of Education. How to adapt methods, techniques and classroom environments to help children with disabilities to be more successful in regular and special education classrooms.

### EDSP 50663 - Motivating and Managing Students in the Classroom

Prerequisite: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Research-based methods for creating positive classroom and school climates, organizing and managing classrooms, improving instruction, dealing with classroom discipline problems, and developing prosocial behaviors in children and youth.

### EDSP 60233 - Understanding Exceptional Children and Youth At-Risk

Examination of the diverse characteristics of children and youth with learning and behavior problems and the impact of these characteristics on social and academic development.

### EDSP 60313 - Educational Programs for Exceptional Children

Study of methods and materials appropriate for use with exceptional children.

### EDSP 60323 - Internship in Special Education

Field experience under direct supervision of a certified special education teacher in public or private school setting. Minimum of 200 clock hours required.

### EDSP 60433 - Issues and Practices in Collaboration

A review of current research and practices concerning the concept of shared responsibility between regular educators and special educators to provide coordinated and inclusive educational arrangements for all children and youth and to facilitate their success within the least restrictive environment.

### EDSP 60453 - Practicum in Educational Testing

Prerequisite: Permission of course instructor. Administration and interpretation of evaluative instruments in education and/or guidance settings.

## Education - General Courses

### EDUC 50003 - Diversity in American Education

Prerequisite: Admission to College of Education or written permission of the Dean, College of Education. This course will equip educators with the necessary skills for multiethnic school environments. It focuses on developing an awareness of how education is connected to wider structures of social, cultural, economic life and encourages not only critical examination, but also discussion of alternatives to the present reality.

### EDUC 50043 - Seminar in Children's Literature

Prerequisite: Admission to Teacher Education Program or written permission of the Dean, College of Education. Advanced study of literature for children with special attention to principles of selection and use in the elementary school curriculum.

### EDUC 50063 - Seminar in Teaching Gifted and Talented Children

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, School of Education. Advanced study of methods to identify, assess and teach exceptionally capable students. Major emphasis is on developing skills and teaching methods. Other aspects cover guidance counseling process, social/emotional needs, working with parents, and model school-district programs.

### EDUC 50143 - Theories of Human Development

Prerequisites: Admission to College of Education or written permission of the Dean, College of Education. Selected theories of human behavioral, social, and emotional development.

**EDUC 50203 - Programs in Bilingual Education**

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. The rationale for bilingual-bicultural education including a survey of current programs. Includes lab experiences in public school classes.

**EDUC 50213 - Seminar in Bilingual Education**

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Methods and strategies in teaching the bilingual child; including English as a second language and Spanish as a first language. Observation and participation in bilingual classes required.

**EDUC 50253 - Technology Applications in Education**

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, School of Education. An introduction to using educational technology for professional productivity and instructional purposes. Includes familiarity and operational skills with word processing, spreadsheets, databases, graphics, desktop publishing, telecommunications, instructional software and multimedia authoring programs.

**EDUC 50263 - Cybercommunication in Education**

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Educational applications of computers and the Internet for communicating information. Students will develop skills in locating, organizing, interpreting, analyzing, evaluating, designing, and communicating various types of digital information (e.g., online discussions, desktop publishing, multimedia, and web sites). They will consider ethical and societal issues related to cybercommunication and instruction.

**EDUC 50313 - Foundations of Literacy**

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. The study of the theoretical bases for literacy instruction. Research from linguistics, cognitive psychology, and sociology will be studied as related to recommendations for practices in literacy instruction.

**EDUC 50503 - Developing Communication Competencies of Linguistically and Culturally Diverse Students**

Prerequisites: Admission to Teacher Education Program or written permission of the Dean, College of Education, and concurrent enrollment in EDMS/EDSE 50223, or permission of the instructor. Principles and practices of first and second language acquisition as they relate to the development of communication skills. Emphasis is placed on the interrelatedness of language processing (reading, writing, speaking and listening) to facilitate the learner's ability to construct meaning. Strategies to enhance social-communicative and cognitive-academic language competence and self-directed learning are addressed. Assessment procedures appropriate to second-language learners are introduced.

**EDUC 50513 - Curriculum and Instruction in the Second Language Learning Classroom**

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Curricular and instructional principles and practices to meet the academic development needs of first and second language learners in the classroom. Emphasis on strategies for providing content-area instruction and establishing learner-centered environments within various ESL settings. Texas requirements for second language learners are addressed. (Offered as EDEL or EDSE credit.)

**EDUC 50643 - Reading in the Secondary School**

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, College of Education. Materials and methods for developing reading skills of the secondary school student in the various curriculum areas.

**EDUC 50870 - Directed Study in Education**

Prerequisites: Admission to the Teacher Education Program or written permission of the Dean, School of Education. Study of specialized topics in Education.

**EDUC 50970 - Special Problems in Education**

Study of specialized topics in Education.

**EDUC 50990 - International Experiences in Education**

Prerequisites: Meet admission requirements set forth by TCU Study Abroad. Permission of adviser and professor of record. The objective of the course is to gain first-hand knowledge of varying approaches to education. This course provides the opportunity to learn about unique educational practices in an international setting. Students will have opportunities to learn about, observe, and/or participate in educational facilities which focus on early childhood, middle childhood, and/or adolescence. This course may be taken for up to six hours credit.

**EDUC 60013 - Curriculum Theory**

Addresses general principles and practices of curriculum development and curriculum change; organizational patterns for developing curriculum and implementing change.

**EDUC 60043 - Seminar in Elementary School Science**

Advanced study of current issues in science education and of curricula, materials, and techniques utilized in the effective teaching of elementary school science.

**EDUC 60053 - Advanced Study of Literacy Instruction**

Analyzes recent research, philosophies of instruction, curriculum development, literature, and assessments that can be used to improve students' reading, writing, and language abilities.

**EDUC 60063 - Seminar in Elementary School Mathematics**

Advanced study of modern curricula, strategies and techniques utilized in teaching and upgrading mathematics instruction in the elementary school.

**EDUC 60073 - Seminar in Elementary School Social Studies**

Advanced study of curricula, strategies, and techniques utilized in teaching and upgrading social studies instruction in the elementary school.

**EDUC 60083 - Seminar in Elementary School Language Arts**

Advanced study of curricula, strategies, and techniques utilized in teaching and upgrading language arts instruction in the elementary school. The interrelationships of all areas of language arts are given primary emphasis.

**EDUC 60120 - The Role of the In-service Teacher in Preservice Teacher Education**

Study of the role of the Cooperating Teacher in a teacher education conference. Includes clinical supervision, mastery learning, observation skills, conferencing skills and program design.

**EDUC 60153 - Seminar in Promoting Literacy in the Subject Areas**

Instructional strategies include ways to integrate reading, writing, and study strategies.

**EDUC 60213 - Thinking, Learning, and Teaching**

Prerequisite: Previous coursework in either educational or developmental psychology or permission of instructor. This course focuses on using learning theories and theoretical concepts that are an integral part of teaching and educational practices. Students will gain insights and skills for applying psychological principles to solve authentic problems drawn from personal experiences in education and from case studies and other course readings.

**EDUC 60253 - Historical and Philosophical Foundations of Education**

Philosophic positions and the implications of these viewpoints on one's approach to and resolution of educational issues and questions will be examined.

**EDUC 60293 - Curriculum Workshop**

Prerequisite: At least one year's teaching experience and approval of instructor. Provides for development of curriculum materials and strategies for specific subject areas; application of curriculum theory to school and classroom situations.

**EDUC 60313 - Educational Assessment**

Characteristics of tests, constructs, scoring, interpreting, evaluation, and test-taking skills as a form of problem-solving are included.

**EDUC 60513 - Practicum in Education**

Practical experiences in an educational setting designed to sensitize the student to the challenges of transforming theory into practice. This course may be repeated for credit.

**EDUC 60810 - Seminar in Educational Research**

May be repeated up to 13 hours.

**EDUC 60823 - Educational Program Evaluation**

Evaluation of programs, curriculum projects, accreditation standards, and personnel appraisal are explored using different approaches to evaluation. Other topics include purpose, qualitative and quantitative evaluation design and data-collecting methods, sampling techniques, and reliability and validity. Particular emphasis is placed on case study for the purpose of planning, conducting and writing the evaluation for presentation to stakeholders.

**EDUC 60980 - Internship**

Supervised experience which emphasizes the application of theories of curriculum and instruction in a field-based setting. Options include the introduction of innovative teaching practices into a school or other educational setting or research focused on instructional practices. Graduate students in Education who possess a bachelor's degree with a non-education major and who have completed the specified course work may choose to apply the internship for certification purposes with the approval of the department. (6 semester hours with no more than 6 semester hours applied to the Master's degree)

**EDUC 70870 - Advanced Directed Study in Education**

Advanced research on specialized topics in Education.

**EDUC 70903 - Treatise**

Students complete a paper under the advisement of a faculty member in the department.

**EDUC 70953 - Research in Education**

Students are expected to gain an appreciation of the complexities of the research process, ways of conducting research, and a sense of the power and constraints of the various perspectives within which educational questions are pursued.

**EDUC 70960 - Apprenticeship in Research**

Prerequisites: EDUC 70953, or permission of the instructor. Students engage in authentic research by apprenticing with one or more faculty members who have vigorous research agendas. A minimum of three hours of internships is required of all Curriculum Studies students. Course structure, requirements, readings, schedule, and grading criteria will be determined by mentoring faculty as relevant to research project.

**EDUC 70963 - Qualitative Inquiry I**

Prerequisite: EDUC 70953 or permission of the instructor. This course theoretically and practically explores qualitative inquiry as interpretive, constructivist, and naturalistic forms of research. The course will focus on understanding the philosophical assumptions and historical context of qualitative inquiry, and students will work on research projects throughout the semester in order to learn and practice research design, IRB proposal writing, data collection, data management, data analysis, and writing for research presentations and professional publication. Course assignments will assist students in developing the skills and talents necessary for qualitative researchers. The ethics of qualitative inquiry and the ways it attends to the positionality of researchers, research participants, and researcher-participant relationships will also be explored.

**EDUC 70970 - Special Problems in Education**

Prerequisite: Approval of advisor and instructor in course.

**EDUC 70973 - Qualitative Inquiry II**

Prerequisite: EDUC 70963, Qualitative Inquiry I.. Students further develop theoretically and practically as qualitative researchers. They work with data collected in EDUC 70963 throughout the semester focusing on data analysis and writing and the development of skills and talents necessary for qualitative researchers. The course explores various forms of qualitative inquiry, which may include narrative inquiry, phenomenology, grounded theory, life history, and other forms, as well as the ethics of qualitative inquiry.

**EDUC 70980 - Thesis**

Prerequisite: Admission to Candidacy.

**EDUC 70990 - Thesis**

Thesis

**EDUC 90980 - Dissertation**

Dissertation. A maximum of six hours may be taken.

**EDUC 90990 - Dissertation**

Dissertation. May be taken for a total of six semester hours.

# College of Fine Arts

The College of Fine Arts comprises the School of Art, the School for Classical and Contemporary Dance, The Department of Design, Merchandising & Textiles, the School of Music and the Department of Theatre. The Department of Art and Art History offers the M.F.A. in Art and the M.A. in Art History. The School of Music offers the M.M. in Performance, Musicology, Theory/Composition, Conducting and Pedagogy; the M.M.E. in Music Education; the Artist Diploma in Performance; and the Doctor of Musical Arts in Performance, Pedagogy, Composition and Conducting.

College of Fine Arts faculty are dedicated teachers who combine strong academic training with years of professional experience in their disciplines, and pride themselves on the ability to convey to students the knowledge necessary for successful lives and careers in the 21st century. The college also hosts visiting faculty, guest artists and performers who interact with students throughout the year enriching the learning experience.

Resources available to students include numerous computer labs, lighting and sound systems, specialized libraries and conditioning equipment, galleries, art and dance studios, theaters, and performance halls. Importantly, College of Fine Arts programs enjoy close working relationships with the Kimbell Art Museum, the Fort Worth Symphony, Casa Mañana Theatre, and the other visual and performing arts institutions in the Dallas/Fort Worth metroplex.

## Art History

The School of Art offers the Master of Arts in Art History. This graduate program enables students to gain a deeper understanding of the history of art, its objects and its methods. An integral component of this program, which sets it apart from many others, is "the museum experience": the opportunity to study in art museums and work with museum professionals. Centering on the art object, the program allows students to expand their knowledge of the historical, stylistic and theoretical dimensions of the visual arts, while having the practical experience of working directly with art objects and in museums with professional staffs. Students participate in courses that utilize the resources of the Amon Carter Museum, the Modern Art Museum of Fort Worth and the Kimbell Art Museum, and serve internships in these and other art museums. Graduates are prepared to engage in work at the Ph.D. level and pursue careers in the teaching and art museum professions.

### Program Prerequisites

In addition to meeting the minimum requirements for admission established by the TCU, applicants will normally have completed 18 semester hours (six courses) in art history. The department will consider applications from qualified students in other fields. Applicants are expected to have studied one foreign language—French, German, Italian, Spanish or one approved by the department—for two years or have reading proficiency. The TOEFL exam is required for foreign students and must be passed at the level set by the University. The application must include:

- A personal statement of no more than 250 words describing the applicant's academic and professional objectives;
- A writing sample (such as an undergraduate paper) of 1250 to 2500 words;
- Three letters of recommendation; and
- GRE General Test scores.

### Degree Requirements

The program requires 30 hours of coursework and six hours for the thesis. Upon approval of the faculty, entering students may transfer up to six hours of graduate study in art history earned prior to admittance. Required courses are:

70003	Methods and Issues in Art History	3
70013	The Art Museum	3
70023	Approaches to the Art Object	3
70983	Internship	3
70996	Thesis	6

The remaining 18 hours are elective courses; students are strongly encouraged to enroll in courses that reflect chronological and geographical diversity. Generally, a student may not earn more than three hours of graduate credit in coursework taken outside of the art history program.

### Thesis Requirement

The thesis is to be fulfilled by a paper, or its equivalent, that demonstrates advanced research skills. The thesis should be the result of independent study, the revision and improvement of a seminar paper, or writing generated by the student's museum internship. In all cases, the topic must receive approval of the student's adviser. The thesis is overseen by department faculty members, in conjunction with a museum professional.

### Language Requirement

Students are required to pass a reading proficiency examination in French, German, Italian, Spanish or another language approved by the faculty upon entering the program. The language examination is administered at the beginning of the fall semester. Students are expected to translate two passages into English, one with the use of a dictionary and one without a dictionary. Each passage is no more than 250 words, and students are given 30 minutes to complete each portion of the exam.

Foreign language exams are administered to ensure that students can do art historical research in a foreign language. To this end, students are encouraged to possess a strong understanding of basic grammar and vocabulary, as well as important art historical terminology. Students whose basic knowledge of a language or mastery of basic terminology in art history appears to be unsatisfactory will not receive a passing grade on the exam. Language exams are graded on the following scale: high pass; pass; low pass; fail. The dictionary and non-dictionary portions of the exam are each graded separately. Students are required to pass both sections of the for the M.A. in Art History.

Students not passing the examination have two options:

*Option 1:* Retake and pass the examination at the beginning of the following semester.

*Option 2:* Enroll in two semesters (or an approved intensive equivalent) of second-year foreign language study and earn at least a "B" in both semesters (or their equivalent). This option must be completed by the beginning of the student's second year in the program.

Students who do not satisfy the language requirement by the beginning of their second year may be withdrawn from the program.

### Oral Examination

Candidates for the M.A. are required to perform satisfactorily in a final oral examination.

### Art Facilities

TCU maintains a number of facilities appropriate to the graduate art student. The School of Art is housed in one of the best-designed and fully equipped facilities in the Southwest—the J. M. Moudy Building for the Visual Arts and Communication, designed by Roche, Dinkeloo and Associates. The campus library houses a fine collection of art and art-related books, catalogues and journals. The Visual Resources Library holds an extensive collection of slides and digital images. The Art Galleries at TCU display international, national and regional art. Fort Worth's galleries and three major museums—the Modern Art Museum of Fort Worth, the Amon Carter Museum and the Kimbell Art Museum—are conveniently located near campus. Dallas, with its many galleries and excellent art museums, is 40 minutes away by car.

### Art and Art History Course Subcategories

ART 60123	American Art 1914-Present
ART 60173	Early Italian Renaissance Art
ART 60183	High and Late Italian Renaissance Art
ART 60193	Symbol and Reality: Renaissance Art in Northern Europe
ART 60203	17th-Century Italian and Spanish Art
ART 60213	Old Master Drawing
ART 60333	Modern Art I: Romantic Classicism to Impressionism

ART 60343	Modern Art II: Post-Impressionism to Surrealism
ART 60353	Picasso: Artist of the Century
ART 60363	17th Century Flemish-Dutch Painting
ART 60500	Special Topics in Art History
ART 60603	Art since 1945
ART 60613	Modern Architecture
ART 60623	History of the Print
ART 60823	History of Photography

## Studio Art

Master of Fine Arts degree available in painting, printmaking or sculpture.

TCU offers a two-year (60-semester-hour) program in art leading to the Master of Fine Arts degree. Areas of specialization include painting, sculpture, and printmaking. The faculty welcomes applicants whose work displays high quality, originality and sustained visual ideas.

### Program Prerequisites

B.F.A., or equivalent, including concentration in intended specialty as evidenced by appropriate credit, an acceptable portfolio of work, a statement of professional experience and goals, and letters of recommendation. Admission to the program is based on:

- Portfolio acceptable to faculty committee
- Strong G.P.A. in undergraduate art courses
- Statement of professional experience and goals
- Good overall academic G.P.A.
- Three letters of recommendation.

### Degree Requirements

A total of at least four semesters of graduate work is required. At least 60 semester hours must be earned, including no less than 12 in one area of specialization, and one hour in Thesis Exhibition. Six hours of Graduate Seminar, 12 hours of Art 60120 and 6 hours of Art History are required. Three hours of Art History must be 60603 Art Since 1945 or another contemporary art history course. The other 3 hours in art history may be chosen in consultation with the student's advisory committee. The remaining hours may be selected with the approval of the student's thesis committee, but with no more than 6 hours taken outside the department.

Suggested Credit-Hour Distribution:

#### First Year:

<i>1st Semester</i>	
Studio	9
Grad. Critique	3
Seminar	3
<b>Total</b>	<b>15</b>

<i>2nd Semester</i>	
Studio	9
Grad. Critique	3
Art History	3
<b>Total</b>	<b>15</b>

#### Second Year:

<i>1st Semester</i>	
Studio	9
Grad. Critique	3
Seminar	3
<b>Total</b>	<b>15</b>

<i>2nd Semester</i>	
Studio	8
Grad. Critique	3
Thesis Exhibition	1
Art History	3
<b>Total</b>	<b>15</b>

### Sequential Summary:

First semester-request appointment of thesis committee; complete sequence of courses as approved by committee; complete any conditions contained in the admission letter from the Graduate Office. Second semester-complete sequence of courses as approved by

committee; seek candidacy approval of committee. Third semester-request committee approval for preparation of Thesis Exhibition; complete sequence of courses approved by committee. Fourth semester-enroll for Art 70991 Thesis Exhibition with major adviser as chair of committee; complete approved sequence of courses; give careful attention to the special deadlines for graduating students as they are outlined in the Bulletin or "Information and Deadlines for Graduation" available from the Graduate Office. Students are advised to work at least two weeks ahead of deadlines to avoid disappointments caused by unexpected delays and schedule conflicts.

### Thesis Committees:

Students admitted to the program will be assigned a temporary adviser in their major or specialty area until an ultimate area of specialization is determined. In the first six weeks of study the student must request, in writing, that the department chair appoint a faculty member as a permanent major adviser. The student must confer with the proposed major adviser, and ensure that the faculty member is prepared to accept the student before requesting the chair to appoint the major adviser. The student may also suggest the names of two other faculty members to serve on the thesis committee. The thesis committee is formally appointed by the Graduate Office on the recommendation of the Chair of the Department of Art and Art History.

While every effort will be made to compose a committee of the student's first choices, it may be necessary to make changes in light of the student's field of concentration, and the load or commitments of the faculty members.

A student may request, in writing, to the chair of the department, that a change be made of the major adviser, or committee members, if the field of specialization changes, or if other justifiable reasons arise that would make the continuation of the existing committee contrary to the best interests of the student or the program.

The major adviser will be responsible for committee activities, for aiding the student in matters of the program and for informing the chair of the department, in writing, of the progress of the student.

### Colloquia:

Colloquia are offered by the faculty of the department. These are intended to serve the specific purpose of establishing a personal and informal means of communication between students and faculty. The colloquia will feature presentations and discussions by on and off-campus speakers, faculty and members of the Department of Art and Art History.

### Candidacy:

Admission to candidacy requires the approval of the thesis committee of each student. Admission to candidacy is expected no later than the end of the first academic year of graduate study. Those who have not been admitted to candidacy by the beginning of the second academic year may not earn additional credits. Those who wish additional elective credits may continue for a probationary period of not more than 12 semester hours as a 'non-degree' student. Further enrollment will be permitted only if a student is re-admitted to the degree program.

### Exhibition:

Thesis exhibition enrollment requires admission to candidacy as a prerequisite. Actual installation of the thesis exhibition requires approval of the thesis committee. The written portion of the thesis exhibition also requires committee approval. This written portion, and the format of the permanent record of the thesis exhibition, will be determined by the committee. The written portion of the MFA requirement is to be called 'Thesis Exhibition Statement' and will contain the following:

1. Title page;
2. Approval (signatures) page;
3. Index to the written portion;
4. Curriculum Vitae of the student;
5. List of illustrations (with title, media, dimensions);
6. Narration;
7. Illustrations in the form of photographs.

The narration (6 above) will take one of the following formats:

- Program notes of an explanatory nature from the student's work in the exhibition;
- Student's personal evaluation of the art forms contained in the exhibit;

- Contemporary or historical perspectives supporting the student's exhibit.

Three bound copies of the Thesis Exhibition Statement are required. Two of these are retained by the Library and one by the Department of Art and Art History. Each copy will contain digital images of the work which lists the title, date, media and dimensions.

**Graduate Assistantships:**

Graduate assistantships are offered each year to qualified candidates. Graduate assistants have an obligation of eight hours a week in service to the Department. They are given a full tuition waiver. Departmental assistants are given a full tuition waiver plus a stipend. Graduate and departmental assistants are assigned a private studio space.

**Art Courses**

**ART 60100 - Life Studies**

Life Studies (may be taken for 1-21 hours.)

**ART 60120 - Graduate Critique**

Graduate Critique. 3-12 hours.

**ART 60123 - American Art 1913 to the Present**

American Art from 1913 to the present.

**ART 60140 - Painting**

Painting. 1-21 hours.

**ART 60153 - The Aztec, Maya, and Olmec: Ancient Mesoamerican Art**

This course examines the art and architecture of the major cultures of Pre-Columbian Mesoamerica.

**ART 60160 - Printmaking (Intaglio)**

Printmaking (Intaglio) 1-15 hours.

**ART 60163 - Maya Art and Architecture**

This course is an in-depth study of the art and architecture of the ancient Maya.

**ART 60170 - Printmaking (Lithography)**

Printmaking (Lithography) 1-15 hours.

**ART 60173 - Early Italian Renaissance Art**

Early Italian Renaissance Art

**ART 60180 - Printmaking (Screenprinting)**

Printmaking (Screenprinting) 1-15 hours.

**ART 60183 - High and Late Italian Renaissance Art**

High and Late Italian Renaissance Art

**ART 60193 - Northern Renaissance Painting: Van Eyck - Bruegel**

Symbol and Reality: Renaissance art in northern Europe.

**ART 60203 - 17th Century Italian and Spanish Art**

17th century Italian and Spanish art.

**ART 60213 - Drawing as Artistic Invention**

The history and technique of drawings from the 15th through 18th centuries. Emphasis on Leonardo, Raphael, Michelangelo, Elisabetta Sirani, Rubens, and Rembrandt.

**ART 60333 - Modern Art I: Romantic classicism to Impressionism**

Modern Art I: Romantic Classicism to Impressionism.

**ART 60343 - Modern Art II: Post-Impressionism to Surrealism**

Modern Art II: Post-Impressionism to Surrealism

**ART 60353 - Picasso: Artist of the Century**

Picasso: Artist of the Century

**ART 60363 - 17th Century Flemish-Dutch Painting**

17th Century Flemish-Dutch Painting

**ART 60420 - Sculpture**

Sculpture

**ART 60500 - Special Topics in Art History**

Special Topics in Art History

**ART 60603 - Art Since 1945**

Art since 1945.

**ART 60613 - Modern Architecture**

Modern Architecture: 1750 to the present.

**ART 60623 - History of the Print**

History of the Print

**ART 60823 - History of Photography**

History of Photography

**ART 60903 - Seminar in Art Criticism**

Seminar in Art Criticism

**ART 60913 - Seminar in Art Professions**

Seminar in Art professions.

**ART 60970 - Special Problems**

Special Problems (1-21 hours.)

**ART 70003 - Art Historical Methods, Theories and Issues**

A seminar focusing on the historiography of art history and current methodologies and theories employed by the discipline. Topics include the origins of art history; research techniques employed to study the production and reception of the art object; the premises and results of contemporary modes of interpreting the art object, as well as current issues in the field.

**ART 70013 - The Art Museum**

A seminar which assess a broad range of historical and contemporary issues, practices, and concerns of art museums, and which examines more specifically the collections and philosophies of the Amon Carter Museum, the Kimbell Art Museum, and the Modern Art Museum of Fort Worth. The class includes numerous museum-site sessions.

**ART 70023 - Approaches to the Art Object**

A seminar on the physical characteristics of art works, focusing on the science/art of authenticating and identifying art works in terms of authorship and date. Information also on artistic techniques, condition, and conservation. The chronological emphasis of the course may vary, depending on the particular interests of the instructor.

**ART 70100 - Museum Seminar**

This seminar offers students the opportunity to study an historical topic in depth, within an art museum environment. The course's specific topic varies, but the course always centers on actual works of art. Therefore, the seminar will meet the majority of the time in an art museum and include the participation of museum professionals. (3-9 semester hours)

**ART 70300 - Special Topics Seminar**

A seminar that offers the opportunity to study various significant topics in depth. (3-12 semester hours)

**ART 70983 - Internship**

Prerequisite: completion of the first year of the graduate program in art history. Students must apply and interview for an internship. A semester-long internship in an art museum.

**ART 70991 - Thesis Exhibition**

Prerequisite: Admission to candidacy.

**ART 70996 - Thesis**

Prerequisite: Completion of 27 semester hours of the graduate program in art history.

**School for Classical and Contemporary Dance Courses**

The curriculum for the MFA in Classical & Contemporary Dance is being revised. The program will recommence in Fall 2010.

## Classical & Contemporary Dance Courses

### DANC 50303 - Dance Theory

Prerequisites: DANC 40373 and 40383. This course surveys readings and topics in the theory and philosophy of dance. Specific topics are at the discretion of the instructor, and may include aesthetics of dance, dance historiography, dance and music, dance and feminism, dance and sexuality, and dance for the camera.

### DANC 60200 - Modern Dance Technique and Artistry

Theory and practice of modern dance. 3 hours maximum per semester.

### DANC 60300 - Graduate Dance Production Practicum

Practical experience working leadership positions involving the technical and production aspects of dance performances presented by the School for Classical & Contemporary Dance. .5-3 hours per semester. May be repeated for up to 6 credits.

### DANC 60333 - Lighting Design for Dance

This design course equips the student with the advanced knowledge and skills necessary to effectively create lighting designs for dance.

### DANC 60533 - Dance Pedagogy I: Practice and Analysis

Practice and analysis of selected issues in dance instruction.

### DANC 60553 - Graduate Choreographic Studies

Graduate study of choreographic concepts, techniques, and applications. Course work includes research of style and form, development of choreographic material, and a public presentation of the work.

### DANC 60613 - Dance Research Methods

Current methodologies and definitions in dance research.

### DANC 60663 - Dance History: A Cultural Investigation

Study of historical developments in dance seen from social, anthropological, political, philosophical and/or artistic perspectives.

### DANC 70100 - Ballet Technique and Artistry

Theory and practice of ballet. 3 hours maximum per semester.

### DANC 70200 - Modern Dance Technique and Artistry

Theory and practice of modern dance. 3 hours maximum per semester.

### DANC 70300 - DanceTCU

DanceTCU is a graduate level performance course, and as such students earn the opportunity - via audition - to perform in either a faculty or guest artist work. Through the performance experience, students utilize dance technique and artistry developed in ballet and modern dance courses. .5 - 9 hours credit. This course may be repeated for up to 9 hours credit.

### DANC 70533 - Dance Pedagogy II: Practice and Analysis

Prerequisites: DANC 60533. An advanced pedagogy course using both seminar and praxis formats addressing selected issues and their applications to dance instruction.

### DANC 70553 - Advanced Choreographic Studies

Advanced graduate study of choreographic concepts, techniques, and applications. Course work includes research of style and form, development of choreographic material, and a public presentation of the work.

### DANC 70570 - Directed Studies: Studio Elective

Individual study in dance practice, chosen in consultation with graduate advisor. 1-3 semester hours.

### DANC 70603 - Research Problems

Individual research and study in preparation for written thesis (DANC 70990.)

### DANC 70980 - Concert Thesis

Concert Thesis

### DANC 70990 - Written Thesis

Prerequisite: DANC 70603. Written Thesis

## Music

### School of Music Facilities

The TCU School of Music is housed in historic Ed Landreth Hall, the Mary D. and F. Howard Walsh Center for Performing Arts, Music Building South and Jarvis Hall. The Ed Landreth building includes the music offices and conference room; teaching studios; classrooms; a computer lab; practice and rehearsal facilities; and a 1,200-seat auditorium, once home to the Van Cliburn International Piano Competition. Instrumental resources include numerous upright and grand pianos, four pipe organs, two harpsichords, a clavichord and a collection of authentic Baroque instruments.

The Walsh Center is home to the unique 325-seat PepsiCo Recital Hall, which is well known for its unprecedented acoustical design. The Walsh Center also contains an instrumental rehearsal hall, a choral rehearsal hall, an electronic piano laboratory, piano teaching studios and piano practice rooms all furnished exclusively with Steinway pianos.

Located on the south side of the TCU campus, Music Building South serves the TCU Opera Studio and contains a 100-seat rehearsal studio theater and the John Large Vocal Arts Laboratory.

The third floor of the newly renovated Jarvis Hall contains teaching studios, two classrooms, the Upchurch Studio for Electro-Acoustic Music, the Music Education Resource Library and the School of Music student lounge.

In addition to these four buildings, practice rooms and teaching studios are located in Waits and Foster residence halls; and a large, comprehensive music library complete with recordings, reference books, texts, scores and a listening room is housed in the Mary Coats Burnett Library.

### Doctor of Musical Arts

The objective of the TCU Doctor of Musical Arts (DMA) degree in performance, piano pedagogy, composition or conducting is to develop the musician-scholar—one who displays a high level of mastery in a professional medium and is equipped with scholarly research skills. The program leading to the degree is designed to prepare musician-scholars for careers as creative artists and teachers at institutions of higher learning. Enrollment in the doctoral program is carefully monitored toward the goal of remaining highly selective and relatively small. Prospective DMA students must demonstrate the potential for both artistry and scholarship on the highest levels.

### DMA Admission Requirements

To be admitted for study leading to the Doctor of Musical Arts, applicants must hold a master's degree in music or music education (or the equivalent) of at least 30 credit hours from an accredited college, university, or comparable institution, and present a GPA of at least 3.0 for all previous graduate-level work (A = 4.0). Appropriate preparation for doctoral study will vary according to the major/degree plan chosen; therefore, prospective applicants should consult with faculty in their intended major area for specific requirements and expectations. To complete the application process, send the following to the Graduate Studies Office, College of Fine Arts, Texas Christian University, TCU Box 297550, Fort Worth, TX, 76129:

1. A completed application for admission to DMA graduate study, available at [www.cfagraduate.tcu.edu/](http://www.cfagraduate.tcu.edu/).
2. Two official transcripts of all college work. Translations must be provided for all international transcripts.
3. Non-refundable \$50 application fee.
4. Three current letters of reference from persons qualified to comment on the applicant's academic musical achievement, teaching and/or professional experience, and potential for success in the degree program.
5. A double-spaced typed paper of five pages or more that illustrates the applicant's best writing and research skills. A term paper completed as part of master's level work is sufficient, or the student may submit a research paper, a critical analysis or an article suitable for publication.
6. A resume or curriculum vitae. This should include a list of concert performances, compositions, publications, and other musical accomplishments.

In addition, applicants must complete the requirements for the major field of study as described below:

**A. Performance**

1. Based on the results of pre-screening, an invitation may be extended to perform an on-campus audition/recital in the principal applied music area before a faculty committee. The performance should feature works of contrasting styles, chosen to demonstrate musicianship and technical proficiency. Memorization is encouraged for all performers; it is required in piano, strings and voice. Sight-reading may be included as part of the audition. Audition requirements vary depending upon the area of study; for specific audition requirements, applicants must contact the faculty in their intended major area.
2. Students should submit printed programs of their performances and supply a CD recording of a live performance with their application for admission. A videotape or DVD may be submitted in addition to the CD recording. A DVD may be required by some programs/areas.

**B. Composition**

1. Based on the results of pre-screening, an invitation may be extended for an on-campus interview with the composition faculty.
2. Applicants must submit five scores of recent works with recordings, as available.

**C. Conducting**

1. Based on the results of pre-screening, an invitation may be extended to perform an on-campus audition/recital with a TCU choral or instrumental ensemble before a faculty committee. The audition will consist of a work chosen by the applicant in addition to one work assigned by the conducting faculty.
2. Applicants must submit a videotape of a recent ensemble performance and rehearsal conducted by the applicant.
3. Applicants must submit a repertoire list of all works conducted, as well as those studied in depth and prepared for conducting.

**Audition**

Based on the results of pre-screening, an invitation may be extended to perform an on-campus audition/recital/interview in the principal applied music area before a faculty committee. If invited, the audition/recital/interview should be arranged in coordination with the faculty in the major area and the College of Fine Arts Graduate Office. The CFA Graduate Office will send faculty contact information after application materials are received. Audition dates are posted on [www.cfagraduate.tcu.edu/](http://www.cfagraduate.tcu.edu/).

The candidate must present a dossier at the audition; it should include the audition program, a vita and a repertoire list. During the audition, which will be heard by at least three members of the graduate faculty, the candidate normally performs 30-45 minutes from a prepared one-hour program. After the performance, the applicant will interview with the faculty present. The faculty will report their evaluation of the audition and interview to the College of Fine Arts Graduate Office, using the Report of DMA Audition Form. This report will be added to the student's file, which will be reviewed by area faculty, the Graduate Standards Committee, the School of Music director and the associate dean for graduate studies.

**Language Requirement**

The student must acquire a reading knowledge of one approved modern foreign language, usually French, German or Italian. With the consultation and approval of the program adviser, the student will choose the language most appropriate to his/her research, area of concentration and prior language study.

The student may meet the language requirement by earning at least a "B" average in the undergraduate sophomore year (both semesters) of the language, by earning a "B" in a graduate-level course in the language, or by achieving an appropriate score on a language exam such as the College Level Examination Program (CLEP). Curricular DMA credit is not given for language courses; in addition, no graduate financial aid is available for these courses.

Further language and diction skills are required for voice and choral conducting students. Please consult with the faculty in these areas for details.

**Entrance Examination**

The academic and musical abilities of all applicants are assessed by means of an entrance examination. This exam is given during the audition/interview visit. The exam serves as a diagnostic tool to determine whether or not a student is prepared for doctoral study, what deficiencies exist and as an aid in advising. The results of the exam are

reported to the College of Fine Arts Graduate Office and added to the student's file; it is a factor in admissions.

On the basis of the entrance exam, incoming doctoral students may be advised to take certain courses to eliminate deficiencies in music history and theory. Credit earned in the completion of these courses is not applicable toward DMA requirements.

During the registration period, the student will meet with his/her program adviser to discuss the results of the exams, plan a tentative course of study, identify ways to strengthen areas in which deficiencies may exist and review general program requirements.

Students whose master's degree program did not include a course in bibliographic research will be required to take MUSI 60103 Bibliography and Research Techniques; this course will not count toward DMA curriculum requirements.

Further information about the entrance exam and suggestions for preparation are available at [www.cfagraduate.tcu.edu/](http://www.cfagraduate.tcu.edu/).

**English Requirements for International Applicants**

In order to be considered for admission to the TCU DMA Program, all international students must complete the Test of English as a Foreign Language and achieve one of the following scores:

- 100 on the iBT TOEFL

This requirement applies to prospective international students coming from abroad, as well as those coming to TCU from another college or university in the United States. Official scores must be sent to TCU from the testing agency.

Students who have earned a degree (in music) at an English-language university may be exempted from taking the TOEFL, at the discretion of the Graduate Standards Committee.

The on-campus interview and submitted writing samples will also be used to evaluate each applicant's English language proficiency. International students may be asked to interview via teleconference to ascertain listening and speaking ability in English.

**GRE**

The GRE is required of all DMA applicants. Official scores must be sent to TCU from the testing agency. The GRE score is one of many elements in the applicant's file that will be considered during the admission process; there is no minimum required score.

**Application Deadlines**

For full consideration, applicants seeking admission to the DMA Program should complete their application by January 15 to be considered for fall matriculation.

**Graduate Assistantships**

Graduate assistantships are available in various areas; these assistantships provide tuition waiver, a stipend or both, and require up to 10 hours of work per week. Graduate assistants must be full-time resident students. Applicants should indicate their interest in being considered for an assistantship on the application for admission. The application must be received in the graduate office by January 15 for full consideration for the fall semester.

Generally, assistantships are for a complete academic year and are not available starting in the spring semester. Students are notified by April 15 if they have been granted an assistantship for the next academic year.

TCU adheres to the following Resolution of the Council of Graduate Schools in the United States: "Students are under no obligation to respond to offers of financial support prior to April 15; earlier deadlines for acceptance of such offers violate the intent of this Resolution. In those instances in which a student accepts an offer before April 15, and subsequently desires to withdraw that acceptance, the student may submit in writing a resignation of the appointment at any time through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another offer without first obtaining a written release from the institution to which a commitment has been made. Similarly, an offer by an institution after April 15 is conditional on presentation by the student of the written release from any previously accepted offer."

Doctoral students may hold an assistantship for a maximum of three years; renewal is dependent upon the recommendation of the faculty. In order to have an assistantship renewed, the student must make

excellent academic and musical progress, display professional and collegial conduct, and fulfill all assistantship duties.

Outside employment for students holding financial aid carrying stipends is discouraged. The University assumes that the student's primary obligation is toward graduate study. The director and associate dean reserve the right to review any outside employment and require that the student modify the commitment to the outside employment or relinquish the financial aid appointment.

### **DMA Keyboard Proficiency**

Certain areas of study require keyboard proficiency. These standards are as follows:

**Composition:** Keyboard sight reading for composition majors consists of simple four-part, open choral score reading and a demonstrated ability to sight-read multiple lines at a time from a full orchestral or band score at pitch and in common transpositions (F, E-flat, B-flat, A) and tenor or alto clefs. The selected excerpts, which require moderate piano technical skills, must be transposed to the proper key and sounding octave.

**Voice (Vocal Performance):** Perform a piano audition of approximately five minutes in length. Repertoire presented should be equivalent in difficulty to that of Clementi Sonatinas or J. S. Bach Two Part Inventions. Pieces need not be memorized. Sight-read song accompaniments of moderate difficulty.

**Choral Conducting:** Sight reading for choral conducting majors consists of four-part, open choral score reading.

**Wind Instrument Conducting:** Sight read lines from a full orchestral or band score in common transpositions (F, E-flat, B-flat, A) and tenor or alto clefs. The selected excerpts, which require moderate piano technical skills, must be transposed to the proper key and sounding octave.

**Orchestral Conducting:** Two excerpts will be given to the student 24 hours prior to the exam, including four-part strings and four to five woodwinds and/or brass, including at least two transpositions. Two additional excerpts will be given at the exam, including a single line in alto or tenor clef, and a single line in B-flat, F, or A transposition.

The student's level will be ascertained by means of an audition; the required skills must be acquired before candidacy.

### **DMA Program Specifics**

#### **Major and Co-Major Professor**

At the time of admission, each student is assigned a faculty member—typically the student's professor in the major area—who serves as adviser and mentor throughout the program. If the major professor does not have an earned doctorate, a co-major professor with an earned doctorate will be appointed. The major and co-major professor advise the student on all matters pertaining to the program of study and selection of courses.

The major or co-major professor typically serve as chair of the student's Doctoral Committee, guiding the preparation of recitals and research for the document or dissertation. The major or co-major professor chair the oral portion of the general exam as well as the final oral examination.

#### **Doctoral Committee**

Each student is counseled by a Doctoral Committee comprising five members of the graduate faculty. As soon as it is practical, the Doctoral Committee is selected jointly by the student and the major professor. The student contacts members of the faculty to secure their willingness to serve on the committee and obtains the signature of each member on the Appointment of Doctoral Committee Form. The committee must include the major or co-major professor (who serves as chair of the committee), another professor representing the major field of study, an approved professor representing music history/literature, an approved professor representing music theory, and a professor from outside of the School of Music.

The committee approves recital programs, evaluates the recitals, conducts the general examination, supervises the preparation of the document or dissertation, and administers the final oral examination. At the document or dissertation stage, the Doctoral Committee may be reconstituted to provide additional expertise appropriate to the project. Any changes in membership of the Doctoral Committee must receive approval by the retiring, continuing and new members of the committee, the School of Music director and the associate dean for graduate studies.

### **Doctoral Committee Report**

The Doctoral Committee Report affords the opportunity for a thorough review of the student's degree progress. Following approval by the major area of study, it is normally prepared jointly by the major professor and student when the student has earned at least 12, but not more than 30 doctoral credits. It is then circulated to all Doctoral Committee members for approval and/or recommendations.

The report specifies the requirements for the completion of the degree and thus constitutes an agreement between the student, Doctoral Committee, the School of Music and the College of Fine Arts Graduate Office. It must be submitted to and accepted by the College of Fine Arts Graduate Office prior to attempting the general examination.

Subsequent changes in the content of the report can be made only with the approval of the major professor, Doctoral Committee, School of Music director and the associate dean for graduate studies.

### **Residency Requirements**

The student must be in residence as a full-time student for two consecutive regular semesters (fall/spring or spring/fall). A minimum of nine hours of approved coursework and/or approved research must be completed each semester of the year of residence. Depending on the area of study, summer study/coursework may or may not be available. Summer coursework does not count toward residency requirements.

### **Transfer Credit**

All TCU DMA programs include 60 semester hours of credit. A master's degree of at least 30 hours is a prerequisite for DMA study at TCU.

Up to 12 semester hours of transfer credit earned beyond the master's level may be applied to doctoral degree requirements in accordance with the following rules:

1. The credit hours transferred must represent valid graduate credit from an institution accredited to offer the DMA or equivalent degree.
2. The credit is applicable to the degree program and is approved by the program adviser, the Doctoral Committee, School of Music director and associate dean for graduate studies.
3. The credit hours transferred may not be in an area where a deficiency exists (as identified by the entrance examinations or any other evaluation process).
4. Credit hours in the candidate's major area of concentration may not be transferred.
5. Credit hours transferred must carry a grade of "A," "B" or "S."
6. Credit hours transferred normally cannot be more than five years old at the time of admission or readmission to the degree program.
7. Students whose master's degree program included more than 30 hours may be eligible to transfer up to six hours of master's degree work.

### **DMA Public Performance Requirements**

The program content for DMA recitals must be approved one month in advance by the major professor and the student's Doctoral Committee. In the case of a lecture recital, an outline of the lecture must accompany the program. The first recital must be presented before the general examination is taken, and at least one recital must be performed after the general examination has been passed.

Recital dates may be reserved during the first week of class during each semester. The recital program must be approved by the major professor and the Doctoral Committee; the major professor will notify the College of Fine Arts Graduate Office and the Music Office that the student has been approved to play a DMA recital. The major professor will accompany the student to the Music Office to secure a date for the recital. All members of the Doctoral Committee should be notified of the time, date and location of each recital by the candidate at least two weeks prior to the performance. Students are encouraged to consult with committee members prior to setting the recital date.

Normally, all doctoral recitals are given on campus. However, with permission of the student's Doctoral Committee and the School of Music director, a student may present one of the recitals off campus. When a recital is given off campus, the major professor must be in attendance.

Ideally, all doctoral recitals will be heard in person by at least three members of the student's Doctoral Committee. Members of the Doctoral Committee present at the recital will meet privately following the recital to discuss and evaluate the performance. Doctoral Committee members not in attendance must be provided a recording by the student within one week following the recital, to be evaluated within the period of two weeks. The major professor will circulate the Report of DMA Recital

Grade Form for all Doctoral Committee members to sign and return it to the College of Fine Arts Graduate Office. The associate dean will then report the recital grade to the registrar.

**Performance:** A minimum of three public performances is required. At least two performances must be full-length solo recitals. The remaining performance may be either a lecture recital or chamber music recital. A student who has an opportunity to perform a concerto with orchestra or appear in a major operatic role may apply for evaluation of such performances as a portion of the recital requirements. Concerto or operatic performances may not be substituted for more than one full-length recital. Such substitution must be approved in advance by the student's Doctoral Committee. Memorization requirements are determined by the faculty in the major area. A DVD may be required by some programs/areas.

**Piano Pedagogy:** A student emphasizing piano pedagogy must demonstrate competence both as a performer and as a teacher. To this end, three public performances are required:

1. A full-length solo recital;
2. A second full-length solo recital, a lecture recital (which may be pedagogical in nature), or a chamber music recital in which the piano plays an important musical role; and
3. A public workshop for piano teachers concentrating on teaching techniques and materials. The public workshop must be at least five hours in length. It may be presented off campus, provided the major professor is in attendance and the workshop is videotaped.

**Composition:** A student in composition must demonstrate competence as a practitioner of the musical art by presenting two recitals. One recital is a program of original music. The second recital requirement may be satisfied through the presentation of a single recital of original music or the equivalent realized through several performances of original compositions presented during regular School of Music concerts or recital programs. As appropriate, the student may appear as a soloist, member of a chamber ensemble or as conductor. A student who has the opportunity for a significant off-campus performance of original music may apply for evaluation of that performance as a portion of the second recital requirement. This must be approved by the major professor and the Doctoral Committee.

**Conducting:** Three public performances are required. Two of these may be performed by TCU School of Music ensembles; at least one recital must be performed by a group recruited by the student. At least two performances must be full-length concerts. The remaining performance may be a lecture recital related to the document topic. Concert literature should comprise a variety of national and historical styles, and should make use of large as well as small ensembles. Choice of repertoire and media is made after consultation with and approval of the major professor and the Doctoral Committee. Detailed and specific requirements are available from the conducting area faculty.

### Recital Recording

Recitals performed in Ed Landreth Hall or PepsiCo Recital Hall will be recorded by School of Music staff. The student must arrange for a professional-quality recording to be made of any recitals given outside the School of Music or off campus. An appropriately labeled and indexed recording of each recital, with program, must be submitted to the Graduate Office.

### DMA General Examination

The general examination is designed to evaluate the student's ability to integrate knowledge, apply theoretical concepts, demonstrate skills and draw conclusions. Although it is composed of many parts, the examination is regarded as one entity and evaluated as such. It normally covers coursework completed for the doctoral degree as well as general musical knowledge normally acquired through prior study and professional experience. It focuses on the major field of concentration' the cognate area(s) of study, music history; and music theory.

Before taking the examination, the student must have remedied any deficiencies identified by the entrance exam. In addition, he/she must have completed all of the coursework in music history and theory, and a majority of the major field coursework. Further, the student must have presented at least two DMA recitals. The student must receive the approval of the Doctoral Committee to take the examination. The major professor will report to the College of Fine Arts Graduate Office in writing or by e-mail that the student has been approved by the committee to take the exam. The student must be enrolled in at least

one graduate credit hour during the semester in which the general examination is taken. The examination is both written and oral in nature. The written portion of the examination is given once each semester. Exam dates and information about the structure of the exam may be obtained from [www.cfagraduate.tcu.edu/](http://www.cfagraduate.tcu.edu/).

The oral portion of the exam is usually scheduled one to two weeks following the written tests. All members of the Doctoral Committee, including the outside member, must be present when the oral portion of the examination is administered. The examination must be completed at least seven months prior to receiving the degree.

Within one week after the oral portion of the general examination, the major professor must report to the associate dean for graduate studies whether the student passed or failed the examination. If the student passes the examination, he/she is admitted to candidacy for the degree. If the student fails, he/she may, with the permission of the Doctoral Committee, attempt the examination one more time during the following semester or later. A third attempt is not permitted.

For more detailed information on how to schedule the general examination, see [www.cfagraduate.tcu.edu/](http://www.cfagraduate.tcu.edu/).

### DMA Written Documentation/Dissertation

A six-credit hour written document is required for the DMA in Performance, Piano Pedagogy and Conducting. The document is normally more limited in scope than a dissertation, but demonstrates high standards of scholarship and contributes to existing knowledge. It is hoped that the final project is suitable for publication.

Composition students produce a full 12-hour dissertation of one or more compositions suitable for publication.

Students should begin thinking about a topic early during the coursework so they may be ready to present the topic proposal as soon as the general examination has been passed. Presentation of a topic prior to passing the general examination requires special permission from the Doctoral Committee and the School of Music director.

### Choosing a Topic

**Performance Major:** The document is normally concerned with such areas as music history, repertoire, performance practices, analysis of major works, human physiology, acoustics, psychology, aesthetics, teaching methods and materials, and the editing of lesser-known compositions.

**Composition Major:** The final project comprises one or more major works.

**Conducting Major:** The document is concerned with such areas as performance practices, teaching methods and materials, the editing of early music, aesthetics or psychology, and analysis of major works.

### Proposal

Once a potential topic is identified, a written proposal is prepared under the guidance of the major professor and other members of the Doctoral Committee. The proposal normally includes an introduction, a discourse on the nature and importance of the topic, a chapter-by-chapter outline of the projected document and a bibliography. Once the proposal is written, it is submitted to all committee members for comments and suggestions. Following further revision (if needed), the proposal is considered at a meeting of the entire Doctoral Committee. The student is required to be present at this meeting. Upon approval of the proposal, bound copies are then signed by the Doctoral Committee members. Each committee member receives a copy of the proposal and an additional copy is submitted to the College of Fine Arts Graduate Office for reference. The latter must be velo bound.

### Document or Dissertation Hours Enrollment

Permission to enroll in MUSI 90960/90970 (DMA Document) or MUSI 90980/90990 (DMA Composition Dissertation) may be granted during any enrollment period in which work on the project or proposal is undertaken. Following the initial enrollment in document or dissertation hours, a student must maintain continuous enrollment during each regular semester in at least one hour of document or dissertation until the degree is completed.

### Document or Dissertation Writing

During the research and writing of the project, the candidate is advised to consult regularly with the major professor and, from time to time, with the other members of the Doctoral Committee. The major professor bears the primary responsibility for guiding the research efforts of the

doctoral candidate and should possess expertise in the topic area as well as skills of scholarship necessary to guide the document to successful completion. When the topic extends beyond the expertise of this faculty member, a co-major professor may serve the best interests of the student. In addition, if the student's major professor does not have an earned doctorate, the co-major professor, appointed at the outset of doctoral study, will mentor the project. (See above, Major and Co-Major Professor.) The major or co-major professor supervises the project to ensure exhaustive research of the topic, a thorough and complete report of the findings, a logical organization of the paper, correct grammar, proper spelling, acceptable writing style and appropriate format. Before other members of the Doctoral Committee receive the document for review (either in part or whole), the paper should be at a stage of progress and level of scholarship suitable for critical examination.

Each committee member brings his/her own area of expertise to bear on the paper and carefully scrutinizes it for weaknesses in research, content, organization and general scholarship.

The student, in consultation with the major professor, will use the current edition of either the *MLA Style Manual and Guide to Scholarly Publishing* or *Turabian's Manual of Style*. Each student must follow the School of Music DMA Document and Dissertation Guidelines available at [www.cfagraduate.tcu.edu](http://www.cfagraduate.tcu.edu).

### DMA Final Oral Examination

One month prior to the proposed final oral examination date, the candidate must present a copy of the document or dissertation to all members of the doctoral committee for critical examination and comment. All five members of the committee must read the document/dissertation and accept or reject it. If it receives tentative acceptance from the committee and the indicated corrections and/or revisions are minimal, then the candidate may begin preparation of the final draft.

The candidate must present to the Graduate Office an unbound copy of the complete document/dissertation and abstract (the latter not exceeding 350 words) in order to secure permission to take the final oral examination. The document and abstract must be accompanied by the Doctoral Oral Exam Scheduling Form, signed by all members of the Doctoral Committee. The student must contact each member of the Doctoral Committee prior to setting and confirming the date and time of the final oral examination. After the reading copy has been examined and approved and a degree check has been satisfactorily completed by the College of Fine Arts Graduate Office, the associate dean will sign the Doctoral Oral Exam Scheduling Form and the exam may take place as scheduled. A Report on the Final Oral Examination Form will be given to the major professor.

The final oral examination is primarily a defense of the document or dissertation, although any relevant topic may be explored if the committee so chooses. In order to allow adequate time for preparation of examination questions, a copy of the document should be provided to each member of the committee at least seven days prior to the examination. The student is responsible for contacting all committee members prior to setting the time, date and location of the examination. The final oral examination is open to the public.

At least four members of the committee, including the major professor and the outside member, must be present to conduct the examination. Following a decision on the student's examination performance, those committee members present must sign the Report on the Final Oral Examination Form. The major professor will deliver the report to the College of Fine Arts Graduate Office.

The candidate must be enrolled in at least one graduate hour during the semester in which the final oral examination is taken. The final oral exam must be taken during the same semester that the document or dissertation is completed.

If the candidate fails the oral exam, only one reexamination will be permitted; the date of the reexamination is set at the discretion of the doctoral committee. If the candidate fails the reexamination, he/she is dropped from the program, and candidacy for the degree is terminated.

If the candidate passes the final oral examination, he/she will take a copy of the document/dissertation, signed by all committee members, to the College of Fine Arts Graduate Office for final approval. The process requires electronic submission of a PDF file, according to the instructions posted at [lib.tcu.edu/NDLTD](http://lib.tcu.edu/NDLTD). Copyright may be obtained; the fee for this optional service is paid by the student. The School of Music also requires a bound copy of the document/dissertation for its archives.

### Time Limit

A doctoral student who enters the TCU DMA program with a master's degree must pass the general examination within four calendar years of the student's first registration for doctoral study at TCU. A doctoral candidate must complete all the degree requirements within six years after passing the general examination. Extension of time must be applied for in writing to the School of Music director, who will then make a recommendation to the associate dean. The letter should explain why the degree was not completed within the time limit and should present a schedule for completion of the degree.

### DMA Music Degree Program Requirements

#### Performance with Cognate in Music Theory or History

MUSP 70110-70610	Lessons on major instrument	18 (six semesters)
MUSP 80971	DMA Recital I	1
MUSP 80981	DMA Recital II	1
MUSP 80991	DMA Recital III	1
	Music Theory courses	9
	Music History courses	9
Cognate		6*
MUSI 60010-60360	Ensembles	2
MUSI 90970	DMA Document	6
Electives		7
<b>Total</b>		<b>60</b>

\* Six additional credits in music history or theory

#### Performance with Cognate in Composition\*

MUSP 70110-70610	Lessons on major instrument	18 (six semesters)
MUSP 80971	DMA Recital I	1
MUSP 80981	DMA Recital II	1
MUSP 80991	DMA Recital III	1
	Music Theory courses	9
	Music History courses	9
MUSI 60630	Composition	6
MUSI 60801	Composition Seminar	1
	Composition electives	2
MUSI 60010-60360	Ensembles	2
MUSI 90970	DMA Document	6
Electives		4
<b>Total</b>		<b>60</b>

\*Admission to the composition cognate is determined by the composition faculty; ability to do graduate-level work in composition is a prerequisite.

#### Performance with Cognate in Voice Pedagogy

MUSI 70110	Doctoral Voice	12 (six semesters)
MUSI 70110	Doctoral Voice (Vocal Coaching)	6 (six semesters)
MUSI 80971	DMA Recital I	1
MUSI 80981	DMA Recital II	1
MUSI 80961	DMA Lecture/Recital	1
	Ensembles (Opera)	2
MUSI 60064	Advanced Vocal Pedagogy Seminar	3
MUSI 60072	Technology in Voice Teaching	2
MUSI 60052	Repertoire Management	2
MUSI 60041	Practicum (2 semesters)	2
	Pedagogy Elective **	2-3
	Music History courses*	6-9
	Music Theory courses*	6-9
MUSI 90970	DMA Document	6
Electives		4-5
<b>Total</b>		<b>60</b>

\* Advanced courses in music theory and music history with a minimum of two courses in an area.

\*\* Chosen from MUSI 50063, 60041, 60062, 6016 or speech communications disorders courses.

#### Piano Performance with Cognate in Piano Pedagogy

MUSP 70210	Doctoral Piano	18 (six semesters)
MUSP 80971	DMA Recital I	1
MUSP 80981	DMA Recital II	1
MUSP 80961	DMA Lecture/Recital	1

	Piano Pedagogy courses	11-12*
	Music Theory courses	9
	Music History courses	9
MUSI 60080-60170	Ensembles	2
MUSI 90970	DMA Document	6
Electives		1-2
<b>Total</b>		<b>60</b>

\* Chosen from MUSI 60203, 60213, 60223, 60233, 60243, 60913, 60923, 61230, 60400

**Piano Pedagogy DMA Requirements**

MUSP 70210	Doctoral Piano	12 (six semesters)
MUSP 80971	DMA Recital I	1
MUSP 80981	DMA Recital II	1
MUSI 80971	Doctoral Pedagogy Workshop I	1
MUSI 80981	Doctoral Pedagogy Workshop II	1
	Piano Pedagogy courses	12-14*
	Music Theory courses	9
	Music History courses	9
MUSI 60080-60170	Ensembles	2
MUSI 90970	DMA Document	6
Electives		4-6
<b>Total</b>		<b>60</b>

\* Chosen from MUSI 60203, 60213, 60223, 60233, 60243, 60913, 60923, 61230, 60400

**Composition with Cognate in Music History**

MUSI 70630	Doctoral Composition (four semesters)	12
MUSP 80971	DMA Recital I	1
MUSP 80981	DMA Recital II	1
MUSI 60801	Composition Seminar	1
	Music Theory Courses*	12
MUSI 70903	Music Theory Treatise*	3
	Music History Cognate	15
MUSI 60010-60360	Ensembles	1
MUSI 90980, 90990	DMA Composition Dissertation	12
Electives		2
<b>Total</b>		<b>60</b>

\*All DMA degrees in composition include the equivalent of a cognate in music theory.

**Composition with Cognate in Performance\***

MUSI 70630	Doctoral Composition	12 (four semesters)
MUSP 80971	DMA Recital I	1
MUSP 80981	DMA Recital II	1
MUSI 60801	Composition Seminar	1
	Music Theory courses**	12
MUSI 70903	Music Theory Treatise**	3
	Music History courses	9
MUSP 60110-60610	Applied Music lessons	6
	Performance electives	2
MUSI 60010-60360	Ensembles	1
MUSI 90980, 90990	DMA Composition Dissertation	12
<b>Total</b>		<b>60</b>

\*Admission to the performance cognate is by audition and must be approved by the appropriate applied music faculty.

\*\*All DMA degrees in composition include the equivalent of a cognate in music theory.

**Conducting with Cognate in Music History or Theory**

MUSI 70220	Doctoral Conducting*	18 (six semesters)
MUSP 80971	DMA Recital I	1
MUSP 80981	DMA Recital II	1

MUSP 80991	DMA Recital III	1
MUSI 60232	Score Reading	2
	Music Theory courses**	9
	Music History courses***	9
	Cognate****	6
MUSI 60010-60360	Ensembles	2
MUSI 90970	DMA Document	6
Electives		5
<b>Total</b>		<b>60</b>

\*Must include lessons in orchestral, band and choral conducting.

\*\*Must include MUSI 70203 Analysis for Performance and MUSI 50970 Special. Studies: Advanced Orchestration.

\*\*\* MUSI 50403 Symphonic Literature, MUSI 50423 Choral Literature, MUSI 50970 Special Studies: Band Literature are required.

\*\*\*\*Six additional credits in music history or theory

**Conducting with Cognate in Performance\***

MUSI 70220	Doctoral Conducting**	18 (six semesters)
MUSP 80971	DMA Recital I	1
MUSP 80981	DMA Recital II	1
MUSP 80991	DMA Recital III	1
MUSI 60232	Score Reading	2
	Music Theory courses***	9
	Music History courses****	9
MUSP 60110-60610	Applied Music lessons	6
MUSP 70971	Recital (Cognate area)	1
MUSI 60010-60360	Ensembles	2
MUSI 90970	DMA Document	6
Electives		4
<b>Total</b>		<b>60</b>

\*Admission to the performance cognate is by audition and must be approved by the appropriate applied music faculty.

\*\*Must include lessons in orchestral, band and choral conducting.

\*\*\*Must include MUSI 70203 Analysis for Performance and MUSI 50970 Special. Studies: Advanced Orchestration.

\*\*\*\*MUSI 50403 Symphonic Literature, MUSI 50423 Choral Literature, MUSI 50970 Special Studies: Band Literature are required.

**Master of Music**

Degree programs may be pursued in Master of Music with emphasis in performance, pedagogy, musicology, theory/composition and the Master of Music Education.

**Prerequisites**

To apply to the Master of Music program, students must possess a Bachelor of Music or its equivalent, with a major in the area of proposed graduate study, including sophomore-level credit in an approved foreign language in the case of prospective majors in musicology or theory/composition.

**Audition**

Students applying in performance must present a satisfactory, in-person audition. Before an audition can be scheduled, applicants must submit a completed School of Music application and a statement of professional experience and goals. An additional requirement for admission includes two separate letters of recommendation attesting to the candidate's musical accomplishments and ability sent directly to the School of Music office. In exceptional circumstances, a videotape/DVD audition recording is considered for admission.

Students applying in the areas of musicology, theory/composition, and music education are required to submit acceptable GRE scores prior to admission. Students applying for admission to all other Master of Music programs are not required to take the GRE, but are strongly encouraged to do so and submit scores prior to admission. The test scores, along with other materials, provide valuable information aiding in the evaluation and placement of students.

All entering graduate students are required to take placement examinations during the first week of residency, and must satisfy keyboard and theory proficiencies. All portions of the test must be satisfactorily completed prior to admission to candidacy.

Students majoring in musicology or theory/composition must submit examples of scholarly or creative work prior to admission. Scholarly

papers, compositions (scores and tapes), and original computer programs are appropriate.

Every graduate student must participate in an ensemble for a minimum of two semesters during residency. In special circumstances related to stipend or assistantship, ensemble participation may be required for additional semesters.

**International Student Requirements**

Applicants from countries other than the United States must meet the same admission standards required of all other applicants. In addition, before being admitted to the School of Music, each international student must demonstrate proficiency in the English language. The University requires an official score report from the Educational Testing Service of at least 550 (paper-based) or 213 (computer-based) on the Test of English as a Foreign Language (TOEFL) with no section score less than 55. The School of Music prefers the computer-based test.

Performance majors must earn 30-34 hours in approved graduate courses, including at least 12 hours in studio instruction, and present two recitals, the content and format of which shall be determined and evaluated by the student's Graduate Advisory Committee.

Pedagogy, musicology and theory/composition majors must earn 34-36 hours in approved graduate courses, with at least half of the courses, including thesis where appropriate, in the principal field.

The piano pedagogy curriculum is designed to provide advanced training in the field of piano pedagogy by preparing students to teach studio and class piano, conduct research in their field, write papers suitable for publication and present lectures and workshops on pedagogical topics.

A comprehensive oral examination must be passed before the completion of all programs. This examination is given after the final recital or project is completed.

**Master of Music Degree Program Requirements**

**String Performance**

MUSP 60310-60360	Lessons	12
MUSI 60120	Orchestra	2
MUSI 60080	Chamber Music	1
MUSP 70971	Recital I	1
MUSP 70981	Recital II*	1

*Musicology*

MUSI 60103	Bibliography and Research Techniques	3
	Electives in Music History	3

*Music Theory*

MUSI 50203	Structure and Style	3
	Electives in Music Theory	3

Electives

<b>Total</b>		<b>32</b>
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\*The recital shall be no less than 60 minutes in length, not including intermission. Two copies of a good quality recording of the final recital must be submitted to the Graduate Studies Office before the student can be cleared for graduation. This is the student's responsibility.

**Theory/Composition**

It is possible to emphasize either theoretical, compositional or computer music studies. In each semester of the first year of study, prescribed courses are taken, as well as courses in the emphasis area of choice.

MUSI 60800	Theory Seminar	6
MUSI 60700	Special Topics, Theory or Computer Music <i>or</i>	
	Composition	6
MUSI 60630	Composition	6
MUSI 50523	Linear Analysis	3
MUSI 60553	Analysis of Contemporary Music	3
MUSI 70980	Thesis	6
MUSI 60103	Bibliography	3
MUSI 60500	Musicology Seminar	3
MUSI 60010-60210	Ensemble	1
Electives		5
<b>Total</b>		<b>36</b>

**Piano Performance**

MUSP 60210	Piano	12
MUSI 60080-60210	Ensemble*	1
MUSI 70971	Recital I**	1

MUSI 70981	Recital II***	1
<i>Musicology</i>		
MUSI 60103	Bibliography and Research Techniques	3
MUSI 50433	Keyboard Literature	3
<i>Music Theory</i>		
MUSI 50523	Linear Analysis	3
MUSI 60553	Analysis of Contemporary Music	3
Electives		3
<b>Total</b>		<b>30</b>

\*Piano majors fulfill this two-semester requirement through Piano Accompanying and/or Chamber Music.

\*\*Each of the two recitals shall be no less than 60 minutes in length. The first recital may, if desired, include a concerto with second piano accompaniment and/or chamber music; this portion, however, must be no more than half the length of the recital.

\*\*\*Two copies of a good quality recording of the final recital must be submitted to the Graduate Studies Office before the student can be cleared for graduation. This is the student's responsibility.

**Organ Performance**

MUSP 60220	Organ	12
MUSP 60080-60210	Ensemble	1
MUSP 70971	Recital I*	1
MUSP 70981	Recital II**	1

*Musicology*

MUSI 60103	Bibliography and Research Techniques	3
MUSI 50423	Choral Literature <i>or</i>	3
MUSI 50970	Special Studies: Hymnology	

*Music Theory*

MUSI 50523	Linear Analysis	3
MUSI 50203	Musical Structure and Style	3
Electives***		5
<b>Total</b>		<b>32</b>

\*The recitals should be one hour in length. The first recital may be a lecture recital, or it could include ensemble or chamber music. However, this recital must include at least 30 minutes of solo performance.

\*\* Two copies of a good quality recording of the final recital must be submitted to the Graduate Studies Office before the student can be cleared for graduation. This is the student's responsibility. A comprehensive oral examination follows the final recital.

\*\*\*Recommended electives are MUSI 50212 Choral Conducting MUSI 60700 Special Studies: Keyboard Harmony and/or MUSI 50433 Keyboard Literature.

**Piano Pedagogy Performance**

*Performance*

MUSI 60210	Piano	8
MUSI 60080-60210	Ensemble*	1
MUSI 70971	Recital I	1

*Pedagogy*

MUSI 60203	Graduate Piano Pedagogy and Practicum I	3
MUSI 60213	Graduate Piano Pedagogy and Practicum II	3
MUSI 60223	Current Trends and Research in Piano Pedagogy	3
MUSI 61231	Internship in Teaching	1
MUSI 60913	Psychology of Music	3
MUSI 70972	Lecture/Recital	2

*Musicology*

MUSI 60103	Bibliography and Research Techniques	3
MUSI 50433	Keyboard Literature	3

*Music Theory*

MUSI 50523	Linear Analysis <i>or</i>	
MUSI 60553	Analysis of Contemporary Music	3
<b>Total</b>		<b>34</b>

\*Piano pedagogy majors fulfill this two-semester requirement through Accompanying and/or Chamber Music.

Piano pedagogy majors must pass the Keyboard Skills Exam or take Functional Piano MUSI 20071 and 20081

**Voice (Pedagogy Emphasis)**

<i>Performance</i>			
MUSP 60110	Voice	8	
MUSI 60100; 60040	Opera/Chorale	2	
MUSI 70971	Recital*	1	
<i>Pedagogy</i>			
MUSI 50053	Introduction to Voice Pedagogy	3	
MUSI 50063	Comparative Voice Pedagogy	3	
MUSI 60052	Voice Repertoire Management	2	
MUSI 60162	Techniques for the Singer-Actor	2	
MUSI 60041	Voice Pedagogy Practicum**	1	
<i>Musicology/Music Literature</i>			
MUSI 60103	Bibliography and Research Techniques	3	
	Musicology/Music Literature Elective	3	
	Music Theory	3	
Electives***		3	
<b>Total</b>		<b>34</b>	

\* The recital shall be no less than 60 minutes in length, not including intermission. Two copies of a good quality recording of the final recital must be submitted to the Graduate Studies Office before the student can be cleared for graduation. This is the student's responsibility.

\*\* Voice Pedagogy Practicum may be repeated for elective credit.

\*\*\*Chosen from graduate courses in music or related academic fields. Recommendations may be made on the basis of undergraduate transcript and placement examinations.

**Voice (Performance Emphasis)**

<i>Performance</i>			
MUSP 60110	Voice	8	
MUSI 60100; 60040	Opera/Chorale	2	
MUSI 70971	Recital I*	1	
MUSI 70981	Recital II**	1	
<i>Pedagogy</i>			
MUSI 50053	Introduction to Voice Pedagogy	3	
MUSI 60052	Voice Repertoire Management	2	
MUSI 60162	Techniques for the Singer-Actor	2	
<i>Musicology/Music Literature</i>			
MUSI 60103	Bibliography and Research Techniques	3	
	Musicology/Music Literature Elective	3	
	Music Theory	6	
Electives***		3	
<b>Total</b>		<b>34</b>	

\* Each recital shall be no less than 60 minutes in length, not including intermission. A major operatic role may be substituted for one of the recitals.

\*\*Two copies of a good quality recording of the final recital must be submitted to the Graduate Studies Office before the student can be cleared for graduation. This is the student's responsibility.

\*\*\*Chosen from graduate courses in music or related academic fields. Recommendations may be made on the basis of undergraduate transcript and placement examinations.

**Wind and Percussion Performance**

<i>Performance</i>			
MUSP 60310- 60710	Lessons	12	
MUSI 60010- 60210	Ensemble*	1	
MUSI 70971	Recital I	1	
MUSI 70981	Recital II **	1	
<i>Musicology</i>			
MUSI 60103	Bibliography and Research Techniques	3	
MUSI 60500	Seminar in Musicology	3	
<i>Music Theory</i>			
MUSI 50523	Linear Analysis	3	
MUSI 60553	Analysis of Contemporary Music	3	
Electives		3	
<b>Total</b>		<b>30</b>	

\*This is a two-semester requirement.

\*\* A good quality tape recording of the final recital must be submitted in two copies to the Graduate Studies Office, before the student may be cleared for graduation. This is the student's responsibility. A comprehensive oral examination follows the final recital.

**Musicology**

<i>Music History Courses</i>			
MUSI 60103	Bibliography and Research Techniques	3	
MUSI 60500	Seminar in Musicology	3	
MUSI 70950	Special Studies: Comprehensive Exam Preparation	1	
MUSI 70980	Thesis I	3	
MUSI 70990	Thesis II	3	
	Three additional music history courses	9	
<i>Other Requirements</i>			
MUSI 60800	Seminar in Music Theory	3	
MUSI 50203	Musical Structure and Style or	3	
MUSI 50523	Linear Analysis or		
MUSI 60553	Analysis of Contemporary Music		
(60010-60210)	Ensemble	1	
Electives*		3	
<b>Total</b>		<b>32</b>	

\*Chosen from graduate-level courses (musicology, theory or courses outside the school).

**Conducting**

**Band Conducting Emphasis**

<i>Music Theory</i>			
MUSI 50523	Linear Analysis	3	
MUSI 60553	Analysis of Contemporary Music	3	
<i>Musicology</i>			
MUSI 60103	Bibliography and Research Techniques	3	
MUSI 60500	Seminar in Musicology	3	
<i>Conducting</i>			
MUSI 50222	Instrumental Conducting	2	
MUSI 60232	Score Reading	2	
MUSI 50970	Special Topics: Band Literature	3	
MUSI 60220	Special Studies in Conducting	4	
<i>Performance</i>			
MUSP 60410- 60610	Lessons	4	
MUSP 70971	Recital I*	1	
MUSP 70981	Recital II*	1	
Electives**		3	
<b>Total</b>		<b>32</b>	

\* Conducting majors participate as conductors in at least two public performances with major University ensembles. Each candidate for the Master of Music in Conducting must submit two copies of good quality audio and video recordings of both recital appearances to the Graduate Studies Office before the student can be cleared for graduation.

\*\*Chosen from graduate courses in music or related academic fields.

**Choral Conducting Emphasis**

<i>Music Theory</i>			
MUSI 50523	Linear Analysis	3	
MUSI 60553	Analysis of Contemporary Music	3	
<i>Musicology</i>			
MUSI 60103	Bibliography and Research Techniques	3	
MUSI 60500	Seminar in Musicology	3	
<i>Conducting</i>			
MUSI 50212	Choral Conducting	2	
MUSI 60232	Score Reading	2	
MUSI 50423	Choral Literature	3	
MUSI 60220	Special Studies in Conducting	4	
<i>Performance</i>			
MUSP 60110	Voice	4	
MUSP 70971	Recital I*	1	
MUSP 70981	Recital II*	1	
Electives**	3 chosen from graduate courses in music or related academic fields.		
<b>Total</b>		<b>32</b>	

\* Conducting majors participate as conductors in at least two public performances with major University ensembles. Each candidate for the Master of Music in Conducting must submit two copies of good quality audio and video recordings of both recital appearances to the Graduate Studies Office before the student can be cleared for graduation.

\*\*Chosen from graduate courses in music or related academic fields.

**Orchestral Conducting Emphasis**

<i>Music Theory</i>			
MUSI 50523	Linear Analysis		3
MUSI 60553	Analysis of Contemporary Music		3
<i>Musicology</i>			
MUSI 60103	Bibliography and Research Techniques		3
MUSI 60500	Seminar in Musicology		3
<i>Conducting</i>			
MUSI 50222	Instrumental Conducting		2
MUSI 60232	Score Reading		2
MUSI 50403	Symphonic Literature		3
MUSI 60220	Special Studies in Conducting		4
<i>Performance</i>			
MUSP 60310-60810	Lessons		4
MUSP 70971	Recital I*		1
MUSP 70981	Recital II*		1
	Electives**		3
<b>Total</b>			<b>32</b>

\* Conducting majors participate as conductors in at least two public performances with major University ensembles. Each candidate for the Master of Music in Conducting must submit two copies of good quality audio and video recordings of both recital appearances to the Graduate Studies Office before the student can be cleared for graduation.

\*\*Chosen from graduate courses in music or related academic fields.

**Master of Music Education Degree Program Requirements**

Music education majors must earn a minimum of 32 hours in approved graduate courses, with at least half of the courses, where appropriate, in the principal field of instrumental, choral or general music. This degree is designed to strengthen musical scholarship and performance, to promote philosophical and psychological understanding in music education, and to provide opportunities to explore specific interests of the individual student through special topics courses.

MUSI 60913	Psychology of Music		3
MUSI 60923	Philosophy of Music Education		3
MUSI 60300	Special Problems in Music Education*		6
	Education Courses		6

<i>Musicology</i>			
MUSI 60103	Bibliography and Research Techniques		3
	Theory		3

MUSI 50523	Linear Analysis or MUSI 60553 Analysis of Contemporary Music		
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<i>Performance</i>			
MUSP 60110-60710	Lessons**		3-6
MUSI 60010-60210	Ensemble		1
	Electives***		1-4
<b>Total</b>			<b>32</b>

\* A comprehensive oral examination follows submission of the final Special Problems Report.

\*\* With permission, students may take Performance for six semester hours, including a public recital.

\*\*\* Majors with keyboard concentration fulfill this two-semester requirement through Accompanying and Chamber Music ensembles.

**Piano Pedagogy**

MUSI 60913	Psychology of Music		3
MUSI 60923	Philosophy of Music Education		3
MUSI 60203	Graduate Piano Pedagogy and Practice I		3

MUSI 60213	Graduate Piano Pedagogy and Practice II		3
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MUSI 60223	Current Trends in Piano Pedagogy		3
MUSI 60231	Internship in Teaching		1
EDEC 60133	Play and Creativity or		3
EDUC 60810	Advanced Educational Research Seminar		

MUSI 60300	Special Problems in Music Education*		2
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<i>Musicology</i>			
MUSI 60103	Bibliography and Research Techniques		3

*Theory*

MUSI 50523	Linear Analysis or		3
MUSI 60553	Analysis of Contemporary Music		
<i>Performance</i>			
MUSP 60210	Lessons**		6
MUSI 60010-60210	Ensemble***		1
<b>Total</b>			<b>34</b>

\* A comprehensive oral examination follows submission of the final Special Problems Report.

\*\*With permission, students may take Performance for six semester hours, including a public recital.

\*\*\*Majors with keyboard concentration fulfill this two-semester requirement through Accompanying and Chamber Music ensembles.

**Artist Diploma (Post-Baccalaureate)**

The Artist Diploma is a program for the most advanced and gifted performers, who, by their performance and credentials, demonstrate that they have serious potential to become concert artists. The program is designed to provide intensive study and performance opportunities under the guidance of master teachers in preparation for a concert career.

An audition for the appropriate applied studio faculty is required. Admission to the program is allowed only upon the recommendation of the appropriate applied studio faculty and the approval of the School of Music director.

The Artist Diploma is a three-year program available in both a pre-baccalaureate and a post-baccalaureate track. A minimum cumulative GPA of 3.0 is required to maintain satisfactory academic progress in this program.

**Program Requirements**

The Artist Diploma (post-baccalaureate) requires 33 hours total.

*Studio Performance Lessons: 26 hours*

MUSP 50XX0 Upper-division courses

*Recitals: 4 hours*

MUSP 50961	Artist Diploma Recital I		
MUSP 50971	Artist Diploma Recital II		
MUSP 50981	Artist Diploma Recital III		
MUSP 50991	Artist Diploma Recital IV		

*Chamber Music/Ensemble/Collaborative Piano: 3 hours\**

MUSI 60080/600X0/51081

\*Appropriate course determined by student's applied music area; specific ensemble assignment determined upon admission

**Music Courses**

**MUSI 50053 - Introduction to Voice Pedagogy**

Prerequisite: Appropriate undergraduate degree in Music or Music Education or permission of instructor. Introduction to science, methods, and materials of voice pedagogy. Acoustics, breathing, attack, registration, resonance, vowels, articulation, and coordination of singing.

**MUSI 50063 - Comparative Voice Pedagogy**

Prerequisite: MUSI 50053 or equivalent and permission of instructor. Comparisons of research results and concepts of voice pedagogy across national styles, bel canto treatises, 19th century sources, contemporary methods, and artist statements. Students are encouraged to develop their own practical studio procedures in harmony with the common ideals of Western artistic voice culture.

**MUSI 50203 - Musical Structure and Style**

Prerequisites: MUSI 30202. Study of musical style and structure through the analysis of music; organized chronologically from 1750 to the present.

**MUSI 50212 - Choral Conducting**

Prerequisites: Senior or graduate standing, MUSI 30512 or 30522, keyboard facility or permission of instructor. Materials and techniques for the experienced choral director.

**MUSI 50222 - Instrumental Conducting**

Prerequisite: MUSI 30522; keyboard facility; or permission of instructor. Baton technique and its application to selected works of symphonic and operatic literature.

**MUSI 50303 - History of Sacred Music**

Prerequisite: Junior or Senior standing or permission of instructor. A historical survey of sacred music from ancient times to the twentieth century.

**MUSI 50403 - Symphonic Literature**

Prerequisite: Senior or graduate standing. Selected works for orchestra and band, illustrating development of the symphony.

**MUSI 50413 - Survey of Opera Literature**

Prerequisite: Graduate standing or approved seniors with Music 30613, 30623. Operatic masterpieces from 1600 to the present with emphasis on selected works of Mozart, Verdi, Wagner, Puccini, Britten and others.

**MUSI 50423 - Choral Literature**

Prerequisite: Graduate standing or approved seniors with Music 30613, 30623. The various forms in the field of choral literature with detailed examination of representative works.

**MUSI 50433 - Keyboard Music**

Prerequisite: Senior or graduate standing. History of development of organ from earliest evidence, harpsichord, clavichord, forte-piano, the piano as well as development of music for these instruments. Keyboard forms and styles with emphasis on earliest developments.

**MUSI 50443 - Ethnomusicology**

Prerequisite: Senior or graduate standing. The study of various theories concerning the cultural function of music, exposure to the analytical methods of ethnomusicologists, and the examination of examples from diverse musical cultures.

**MUSI 50453 - Music Criticism**

Prerequisite: Senior or graduate standing. Study of selected writings on music criticism and aesthetics from antiquity to the present.

**MUSI 50463 - Music in the Twentieth Century**

Prerequisite: Senior or graduate standing. Study of the main trends from the time of Ravel to the present.

**MUSI 50473 - Survey of Song Literature**

Prerequisite: Senior or graduate standing. An examination of the repertoire for solo voice from 1750 to the present, with emphasis on the works of German,

**MUSI 50483 - Chamber Music Literature**

Prerequisite: Graduate standing or approved seniors with Music 30613, 30623. Consent of instructor. The study of the development of chamber music from its beginnings to the present.

**MUSI 50493 - Music in the United States**

Prerequisite: Senior or graduate standing in music. An examination of both cultivated and vernacular music in the United States from the Colonial Era to the present.

**MUSI 50503 - History of Sacred Music**

Prerequisites: Senior or graduate standing or permission of instructor. An historical survey of sacred music from ancient times to the twentieth century.

**MUSI 50523 - Linear Analysis**

Prerequisite: Graduate standing or approved seniors. Development of structural learning through graphic analysis. Readings on Schenkerian concepts as applied to tonal music.

**MUSI 50970 - Special Problems**

Prerequisite: Permission of instructor. Specialized work in student's area of concentration. 1-6 hours.

**MUSI 51081 - Artist Diploma Post-Baccalaureate Collaborative Piano**

Prerequisites: Acceptance to Artist Diploma Program, Post-Baccalaureate. Collaborative Piano course for the Artist Diploma Program in the School of Music.

**MUSI 60000 - Music Pedagogy**

Methods and materials for teaching at various levels, to include supervised teaching.

**MUSI 60010 - Wind Symphony**

1/2 semester hour.

**MUSI 60020 - Percussion Ensemble**

1/2 semester hour.

**MUSI 60030 - Choral Union**

1/2 semester hour.

**MUSI 60040 - Concert Chorale**

1/2 semester hour.

**MUSI 60041 - Voice Pedagogy Practicum**

Prerequisites: MUSI 50053. Experience in individual voice instruction under the supervision of a faculty advisor. Each student will teach two voice pupils weekly lessons for the semester and observe lessons taught by university faculty. A weekly class serves as a forum for pedagogical discussion and exchange of ideas. The course may be repeated for a maximum of three credit hours.

**MUSI 60050 - Chapel Choir**

1/2 semester hour.

**MUSI 60052 - Voice Repertoire Management**

Prerequisite: Knowledge of Italian, German and French dictions and the International Phonetic Alphabet (IPA) and some proficiency in piano accompanying. Survey of the repertoire for voice performance and its relationship to voice classification, age, technical level and performance situation. Students will learn to coach various national styles and performance practices.

**MUSI 60060 - Chamber Singers**

1/2 semester hour.

**MUSI 60062 - Research in Singing**

Prerequisites: MUSI 50053, 50063 and permission of instructor. Surveys the literature of research in singing, including topics such as aerodynamics, vocal registers, vibrato, formants, intelligibility, voice classification, vocal abuse and misuse, fitness for singers and the psychology of singing. Students also become familiar with the instrumentation for physiologic and psychoacoustic studies and the principles of experimental design.

**MUSI 60063 - Advanced Seminar in Voice Pedagogy**

Prerequisites: MUSI 50053, and concurrent enrollment in MUSI 60041. Examination of the techniques and practical aspects of teaching voice, including the psychology of teaching, lesson sequencing, vocalizes and their various applications, integration of repertoire into technical goals, and consideration of the teacher as vocal coach. The special needs of child, adolescent, and aging voices will also be covered.

**MUSI 60070 - Vocal Jazz**

1/2 semester hour.

**MUSI 60073 - Technology in Voice Teaching**

Prerequisites: Graduate standing in voice.

**MUSI 60080 - Chamber Music**

1/2 semester hour.

**MUSI 60090 - Woodwind Ensemble**

1/2 semester hour.

**MUSI 60100 - Opera Studio**

1/2 semester hour.

**MUSI 60103 - Bibliography and Research Techniques**

Prerequisites: Graduate standing. A course in the basic materials and methods of research in music. Acquaintance with primary source materials such as music lexicons, dictionaries, monuments, complete works of composers, periodical literature and evaluation of standard sources in all areas of music.

**MUSI 60110 - Marching Band**

1/2 semester hour.

**MUSI 60120 - Symphony Orchestra**

1/2 semester hour.

**MUSI 60133 - Music Theory/Literacy Pedagogy**

Prerequisites: Limited to graduate students majoring in music theory or composition or having music theory or composition as a cognate on their TCU doctoral degree program. Participants in this course learn how to teach music literacy through observation of the instructor, interaction with other participants in model-teaching exercises, and review of test and assignments. A portion of the course is dedicated to the critical review of existing texts, instructional materials, and software.

**MUSI 60150 - New Music Ensemble**

The ensemble performs mixed chamber music composed during the past 100 years with emphasis upon works of the past 25 years.

**MUSI 60160 - Brass Ensemble**

1/2 semester hour.

**MUSI 60162 - Techniques for the Singer-Actor**

Development of performance techniques unique to music theatre genre. Examination and practical application of skills and knowledge required for producing/directing music theatre.

**MUSI 60170 - Piano Accompanying**

1/2 semester hour.

**MUSI 60180 - Collegium Musicum**

1/2 semester hour.

**MUSI 60182 - Piano Chamber Music Performance**

Prerequisite: Graduate standing in music. Intensive study of selected works of chamber music with piano. Emphasis on developing the musical and interactive skills needed for chamber music through rehearsal and performance. Weekly coaching with faculty.

**MUSI 60190 - Jazz Ensemble**

1/2 semester hour.

**MUSI 60203 - Graduate Piano Pedagogy and Practicum I**

The study of learning theories, methods, materials, curriculum development, and musical assessment for teaching piano with focus on group instruction at the college and university levels. Student teaching is required.

**MUSI 60210 - Symphonic Band**

1/2 semester hour.

**MUSI 60213 - Graduate Piano Pedagogy and Practicum II**

Prerequisite: MUSI 60203. The student of learning theories, methods, materials, curriculum development, and musical assessment for teaching piano with focus on the elementary and intermediate student. Student teaching is required.

**MUSI 60220 - Special Studies in Conducting**

Prerequisite: Admission to the Master of Music in Conducting degree program and/or permission of the instructor. An intensive study of the technique and philosophy of conducting with the student's major professor. Required of all students in the Master of Music in Conducting degree during each semester of study in the program. One hour of credit each semester for a maximum of four credits.

**MUSI 60223 - Current Trends and Research in Piano Pedagogy**

Reading and writing assignments which explore the body of knowledge in the field of piano pedagogy, with emphasis on recent research studies. Selection and development of a research topic for the lecture/recital.

**MUSI 60230 - Internship in Teaching**

Observation and teaching in a specialized area chosen in consultation with the instructor.

**MUSI 60232 - Score Reading**

Prerequisite: Admission into the Master of Music in Conducting degree program or permission of instructor. Further development of skills in the reading of all clefs and the most common transpositions and structured analysis of large scores. Score analysis and the simultaneous reading of multiple lines in both full and condensed scores.

**MUSI 60233 - Teaching Intermediate and Advanced Piano Students**

Prerequisites: MUSI 60203 and 60213. A study of piano literature with a focus on curriculum development and strategies for teaching piano students at the intermediate through advanced levels.

**MUSI 60243 - Piano Ensemble Teaching and Performance Literature**

Prerequisites: Graduate standing in music. A study of the teaching and performance literature for piano duet, two pianos, and multiple pianos, and teaching applications for the elementary through advanced levels.

**MUSI 60300 - Special Problems in Music Education**

Special Problems in Music Education.

**MUSI 60303 - History of Music Notation**

Prerequisites: grad standing in music. This course traces the history of music notation in the Western tradition from Ancient Greece to the end of the 16th century through readings, manuscripts, and prints. Students will gain practical transcription and editing experience.

**MUSI 60350 - TCU Cello Ensemble**

Study and performance of music for cello ensemble.

**MUSI 60360 - TCU Harp Ensemble**

The study and performance of music for harp ensemble

**MUSI 60400 - Special Topics in Piano Pedagogy**

Prerequisites: Graduate standing in music; permission of instructor. Specialized work in student's area of concentration. (1-6 hours.)

**MUSI 60413 - Seminar in Opera Literature**

Prerequisites: MUSI 50413. An intensive study of a specific area of opera literature, such as the works of a selected composer or of a specific genre of opera. Active research in the historical style and musico-textual relationship through reading, listening, and writing will lead to effective performance. The specific content of this course will change from semester to semester.

**MUSI 60433 - Seminar in Keyboard Literature**

Prerequisites: Graduate standing in music. A study of a specific area of piano literature, such as the works of a selected composer or a specific genre. The specific content of this course will change from semester to semester.

**MUSI 60453 - Musicians in Fiction**

Prerequisites: grad standing in Music (non-music majors welcome). This seminar will investigate the role of the musician in selected short stories and novels.

**MUSI 60473 - Seminar in Song Literature**

Prerequisites: MUSI 50473. An in-depth study of a specific area of art song history and literature. Content will change from semester to semester. Active research on an aspect of solo voice repertoire development in the musical treatment of the text through reading, listening, and writing, will lead to effective performance of the works studied.

**MUSI 60500 - Seminar in Musicology**

Prerequisite: Graduate standing in music, consent of instructor.

**MUSI 60553 - Analysis of Music: 1880-1950**

Prerequisite: Graduate standing. An analysis of 20th Century compositions, with emphasis on atonal music. Study of contemporary compositional techniques and pitch-class analysis. Readings on set analysis and recent developments in contemporary composition.

**MUSI 60563 - Analysis of Music: 1950 to Present**

Prerequisites: Acceptance into the School of Music DMA program or consent of instructor.

**MUSI 60630 - Composition**

Prerequisite: Permission of instructor. Study of compositional methods. The course may be taken twice for 6 total hours with a maximum load of 3 hours per semester.

**MUSI 60643 - Computer Music**

Prerequisite: Permission of instructor. An investigation of basic acoustic and electronic principles, psychoacoustics, synthesis fundamentals, synthesis using distortion techniques, subtractive synthesis, speech

synthesis, reverberation, auditory localization and other sound processing techniques, aleatoric and deterministic composition with computers and real-time performance of computer music.

**MUSI 60700 - Special Studies in Music Theory**

Prerequisites: Graduate standing in music, consent of instructor. Special topics in the theory of music, affording students an opportunity to carry on individual programs of study.

**MUSI 60800 - Seminar in Music Theory**

Seminar in music theory.

**MUSI 60801 - Composition Seminar**

Prerequisites: Graduate standing in Music. These weekly meetings feature guest speakers, TCU faculty, and graduate students presenting on specific topics in music composition and presenting works for consideration and analysis.

**MUSI 60913 - Psychology of Music**

The study of the sociological and psychological aspects of music as well as musical aptitude, human learning theory and theories of music learning.

**MUSI 60923 - Philosophy of Music Education**

A study of the concepts involved in the philosophy of music education with respect to the place of music as a moral, social and cultural force.

**MUSI 70203 - Analysis for Performance**

Prerequisites: MUSI 50203. In this course students learn to apply analytical techniques learned in MUSI 50203, Musical Structure and Style to performance of musical works. Students will be required to analyze works, articulate the implications for performance suggested by these analyses, critique performance editions and performances in terms of these analyses, and apply their finds to performance and the production of performance editions.

**MUSI 70220 - Doctoral Conducting**

Prerequisites: must be a DMA conducting student. Advanced conducting lessons for doctoral (DMA) students.

**MUSI 70630 - Doctoral Composition**

Prerequisites: must be a doctoral student in Music Composition. Private lessons in composition are dedicated to the student application of advanced techniques in the field through the creation of new works. In doctoral level lessons the student is expected to use the aforementioned techniques in the context of developing his or her own creative voice.

**MUSI 70771 - Non-Thesis**

Selected when enrolling only for non-thesis examination or preparation for the examination.

**MUSI 70903 - Music Theory Treatise**

Prerequisites: Doctoral student in music. Students do intensive study in the area of musical analysis and produce a significant document related to this study by semester's end.

**MUSI 70950 - Special Problems in Musicology**

Prerequisite: Graduate standing in music; consent of instructor. Special topics in the history of music, affording students an opportunity to carry on individual programs of study.

**MUSI 70971 - Recital I**

Recital I.

**MUSI 70972 - Lecture Recital**

Preparation and delivery of a lecture-recital on a pedagogical topic. Culminates in a major paper and a large-scale workshop presentation.

**MUSI 70980 - Thesis I**

Thesis I

**MUSI 70981 - Recital II**

Recital II.

**MUSI 70990 - Thesis II**

Thesis II

**MUSI 80971 - Doctoral Pedagogy Workshop I**

Prerequisites: MUSI 60203 and 60213. The preparation of a public workshop for piano teachers at least five hours in length addressing topics related to teaching techniques, teaching materials, and piano literature.

**MUSI 80981 - Doctoral Pedagogy Workshop II**

Prerequisites: MUSI 80971. The presentation of a public workshop for piano teachers at least five hours in length addressing topics related to teaching techniques, teaching materials, and piano literature.

**MUSI 90970 - DMA Document**

Requisites: Doctoral students in music. DMA Document. May be repeated for credit; 6 hours required.

**MUSI 90980 - DMA Composition Dissertation**

Prerequisites: Doctoral student in Music. Capstone document in Music composition. This will be a musical composition or set of compositions of major scope.

**MUSI 90990 - DMA Composition Dissertation**

Prerequisites: Doctoral student in Music. Capstone Document in Music Composition. This will be a musical composition or set of compositions of major scope.

**Music Performance Courses**

**MUSP 50210 - Artist Diploma Lessons**

Prerequisites: Acceptance to Artist Diploma program, Post-Baccalaureate.

**MUSP 50961 - Artist Diploma Recital I**

Prerequisites: Acceptance to Artist Diploma Program, Post-Baccalaureate. First recital in a sequence of four required for the Artist Diploma program in the School of Music.

**MUSP 50971 - Artist Diploma Recital II**

Prerequisites: Acceptance to Artist Diploma Program, Post-Baccalaureate. Second recital in a sequence of four required for the Artist Diploma program in the School of Music.

**MUSP 50981 - Artist Diploma Recital III**

Prerequisites: MUSP 50971. Third recital in a sequence of four required for the Artist Diploma program in the School of Music.

**MUSP 50991 - Artist Diploma Recital IV**

Prerequisites: MUSP 50971. Fourth recital in a sequence of four required for the Artist Diploma program in the School of Music.

**MUSP 60110 - Voice**

Voice

**MUSP 60120 - Vocal Coaching Graduate**

Prerequisites: Enrollment in Studio Voice MUSP 60110. Individual instruction providing an introduction to professional methods used in opera companies and music theatre for aspiring professional vocalists. Students will concentrate on in-depth study of details of text and style, ensuring authentic sounding diction and appropriate stylistic interpretation. Repertoire studied will be assigned by the studio teacher along with repertoire being prepared for performance on campus and off. Course may be taken for 1 or 2 credits and repeated for credit.

**MUSP 60130 - Applied Voice Technology**

Concurrent enrollment in MUSP 60110. This elective course teaches the student to employ the Kay-elementrics Computerized Speech Lab, the Voce Vista program (with electroglottography), and video and recording equipment in furthering the development of their own vocal technique and in devising strategies for the teaching studio by applying measurable analyses to the coordination of vocal-fold vibration, airflow and resonance factors. Students may examine recordings from their studio lessons and compare technical strategies of recorded professional singers. Research projects may be developed.

**MUSP 60210 - Piano**

Piano

**MUSP 60220 - Organ**

Organ

**MUSP 60230 - Jazz Piano**

Jazz Piano

**MUSP 60240 - Harpsichord**

Harpsichord

**MUSP 60310 - Violin**

Violin

**MUSP 60320 - Viola**

Viola

**MUSP 60330 - Violoncello**

Violoncello

**MUSP 60340 - Double Bass**

Double Bass

**MUSP 60350 - Viola da Gamba**

Viola da Gamba

**MUSP 60360 - Jazz Bass**

Jazz Bass

**MUSP 60410 - Flute**

Flute

**MUSP 60420 - Oboe**

Oboe

**MUSP 60430 - Clarinet**

Clarinet

**MUSP 60440 - Saxophone**

Saxophone

**MUSP 60450 - Bassoon**

Bassoon

**MUSP 60460 - Jazz Saxophone**

Advanced study and performance of saxophone in the jazz style. Emphasis will be placed on maintaining an authentic sound, style and interpretation of jazz repertoire dating from the 1940's to the present. Instruction consists of one on one interaction between faculty and student and is offered for one or two credit hours.

**MUSP 60510 - French Horn**

French Horn

**MUSP 60520 - Trumpet**

Trumpet

**MUSP 60530 - Trombone**

Trombone

**MUSP 60540 - Baritone**

Baritone

**MUSP 60550 - Tuba**

Tuba

**MUSP 60560 - Euphonium**

Euphonium

**MUSP 60610 - Percussion**

Percussion

**MUSP 60620 - Jazz Drumset**

Jazz Drumset

**MUSP 60710 - Harp**

Harp

**MUSP 60810 - Guitar**

Guitar

**MUSP 60910 - Jazz Guitar**

Jazz Guitar

**MUSP 70110 - Doctoral Voice**

Prerequisite: DMA students only. Advanced study in voice for DMA students.

**MUSP 70210 - Doctoral Piano**

Prerequisite: DMA students only. Advanced study in piano for DMA students.

**MUSP 70220 - Doctoral Organ**

Prerequisite: DMA students only. Advanced study in organ for DMA students.

**MUSP 70310 - Doctoral Violin**

Prerequisite: DMA students only. Advanced study in violin for DMA students.

**MUSP 70320 - Doctoral Viola**

Prerequisite: DMA students only. Advanced study in viola for DMA students.

**MUSP 70330 - Doctoral Violoncello**

Prerequisite: DMA students only. Advanced study in violoncello for DMA students.

**MUSP 70340 - Doctoral Double Bass**

Prerequisite: DMA students only. Advanced study in double bass for DMA students.

**MUSP 70410 - Doctoral Flute**

Prerequisite: DMA students only. Advanced study in flute for DMA students.

**MUSP 70420 - Doctoral Oboe**

Prerequisite: DMA students only. Advanced study in oboe for DMA students.

**MUSP 70430 - Doctoral Clarinet**

Prerequisite: DMA students only. Advanced study in clarinet for DMA students.

**MUSP 70440 - Doctoral Saxophone**

Prerequisite: DMA students only. Advanced study in saxophone for DMA students.

**MUSP 70450 - Doctoral Bassoon**

Prerequisite: DMA students only. Prerequisite: DMA students only. Advanced study in bassoon for DMA students.

**MUSP 70510 - Doctoral French Horn**

Prerequisite: DMA students only. Advanced study in French Horn for DMA students.

**MUSP 70520 - Doctoral Trumpet**

Prerequisite: DMA students only. Advanced study in trumpet for DMA students.

**MUSP 70530 - Doctoral Trombone**

Prerequisite: DMA students only. Advanced study in trombone for DMA students.

**MUSP 70550 - Doctoral Tuba**

Prerequisite: DMA students only. Advanced study in tuba for DMA students.

**MUSP 70610 - Doctoral Percussion**

Prerequisite: DMA students only. Advanced study in percussion for DMA students.

**MUSP 70971 - Recital I**

Recital I

**MUSP 70981 - Recital II**

Recital II

**MUSP 80961 - DMA Lecture Recital**

Prerequisites: Limited to doctoral students in music. A lecture/performance employing a synthesis of scholarship and

performance skills in the examination of a topic related to the candidate's area of performance

**MUSP 80971 - DMA Recital I**

Prerequisites: Doctoral student in Music only. A public recital presented by the doctoral student in music.

**MUSP 80981 - DMA Recital II**

Prerequisites: Must be a Doctoral student in music. A public recital presented by the doctoral student in music.

**MUSP 80991 - DMA Recital III**

Prerequisites: Must be a doctoral student in music. A public recital presented by the doctoral student in music.

# Addran College of Liberal Arts

In 1873, Addison and Randolph Clark established AddRan Male and Female College in Thorp Spring, Texas. That institution later moved to Fort Worth and became Texas Christian University. Though the University has grown and expanded into areas that the Clark brothers could not have conceived, the AddRan College of Liberal Arts perpetuates their vision of education and the centrality of the liberal arts that lay at its core.

Today, AddRan offers the MA and PhD. in English and History. Four departments (economics; philosophy; religion; and sociology, criminal justice and anthropology) offer a limited number of courses at the graduate level in which graduate students from across the University can enroll. Additionally, faculty in various other AddRan departments also hold appointments to the graduate faculty, allowing them to work with graduate students in various capacities, including serving on thesis or dissertation committees.

## English

The English concentration is available on the Master of Arts and the Doctor of Philosophy degrees.

For admission and general requirements, see the front of this catalog where specific departmental requirements and supplementary information are provided.

### English MA/PhD Admission Requirements

To pursue the MA in English, students must earn a B.A. or equivalent, with credit in English equivalent to the TCU 30-semester-hour major and with sophomore-level credit in a foreign language. Applicants with less preparation may be admitted conditionally, but must take such additional courses as are prescribed by AddRan College and the departmental director of graduate studies. Applicants must present recent GRE scores (less than five years old) with the admission application. Applicants must also submit a writing sample (10-20 pages, exclusive of notes and works cited) that demonstrates appropriate academic and writing skills needed for success in an English graduate program. Applicants should include with their materials a personal statement outlining career goals, explaining how they match the English Program at TCU, and three to five references directly relevant to postgraduate work in English studies.

### English MA Program

The program requires at least 30 semester hours of credit approved by the director of graduate studies in addition to any coursework required because of inadequate prerequisites. The 30 hours include six hours for a thesis and may include up to nine hours for an approved minor or approved courses in a related field or fields.

### English PhD Program

#### Course Requirements

Students must complete for credit a minimum of 54 semester hours of graduate courses, exclusive of credit hours for the dissertation. Postgraduate hours completed more than seven years prior to a student's admission into TCU's English graduate program may not count toward requirements; the graduate adviser will determine applicable credit on a case-by-case basis. Of the 54 hours, at least 36 must be taken at TCU, and 27 must be in courses that satisfy the graduate core, which is described in subdivisions A, B and C below:

- A. *Resources for English Studies (6 hours)*
  - 3 hours Research Methods
  - 3 hours Introduction to Modern Critical Theory
- B. *Rhetoric and Composition (6 hours)*
  - 3 hours Theories of Composition
  - 3 hours History of Rhetoric or Modern Rhetoric
- C. *Literature (12 hours)*
  - 6 hours in literature before 1830
  - 6 hours in literature after 1830
- D. *Focus (12 hours)*

A minimum of 9 semester hours is required in the student's area of concentration, which is to be chosen from the following:

  1. British Literature

2. American Literature
3. Rhetoric and Composition

### Language Requirement

Reading knowledge of one approved foreign language, typically selected from French, German, Spanish or Latin, is required. Other languages may be offered on approval of the Departmental Graduate Committee, but the language should be the one most appropriate to the student's research, field of concentration or professional development. This requirement may be met by satisfying the general University statement under PhD Degree Requirements or by any other means approved by the Departmental Graduate Committee. The language requirement must be satisfied before the student can be admitted to candidacy for the PhD degree.

### Examinations

A qualifying examination, consisting of three essays written over a period of five days and a two-hour oral examination, is offered when a student has completed for credit 48-54 hours of graduate courses, of which 24-30 hours must be from TCU; has completed the graduate core; and has met the language and residency requirements. These examinations are based upon the student's areas of concentration. Two examinations must fall within the concentration area; the third may fall within a related or directly complementary field. The student and his/her advisory committee will determine the areas to be covered by these specialty examinations. A student who fails one or more parts of the examinations may take them again, but a second failure on one examination bars the student from candidacy.

### Dissertation

Doctoral students must complete a dissertation that demonstrates their ability to do independent and original research, and to synthesize their findings and existing knowledge into a unified document. A candidate must present a dissertation prospectus to his/her advisory committee for discussion, suggestions and approval before proceeding with the project. The candidate's oral defense of the dissertation is a public lecture based upon his/her findings, presented to the Department of English graduate faculty, graduate students and other interested persons within the academic community.

### Advisory Committee

Before taking qualifying examinations, a student requests through the director of graduate studies that the associate dean of AddRan College of Liberal Arts appoint an advisory committee of four members. The dissertation director normally serves as chair of the student's advisory committee. One member of the committee may come from outside the Department of English if the candidate's dissertation project requires such additional expertise. The advisory committee suggests concentration courses, prepares the qualifying examinations, approves the student for candidacy and directs the dissertation.

### Academic Advising

Students are advised by the departmental director of graduate studies throughout their doctoral programs.

## Rhetoric and Composition PhD Program

### Course Requirements

Completion for credit of a minimum of 54 semester hours of graduate courses, exclusive of credit hours for the dissertation. Postgraduate hours completed more than seven years prior to a student's admission into TCU's graduate program in Rhetoric and Composition may not count toward requirements; the graduate advisor will determine applicable credit on a case by case basis. Of the 54 hours, at least 36 must be taken at TCU and 27 must be in courses that satisfy the graduate core, which is described in subdivisions A, B and C below.

- A. *Theory (6 hours)*
  - 3 hours ENGL 60703: Introduction to Composition
  - 3 hours ENGL 60123: Introduction to Modern Critical Theory or ENGL 80123: Seminar in Literary Theory
- B. *Required Rhetoric and Composition (9 hours)*
  - 3 hours ENGL 70703: History of Rhetoric or ENGL 60713: Modern Rhetoric

or ENGL 50253: Classical Rhetoric  
 3 hours ENGL 60723: Research Practices in Composition and Rhetoric  
 or ENGL 70723: Rhetoric and Criticism  
 3 hours ENGL 60710: Teaching Practicum

C. *Elective—Rhetoric and Composition (12 hours)*

3 hours ENGL 50233: Studies in Creative Writing  
 3 hours ENGL 50243: Teaching Writing  
 3 hours ENGL 60203: Writing for the Professions  
 3 hours ENGL 70713: Rhetoric and Literature  
 3 hours ENGL 80603: Seminar in Kenneth Burke  
 3 hours ENGL 80613: Women's Rhetorics  
 3 hours ENGL 80703: Seminar in Rhetoric  
 3 hours ENGL 80713: Seminar in Literacy  
 3 hours ENGL 80723: Seminar in Composition

D. *General Electives (12 hours)*

In consultation with an advisor, students will take 12 semester hours of elective credit in graduate level literature, additional Rhetoric and Composition, or other areas.

**Language Requirement**

Reading knowledge of one approved foreign language, typically selected from French, German, Spanish or Latin, is required. Other languages may be offered on approval of the Departmental Graduate Committee, but the language should be the one most appropriate to the student's research, field of concentration or professional development. This requirement may be met by satisfying the general University statement under PhD Degree Requirements or by any other means approved by the Departmental Graduate Committee. The language requirement must be satisfied before the student can be admitted to candidacy for the PhD degree.

**Examinations**

A qualifying examination, consisting of three essays written over a period of five days and a two-hour oral examination, is offered when a student has completed for credit 48-54 hours of graduate courses, of which 24-30 hours must be from TCU; has completed the graduate core; and has met the language and residency requirements. These examinations are based upon the student's areas of concentration. Two examinations must fall within the concentration area; the third may fall within a related or directly complementary field. The student and his/her advisory committee will determine the areas to be covered by these specialty examinations. A student who fails one or more parts of the examinations may take them again, but a second failure on one examination bars the student from candidacy.

**Dissertation**

Doctoral students must complete a dissertation that demonstrates their ability to do independent and original research, and to synthesize their findings and existing knowledge into a unified document. A candidate must present a dissertation prospectus to his/her advisory committee for discussion, suggestions and approval before proceeding with the project. The candidate's oral defense of the dissertation is a public lecture based upon his/her findings, presented to the Department of English graduate faculty, graduate students and other interested persons within the academic community.

**Advisory Committee**

Before taking qualifying examinations, a student requests through the director of graduate studies that the associate dean of AddRan College of Liberal Arts appoint an advisory committee of four members. The dissertation director normally serves as chair of the student's advisory committee. One member of the committee may come from outside the Department of English if the candidate's dissertation project requires such additional expertise. The advisory committee suggests concentration courses, prepares the qualifying examinations, approves the student for candidacy and directs the dissertation.

**Academic Advising**

Students are advised by the departmental director of graduate studies throughout their doctoral programs.

**English Courses**

**ENGL 50233 - Studies in Creative Writing**

Prerequisites: ENGL 10203, and 20803. Prior to enrollment, students are also strongly encouraged to take the 30000-level course appropriate

to the semester's genre. ENGL 50233 is an intensive creative writing workshop open to students (graduate and advanced undergraduates) who have a strong background in literature and imaginative writing. Depending on the semester and the selected genre, this course will pay special attention to invention, point-of-view, voice, form, and genre-appropriate theory.

**ENGL 50243 - Teaching Writing**

Prerequisites: ENGL 10803 or 10833, and one 20000-level ENGL course. A course for teachers of English combining theories of composition with practical pedagogy and classroom strategies for the teaching of writing. Not applicable toward degree requirements for the Ph.D. in English.

**ENGL 50253 - Classical Rhetoric**

Prerequisite: Junior or senior standing, permission of instructor. This course examines the emergence of rhetoric in Antiquity and traces the impact of classical rhetoric up to the Middle Ages. A substantial amount of the course is devoted to learning about the relationship between oral and written discourse, the impact of literacy, and the adaptability of systems of communication to technology and society. The implications of such phenomena are examined in different periods in an effort to develop an historical perspective about the relationship between cognition and expression within cultural conditions.

**ENGL 50973 - Directed Study in English**

Prerequisites: ENGL 10803 or 10833, and one 20000-level ENGL course. Directed Study in English.

**ENGL 60103 - Bibliography and Methods of Research**

History, materials and techniques of manuscript and book production; bibliographical description; use of libraries and bibliographical tools, introduction to textual analysis; thesis and dissertation problems and procedures.

**ENGL 60123 - Introduction to Modern Critical Theory**

A seminar on major authors and issues in contemporary critical theory.

**ENGL 60203 - Writing for the Professions**

A workshop for the student who wishes to learn how to write in a specific academic discipline or in a profession.

**ENGL 60303 - Seminar in Medieval Studies**

An Introduction to Medieval literature through the study of Old and Middle English. Key writings will include Beowulf, and texts by Chaucer and the Pearl Poet.

**ENGL 60413 - Chaucer**

Chaucer's language and poems with emphasis on The Canterbury Tales as a work of art and as a reflection of the age.

**ENGL 60423 - Prose and Poetry of the English Renaissance**

The prose writers and poets of 16th and 17th century England in relation to the cultural circumstances influencing and being influenced by their works. Topics may include the prospect and enactment of censorship; the centrality of the patronage system; courts and courtiers; changing views of monarchy and obedience; religious controversy; issues of gender, ethnicity and class; literature and science; pseudo-nonfictional strategies; adaptations of the bible, history, and mythology; and early book production and circulation.

**ENGL 60433 - Renaissance Drama Exclusive of Shakespeare**

The study of the works of major Elizabethan and Jacobean playwrights.

**ENGL 60443 - Seventeenth Century Poetry**

Study of the works of major seventeenth century poets including Donne and Marvell.

**ENGL 60453 - The Long Eighteenth Century**

British literature of multiple genres (poetry, prose, drama, novel, memoir, diary, broadsheets and ballads) from 1660 to 1830. Themes vary by semester.

**ENGL 60473 - British Novel I**

Major fiction to the early nineteenth (1832) century.

**ENGL 60503 - Early American Literature**

American literature from first settlement through 1800, including the Puritan writers (Winthrop, Mather, etc.), the shapers of the American Republic (Paine, Jefferson, Franklin, the Federalist writers, etc.), and early writers of the New Nation (Brown, Dwight, Freneau, Rowson, etc.).

**ENGL 60513 - Teaching College Composition**

Designed to support graduate instructors' teaching of English. Students in the course will explore theories and methods of syllabus construction, teaching, assigning, and grading student writing.

**ENGL 60703 - Introduction to Composition Studies**

A survey of the major contemporary theoretical statements about composing and the teaching of composition.

**ENGL 60713 - Modern Rhetoric**

Major theories of rhetoric and important rhetoricians of the twentieth century.

**ENGL 60723 - Research Practices in Composition and Rhetoric**

History, practices, and methodological concerns; use of archives and information systems; publishing and disciplinary conventions; assessment; fieldwork; ethics, thesis and dissertation problems and procedures.

**ENGL 70403 - British Novel II**

Major fiction from the early nineteenth to the early twentieth century.

**ENGL 70413 - Romantic Poetry and Prose**

The study of works by Wordsworth, Coleridge, Byron, Shelley, Keats and others.

**ENGL 70423 - Victorian Poetry and Prose**

The study of major works and authors, including Arnold, Browning and Tennyson.

**ENGL 70433 - Modern British Novel**

The study of major fiction of the twentieth century.

**ENGL 70443 - Modern British Poetry**

Study of twentieth century British poets.

**ENGL 70453 - Modern British Drama**

The study of important plays and playwrights of the twentieth century.

**ENGL 70463 - Modern British Literature**

Survey of major trends and writers in British literature since 1900.

**ENGL 70473 - Twentieth Century Irish Writers**

Study of important Irish works, with emphasis on Yeats, Joyce and Synge.

**ENGL 70483 - Victorian Women Writers**

An intensive examination of Victorian women poets, novelists, and prose writers in the context of historical conditions and feminist theory.

**ENGL 70493 - Nineteenth Century Studies in British Literature**

Selected topics in nineteenth-century British literature (variable emphasis each semester). Past offerings have included the Medieval Revival and Nineteenth-Century Literature and Rhetoric.

**ENGL 70503 - American Novel I**

The American novel from its beginnings to 1890. Topics examined include the Gothic and sentimental novelists (Brown, Rowson), the early national novel (Cooper), the Romantics (Hawthorne, Melville), Realism and the Realists (Twain, James, Howells), and the early Naturalists (Norris).

**ENGL 70513 - American Novel II**

The development of the American novel from 1890 to the start of World War II.

**ENGL 70523 - American Novel III**

The development of the American novel from 1940 to the present.

**ENGL 70533 - The American Short Story**

A study of short fiction in American literature.

**ENGL 70543 - American Poetry I**

The development of American poetry from the beginnings to 1900.

**ENGL 70553 - American Poetry II**

Major poets and works of the twentieth century.

**ENGL 70563 - American Stagings: Culture, Theatre, Performance**

Dramas from U.S. literature will be read alongside other documents and literary texts in order to foreground the genre's relation to culture, historical, and social contexts. Attention will be given to related cultural phenomena and theoretical concepts, such as the history of U.S. theatre, theatricality in other venues, or performance theory.

**ENGL 70573 - American Non-Fiction Prose**

Major documents of non-fiction prose in American literature.

**ENGL 70583 - American Literature in a Global Context**

This course engages in comparative, cross-cultural study of American literature in a global context. Affirming the field's increasing commitment to extending the scope of "American literatures" beyond U.S. national borders, readings and student research will explore a range of texts using one or more of these frameworks: hemispheric, trans-Atlantic, border-crossing, inter-American. Students may repeat this course, based on differing thematic and organizational approaches being used for the content of particular offerings.

**ENGL 70593 - Authorship in American Literary Culture**

This course examines both shifting conceptions of authorship (e.g., "writer" versus "author") and issues associated with authorial practices in American literary culture. Topics may include individual authors' careers and questions about how conditions in different time periods (e.g., the rise/fall of magazine culture or changes in the public's reading habits) have shaped literary careers. Students may repeat this course, which could utilize diverse organizing principles in differing offerings (e.g., popular culture authorship versus "high art"; American authorship as seen in critical theory; factors promoting the shift from amateur activity to professionalization).

**ENGL 70703 - History of Rhetoric**

A study of the major authors and issues in the history of rhetoric from antiquity to the present day.

**ENGL 70713 - Rhetoric and Literature**

The applications and implications of rhetorical criticism for the study of literature.

**ENGL 70723 - Rhetoric and Criticism**

A study of classical and modern rhetorical theory, with emphasis on the uses of rhetoric in the study of modern communication.

**ENGL 70771 - Non-Thesis**

Selected when enrolling only for non-thesis examination or preparation for the examination.

**ENGL 70970 - Directed Studies**

Directed Studies in English.

**ENGL 70980 - Thesis**

Thesis

**ENGL 70990 - Thesis**

Thesis

**ENGL 80123 - Seminar in Literary Theory**

Seminar in the theoretical problematics of literary language and in current trends within critical theory. Topics change each term; may be repeated for credit.

**ENGL 80403 - Seminar in Spenser**

Seminar in Spenser.

**ENGL 80413 - Seminar in Shakespeare**

Seminar in Shakespeare

**ENGL 80433 - Seminar in British Literature of the Eighteenth Century**

Seminar in British literature of the eighteenth century.

**ENGL 80443 - Seminar in British Literature of the Romantic Period**

Seminar in British literature of the romantic period. Variable emphasis each semester.

**ENGL 80453 - Seminar in British Literature of the Victorian Period**

Variable emphasis each semester. (Past offerings have included The Brownings' Circle.)

**ENGL 80463 - Seminar in Modern British Literature**

Seminar in modern British literature.

**ENGL 80463 - Postcolonial Literature**

Seminar in the cultural politics of countries formerly colonized by Great Britain. Topics vary: recent offerings have focused on India, Ireland, South Africa, Kenya, and Zimbabwe.

**ENGL 80473 - Renaissance Bodies**

Advanced graduate seminar in dramatic literature of the English Renaissance with a focus on the religious, political, aesthetic, and medical history of the body.

**ENGL 80503 - Seminar in American Literature before 1900**

Topics vary; recent offerings have included "Emerson and His Circle" and "The American Renaissance."

**ENGL 80513 - Seminar in American Literature since 1900**

Seminar in American literature since 1900.

**ENGL 80523 - Race and Gender in American Literature**

Examination of race and gender in American literature in relation to recent developments in fields such as women's studies, gender studies, critical race studies, Native American studies, and/or African American studies. Themes will vary by semester.

**ENGL 80533 - Literature of Latina/o Diaspora**

Examination of seminal works of literature in multiple genres by U.S. Latina/o authors. Particular emphasis will be put on a comparative approach, exploring the literature of Puerto Rican, Cuban, Chicana/o, Mexican, Dominican, and/or Nicaraguan Americans. Texts vary by semester.

**ENGL 80583 - Seminar in Contemporary African-American Literature**

This seminar provides graduate students with the opportunity to research and present theoretical approaches to representative contemporary fiction by African-Americans. Continuities will be established between theories shaped by the Black Arts Movement of the sixties and those shaped by post-modernist thinking. Representative writers may include Alice Walker, Toni Cade Bambara, Charles Johnson, Toni Morrison and Ernest Gaines.

**ENGL 80603 - Seminar in Kenneth Burke**

A study of the rhetorical theory and critical methods of Kenneth Burke. This course will include a careful consideration of Burke's major theoretical and literary work with particular emphasis on the ways in which his rhetorical/literary theory grew out of his own literary practice and his engagement in modernist conversations about the function of art (and language, more generally) in culture.

**ENGL 80613 - Women's Rhetorics**

This course examines the histories, theories, and practices of women's rhetorics from the classical era through the present. Students will examine primary texts of women rhetors - essays, "ordinary" writing such as letters and autobiographies, and speeches, to name only a few - as well as secondary sources of those texts, paying particular attention to the ways gender, race, class, religion, place, sexual orientation, and politics shape sense of audiences, methods of invention, arrangement, choices of style, form, tone, and genre.

**ENGL 80703 - Seminar in Rhetoric**

A study of selected major figures and issues in the history of rhetoric.

**ENGL 80713 - Seminar in Literacy**

Exploration of major issues in literacy history, theory, and research. Topics may vary.

**ENGL 80723 - Seminar in Composition**

A study of issues in composition research, practice, or theory. Topics may vary.

**ENGL 80733 - Poststructural Rhetoric**

Prerequisites: ENGL 60123 or 60713 or 70703. An advanced, intensive study of those rhetorical and theoretical positions that often inform contemporary scholarship in composition studies, rhetoric, literature, and cultural studies. Reading will focus on those anglophone and European theorists most often of use to and in discussion with the whole of modern rhetoric and literary theory.

**ENGL 80743 - Genre Theory**

A study of genre theory, with emphasis on the history, methods, and major theories of genre studies in rhetorical theory and literary studies.

**ENGL 90980 - Dissertation**

Dissertation.

**ENGL 90990 - Dissertation**

Dissertation.

## History

The history concentration is available on the Master of Arts and Doctor of Philosophy degrees.

Students must earn a B.A. degree or its equivalent with a 24-semester-hour major in history, and sophomore-level credit in a foreign language. Applicants lacking these qualifications may be admitted conditionally, but must take such preparatory work as may be prescribed by the chair of the Department of History. Applicants should take the GRE and submit these scores with their admission materials.

The Department of History Graduate Committee considers applications during the fall and spring semesters. Yet for maximum consideration applicants should submit their materials before February 1. Late applications will be accepted but will not have priority of consideration.

### History MA Program

To be admitted to study in the MA program, an applicant must complete 24 hours of undergraduate history courses and achieved a score of at least 500 on the verbal portion of the GRE and 4.5 on the analytical writing portion of the exam.

A minimum of 30 approved semester hours, including at least 15 in history courses and six in thesis is required. A maximum of nine hours of supporting work in related disciplines is optional. History 50960 Historiography and Bibliography is required of all graduate students.

For specific requirements, consult the *Department of History Guide to Graduate Study*.

### History PhD Program

To be admitted to study in the PhD program, an applicant must complete 24 hours of undergraduate history courses and have achieved a score of at least 500 on the verbal portion of the GRE and 5.0 on the analytical writing portion of the exam.

Students must also present a strong academic record and provide evidence of an ability to do scholarly research and writing. Even though he/she may have earned an MA degree at TCU, the student must reapply to AddRan College before being admitted to work toward the PhD degree. Letters of recommendation, GRE scores, a statement of purpose and writing sample, and three letters of recommendation are required.

The doctorate is offered in the areas of the U.S. and Latin America history. Students are normally expected to earn the MA degree before continuing toward the PhD

Degree requirements are:

1. A suitable number and variety of graduate courses to prepare the student for the qualifying examination and for the writing of the dissertation. In addition to the major area of specialization, the student also completes coursework in two minor areas, usually nine hours in each. With the approval of the student's graduate committee, as many as 12 hours may be taken outside the department. The doctoral program comprises no fewer than 54 hours of graduate courses for credit exclusive of credit hours for the dissertation.

2. Reading knowledge of one approved foreign language, usually selected from French, German or Spanish. The language should be the one most appropriate to the student's research and fields of concentration. Reading knowledge can be demonstrated either by superior performance on the ETS examination, by satisfactory completion of a special course offered by the Department of Modern Languages, by independent study and successful examination by a member of the department fluent in the language, or by achieving at least a grade of "B" in six hours of sophomore-level college language courses. The language requirements must be met no later than the end of the first semester of the second year.
3. A comprehensive qualifying examination consisting of written and oral exams covering two minor fields and the major area of specialization. The student must pass the written minor field and major field exams before taking the oral exam. On both the written and the oral, he/she will be allowed only two opportunities. Upon the completion of the comprehensive qualifying examination, the student is admitted to candidacy. For specifics regarding this examination, see the *Department of History Guide to Graduate Study*.
4. A doctoral dissertation constituting an original contribution to scholarship or a new synthesis of existing knowledge. The candidate defends the dissertation in a final oral examination.

## History Courses

### HIST 50063 - Historical Methods

Techniques of historical research and documentation. Evaluation of documents, applying internal and external criticism to determine validity of use. Oral history research evaluation and interviewing techniques.

### HIST 50070 - History, Administration, and Management of Archives, I and II

The historical development of archival institutions, procedures and techniques with special emphasis on American federal, state and local records, both public and private. Students will be introduced to professional field work in the archives of the participating institutions.

### HIST 50080 - Archival Internship

Supervised professional training at the Federal Archives and Records Center of Fort Worth, the Regional State Archives of Texas, the Amon Carter Library and the Manuscript Collection of Texas Christian University. Open only to students who are taking or have completed HIST 50070. Required of all students who select the Archives Studies option.

### HIST 50933 - Philosophy of History

Prerequisites: six hours of history, three hours of philosophy. A philosophical analysis of historiography: the logical, conceptual and epistemological characterization of what historians do; also includes a study of traditional attempts to discover some meaning which transcends the intelligibility sought and achieved by ordinary historical work.

### HIST 50960 - Historiography and Bibliography

The major historians of the past, changes in the interpretation and philosophies of history and the major bibliographic sources utilized in the writing of history.

### HIST 50970 - Special Studies in History

Special Studies in History. (NWH or WH)

### HIST 50980 - Historical Writing and Editing

The methods and problems of research and historical writing. Also covers the principles and methods of editing historical journals and documents including archival manuscripts. 3 hours NWH or WH.

### HIST 70103 - Seminar in Ancient History

A readings seminar in which students read widely in the important works on various issues and interpretations of Ancient history

### HIST 70203 - Seminar in Women's History

A readings seminar in which students read widely in the important works on various issues and interpretations of Women's history.

### HIST 70303 - Seminar in Early Modern European History

A readings seminar in which students read widely in the important works on various issues and interpretations of Early Modern European history.

### HIST 70403 - Seminar in Modern European History

A readings seminar in which students read widely in the important works on various issues and interpretations of Modern European history

### HIST 70443 - Seminar in Russian History

A readings seminar in which students read widely in the important works on various issues and interpretations of Russian history

### HIST 70453 - Seminar in Asian History

A readings seminar in which students read widely in the important works on various issues and interpretations of Asian history.

### HIST 70503 - Seminar in British History

A readings seminar in which students read widely in the important works on various issues and interpretations of British history.

### HIST 70603 - Seminar in United States History

A readings seminar in which students read widely in the important works on various issues and interpretations of United States history.

### HIST 70703 - Seminar in Military History

A readings seminar in which students read widely in the important works on various issues and interpretations of Military history.

### HIST 70771 - Non-Thesis

Selected when enrolling only for non-thesis examination or preparation for the examination.

### HIST 70803 - Seminar in Vietnam War History

A readings seminar in which students read widely in the important works on various issues and interpretations of Vietnam War history.

### HIST 70813 - Seminar in Hispanic American History

A readings seminar in which students read widely in the important works on various issues and interpretations of Hispanic American history.

### HIST 70903 - Seminar in Latin American History

A readings seminar in which students read widely in the important works on various issues and interpretations of Latin American history.

### HIST 70980 - Thesis

Thesis

### HIST 70990 - Thesis

Thesis

### HIST 80083 - History as a Profession: Teaching, Research, and Service

Covers all aspects of the teaching profession, including selection of readings, designing courses, preparation and delivery of class lectures, leading class discussions, preparing and grading exams, and professional expectations during and after graduate school.

### HIST 80090 - Supervised Teaching at the College Level

All teaching assistants who are assigned to teach undergraduate courses must enroll for this course.

### HIST 80103 - Research Seminar in Ancient History

As a seminar, this course emphasizes reading, research, writing, and discussion. An occasional lecture may be scheduled. Topics of study will vary from semester to semester. Prerequisites: admission to the graduate program and permission of the instructor.

### HIST 80203 - Research Seminar in Women's History

This seminar will investigate women's experiences in and contributions to the history of the western world, Europe and the United States. Topics may include, but are not limited to: family and reproduction, work, politics, gender issues, slavery, and the frontier.

### HIST 80443 - Research Seminar in Russian History

Research Seminar in Russian history.

**HIST 80453 - Research Seminar in Asian History**

Research seminar in Asian History. Students will read widely around important historiographical issues in Asian history or conduct intensive research on a specific topic in Asian history.

**HIST 80503 - Research Seminar in British History**

Research Seminar in British history.

**HIST 80603 - Research Seminar in U.S. History**

Research Seminar in U.S. history.

**HIST 80703 - Research Seminar in Military History**

Research Seminar in Military history.

**HIST 80803 - Research Seminar in Vietnam War History**

Traces the history of China's social and military influence on Vietnam, the history of pre-European Vietnam, French conquest, Indo-China War, the roots of U.S. involvement, the course of the U.S. war, U.S. domestic developments and post-1975 Socialist Republic of Vietnam.

**HIST 80813 - Research Seminar in Hispanic American History**

Research Seminar in Hispanic American history.

**HIST 90980 - Dissertation**

Prerequisite: Written permission of chairman of the department.

**HIST 90990 - Dissertation**

Prerequisite: Admission to candidacy. Continuation of 90980. A minimum of 12 hours of dissertation credit is required.

## Philosophy Courses

**PHIL 50970 - Directed Studies in Philosophy**

Prerequisite: Permission of instructor.

## Religion Courses

**RELI 50130 - Seminar in Biblical Studies**

Prerequisite: approval of instructor. A particular topic in Biblical Studies will be selected for detailed study. (3-6 semester hours)

**RELI 50970 - Directed Study in Religion**

1 - 6 semester hours

## Sociology

**Anthropology Program**

Administered by the Department of Sociology.

**Anthropology Courses****ANTH 50623 - Advanced General Anthropology**

An overview of the field, including archaeology, linguistics, ethnology, and physical anthropology. Description and analysis of the profession, its history, theoretical foci, intellectual leaders and current ethical dilemmas. For advanced undergraduates and graduate students with opportunities to pursue individual interests within the field.

**ANTH 50923 - Kinship and Social Organization**

Prerequisite: ANTH 20623 or permission of instructor. Principles of descent, kinship terminology and formation of descent groups, including an examination of specific terminological systems in relation to other features of social organization; the adaptive dynamics of family, groups, kinship, and extra-familial associations in simple and complex societies.

**ANTH 60670 - Directed Readings or Research in Anthropology****Sociology Courses****SOCI 50610 - Directed Study in Sociology**

Prerequisite: permission of instructor, and graduate standing. Supervised reading, research and completion of a substantial paper. May be taken for credit ranging from 1-6 semester hours and may be taken more than once.

# Harris College of Nursing & Health Sciences

## Conditional Admission

Conditional admission of graduate students may be granted upon the recommendation of the department chair or director. No student may remain on conditional status more than one semester without further approval of the department chair or director. Removal of the conditional status is described in acceptance letters to students and requires a minimum of one semester of full-time work with grades of "B" or better in each course. Specific courses to be taken for the semester of full-time work are identified in acceptance letters.

## Nursing

### Harris College

Harris College, Nursing offers an innovative online Master of Science in Nursing (MSN).

There are three majors within the degree programs: Clinical Nurse Specialist (CNS), Clinical Nurse Leader (CNL) and Nursing Education. There are two role foci for the CNS major: adult/gerontology nursing or pediatric nursing. There are two role foci for the nursing education major: adult/gerontology or parent-child nursing.

Additionally, a post-master's certificate option is available in all majors for nurses with a previous master's degree in another nursing specialty. The amount of coursework required for the post-master's CNS Certificate is based on transcript review and the Texas Board of Nursing (BON) requirements for CNS-Advanced Practice Nurse recognition. The 12-hour Post-Master's Nursing Education Certificate comprises three online didactic courses and one precepted teaching practicum course. The 15-hour post-master's CNL certificate comprises three online didactic courses, one precepted practicum and one precepted residency course. This major is offered in collaboration with clinical practice partners. Contact the graduate program director for an updated list of clinical practice partners.

All didactic coursework is offered online. Clinical practicum and teaching practicum courses are supervised by TCU faculty in concert with qualified preceptors. Generally, students complete their practicum/residency courses in agencies located in their geographic area. If adequate practicum/residency or preceptor resources are not available in the student's geographic area, concentrated practicum experiences are available in the Fort Worth area.

The MSN has two tracks ADN to MSN and BSN to MSN. *The ADN to MSN Program is undergoing revision and not admitting students at this time. Contact Dr. Kathy Baldwin, graduate program director, nursing, for further information.*

### Admission

Admission to the graduate program is open to qualified registered nurses.

Admission is competitive and an individualized approach is used to identify applicants with demonstrated academic achievement and potential, who have strong motivation to succeed in academic study and professional practice, and the potential to function as a leader in advanced practice and health care delivery or nursing education. The applicant's GPA, performance on standardized exams, writing and speaking skills, and prior professional experience are used to assess applicants for admission. A profile of each applicant is developed based on an admission portfolio consisting of

- Baccalaureate degree in nursing.
- Evidence of a current unencumbered licensure in the state of Texas or the state where clinical coursework will occur.
- Evidence of current CPR certification that meets facilities' requirements.
- Official transcripts from all colleges or universities attended with a preferred cumulative GPA of 3.0 (on a four-point scale) from the applicant's basic nursing program. (Two official transcripts must be sent from each institution).
- Submission of the GRE or MAT score.

- A preferred work history that includes two years of full-time experience or its equivalent as a registered nurse in an area of adult, gerontology or pediatric care, if entering the CNS major.
- A preferred work history that includes two years of full-time experience or its equivalent as a registered nurse, if entering the nursing education major or the CNL major.
- For applicants for whom English is a second language, demonstrated English language proficiency is measured by an acceptable score on the Test of Spoken English as a Foreign Language (TOEFL) and the institutional version of the Test of Spoken English (TSE).
- An assignment demonstrating written communication skills and computer proficiency.
- Three letters of reference, of which two are from health care professionals and the third is preferably from an instructor in the basic nursing program.

Prior to beginning clinical courses, students must present *satisfactory* evidence of the following:

1. Immunizations
  - Tetanus/Diphtheria (TD): Must have DTaP if TD is more than 2 years old.
  - Measles: Those born since January 1, 1957, must have **two** doses since 12 months of age. The two doses must be at least 30 days apart.
  - Mumps: Those born since January 1, 1957, must have at least one dose since 12 months of age.
  - Rubella: At least one dose since 12 months of age is required.
  - Hepatitis B: **The completed three-dose series must be received before contact with clients in practica.**
  - Varicella (chickenpox): All practicum students must document evidence of immunity to varicella (chickenpox) by 1) documentation of varicella immunization. Immunization for adolescents and adults is a series of two doses 4-8 weeks; 2) signed statement by the student, student's parent or student's physician stating that the student had chickenpox and when the disease occurred. This statement should include contact information for the historian (person recalling the illness); or 3) documentation of **positive varicella titer.**
  - Annual seasonal and other recommended influenza vaccination or declination forms on file.
2. Current health insurance coverage.
3. Acceptable results from a drug screening test and a criminal background check within the 30 days prior to beginning practicum course work. Screening tests and background checks must be completed by TCU nursing approved vendors.

### Adult/Gerontology CNS Program Requirements

The 40-hour curriculum comprises 31.5 semester hours of didactic coursework and eight-and-a-half semester hours of clinical practicum. An additional six-hour elective in diagnostic reasoning is offered following program completion for students who desire prescriptive authority.

#### Required Coursework

NURS 50003	Advanced Pathophysiology
NURS 50013	Advanced Health Assessment
NURS 50022	Advanced Practice Roles
NURS 50053	Advanced Pharmacotherapeutics
NURS 60013	Health Care Policy, Law, and Ethics
NURS 60030	Professional Project
NURS 60043	Advanced Nursing Research and Theory
NURS 60414	Adult and Gerontologic Patient Concepts
NURS 60443	Financial Concepts in Health Care
NURS 60482	Advanced Practice Nursing Practicum
NURS 60513	CNS Concepts II
NURS 60583	CNS Practicum II
NURS 60613	CNS Concepts III
NURS 60683	CNS Practicum III
Elective	
NURS 60716	Diagnostic Reasoning

### **Pediatric CNS Program Requirements**

The 40-hour curriculum comprises 31.5 semester hours of didactic coursework and 8.5 semester hours of clinical practicum.

#### *Required Coursework*

NURS 50003	Advanced Pathophysiology
NURS 50013	Advanced Health Assessment
NURS 50022	Advanced Practice Roles
NURS 50053	Advanced Pharmacotherapeutics
NURS 60030	Professional Project
NURS 60043	Advanced Nursing Research and Theory
NURS 60443	Financial Concepts in Health Care
NURS 60744	Advanced Concepts in Parent-Child Nursing
NURS 60482	Advanced Practice Nursing Practicum
NURS 60513	CNS Concepts II
NURS 60583	CNS Practicum II
NURS 60613	CNS Concepts III
NURS 60683	CNS Practicum III

### **Nursing Education Program Requirements**

The 38-hour curriculum comprises 33 semester hours of didactic coursework, two semester hours of clinical practicum and three semester hours of teaching practicum.

NURS 50003	Advanced Pathophysiology
NURS 50013	Advanced Health Assessment
NURS 50053	Advanced Pharmacotherapeutics
NURS 60013	Health Care Policy, Law, and Ethics
NURS 60030	Professional Project
NURS 60043	Advanced Nursing Research and Theory
NURS 60414	Adult and Gerontologic Patient Concepts OR
NURS 60744	Advanced Concepts in Parent-Child Nursing
NURS 60443	Financial Concepts in Health Care
NURS 60482	Advanced Practice Nursing Practicum
NURS 60713	Learning and Instruction
NURS 60723	Curriculum and Program Development
NURS 60733	Evaluation in Nursing Education
NURS 60783	Teaching Practicum

### **Clinical Nurse Leader (CNL) Program Requirements**

The 33-hour curriculum comprises 26.5 semester hours of didactic coursework and 6.5 hours of clinical practicum/residency.

NURS 50003	Advanced Pathophysiology
NURS 50013	Advanced Health Assessment
NURS 50053	Advanced Pharmacotherapeutics
NURS 60013	Health Care Policy, Law, and Ethics
NURS 60043	Advanced Nursing Research and Theory
NURS 60443	Financial Concepts in Health Care
NCNL 61113	Leadership and Clinical Microsystems
NCNL 61123	Care Environment Management
NCNL 61133	Clinical Outcomes Management
NCNL 61182	Clinical Nurse Leader Practicum
NCNL 61284	Clinical Nurse Leader Residency

### **Adult/Gerontology CNS Post-Master's Certificate Program Requirements \***

NURS 60414	Adult and Gerontologic Patient Concepts
NURS 60482	Advanced Practice Nursing Practicum
NURS 60513	CNS Concepts II
NURS 60583	CNS Practicum II
NURS 60613	CNS Concepts III
NURS 60683	CNS Practicum III

\* Additional coursework may be required to meet the BON requirements for advanced practice nurses.

### **Nursing Education Post-Master's Certificate Program Requirements**

NURS 60713	Learning and Instruction
NURS 60723	Curriculum and Program Development
NURS 60733	Evaluation in Nursing Education
NURS 60783	Teaching Practicum

### **CNL Post-Master's Certificate Program Requirements**

NCNL 61113	Leadership and Clinical Microsystems
NCNL 61123	Care Environment Management
NCNL 61133	Clinical Outcomes Management
NCNL 61182	Clinical Nurse Leader Practicum
NCNL 61284	Clinical Nurse Leader Residency

If not completed in a previous master's degree, the following courses are also required:

NURS 50003	Advanced Pathophysiology
NURS 50013	Advanced Health Assessment
NURS 50053	Advanced Pharmacotherapeutics

### **Clinical Nurse Leader**

#### **NCNL 61113 - Leadership in Clinical Microsystems**

The course focuses on nursing leadership strategies in the context of the clinical nurse leader role. Lateral Integration of care through effective use of change and communication strategies is examined in relation to the complex healthcare environment, particularly in clinical microsystems. The impact of macrosystem variables on health delivery and outcomes is discussed. Effective use of self as leader is stressed.

#### **NCNL 61123 - Care Environment Management**

Prerequisites: NCNL 61113. This course examines evidence-based decision making strategies that can be used in the healthcare environment, particularly the clinical microsystem. Cost-benefit analysis, risk analysis, outcomes assessment, and health care economics will be analyzed. Ethical and legal issues surrounding healthcare decisions will be discussed. Relevant theories related to clinical decision making will be explored.

#### **NCNL 61133 - Clinical Outcomes Management**

Prerequisites: NCNL 61113, 61123, and 61182. This course explores evidence-based strategies to improve client care and manage clinical microsystems. Ways to address nursing sensitive outcomes will be discussed. Outcomes evaluation following nursing interventions will be analyzed. Relevant theories will be explored to improve care outcomes.

#### **NCNL 61182 - Clinical Nurse Leader Practicum**

Prerequisites: NCNL 61113 and NCNL 61123 (may be taken concurrently.) This precepted clinical course allows students to implement communication and decision making strategies in a clinical microsystems within a healthcare setting. Students will identify and begin work on the clinical project that will serve as their Capstone experience.

#### **NCNL 61284 - Clinical Nurse Leader Residency**

Prerequisites: NCNL 61113, 61123, 61182, and 61133 (may be taken concurrently.) This clinical course allows students to implement communication, decision making, and advanced client care strategies in a healthcare setting. Students will complete the clinical project that will serve as their Capstone experience.

### **Nursing**

#### **NURS 50003 - Advanced Pathophysiology**

Prerequisites: Admission to Graduate Program or permission of instructor. Provides an understanding of advanced knowledge base of pathophysiologic processes underlying human illness. Content includes systems approach to pathophysiologic processes associated with altered health states in adults and children.

#### **NURS 50013 - Advanced Health Assessment**

Prerequisites: Admission to Graduate Program or permission of instructor. This course focuses on developing comprehensive health assessment knowledge and skill required for advanced practice nursing practice across the life span. Diagnostic and inferential skills are emphasized through systematic approaches. The course includes didactic and practicum experiences.

#### **NURS 50022 - Advanced Practice Roles**

Prerequisites: Admission to Graduate Program. Provides a foundation for transition to the role of the nurse in advanced practice. Includes roles within advanced practice, theories of change, concepts of negotiation, collaboration, interdependence, advocacy and autonomy, and titling, certification and licensure issues. Clinical nurse specialist role is extensively examined.

#### **NURS 50053 - Advanced Pharmacotherapeutics**

Prerequisites: Admission to Graduate Program or permission of instructor. Emphasizes pharmacological principles fundamental to the selection of pharmacologic agents in altered health states in adults across the lifespan. Includes the pharmacodynamic, pharmacokinetic and pharmacotherapeutic properties of drug categories and specific

agents, clinical responses to the use of pharmacologic agents, efficacy and cost-effectiveness issues, client education, and adherence.

#### **NURS 60000 - Independent Study: Advanced Nursing Practice**

This course is designed to afford students the opportunity to focus on a phenomenon of interest in advanced nursing practice.

#### **NURS 60013 - Health Care Policy, Law and Ethics**

Prerequisites: Admission to the Graduate Program or permission of the instructor if in a graduate program in another department. This course integrates concepts of health care policy, law and ethics as a foundation for high quality cost-effective care and for participation in the design and implementation of care in health care delivery systems. Content includes knowledge of how health policy is formulated, how to affect this process, and how it impacts clinical practice and health care delivery. Philosophical/ethical/legal dimensions of health care policy, organization and economics are analyzed.

#### **NURS 60030 - Professional Project**

Prerequisites: NURS 60043. Emphasis is placed on improving clinical, financial, or system outcomes through an evidence-based quality improvement project within a specified area of advanced practice and strategies for utilization within the practice setting.

#### **NURS 60043 - Advanced Nursing Research and Theory**

Prerequisites: Admission to the Graduate Program. This course emphasizes the evaluation, utilization and integration of a wide variety of theories and research methodologies as a foundation for advanced nursing practice. Content includes application of theoretical frameworks to research designs to improve practice and patient outcomes. Evidenced-based interventions are analyzed followed by identification of outcome studies needed to improve practice.

#### **NURS 60053 - Critical Inquiry in Advanced Nursing Practice**

This course emphasizes the utilization of knowledge gained from the inquiry process to provide high quality health care, initiate change and improve health care delivery at all levels. Content includes the identification of clinical practice problems, evaluation of research in relation to those problems, application of the inquiry process to clinical issues as a basis for clinical and organizational decision-making and the use of information technologies in inquiry and research.

#### **NURS 60303 - Seminar in Women's Health**

Explores holistic women's health in the contexts of history, culture, science. Examines the influence of race, gender, age, and class on women's embodied experiences and women's health. Reviews effect of oppression and influence of power and privilege on systems and processes. Analyzes the impact of social construction of gender on women as consumers and providers of health care. Reframes contemporary systems to challenge prevailing social values and actions; suggests alternative practices and research agendas. Promotes women's ownership and self-agency in naming misogyny, understanding health behaviors and selected problems; identifying choices in prevention and care. Introduces global considerations in women's health.

#### **NURS 60413 - CNS Concepts I**

Prerequisites: NURS 50003, 50013, 50053, 60043. This course emphasizes the patient/client domain of CNS practice. The health maintenance, health promotion, and illness prevention needs of adults, individually and collectively, are examined through the introduction and implementation of the outcomes management role. Content includes management of commonly encountered symptoms, functional problems, and risk behaviors commonly encountered in adults.

#### **NURS 60414 - Adult and Gerontologic Patient Concepts**

Prerequisites: NURS 50003, 50013, 60043, and 50053. This course emphasizes the patient/client domain of nursing practice. The health maintenance, health promotion, and illness prevention needs of adults and older adults, individually and collectively, are examined through the introduction and implementation of the outcomes management role. Content includes management of commonly encountered symptoms, functional problems, and risk behaviors commonly encountered in adults.

#### **NURS 60443 - Financial Concepts in Health Care**

Prerequisites: NURS 60013. This course provides an overview of the financial concepts necessary to functioning as a case manager.

Content includes financial accounting, planning and control, resource management, and management information systems.

#### **NURS 60444 - Clinical Interpretation of Assessment and Diagnostic Data**

This course emphasizes the interpretation of multi-dimensional assessment data for the purpose of planning, implementing and evaluating a course of care for the client receiving case management services. The relationship between these data and the health and illness needs of clients is used to provide a basis for the service requirements needed to maintain and restore clients' optimal health.

#### **NURS 60482 - Advanced Practice Nursing Practicum**

The course consists of supervised practicum experience focusing on advanced nursing practice with patients and families experiencing illnesses, injuries, or disease, or developmental transitions common to the selected population of study. The application of health maintenance, health promotion and illness prevention will be incorporated. Particular emphasis is placed on the management of symptoms, functional issues, and risk behaviors commonly encountered in the selected population of study.

#### **NURS 60513 - CNS Concepts II**

Prerequisites: NURS 60413 and 60482. Explores the nursing practice domain of CNS practice. Organized according to competencies related to identifying and defining problems and opportunities in nursing practice, identifying and articulating factors contributing to resource management needs and outcomes, developing innovative solutions, and evaluating the effect of solution strategies. Examines CNS sub roles of expert practitioner, educator, researcher, change agent, and consultant within the nursing personnel sphere of influence.

#### **NURS 60583 - CNS Practicum II**

Concurrent: NURS 60513. Clinical care of adult patients experiencing common illnesses or injuries and nursing practice domain of CNS practice. Emphasizes identification and definition of problems and opportunities in nursing practice, identification and articulation of factors contributing to resource management needs and outcomes, development of innovative solutions, and evaluation of solution strategies. Explores CNS sub roles of expert practitioner, educator, researcher, change agent and consultant.

#### **NURS 60613 - CNS Concepts III**

Prerequisites: NURS 60413, 60482, 60513, and 60583. Explores the systems/organizations domain of CNS practice. Organized according to competencies related to identification and definition of problems and opportunities in nursing practice, identification and articulation of factors contributing to resource management needs and outcomes, development of innovative solutions, and evaluation of solution strategies.

#### **NURS 60683 - CNS Practicum III**

Concurrent: NURS 60613. Clinical care of adult patients experiencing common illnesses or injuries; systems/organizations domain of CNS practice; capstone experience integrating CNS Spheres of Influence in last quarter of semester. Emphasizes organizational/network domain; identification and definition of problems and opportunities within organizations/networks, identification and articulation of factors contributing to resource management needs and outcomes within organizations/networks, development of innovative solutions within organizations/networks, and evaluation of solution strategies within organizations/networks.

#### **NURS 60713 - Learning and Instruction in Nursing Education**

This course examines the teaching/learning theories used in nursing education. Students also examine the ethical and legal issues in nursing education. Students will begin to develop a personal philosophy of teaching. Models used in classroom and clinical nursing education are compared and contrasted. Evaluation methods for classroom and clinical teaching are examined.

#### **NURS 60716 - Diagnostic Reasoning**

Prerequisites: NURS 50003, 50004, and 50053. Emphasizes diagnosis and management of common acute and chronic disruptions of health experienced by adults across the lifespan. Concepts from advanced assessment, advanced pathophysiology, and advanced pharmacotherapeutics assimilated to develop diagnoses and treatment plans within the scope of practice. Clinical practice of diagnostic and

treatment skills in 6 hours weekly. Completes nationally recognized requirements for prescriptive authority.

**NURS 60723 - Curriculum and Program Development in Nursing**

This course examines the faculty role. Curriculum development will be highlighted. Students will continue to develop their personal philosophy of teaching. The impact of societal changes on nursing education will be examined.

**NURS 60733 - Evaluation in Nursing Education**

This course examines the evaluation process in nursing education including student learning and outcomes in classroom and clinical nursing courses, curriculum evaluation, teaching effectiveness, and overall nursing program evaluation. Exam development and grading decisions are of particular focus.

**NURS 60744 - Advanced Concepts in Parent-Child Nursing**

The course focuses on family-centered nursing care for childbearing and childrearing families. Areas of concentration include family systems, development and functioning, acute and chronic illness, evidence-based, family centered nursing assessment and intervention, and interdisciplinary collaboration.

**NURS 60783 - Teaching Practicum**

Prerequisites: NURS 60713. This practicum experience enables students to implement the knowledge and skills learned in NURS 60713. Students will teach in both a classroom and clinical setting in a nursing program during this experience.

**NURS 70030 - Special Topics in Nursing**

Special topics and innovations in the broad field of nursing will be discussed.

## Master of Science - Nurse Anesthesia

### School of Nurse Anesthesia

TCU's School of Nurse Anesthesia is accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA), a specialized accrediting body recognized by the Council on Higher Education Accreditation (CHEA) and the U.S. Department of Education (DOE). (Council on Accreditation, 222 South Prospect Ave., Ste. 304, Park Ridge, IL 60068-4010).

The Standards and Guidelines for accreditation of nurse anesthesia educational programs/schools endorsed by the council are merely guidelines for TCU to follow. They are not a contract between any member of the School of Nurse Anesthesia of TCU and should not be construed to give rise to any liability of TCU to any student enrolled in the School of Nurse Anesthesia. The program, the parent institution, or the clinical affiliates will not distort or misrepresent the program's accreditation status.

The mission of TCU's School of Nurse Anesthesia is to prepare professional nurses for nurse anesthesia practice with advanced, specialized knowledge and skills in order to meet the health needs of a diverse population.

**Program Goals**

1. Support the University's mission, vision and core values.
2. Prepare graduates to become competent certified registered nurse anesthetists, ready to serve society in an advanced role on the health care team.
3. Promote core values and behaviors that encourage respect for diversity, acknowledge human worth and dignity, and support professional nurse anesthesia practice.
4. Foster an appreciation for the necessity of learning, thinking critically and continuing to grow personally and professionally.
5. Contribute to the nurse anesthesia profession and to society by engaging in expert clinical practice and by demonstrating commitment to ethical leadership and responsible citizenship.

**Code of Ethics**

A code of ethics guiding the practice of TCU student nurse anesthetists is published in the school handbook.

### Nurse Anesthesia Admission Deadlines

An application packet can be obtained at [www.crna.tcu.edu](http://www.crna.tcu.edu) or by calling the School at 817.257.7887. Deadlines and other important dates related to admission are also available on the website or by telephone.

All applicants meeting the following criteria will be considered for admission:

- Bachelor of Science in Nursing or an appropriate bachelor's degree from an accredited school, college or university;
- Valid licensure as a registered nurse;
- Official GRE scores (verbal and quantitative > 1100);
- Weighted 3.0 GPA or greater;
- A minimum of one year experience in adult critical care, emergency room, pediatric critical care, or equivalent; *two years is highly recommended*;
- Certification as BLS, ACLS, PALS, CCRN;
- Three strong professional references;
- A short essay; and
- If English is not the first language, a score of at least 600 on the Test of English as a Foreign Language and a score of 6 on the institutional version of the Spoken English Test (International applicants should refer to that section in the TCU Graduate Catalog).

Candidates who satisfactorily meet these criteria will be invited for an interview. Candidates will be informed of admission status.

**Application Deadlines**

October 1 for class beginning the next August. Candidates will be notified of admission status by February 1.

**Non-Discrimination**

TCU does not discriminate on the basis of personal status, individual characteristics or group affiliation, including, but not limited to, classes protected under federal and state law.

TCU complies with the Americans with Disabilities Act and with Section 504 of the Rehabilitation Act of 1973 regarding students with disabilities. Disabled students will be individually assessed for their ability to meet the requirements of the curriculum and of practice. Students with questions about disabilities should contact the director.

### Nurse Anesthesia Medical Requirements

A documented health examination is required prior to the beginning of classes. Each student must be in good physical and mental health, free of communicable disease when involved in patient care, and have a medical questionnaire and physician's certificate on file at the University prior to enrollment with proof of tuberculin testing (negative) and immunization against the diseases noted below.

A student who contracts a communicable disease shall notify the director or associate director as soon as possible after learning of same and shall be suspended immediately and indefinitely until the student is free from infection.

*Schedule for Immunizations*

- Tetanus/Diphtheria (Td): Must have had one dose within past 10 years.
- Measles: Those born since January 1, 1957, must have two doses since 12 months of age. The two doses must be at least 30 days apart.
- Mumps: Those born since January 1, 1957, must have at least one dose since 12 months of age.
- Rubella: At least one dose since 12 months of age.
- Hepatitis B: A complete series or proof of immunity is strongly encouraged prior to beginning direct patient care.
- Varicella (Chickenpox): Positive V/Z titer or documentation of immunization.
- TB Skin Test (within one year): Negative PPD or negative chest x-ray.

For more information, see [www.tdh.state.tx.us/immunize/](http://www.tdh.state.tx.us/immunize/) or call the Texas School of Health, Immunization Division, 1.800.252. 9152.

**Environmental Exposure**

Providers in anesthesia are advised that several studies have found an increase in congenital abnormalities in children of parents exposed to

inhalation agents. Results of these studies have been questioned. Students of childbearing age are advised to use caution and limit their exposure to inhalation agents. Dorsch, J.A. & Dorsch, S.E. (2008). *Understanding anesthesia equipment* (5th ed.). Baltimore: Williams & Wilkins.

### Health Insurance

Students must carry health insurance throughout the program. Although TCU offers a major medical insurance plan for students to purchase, students are advised to evaluate several plans before selection. Proof of coverage is required. Students are not hospital employees and are not covered by Worker's Compensation.

### Nurse Anesthesia Drug and Alcohol Abuse Statement

The following policy is in accordance with the Council on Accreditation of Nurse Anesthesia Educational Programs' *Statement on admissions inquiries regarding drug and alcohol use*.

1. Applicants will be asked if they are currently using illegal drugs, abusing prescription drugs or engaging in imtemperate alcohol use at the time of application. An affirmative answer is grounds for denial of admission.
2. After acceptance into the School of Nurse Anesthesia, but prior to enrollment, the student will be asked about prior illegal drug usage, abuse of prescription drugs and prior imtemperate alcohol use. Past users will be monitored, including, but not limited to, drug testing. Failure to comply with this policy or failure of a drug screen will result in dismissal from the program. The University or clinical training facility pays for the drug testing.
3. All students are required to submit to random or scheduled drug testing at any point in their training based on the decision of the University or clinical training site. Failure to comply with this policy or failure of a drug screen will result in immediate dismissal from the program. The University or clinical training facility pays for the drug testing.
4. In the event of a failed drug screen, the University or clinical training site will provide information about rehabilitation. The University or the clinical training site will not incur any expense in this matter. In Texas, referrals are made to:
 

Texas Peer Assistance Program for Nurses (T-PAPN)  
7600 Burnet Road, Suite 440  
Austin, Texas 78757-1292  
1.800.288.5528
5. Following successful completion of a drug rehabilitation program, students may apply for reinstatement in the program. Readmission is not automatic; cases are individually considered.
6. Criminal background checks are required for insurance coverage prior to entering the residency phase. Students with concerns or questions should contact the director before beginning the program. Prior conviction(s) may result in denial of admission to the residency phase.

### Nurse Anesthesia General Information

#### Housing and Meals

Students are eligible for residence halls and meal plans at TCU. Contact Residential Services at 817.257.7865 or [www.rh.tcu.edu/GSA.HTM](http://www.rh.tcu.edu/GSA.HTM) for further information. Students are responsible for their own housing and meals at their assigned clinical site.

#### Financial Aid

Both loans and limited scholarships are available for students. Deadlines are early in the semester prior to entry and students are encouraged to contact the graduate financial aid adviser, TCU Box 297012, Fort Worth, TX 76129 as soon as possible. TCU is recognized by the Veterans' Administration for financial assistance to eligible students.

A student withdrawing from TCU within a limited time frame is eligible for tuition refund. Deadlines are printed in the University calendar every semester.

The student is responsible for all books, supplies and equipment as required by courses.

The RRNA is provided with operating room attire during clinical instruction in both Phase I and Phase II except at a few rotation sites. The RRNA must provide a white lab coat.

### Technology

Students should have sufficient computer literacy to manipulate multiple types of files. Students need a Pentium Class PC with Windows 2000 or Windows XP, or a MAC with OS X v10.2 or better. Students are required to have Microsoft Office 2000 (with PowerPoint, Word and Excel, or MAC compatible version), an Internet connection (preferably broadband) and a printer.

### Time Commitment

The student's time commitment is approximately 64 hours during a seven-day week. This time commitment includes study time. One hour of classroom time generates two hours or more of study time. The student should expect a rotating schedule during Phase II.

### Employment

Student employment is strongly discouraged. Students gain more from their academic and clinical experiences without the additional burden of work commitments. If student employment is absolutely necessary, the student must notify the director in writing of the position and hours, documenting that there is no conflict in time between their job and program responsibilities. Students/RRNAs may not be employed to practice anesthesia. Clinical students/RRNAs may not work the shift prior to clinical time during Phase II.

### Nurse Anesthesia Curriculum (MSNA Tract)

#### Phase I: Lecture (First 12 months)

Phase I begins each August and is completed the following August. During this period, students earn 40 graduate credit hours. In order to begin Phase II of the program, students must complete Phase I within 12 months of the beginning of their coursework and maintain a 3.0 GPA or greater. In the event of emergencies, students may be granted a leave of absence (see handbook for details).

#### Phase I Curriculum (40 hours)

##### Fall Semester (16 credits)

NRAN 60113	Research and Theory in Nurse Anesthesia
NRAN 60123	Physical Science in Nurse Anesthesia
NRAN 60134	Advanced Pharmacology
NRAN 60146	Anatomy, Physiology and Pathophysiology I

##### Spring Semester (12 credits)

NRAN 60224	Pharmacology of Anesthetic Agents
NRAN 60235	Anatomy, Physiology and Pathophysiology II
NRAN 60213	Anatomy, Physiology and Pathophysiology III

##### First Summer Session (6 credits)

NRAN 60316	Physical Assessment and Monitoring in Anesthesia Practice
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##### Second Summer Session (6 credits)

NRAN 60416	Principles of Anesthesia Practice
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### Distance Option

All students must be in residence during the fall semester of Phase I. Students may arrange to complete the spring and summer semesters of Phase I by distance programming at clinical sites that offer this option. Distance option classes are presented via live video-broadcast. At least two students per site must elect this option in order to make programming feasible; once initiated for a group of students, distance programming will continue as long as needed by that group. A fee per credit hour is assessed to cover broadcasting costs (no students at distant sites are assessed broadcast fees during Phase II).

#### Phase II: Clinical (Minimum 16 months)

Upon completion of Phase I, students must immediately enter Phase II. This phase of the program begins in late August and lasts approximately 16 months. During this time, the student's learning is built upon the material covered during the first phase of the program and is primarily a clinical residency, although the student also returns to the classroom on a weekly basis for extensive clinically related study. Phase II ends in December. At the end of Phase II, the graduate receives a Master of Science in Nurse Anesthesia, or a Doctor of Nursing Practice – Anesthesia (depending on enrolled tract), and becomes eligible to write the National Certifying Examination for Nurse Anesthetists given by the Council on Certification of Nurse Anesthetists. Graduates who successfully complete this written exam are eligible to be certified registered nurse anesthetists (CRNAs).

Phase II consists of the actual administration of general and regional anesthesia with qualified clinical instructors (anesthesiologists and/or

CRNA). Weekly classroom sessions consist of clinical conferences; journal club; and seminars dealing with current topics including, but not necessarily limited to, respiratory, cardiovascular, thoracic, neurosurgical, regional, obstetrical, pediatric and special areas of anesthesia. Various special projects and competency examinations are administered throughout this phase.

Phase II courses are offered in concurrent sequences. Each set, e.g., NRAN 60572 and 60583, must be taken together and successfully completed prior to beginning the next set.

**Phase II Curriculum (19 hours)**

*Fall Semester (5 credits)*

- NRAN 60572 Pathophysiology and Clinical Management I
- NRAN 60583 Clinical Residency I

*Spring Semester (5 credits)*

- NRAN 60672 Pathophysiology and Clinical Management II
- NRAN 60683 Clinical Residency II

*First and Second Summer Sessions (4 credits)*

- NRAN 60772 Professional Aspects
- NRAN 60782 Clinical Residency III

*Fall Semester (5 credits)*

- NRAN 60972 Clinical Concepts
- NRAN 60983 Clinical Residency IV

These academic courses are accepted as continuing education by the Board of Nurse Examiners for the State of Texas for Type I credit (If audited, contact the School of Nurse Anesthesia director for instructions).

**Course Numbering System**

Courses numbered 60000 or above are graduate-level courses. The first two numbers, 60, are standard in all courses. The third number indicates which semester in the sequenced program the course is placed (e.g., a 3 indicates the course is in the third semester). The summer sessions are numbered separately; there are nine semesters in the program. In Phase I courses, the fourth number has no significance. In Phase II courses, the fourth number indicates whether the course is a residency (an 8) or a concepts course (a 7). The last number indicates the number of credit hours.

**Minimum Case Requirements**

The School of Nurse Anesthesia exceeds the general requirements as set forth by the Council on Accreditation, Standards and Guidelines for Accreditation of Nurse Anesthesia Educational Programs/Schools. Each RRNA is required to complete a minimum of 650 cases.

**Grading**

A grade is assigned for each course in which a student is regularly enrolled for graduate credit. A passing grade may be earned only if the student is enrolled for the duration of the course.

The graduate program at TCU requires a minimum overall GPA of 3.0 for graduation. A course grade of at least "B" is required in the following courses:

- NRAN 60224 Pharmacology of Anesthetic Agents
- NRAN 60235 Anatomy, Physiology and Pathophysiology II
- NRAN 60213 Anatomy, Physiology and Pathophysiology III
- NRAN 60316 Physical Assessment and Monitoring in Anesthesia Practice
- NRAN 60416 Principles of Anesthesia Practice
- NRAN 60572 Pathophysiology and Clinical Management I
- NRAN 60672 Pathophysiology and Clinical Management I
- NRAN 60772 Professional Aspects
- NRAN 60972 Clinical Concepts

A course grade of less than "C" will not be accepted in any other course.

No more than six credit hours of "C" are accepted.

**Graduation Criteria**

All Phase I work is to be completed within one year from the date of program admission. Phase II is to be completed in 16 months. To qualify for graduation, a student must have completed a minimum of 59 semester hours of work with a 3.0 overall GPA (on a 4.0 scale). The Master of Science in Nurse Anesthesia will be awarded upon completion of Phase II.

**Nurse Anesthesia**

**NRAN 60113 - Research in Nurse Anesthesia**

Emphasizes the evaluation and use of a variety of theories and research methods as a foundation for advanced practice in nurse anesthesia. Includes application of theory and research to improve practice and patient outcomes and identification of outcome studies needed to improve practice. Incorporates legal and ethical foundations of practice and policy.

**NRAN 60123 - Physical Science in Nurse Anesthesia**

Introduction to structural recognition and nomenclature of organic compounds. Includes an introduction to amino acids, lipids, membranes, protein structure and function, and overview of the bioenergetics of the cell.

**NRAN 60134 - Advanced Pharmacology**

Prerequisites: Permission of Director if not an admitted program student. Prepares the registered nurse (RN) for the anesthesia patient care team and in the administration of anesthesia by teaching the principles of pharmacokinetics, pharmacodynamics, uptake and distribution, and selected systemic pharmacology as applicable to anesthesiology. (Includes experiences with the human patient simulator.)

**NRAN 60146 - Anatomy, Physiology, and Pathophysiology I**

Study of structure and function in health and disease of human nervous, endocrine, and excretory systems including fluid, electrolyte and acid-base balance.

**NRAN 60213 - Anatomy, Physiology and Pathophysiology III**

Study of structure and function of health and disease in the human cardiovascular system.

**NRAN 60224 - Pharmacology of Anesthesia Agents**

Prepares the RN for a role on the anesthesia patient care team and in the administration of anesthesia by teaching analysis, synthesis, and evaluation skills in selecting and administering appropriate anesthesia drugs for use in patient care situations. (Includes experiences with the human patient simulator.)

**NRAN 60235 - Anatomy, Physiology and Pathophysiology II**

Study of structure and function of health and disease in the human respiratory, gastrointestinal tract, and endocrine systems.

**NRAN 60316 - Physical Assessment and Monitoring in Anesthesia Practice**

Prerequisites: Progression to third semester Phase I. This course presents the basic concepts of anesthesia and also introduces the student to procedures and principles of nurse anesthesia. Principles presented include monitoring and assessment skills, airway management (including endotracheal intubation), the anesthesia machine and related current technology. Students are also provided with a clinical simulator component which includes fundamental patient interaction under the direct supervision of an instructor.

**NRAN 60416 - Principles of Anesthesia Practice**

Prerequisites: NRAN 60316. This course is intended to provide the student with basic principles of regional anesthesia, selected disease states and their anesthetic implications, basic principles of patient assessment, preparation and interpretation of preoperative data in obstetrics. Emphasis is placed on the physiologic response to surgery, medications, and disease. Students are also provided with a clinical simulator component which includes fundamental patient interaction under the direct supervision of an instructor.

**NRAN 60572 - Pathophysiology and Clinical Management I**

Prerequisites: Successful completion of Phase I. An integrated series of lectures, clinical conferences, and seminars designed to provide the clinical resident with an in-depth education in the anesthetic management and considerations of various surgical procedures on patients with diverse pathological conditions. Emphasis is placed on the pathophysiologic aspects and their anesthesia implications. Topics include respiratory, thoracic, neurological, cardiovascular, regional, pediatric, and special areas of anesthesia. Integrates legal and ethical foundations from practice.

**NRAN 60583 - Clinical Residency I**

Initial exposure to the clinical arena. Provides the opportunity to develop the basic skills and master the course objectives. The nurse anesthesia resident is responsible for the objectives as they pertain to American Society of Anesthesiologists' Classification I, I-E, and II patients and any assigned specialty rotations.

**NRAN 60672 - Pathophysiology and Clinical Management II**

Prerequisites: NRAN 60572, 60583. An integrated series of lectures, clinical conferences, and seminars designed to provide the clinical resident with an in-depth education in the anesthetic management and considerations of various surgical procedures on patients with diverse pathological conditions. Emphasis is placed on the pathophysiologic aspects and their anesthesia implications. Topics include respiratory, thoracic, neurological, cardiovascular, regional, pediatric, and special areas of anesthesia. Integrates legal and ethical foundations from practice.

**NRAN 60683 - Clinical Residency II**

Builds on theoretical knowledge acquired in Phase I. A formative period allows the nurse anesthesia resident to learn the new skills required in this practicum. The nurse anesthesia resident is responsible for the following objectives as they pertain to American Society of Anesthesiologists' Classification I, I-E, II, II-E, III, and III-E patients and any assigned specialty rotations.

**NRAN 60772 - Professional Aspects**

Prerequisites: NRAN 60683 and 60672. Overview of practice, clinical, legal, ethical, business, health policy, anesthesia care, management, and history.

**NRAN 60782 - Clinical Residency III**

Builds upon theoretical knowledge acquired in Phase I. A formative period allows the acquisition of new skills required in this residency. The nurse anesthesia resident is responsible for the following objectives as they pertain to ALL American Society of Anesthesiologists' Classifications of patients and assigned specialty rotations.

**NRAN 60972 - Clinical Concepts**

Overview of selected topics from Phase I and Phase II, integrating research, basic sciences and anesthetic problems.

**NRAN 60983 - Clinical Residency IV**

Builds upon the previous residency and the theoretical knowledge acquired in Phase I. A formative period is not included in this residency. The nurse anesthesia resident is responsible for the objectives as they pertain to all classes and types of patients and any assigned specialty rotation.

**NRAN 81113 - Complexity and Innovation in Healthcare**

The purpose of this course is to examine complexity and innovation as they relate to healthcare systems, healthcare delivery, and population health. Areas of focus are systems, organizations, health disparities and ethical decision making. The course provides a broad foundation from which to approach resolution of complex clinical situations and improve practice environments.

**NRAN 81123 - Biostatistics for the Advanced Health Practitioner**

Provides a comprehensive overview of frequently used descriptive and inferential biostatistical methods. The course includes application of the theories of measurement and statistical inference which contribute to better clinical decisions and improved outcomes. Conceptual understanding, rather than computational ability, is the focus of the course. Development of an adequate vocabulary, an examination of fundamental principles, and a survey of widely used procedures or tools to extract information from data will form a basis for fruitful collaboration with a professional biostatistician, when appropriate.

**NRAN 81233 - Decision Science and Informatics**

This course focuses on the methods and applications of decision analysis in healthcare practice, information technology, and resource allocation.

**NRAN 81243 - Translational Research**

Prerequisites: NRAN or NDNP 81123. This course is designed to prepare the clinician to demonstrate advanced levels of clinical judgment, systems thinking, and accountability in designing, delivering, and evaluating evidence based on care to improve patient outcomes.

**NRAN 81353 - Healthcare Policy and Politics**

Examines the current and future dilemmas of the healthcare system and how health plans, healthcare professionals, policymakers, and consumer groups can work together to find innovative solutions. Explores role of health politics in the work place, organization, government, and community with emphasis on involvement and advocacy.

**NRAN 81363 - Emerging Sciences for Advanced Practice**

This course provides a comprehensive overview of current and developing scientific and technological advances in the area of healthcare. The course will explore the role of the advanced practice nurse in these new and upcoming advances and how they could be incorporated into current and future care of the complex client.

**NRAN 88080 - Advanced Clinical Project**

Prerequisites: NDNP 81113, 81123, 81233, 81243, 81353, 81363. This course emphasizes the synthesis, critique, and application of learning gained in the program to support quality clinical practice and organizational systems. The DNP candidate, in consultation with their academic adviser, proposes a project that begins with a thorough and scientific evaluation of a current healthcare issue requested by an approved healthcare entity. Following approval of the proposal by the academic adviser and project committee, the DNP candidate will complete the doctoral project within two academic years as evidenced by the rendering of recommendation(s) or design of an innovative clinical practice or program solving an actual healthcare issue.

## Doctor of Nursing Practice - Anesthesia

**DNP Anesthesia Program**

Doctor of Nursing Practice (DNP) with a major in Nurse Anesthesia is a joint program between the School of Nurse Anesthesia and the DNP program. This accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs.

**Description of Program**

The Doctor of Nursing Practice (DNP) for post baccalaureate registered nurses is an innovative, solutions focused program designed to prepare nurse anesthesia students to lead efforts in solving complex health care issues and developing new health care opportunities, specifically in the context of nurse anesthesia practice. The program builds on TCU's mission: "Learning to Change the World" and charges post baccalaureate registered nurses DNP students with "Making a Difference in Health care".

**Mission**

The DNP for post baccalaureate registered nurses provides the terminal academic preparation for nurse anesthesia practice with advanced, specialized knowledge and skills to meet the health needs of diverse populations. The purpose of the DNP-ANESTHESIA program is to prepare nurse anesthetists who are equipped to assume clinical leadership positions in a variety of health care, business, government, and educational organizations.

**Objectives**

Upon successful completion of the DNP-ANESTHESIA curriculum, graduates should be able to:

- Utilize scientific knowledge to evaluate existing and emerging approaches to nurse anesthesia practice and health care delivery to promote optimal outcomes.
- Provide leadership in organizations and systems to assure quality care delivery models.
- Design, deliver, direct, and disseminate evidence based practices.
- Use information systems to design, select, use, and evaluate programs of care, outcomes of care, and care systems. Advocate for anesthesia care and health care practice change through active involvement in policy development and political processes.
- Assume leadership roles for effective transdisciplinary collaboration to achieve optimal outcomes.
- Apply ethical principles to decision making in health care practices and systems.
- Demonstrate advanced clinical reasoning and judgment in the management of complex clinical situations and systems.

- Demonstrate the ability to administer individualized safe anesthesia based on pathophysiologic principles and recognize changing conditions of the patient and creatively alter the anesthesia management.
- Obtain and document pre-anesthesia interviews (include history and physical, assessment) and informed consent (include risks, complications, and anesthesia alternatives).
- Develop an appropriate anesthetic care plan based on patient history and proposed surgical procedure.
- Select, assemble, and maintain proper equipment, anesthetic agents, and accessories while preparing for an anesthetic – general, regional, MAC.
- Conduct a physiologically sound anesthetic during induction, including positioning of the patient to assure optimal physiologic function and safety, and appropriate management of the patient's airway.
- Administer physiologically sound anesthesia maintenance within the confines of the operative, diagnostic, and therapeutic situation and the pathological condition of the patient.
- Manage a physiologically sound anesthetic emergence within the confines of the operative, diagnostic, and therapeutic situation and the pathological condition of the patient.
- Evaluate post-anesthetic recovery of the patient in terms of recognizing complications arising from the anesthetic management and recommending a course of action for correcting such complications within medically established guidelines.
- Provide safe transport for the patient and effectively communicate the condition of the patient to the recovery personnel.
- Demonstrate responsibility for own actions and for continued personal and professional growth.
- Participate in activities that improve patient care utilizing evidence-based research.
- Exhibit expected role responsibilities, maintaining integrity and legal/ethical standards.
- Function within appropriate legal requirements as licensed professional, accepting responsibility and accountability for own practice.
- Perform clinically in ways that reflect specialized knowledge, attitudes, skills, motivations, and self-perceptions.

### DNP Anesthesia Admission

Students will be selected based on evaluation of the following:

- Bachelor of Science in Nursing
- Valid licensure as a registered nurse or an appropriate bachelor's degree from an accredited school, college or university
- Official Graduate Record Examination (GRE) scores (verbal and quantitative >1100). This requirement is waived for candidates with an earned master's degree.
- Weighted GPA of 3.0 or greater
- A minimum of one year experience in adult critical care, emergency room, pediatric critical care, or equivalent. Two years is highly recommended.
- Certification as BLS, ACLS, PALS, CCRN
- Three strong professional references
- A short essay
- If English is not the first language, a score of at least 600 on the Test of English as a Foreign Language and a score of 6 on the institutional version of the Spoken English Test
- International applicants should refer to the TCU Graduate Bulletin

Candidates who satisfactorily meet these criteria will be invited for an interview. Candidates will be informed of admission status following completion of all candidate interviews.

### DNP Anesthesia Curriculum

Minimum coursework requirements are as follows:

#### Degree Requirements

##### Spring I

- NRAN 81113 Complexity and Innovation in Health Care ^
- NRAN 81123 Biostatistics for the Advanced Health Practitioner ^

##### Summer I

- NRAN 60113 Research and Theory in Nurse Anesthesia\*\* ^
- NRAN 81233 Decision Science and Informatics ^

##### Fall I

- NRAN 81243 Translational Research ^
- NRAN 60123 Physical Science in Nurse Anesthesia
- NRAN 60134 Advanced Pharmacology\*\*
- NRAN 60146 Anatomy, Physiology, and Pathophysiology I\*\*

##### Spring II

- NRAN 60235 Anatomy, Physiology, and Pathophysiology II\*\*
- NRAN 60213 Anatomy, Physiology, and Pathophysiology III\*\*
- NRAN 60224 Pharmacology of Anesthetic Agents\*\*
- NRAN 81363 Emerging Sciences for Advanced Practice ^

##### Summer II (First Session)

- NRAN 60316 Physical Assessment and Monitoring in Anesthesia Practice\*\*

##### Summer II (Second Session)

- NRAN 60416 Principles of Anesthesia Practice\*\*

##### Fall II

- NRAN 60572 Pathophysiology and Clinical Management II\*\*
- NRAN 88080 Advanced Clinical Project\*
- NRAN 60583 Clinical Residency\*\*

##### Spring III

- NRAN 60672 Pathophysiology and Clinical Management II\*\*
- NRAN 88080 Advanced Clinical Project\*
- NRAN 60683 Clinical Residency II\*\*

##### Summer III

- NRAN 81353 Health Care Policy and Politics
- NRAN 60782 Clinical Residency III\*\*
- NRAN 88080 Advanced Clinical Project\*

##### Fall III

- NRAN 60972 Clinical Concepts\*\*
- NRAN 60983 Clinical Residency IV\*\*
- NRAN 88080 Advanced Clinical Project

\*Each Advanced Clinical Project course is for three (3) credit hours. Students must register for a minimum of six hours over two semesters. Students may enroll in additional hours, beyond the initial six required hours as needed to complete the project.

^ Indicates course is online.

### Nurse Anesthesia Courses

#### NRAN 60113 - Research in Nurse Anesthesia

Emphasizes the evaluation and use of a variety of theories and research methods as a foundation for advanced practice in nurse anesthesia. Includes application of theory and research to improve practice and patient outcomes and identification of outcome studies needed to improve practice. Incorporates legal and ethical foundations of practice and policy.

#### NRAN 60123 - Physical Science in Nurse Anesthesia

Introduction to structural recognition and nomenclature of organic compounds. Includes an introduction to amino acids, lipids, membranes, protein structure and function, and overview of the bioenergetics of the cell.

#### NRAN 60134 - Advanced Pharmacology

Prerequisites: Permission of Director if not an admitted program student. Prepares the registered nurse (RN) for the anesthesia patient care team and in the administration of anesthesia by teaching the principles of pharmacokinetics, pharmacodynamics, uptake and distribution, and selected systemic pharmacology as applicable to anesthesiology. (Includes experiences with the human patient simulator.)

#### NRAN 60146 - Anatomy, Physiology, and Pathophysiology I

Study of structure and function in health and disease of human nervous, endocrine, and excretory systems including fluid, electrolyte and acid-base balance.

#### NRAN 60213 - Anatomy, Physiology and Pathophysiology III

Study of structure and function of health and disease in the human cardiovascular system.

#### NRAN 60224 - Pharmacology of Anesthesia Agents

Prepares the RN for a role on the anesthesia patient care team and in the administration of anesthesia by teaching analysis, synthesis, and evaluation skills in selecting and administering appropriate anesthesia

drugs for use in patient care situations. (Includes experiences with the human patient simulator.)

#### **NRAN 60235 - Anatomy, Physiology and Pathophysiology II**

Study of structure and function of health and disease in the human respiratory, gastrointestinal tract, and endocrine systems.

#### **NRAN 60316 - Physical Assessment and Monitoring in Anesthesia Practice**

Prerequisites: Progression to third semester Phase I. This course presents the basic concepts of anesthesia and also introduces the student to procedures and principles of nurse anesthesia. Principles presented include monitoring and assessment skills, airway management (including endotracheal intubation), the anesthesia machine and related current technology. Students are also provided with a clinical simulator component which includes fundamental patient interaction under the direct supervision of an instructor.

#### **NRAN 60416 - Principles of Anesthesia Practice**

Prerequisites: NRAN 60316. This course is intended to provide the student with basic principles of regional anesthesia, selected disease states and their anesthetic implications, basic principles of patient assessment, preparation and interpretation of preoperative data in obstetrics. Emphasis is placed on the physiologic response to surgery, medications, and disease. Students are also provided with a clinical simulator component which includes fundamental patient interaction under the direct supervision of an instructor.

#### **NRAN 60572 - Pathophysiology and Clinical Management I**

Prerequisites: Successful completion of Phase I. An integrated series of lectures, clinical conferences, and seminars designed to provide the clinical resident with an in-depth education in the anesthetic management and considerations of various surgical procedures on patients with diverse pathological conditions. Emphasis is placed on the pathophysiologic aspects and their anesthesia implications. Topics include respiratory, thoracic, neurological, cardiovascular, regional, pediatric, and special areas of anesthesia. Integrates legal and ethical foundations from practice.

#### **NRAN 60583 - Clinical Residency I**

Initial exposure to the clinical arena. Provides the opportunity to develop the basic skills and master the course objectives. The nurse anesthesia resident is responsible for the objectives as they pertain to American Society of Anesthesiologists' Classification I, I-E, and II patients and any assigned specialty rotations.

#### **NRAN 60672 - Pathophysiology and Clinical Management II**

Prerequisites: NRAN 60572, 60583. An integrated series of lectures, clinical conferences, and seminars designed to provide the clinical resident with an in-depth education in the anesthetic management and considerations of various surgical procedures on patients with diverse pathological conditions. Emphasis is placed on the pathophysiologic aspects and their anesthesia implications. Topics include respiratory, thoracic, neurological, cardiovascular, regional, pediatric, and special areas of anesthesia. Integrates legal and ethical foundations from practice.

#### **NRAN 60683 - Clinical Residency II**

Builds on theoretical knowledge acquired in Phase I. A formative period allows the nurse anesthesia resident to learn the new skills required in this practicum. The nurse anesthesia resident is responsible for the following objectives as they pertain to American Society of Anesthesiologists' Classification I, I-E, II, II-E, III, and III-E patients and any assigned specialty rotations.

#### **NRAN 60772 - Professional Aspects**

Prerequisites: NRAN 60683 and 60672. Overview of practice, clinical, legal, ethical, business, health policy, anesthesia care, management, and history.

#### **NRAN 60782 - Clinical Residency III**

Builds upon theoretical knowledge acquired in Phase I. A formative period allows the acquisition of new skills required in this residency. The nurse anesthesia resident is responsible for the following objectives as they pertain to ALL American Society of Anesthesiologists' Classifications of patients and assigned specialty rotations.

#### **NRAN 60972 - Clinical Concepts**

Overview of selected topics from Phase I and Phase II, integrating research, basic sciences and anesthetic problems.

#### **NRAN 60983 - Clinical Residency IV**

Builds upon the previous residency and the theoretical knowledge acquired in Phase I. A formative period is not included in this residency.

The nurse anesthesia resident is responsible for the objectives as they pertain to all classes and types of patients and any assigned specialty rotation.

#### **NRAN 81113 - Complexity and Innovation in Healthcare**

The purpose of this course is to examine complexity and innovation as they relate to healthcare systems, healthcare delivery, and population health. Areas of focus are systems, organizations, health disparities and ethical decision making. The course provides a broad foundation from which to approach resolution of complex clinical situations and improve practice environments.

#### **NRAN 81123 - Biostatistics for the Advanced Health Practitioner**

Provides a comprehensive overview of frequently used descriptive and inferential biostatistical methods. The course includes application of the theories of measurement and statistical inference which contribute to better clinical decisions and improved outcomes. Conceptual understanding, rather than computational ability, is the focus of the course. Development of an adequate vocabulary, an examination of fundamental principles, and a survey of widely used procedures or tools to extract information from data will form a basis for fruitful collaboration with a professional biostatistician, when appropriate.

#### **NRAN 81233 - Decision Science and Informatics**

This course focuses on the methods and applications of decision analysis in healthcare practice, information technology, and resource allocation.

#### **NRAN 81243 - Translational Research**

Prerequisites: NRAN or NDNP 81123. This course is designed to prepare the clinician to demonstrate advanced levels of clinical judgment, systems thinking, and accountability in designing, delivering, and evaluating evidence based on care to improve patient outcomes.

#### **NRAN 81353 - Healthcare Policy and Politics**

Examines the current and future dilemmas of the healthcare system and how health plans, healthcare professionals, policymakers, and consumer groups can work together to find innovative solutions. Explores role of health politics in the work place, organization, government, and community with emphasis on involvement and advocacy.

#### **NRAN 81363 - Emerging Sciences for Advanced Practice**

This course provides a comprehensive overview of current and developing scientific and technological advances in the area of healthcare. The course will explore the role of the advanced practice nurse in these new and upcoming advances and how they could be incorporated into current and future care of the complex client.

#### **NRAN 88080 - Advanced Clinical Project**

Prerequisites: NDNP 81113, 81123, 81233, 81243, 81353, 81363. This course emphasizes the synthesis, critique, and application of learning gained in the program to support quality clinical practice and organizational systems. The DNP candidate, in consultation with their academic adviser, proposes a project that begins with a thorough and scientific evaluation of a current healthcare issue requested by an approved healthcare entity. Following approval of the proposal by the academic adviser and project committee, the DNP candidate will complete the doctoral project within two academic years as evidenced by the rendering of recommendation(s) or design of an innovative clinical practice or program solving an actual healthcare issue.

## **Doctor of Nursing Practice**

### **DNP**

The Doctor of Nursing Practice (DNP) is an innovative, solution-focused program designed to prepare advanced practice nurses to lead efforts in solving complex health care issues and developing new health care opportunities. Building on TCU's mission "learning to change the world," DNP students are charged with "making a difference in health care."

The practice doctorate in nursing provides the terminal academic preparation for nursing practice. The purpose of this program is to prepare students to assume clinical leadership positions in a variety of health care, business, government and educational organizations.

Upon completion of the program, graduates will be able to:

1. Demonstrate advanced levels of clinical judgment and scholarship in nursing practice.
2. Utilize scientific knowledge to evaluate new and current approaches in nursing practice and health care delivery to promote optimal outcomes.

3. Provide leadership in organizations and systems to assure quality care delivery models.
4. Design, deliver, direct and disseminate evidence-based practices.
5. Use information systems to design, select, use and evaluate programs of care, outcomes of care and care systems.
6. Advocate for health care practice change through policy development and evaluation.
7. Assume leadership roles for effective transdisciplinary collaboration to achieve optimal outcomes.
8. Employ ethical principles to decision making in health care practices and systems.
9. Demonstrate advanced clinical reasoning and judgment in the management of complex clinical situations and systems.

### DNP Program

The DNP is a practice doctorate designed to prepare experts in specialized advanced nursing practice. The focus is heavily on practice that is innovative and evidence-based, reflecting the application of credible research findings and theories to improving health care outcomes.

A master's degree and current recognition as an advanced practice nurse by appropriate certification and licensing boards is required for admission to the advanced practice track. All students are required to maintain their advance practice recognition through practice requirements defined by appropriate certification and licensing boards throughout the program.

A master's degree, current registered nurse license and employment in an administrative role are required for the nursing administration track. Administrative certification is preferred.

The DNP degree may be completed in two years (21 months) at the minimum. The first year is typically composed of didactic courses. The second year focuses on the fulfillment of practice and final project requirements. Additional courses are available to help prepare students for teaching in academia.

### Admission Requirements

Students will be selected based on the evaluation of a portfolio of evidence to include the following:

- Completed application;
- Master's degree with focus in specialty nursing and minimum GPA of at least 3.0/4.0;
- Receipt of official transcript from all universities and colleges attended;
- Unencumbered license to practice as a registered nurse (RN) in the United States;
- For advanced practice roles:
  - Current recognition as advanced practice registered nurse (APRN) by state Board of Nursing in a state where the role is recognized.
  - Results of the national APRN certification examination.
- For nurse administrators:
  - Current licensure as a registered nurse.
  - Results of a national certification in administration preferred.
  - Additional coursework will be required if the master's degree is not in nursing.
- Resume or curriculum vita;
- Three professional references;
- Satisfactory completion of an interview, either by phone or in person (if applicable);
- Remittance of \$50 non-refundable application fee; and
- One- to two-page essay describing how applicant's professional goals are congruent with the DNP Program objectives.

Satisfactory completion of drug screen and background check is required prior to beginning practicum hours.

### Transfer Credit

Transfer credit hours are not used to satisfy degree requirements and are not used in the calculation of the cumulative GPA.

### Pass/No Credit

Pass/no-credit courses are disregarded in the calculation of the student's GPA.

### DNP Degree Requirements

The post-master's DNP degree requires a minimum of 30-semester hours of coursework for completion. Students must maintain a 3.0 GPA throughout the program. Minimum coursework requirements are:

#### Year One

##### Fall

NDNP 81113	Complexity and Innovation in HealthCare
NDNP 81123	Biostatistics for the Advanced Health Practitioner

##### Spring

NDNP 81233	Decision Science and Informatics
NDNP 81243	Translational Research

##### Summer

NDNP 81353	Healthcare Policy and Politics
NDNP 81363	Emerging Sciences for Advanced Practice

#### Year Two

##### Fall

NDNP 82183	Advanced Clinical Practicum I
NDNP 88080	Advanced Clinical Project* <b>or</b>
NDNP 82383	Advanced Administrative Practicum I
NDNP 88280	Advanced Administrative Project

##### Spring

NDNP 82283	Advanced Clinical Practicum II
NDNP 88080	Advanced Clinical Project* <b>or</b>
NDNP 82483	Advanced Administrative Practicum II
NDNP 88280	Advanced Administrative Project

\* Each Advanced Project course is for three credit hours. A minimum of six hours over two semesters of NDNP 88080 is required to complete the degree program. Students may enroll in additional hours, beyond the required six hours, as needed to complete the requirements for the project.

### Academic Rating System

The definition of grades and grade points is as follows:

Grades	Grade Points	Grade Descriptions
A	4.00	Excellent
A-	3.67	Good
B+	3.33	
B	3.00	
B-	2.67	Marginal
C+	2.33	Unsatisfactory
C	2.00	
C-	1.67	
F	0.00	Failing
I		Incomplete
P		Pass
NC		No Credit
W		Withdrew
Q		Dropped by permission of the dean
AU		Audit

DNP students must maintain a GPA of at least 3.0 in accordance with the provisions described below under "Academic Warning." All grades are included in the computation of the GPA, but no more than two grades of "B-" or lower may be utilized in satisfying degree requirements.

An "I" (Incomplete) grade is recorded when the student and instructor have determined that the work required for a course cannot be completed within the term of enrollment due to circumstances beyond the control of the student. Under no circumstances will a grade of "I" be given to avoid earning a grade of "F" for the course.

The "I" grade must be removed within the first 60 days of the regular semester immediately following or it is changed to an "F." Any extension of this time must have the written approval of the instructor and dean. This policy does not apply to graduate thesis, thesis-recital, advanced project and dissertation hours.

A "no-credit" grade is given when the advanced practicum and/or project coursework is not completed within the term of enrollment. The practicum and project must be completed within two academic years.

### Grade Point Average

Two GPAs are maintained by TCU:

1. A semester average based on courses taken at TCU during a particular term; and
2. A cumulative average based on all work attempted at TCU.

A student's GPA is computed by dividing the number of grade points (grade points earned per semester hour for the successful completion of academic work) by the number of hours (total credit hours attempted at TCU, excluding those attempted on a pass/no-credit basis).

### Full-Time Students

DNP students who achieve a GPA of less than 3.0 in any semester or term will be placed on academic warning. Students can be removed from that status by achieving a 3.0 cumulative average by the end of the next six hours of enrollment. If a student should fail to do so, further enrollment will be granted only by the special recommendation of the chair of the department concerned and with the permission of the dean of the school/college in which the student is enrolled.

### Part-Time Students

DNP students enrolled for less than a full load will be placed on academic warning when their accumulated part-time course load totals at least six hours and falls below a 3.0 cumulative GPA. Students can be removed from that status by achieving a 3.0 cumulative average by the end of the next six hours of enrollment. If a student should fail to do so, further enrollment is granted only by the special recommendation of the chair of the department concerned and with the permission of the dean of the school/college in which the student is enrolled.

## DNP Courses

### NDNP 81113 - Complexity and Innovation in Healthcare

The purpose of this course is to examine complexity and innovation as they relate to healthcare systems, healthcare delivery, and population health. Areas of focus are systems, organizations, health disparities and ethical decision making. The course provides a broad foundation from which to approach resolution of complex clinical situations and improve practice environments.

### NDNP 81123 - Biostatistics for the Advanced Health Practitioner

Provides a comprehensive overview of frequently used descriptive and inferential biostatistical methods. The course includes application of the theories of measurement and statistical inference which contribute to better clinical decisions and improved outcomes. Conceptual understanding, rather than computational ability, is the focus of the course. Development of an adequate vocabulary, an examination of fundamental principles, and a survey of widely used procedures or tools to extract information from data will form a basis for fruitful collaboration with a professional biostatistician, when appropriate.

### NDNP 81233 - Decision Science and Informatics

This course focuses on the methods and applications of decision analysis in healthcare practice, information technology, and resource allocation.

### NDNP 81243 - Translational Research

Prerequisites: NRAN or NDNP 81123. This course is designed to prepare the clinician to demonstrate advanced levels of clinical judgment, systems thinking, and accountability in designing, delivering, and evaluating evidence based on care to improve patient outcomes.

### NDNP 81353 - Healthcare Policy and Politics

Examines the current and future dilemmas of the healthcare system and how health plans, healthcare professionals, policymakers, and consumer groups can work together to find innovative solutions. Explores role of health politics in the work place, organization, government, and community with emphasis on involvement and advocacy.

### NDNP 81363 - Emerging Sciences for Advanced Practice

This course provides a comprehensive overview of current and developing scientific and technological advances in the area of healthcare. The course will explore the role of the advanced practice nurse in these new and upcoming advances and how they could be incorporated into current and future care of the complex client.

### NDNP 82183 - Advanced Clinical Practicum I

Prerequisites: NDNP 81113, 81123, 81233, 81243, 81353, 81363 (all didactic courses.) This course provides leadership experiences in a healthcare setting commensurate with the student's advanced practice area. It provides an opportunity for students to further synthesize learning gained through the program, effectively incorporating new knowledge and skills to expand his/her advanced practice.

### NDNP 82283 - Advanced Clinical Practicum II

Prerequisites: NDNP 82183. This practicum is a continuation of the first Advanced Clinical Practicum course. Leadership experiences are focused on exploration and identification of innovative, solutions for complex healthcare issues, practices, programs, or populations.

### NDNP 82383 - Advanced Administrative Practicum I

Prerequisites: NDNP 81113, 81123, 81233, 81243, 81353, 81363 (all didactic courses.) This course provides leadership experiences in a healthcare setting commensurate with the student's leadership area. It provides an opportunity for students to further synthesize learning gained through the program, effectively incorporating new knowledge and skills to expand his/her leadership practice.

### NDNP 82483 - Advanced Administrative Practicum II

Prerequisites: completion of all didactic courses and NDNP 82383. This course provides leadership experiences in a healthcare setting commensurate with the student's leadership area. It provides an opportunity for students to further synthesize learning gained through the program, effectively incorporating new knowledge and skills to expand his/her leadership practice.

### NDNP 88080 - Advanced Clinical Project

Prerequisites: NDNP 81113, 81123, 81233, 81243, 81353, 81363. This course emphasizes the synthesis, critique, and application of learning gained in the program to support quality clinical practice and organizational systems. The DNP candidate, in consultation with their academic adviser, proposes a project that begins with a thorough and scientific evaluation of a current healthcare issue requested by an approved healthcare entity. Following approval of the proposal by the academic adviser and project committee, the DNP candidate will complete the doctoral project within two academic years as evidenced by the rendering of recommendation(s) or design of an innovative clinical practice or program solving an actual healthcare issue.

### NDNP 88280 - Advanced Administrative Project

Prerequisites: NDNP 81113, 81123, 81233, 81243, 81353, 81363 (all didactic courses.) This course emphasizes the synthesis, critique, and application of learning gained in the program to support quality administrative practice and organizational systems. The DNP candidate, in consultation with their academic adviser, proposes a project that begins with a thorough and scientific evaluation of a current healthcare administrative issue requested by an approved healthcare entity. Following approval of the proposal by the academic adviser and project committee, the DNP candidate will complete the doctoral project within two academic years as evidenced by the rendering of recommendation(s) or design of an innovative clinical practice or program solving an actual healthcare issue.

## Communication Sciences and Disorders

The Department of Communication Sciences and Disorders offers the Master of Science in Speech-Language Pathology. The master's degree program is accredited by the ASHA Council on Academic Accreditation.

Within 30 days prior to enrolling in the graduate program, each student is required to present satisfactory evidence of acceptable results from a criminal background check arranged by the Department of Communication Sciences and Disorders.

### Speech-Language Pathology

To pursue the MS in Speech-Language Pathology, students must possess a bachelor's degree, including at least 24 hours in approved speech-language pathology courses.

Course distributions leading to the MS in Speech-Language Pathology (SLP) will allow for the completion of compulsory academic and clinical training required by the American Speech-Language-Hearing Association (ASHA) for professional certification in the field of speech-language pathology (Certificate of Clinical Competence in SLP, CCC-SLP). While the student must enroll for clinical practicum each semester, no more than six semester credit hours may be used to satisfy degree requirements. A minimum of 375 clock hours of supervised clinical practice, 325 hours of which must be on the graduate level, is required.

The Department of Communication Sciences & Disorders offers two tracks within the graduate program leading to the master's of science: 1)

a monolingual track and 2) a bilingual track. Both tracks require a core of 45 credit hours, which includes COSD 60273 and COSD 60343 to ensure that all students receive a multicultural education at the graduate level. The bilingual track requires an additional three credit hours, consisting of COSD 60233. Additionally, the clinical training experiences of students in the bilingual track include children and adults whose primary language is one other than English.

In both the monolingual and bilingual tracks, students have the option to complete a thesis. The requirements for the thesis and non-thesis options are as follows:

**Thesis Option**

This option requires a minimum of 45 hours for students electing the monolingual track of study, and 48 hours for students electing the bilingual track of study. Students are required to complete COSD 70323 and six hours of thesis. Thesis hours will be taken in lieu of other coursework. A final comprehensive examination based on the thesis is required.

**Non-Thesis Option**

This program requires a minimum of 45 hours for students electing the monolingual track of study, and 48 hours for students electing the bilingual track of study. Students are required to complete COSD 70323. A final comprehensive examination consisting of both written and oral portions is required, and is based on the academic and clinical experiences of the students during their program of study.

**Comm Sciences & Disorders****COSD 50300 - Clinical Practicum in Speech-Language Pathology II**

Prerequisite: COSD 40300, and a cumulative TCU GPA of 2.5 or higher. Student must be recommended for enrollment by COSD faculty. A minimum of two semesters required for undergraduate students. A maximum of three semesters is allowed. Graduate students with less than 30 clinical hours will be considered for enrollment in COSD 50300. Supervised clinical experience in management of the most common speech and language disorders.

**COSD 50323 - Counseling Special Populations and Their Families**

Prerequisite: Senior or graduate standing. Theories, principles and practices in counseling special populations and their families with a focus on the communicatively impaired. Appropriate counseling strategies and techniques are explored with practical application experiences included.

**COSD 50342 - Advanced Aural Rehabilitation**

Prerequisite: Senior standing and COSD 30343 and 30363, or graduate standing, or permission of instructor. Theories of assessment and intervention in identification and aural rehabilitation of hearing-impaired and deaf children and adults. Includes methods of evaluation and training in the areas of audition, amplification, speech, language, speech-reading, assistive listening devices, cochlear implants, and communication modes and strategies.

**COSD 50350 - Clinical Practicum in Audiology**

Prerequisites: Senior or graduate standing. Students must be recommended for enrollment by the Communication Disorders CD faculty. Such recommendations are based on the student's: 1) performance in COSD coursework with a grade of "C" or better expected in all COSD courses; and 2) previous clinical experience and performance with students expected to complete two semesters of COSD 40300 with a grade of "C" or better. A laboratory course in basic audiological testing techniques involving assessments and evaluation of the hearing function. 1-3 semester hours.

**COSD 50363 - Seminar on Stuttering**

Prerequisite: Senior (with permission of instructor) or graduate standing. A study of fluency development and breakdown in children and adults. Descriptions and development of speech fluency, onset and development of stuttering, characteristics of stuttering and people who stutter, and theories of stuttering are reviewed.

**COSD 50383 - Voice and Resonance**

Prerequisite: Senior (with permission of instructor) or graduate standing. A study of theories, classification systems and etiologies, with emphasis on respiration, phonation, resonance and articulation factors as they relate to disorders of voice, resonance and compensatory articulation.

**COSD 50413 - Speech Sound Disorders**

Prerequisite: Senior (with permission of instructor) or graduate standing. A study of theories, diagnostic materials, etiologies, and intervention models with emphasis on the phonological productions of children with highly unintelligible speech, childhood apraxia or speech, and mild-moderate articulation errors.

**COSD 50970 - Directed Studies in Communication Disorders**

Prerequisites: Senior or graduate standing; permission of instructor. Directed study focusing on specialized topic in communication sciences and disorders. (1-6 semester hours.)

**COSD 60233 - Speech, Language, and Cognition in Adult Bilinguals**

Prerequisites: Graduate standing in speech-language pathology and consent of instructor. Study of literature in neurolinguistics, psycholinguistics and sociolinguistic aspects of bilingualism in adulthood. Includes current practices in the assessment and treatment of communication disorders in non-English speaking and bilingual adults.

**COSD 60273 - Assessment and Treatment of Communication Disorders in Bilingual Children**

Prerequisites: Graduate standing in speech-language pathology and consent of instructor. Study of bilingual speech and language development, societal and individual influences on bilingualism, and current practices in the assessment and treatment of communication disorders in non-English speaking and bilingual children.

**COSD 60300 - Practicum in Speech-Language Pathology**

Prerequisites: Graduate standing in speech-language pathology and permission of instructor. Advanced clinical practice and evaluation of speech and language disorders. One semester hour required for each semester a student performs clinical practice up to six hours.

**COSD 60313 - Motor Speech Disorders**

Prerequisites: Graduate standing in speech-language pathology. A study of the effects of neuropathology on motor speech performance skills. Etiology, symptomatology, evaluation, and treatment of motor speech disorders in children and adults are examined.

**COSD 60323 - Evaluation and Diagnosis**

Prerequisites: Graduate standing in speech-language pathology and permission of instructor. A study of the theory, and some participation and observation of diagnostic teams working with speech and language problems.

**COSD 60343 - Advanced Language Disorders in Children**

Prerequisites: Graduate standing in speech pathology and permission of instructor. Principles in the assessment and treatment of language disorders in infants, preschoolers, school-aged and adolescents.

**COSD 60353 - Sociolinguistics**

Prerequisite: Graduate standing and consent of instructor. Study of social use of language by ethnically and culturally different individuals who speak a different language or dialect. Special emphasis will be given to the Mexican-American in the Southwest.

**COSD 60363 - Orofacial Pathologies/AAC**

Prerequisite: COSD 30303 or permission of instructor. This two-part course includes study of the pathology of structure and function of the speech mechanism as related to cleft palate followed by a study of the use of augmentative and alternative technology for individuals with severe communication disorders.

**COSD 60383 - Advanced Study of Language and Language Development**

Intensive study and analysis of language in normal children at various developmental levels.

**COSD 60390 - Seminar on Communication Disorders**

In depth study of a communication disorder. Seminar content may vary and may include such topics as dysphagia, organic disorders in children, assessment and treatment of voice disorders, and assessment and treatment of articulation disorders. Three hour maximum per semester.

**COSD 60413 - Communication Neuroscience 1**

This course will assist students to understand the structure and function of central and peripheral nervous systems in relation to normal and disordered communication and swallowing.

**COSD 60424 - Communication Neuroscience 2**

Prerequisites: COSD 60413, or consent of instructor. This course will assist students in learning the theoretical and clinical bases for the differential diagnosis of neurologically based communication disorders in adults and assessment and treatment of dysphagia in adults and children. Case studies, videotaped analyses, and/or clinic stimulation exercises will be used in class and/or a required lab to facilitate application of knowledge to clinical practice.

**COSD 60433 - Communication Neuroscience 3**

Prerequisites: COSD 60424 or consent of instructor. This course will assist students in learning the theoretical and clinical bases for the treatment of neurologically based communication and swallowing disorders in adults. Case studies, videotaped analyses, and/or clinic stimulation exercises will be used in class to facilitate application of knowledge to clinical practice.

**COSD 60970 - Directed Studies in Communication Disorders**

Prerequisites: Permission of instructor. Advanced study of specialized topic in communication sciences and disorders.

**COSD 70313 - Assessment and Treatment of Stuttering**

Prerequisites: COSD 50363; senior or graduate standing. A study of the assessment and treatment of stuttering in preschool, school-aged, and adults who stutter. Assessment issues including behavioral and attitudinal analyses are reviewed. Differential treatment is discussed in terms of current therapies.

**COSD 70323 - Research in Communication Sciences and Disorders**

A review of research design and evaluation in communication sciences and disorders. Emphasis on improved skills in both consuming and producing research in the fields of speech science, speech-language pathology and audiology.

**COSD 70980 - Thesis**

Thesis

**COSD 70990 - Thesis**

Thesis

## Kinesiology

The mission of the graduate program in kinesiology is to provide students the opportunity to gain an in-depth understanding of the theoretical basis of human movement. Students are able to specialize in one of the subdisciplines within kinesiology; however, the departmental core curriculum also gives students a cross-disciplinary exposure to the study of human movement. Along with classroom studies, involvement in original laboratory research constitutes a major means by which students gain a broad understanding of their specialty area. At the completion of the master's degree students should be able to:

- Provide strategies for solving both practical problems and research questions within the disciplines; and
- Integrate movement-based principles into a variety of activities taking place in laboratory, educational, clinical and athletic settings.

Prerequisites include a Bachelor of Science or Bachelor of Arts degree with a 24-hour concentration in kinesiology or its equivalent from an accredited college or university. All applicants are required to take the GRE.

**Academic Warning and GPA Requirements**

Kinesiology graduate students must maintain a GPA of at least 3.0. A graduate student who achieves a cumulative GPA of less than 3.0 at any point in their program will be placed on academic warning. A student can be removed from that status by achieving a 3.0 cumulative average by the end of the next nine hours of enrollment. Failure to resolve academic warning will result in dismissal. No student is allowed to graduate with less than a 3.0 cumulative GPA. All grades are included in the computation of the GPA, but no more than six hours of a minimum of "C+" may be utilized in satisfying degree requirements.

**Kinesiology Academic Areas of Emphasis**

Student may choose an emphasis in exercise physiology, motor control, nutrition, physical activity and chronic disease, and sport psychology.

**Kinesiology Thesis Option**

*Professional Development (6 hours)*

KINE 60103 Research Methods in Kinesiology  
PSYC 50423 Graduate Statistics

*Academic Core (9 hours)*

KINE 60213 Advanced Biomechanics  
KINE 60423 Advanced Motor Behavior  
KINE 60613 Physiology of Exercise

*Academic Specialization (9-12 hours)*

Academic courses that emphasize specific concentrations such as exercise physiology, motor control, nutrition, physical activity and chronic disease, or sport psychology.

*Resource Area (3-6 hours)*

Courses in related areas determined after a review of student preparation and goals. Must have approval of adviser.

*Thesis (6 hours)*

**Kinesiology Treatise Option**

*Professional Development (3 hours)*

KINE 60103 Research Methods in Kinesiology

*Academic Core (9 hours)*

KINE 60213 Advanced Biomechanics  
KINE 60423 Advanced Motor Behavior  
KINE 60613 Physiology of Exercise

*Academic Specialization (9-12 hours)*

Academic courses that emphasize specific concentrations such as exercise physiology, motor control, nutrition, physical activity and chronic disease, or sport psychology.

*Resource Area (9-12 hours)*

Courses in related areas determined after a review of student preparation and goals. Must have approval of adviser.

*Treatise (3 hours)*

**Kinesiology****KINE 50970 - Special Topics in Kinesiology**

Prerequisite: Approval of adviser and course instructor.

**KINE 60103 - Research Methods in Kinesiology**

Emphasis is on the design and analysis of research projects and the writing of research papers.

**KINE 60203 - Advanced Motor Development**

Prerequisite: KINE 30423 or consent of the department. Study of how and why the fundamental motor skills progress from inefficient to efficient patterns of movement. Emphasis on the interacting influence of mechanics, control and coordination on naturally developing systems.

**KINE 60213 - Advanced Biomechanics**

Investigation of mechanical principles primary to understanding human movement performance. Special emphasis on application of mechanics to the analysis of human performance.

**KINE 60423 - Advanced Motor Behavior**

Prerequisite: KINE 20503 or consent of the department. An in-depth study of the mechanisms and processes involved in the control of human motor activity. Focus on contemporary issues of motor control.

**KINE 60433 - Curriculum Development in Physical Education**

Prerequisite: KINE 20403 or KINE 40513 or consent of the department. Theories and trends of curriculum construction in physical education. Emphasis on innovative programming in K-12 setting.

**KINE 60443 - Behavior analysis in Sport and Physical Education**

The application of behavioral principles and systematic observation procedures and research to teaching physical education and coaching athletes.

**KINE 60503 - Physical Activity for Individuals with Disabilities**

In-depth examination of the conceptual framework of adapting for individual differences in activity settings. The impact of inclusion, the

Americans with Disabilities Act, and sport classification in fitness, recreation, and school physical activity settings will be discussed. Emphasis on practical application of knowledge.

**KINE 60513 - Practicum in Adapted Physical Activity**

Hands-on practical experiences in a physical education/community based sports setting with a variety of individuals with disabilities. Activities will include assisting, teaching and supervising physical education and exercise classes, assessing present needs, developing and implementing an individualized program, teaching individuals as well as small and medium-sized groups, videotaping and observing teaching behaviors, learning to utilize volunteers and aides.

**KINE 60523 - Assessment and Programming in Adapted Physical Activity**

Diagnostic-prescriptive process in adapted physical activity; identifying underlying components of various psychomotor assessment instruments; administering and interpreting assessments; developing appropriate programming strategies based on assessment results; and service delivery options for carrying out programming plans.

**KINE 60613 - Physiology of Exercise**

Study of physiological responses and adaptations in physical activity germane to selected areas of physical education that are beyond the introductory level.

**KINE 60623 - Cardiopulmonary Physiology**

Examination of the responses of the cardiovascular system to acute and chronic exercise. Emphasis on the effects of exercise on cardiac metabolism, hemodynamics, electrophysiology, pulmonary responses, gas exchange, gas transport, and renal function.

**KINE 60633 - Laboratory Techniques in Exercise Physiology**

Prerequisite: KINE 60613 or consent of the department. Practical and theoretical knowledge of evaluation of physical performance. Emphasis on acquisition and analysis of data for research in exercise physiology.

**KINE 60643 - Clinical Exercise Testing**

Practical and theoretical knowledge of clinical exercise testing. Emphasis on electrocardiography, health appraisal and risk assessment, guidelines and procedures, and pharmacology of cardiac medications.

**KINE 60653 - Exercise Metabolism and Endocrinology**

Emphasis on metabolic and neuroendocrine control of bioenergetic pathways during acute and chronic exercise. Presentation of these areas will serve as the foundation for independent library and laboratory research.

**KINE 60663 - Practicum in Cardiac Rehabilitation**

Practical experience in exercise testing and prescription in individuals with cardiopulmonary disease. Activities will include assisting in clinical exercise tests, conducting health risk appraisals, and developing, implementing, and supervising an individualized exercise program. All of these activities will be performed at a local hospital-based cardiac rehabilitation center.

**KINE 60673 - Nutrition, Physical Activity and Disease**

A study of the roles that nutrition and physical activity play in chronic diseases, with an emphasis on prevention and treatment of chronic diseases by lifestyle modifications.

**KINE 60683 - Obesity: Etiology, Pathophysiology, and Treatment**

This course will consist of four major parts: epidemiology of obesity and assessment of body fat, food intake, and energy expenditure; etiology of obesity; pathophysiology and social consequences of obesity; and prevention and treatment of obesity.

**KINE 60713 - Psychosocial Aspects of Sport**

Current topics in the psychological aspects of sport are examined in three social contexts: competitive sport, physical education, and exercise settings. Contemporary topics, evaluated in light of selected theoretical positions, include personality, motivation, adherence, communication, expectations, and leadership.

**KINE 60723 - Psychology of Youth Sport**

Prerequisite: KINE 60723 or consent of the department. The focus of this course is on theoretical and practical knowledge of contemporary

issues in youth sport settings. Topics include socialization, motivation, the role of competition, coaching strategies, moral development, and problematic dimensions of youth sport participation. Students will be required to pursue a practical youth sport experience in conjunction with class projects.

**KINE 60733 - Applied Sport Psychology**

Theoretical and practical knowledge of contemporary issues in applied sport psychology. Topics include confidence, arousal, stress, and anxiety, mental imagery, attentional control, goal setting, psychological rehabilitation, and career termination. Laboratory experiences will accompany each topical area.

**KINE 60743 - Practicum in Sport Psychology**

Prerequisite: KINE 60733 or consent of the department. The course consists of practical experience in sport psychology interventions and consulting. Activities will include assisting in the administration of psychological assessment, creating and administering team discussions, performance enhancement interventions, and evaluation of program effectiveness. All of these activities will be performed in an athletic environment with a high school, college, or private team or individual sport setting.

**KINE 60970 - Workshop in Health and Physical Education**

Prerequisite: Approval of advisor and course instructor.

**KINE 70903 - Treatise**

Independent examination of an issue relative to Kinesiology. Students complete a paper under the advisement of a faculty member in the department.

**KINE 70970 - Special Problems in Kinesiology**

Prerequisite: Approval of adviser and course instructor.

**KINE 70980 - Thesis**

Prerequisite: Admission to candidacy.

**KINE 70990 - Thesis**

Thesis

# College of Science & Engineering

The College of Science & Engineering includes eight departments and one school:

## Departments

- Biology
- Chemistry
- Computer Science
- Engineering
- Mathematics
- Nutritional Sciences
- Physics and Astronomy
- Psychology

## School of Geology, Energy, and the Environment

- Environmental Science
- Geology
- Resource Management

The college offers graduate study for master's and doctoral degrees in several areas. Master of Arts degrees are available in biology, chemistry, environmental science, physics and psychology. Master of Science degrees are offered in biology, chemistry, environmental science, geology, mathematics, physics and psychology. A Master of Arts in Teaching is available in mathematics. A Master of Environmental Management is available in Environmental Science. The PhD is available in chemistry, mathematics, physics, physics with astrophysics, and psychology.

Program descriptions and information concerning admission and degree requirements for each program are presented in their departmental and program listings. Written requests for information, application forms and completed applications for admission to graduate programs of the college may be submitted to:

College of Science & Engineering  
Attention: Graduate Studies  
TCU Box 298960  
Fort Worth, TX 76129  
USA

Administrative offices for the College of Science & Engineering are located on the first floor of the Tucker Technology Building (Suite 102). Tucker also houses departmental offices of computer science, engineering and mathematics. Chemistry, environmental science, geology, and physics and astronomy are located in the Sid W. Richardson Building. Departmental offices for biology and psychology are in Winton-Scott Hall. Nutritional sciences is in the Ann Richardson Bass Building.

## Biology

Students may earn a Master of Arts or Master of Science in Biology. Students who have majored in other disciplines may be admitted if undergraduate deficiencies can be removed within a reasonable length of time.

*Prerequisites for the MA/MS degrees:* A bachelor's degree in biology or equivalent; general chemistry; mathematics through calculus or statistics.

### Biology MA Requirements

The Master of Arts in Biology comprises 36 hours of graduate coursework, including BIOL 60011 Research in the Biological Sciences, BIOL 60001 Scientific Presentation, one-hour seminar (BIOL 60910); 21 additional hours in biology (minimum); 12 hours approved electives. Limit of three hours of assigned problems unless approved by graduate committee or department chair.

### Biology MS Requirements

The Master of Science in Biology comprises 30 approved graduate hours, including BIOL 60011 Research in the Biological Sciences, BIOL 60001 Scientific Presentation, one-hour seminar (BIOL 60910); 12 additional hours in biology (minimum), six hours of thesis; nine hours of

approved electives. Limit of three hours of assigned problems unless approved by graduate committee or department chair.

## Biology Courses

### BIOL 50103 - Terrestrial Ecosystems

Three hours lecture per week. Prerequisite: BIOL 30403 or permission of instructor. Concepts, principles, and mechanisms of the function of terrestrial ecosystems, including ecophysiology of component species, nutrient cycling, energy flow, ecosystem stability and global ecology.

### BIOL 50123 - Biostatistics

Prerequisites: BIOL 30403 and 30603 or permission of instructor. Three hours lecture per week. Students will gain knowledge and understanding of how statistical methods are applied to biological research. The course will emphasize hypothesis testing, study design, and the concepts, application, and interpretation of statistical results. Basic probability theory, parametric statistics, correlation, regression, analysis of variance, and non-parametric statistics will be introduced.

### BIOL 50133 - Biochemistry

Prerequisite: CHEM 30133 and 40123 or permission of the instructor. Three hours lecture per week. A general survey of structure and function of biologically important compounds with methods of analysis. (Crosslisted as BIOL 50133.)

### BIOL 50143 - Biochemistry

Prerequisite: CHEM or BIOL 50133. Biosynthesis, replication of DNA, synthesis and processing of RNA and proteins, and special topics e.g. brain and muscle functions, hormones and signal transduction, cancer, development, etc. (Crosslisted as BIOL/CHEM 50143.)

### BIOL 50153 - Medicinal Chemistry

Three hours lecture per week. Prerequisites: CHEM or BIOL 50143, or permission of the instructor. Molecular mechanism of drug actions, and methods of drug design, discovery and development. (Crosslisted as BIOL/CHEM 50153.)

### BIOL 50246 - Biodiversity

Prerequisites: Two semesters of college-level biology courses. This course introduces skills to describe and study the diversity of life. It is immersion, field-intensive instruction. General concepts include patterns of global biodiversity, biogeography of the Southern Plains, conservation biology, pressures on biodiversity, and national/international biodiversity protection efforts and policies. Field skill instruction starts with context description, emphasizing vegetation structure, followed by plant community description. Subsequent modules focus on inventorying animal communities, starting with insects and continuing with freshwater invertebrates, fish, amphibians, reptiles, birds and mammals. The field skill component of the course concludes with a week-long exercise in habitats outside of north-central Texas. Biodiversity information management is learned by developing a relational database coupled with a local Geographic Information System.

### BIOL 50303 - Evolution

Three hours lecture per week. Prerequisite: BIOL 10504 and 10514. Concepts and principles of organic evolution. Topics include natural selection, adaptation, quantitative genetics, sexual selection, kin selection, life history characters, speciation, and phylogeny.

### BIOL 50324 - Techniques in Cell and Molecular Biology

Three hours lecture and one 3-hour laboratory per week. Prerequisite: Concurrent enrollment in BIOL or CHEM 50133 or equivalent and permission of instructor. Survey of techniques central to molecular and cellular biology, including centrifugation, chromatography, electrophoresis, spectrophotometry and radioisotopes.

### BIOL 50463 - Functional Neuroanatomy

Prerequisite: Graduate or senior standing or approval of the instructor. The fundamentals of functional neuroanatomy and neurophysiology with an emphasis on experimental and theoretical analysis of the basic brain behavior relationships. (Crosslisted as BIOL/PSYC 50463.)

**BIOL 50472 - Laboratory in Physiological Psychology and Neuroscience**

Prerequisite: PSYC 30463 or its equivalent or PSYC 50653 or its equivalent, or concurrent registration in either PSYC 50436 or PSYC 30463. One lecture and one laboratory per week. Emphasis will be on the laboratory techniques employed in physiological psychology and neuroscience in analyzing the neural and hormonal correlates of behavior (Crosslisted as PSYC 50472.)

**BIOL 50482 - Laboratory in Physiological Psychology and Neuroscience**

Prerequisite: PSYC 30463 or its equivalent or PSYC 50653 or its equivalent, or concurrent registration in either PSYC 50436 or PSYC 30463. One lecture and one laboratory per week. Emphasis will be on the laboratory techniques employed in physiological psychology and neuroscience in analyzing the neural and hormonal correlates of behavior (Crosslisted as PSYC 50482.)

**BIOL 50502 - Biochemistry Laboratory**

Two four-hour laboratory periods per week. Prerequisite: CHEM 50143 or concurrent registration. (Crosslisted as BIOL/CHEM 50502.)

**BIOL 50703 - Ecology of Lakes and Streams**

Prerequisite: BIOL 30403 or permission of instructor. Two hours lecture and one laboratory period per week. Study of the physical, chemical and biological factors affecting the ecology of lakes, ponds and streams.

**BIOL 50773 - Introduction to Environmental Law**

Three hours lecture per week. Introduction to and analysis of selected federal statutes regulating environmental degradation and environmental clean-up, including the National Environmental Policy Act and regulation of air quality, water quality, wastes, hazardous and toxic substances and enforcement. (Crosslisted as BIOL/ENSC/GEOL 50773.)

**BIOL 50803 - Ecology of Fishes**

Prerequisite: BIOL 30403 or permission of instructor. Two hours lecture and one laboratory period per week. Ecology of fishes, basic techniques of fisheries management.

**BIOL 50903 - Tropical Biology**

Two hours lecture per week, one week of field work in the tropics and a terminal project. Prerequisites: Six semester hours in Biology; travel costs are exclusive of tuition; permission of instructors. This course provides an introduction to the animals, plants, and ecosystems of the New World tropics. Lecture topics will include tropical climate and ecosystems, evolutionary patterns in the tropics, and conservation of biodiversity. The field experience will expose students to coastal ecosystems (coral reefs, mangroves, and seagrass beds) as well as tropical, lowland rainforest.

**BIOL 50910 - Biology Seminar**

1. The primary goal is to acquaint the student with the preparation and presentation (oral and/or written) of scientific information from the biological literature. May be repeated for credit with different topics to a maximum of 3 times (one semester hour per topic). 2. Acquainting the student with the preparation and presentation (oral and/or written) of scientific information from the biological literature. May be repeated for credit with different topics to a maximum of 3 times. (One semester hour per topic.)

**BIOL 60000 - The Teaching of Biology**

Three to six semester hours. Seminar in methods of teaching Biology and supervised classroom and laboratory teaching. Open to students who are Teaching Assistants or National Science Foundation Trainees.

**BIOL 60001 - Scientific Presentation**

The goal of this course is to acquaint the student with the organization, preparation and effective delivery of scientific seminars. ALL BIOLOGY GRADUATE STUDENTS ARE REQUIRED TO TAKE THIS COURSE.

**BIOL 60011 - Research in the Biological Sciences**

One hour lecture per week introducing students to various aspects of biological research including scientific publication, grantsmanship and research approaches. All Biology graduate students are required to take this course.

**BIOL 60123 - Electron Microscopy**

Prerequisites: BIOL 50133, 50143 or permission of instructor. Cell ultrastructure with special emphasis on preparative techniques useful in the study of functional morphology of cells.

**BIOL 60153 - Conservation Genetics**

Prerequisites: BIOL 10504, 10514, 30403, and 30603 or permission of instructor. Genetics plays an important and diverse role in the preservation of biological diversity. This course consists of two one-hour lectures and one three-hour laboratory each week and covers genetic theory and methods that are utilized in modern conservation efforts. Laboratory exercises focus on 1) the practical aspects of DNA extraction methods, molecular markers, PCR, sequencing, and capillary electrophoresis, and 2) analyzing the resulting genetic data.

**BIOL 60243 - Advanced Immunology**

Three hours lecture per week. Prerequisite: Biology 30303 20233, 40253 or approval of instructor. Immunobiology and immunochemistry of the immune response, especially cell mediated reactions. Current literature, techniques and clinical applications.

**BIOL 60443 - Environmental Biology**

Prerequisites: Permission of instructor. Introduction to contemporary issues in environmental biology such as the biological consequences of global climate change, extinction, contaminants in the environment, and overfishing.

**BIOL 60603 - Virology**

Prerequisite: Six hours of biochemistry or permission of instructor. Fundamental properties of viruses and contribution of viral studies to molecular biology.

**BIOL 60723 - Advanced Genetics**

Three hours lecture per week. Prerequisite: BIOL 30303, 40123, 50133 or approval of instructor. Examination of research literature dealing with selected topics in genetics. Topics in molecular genetics are most common. May be repeated for credit one time with different topic.

**BIOL 60910 - Biology Seminar**

Prerequisite: BIOL 60001 or permission of instructor. The primary goal is to acquaint the student with areas of study in the biological sciences not covered in detail in other courses.

**BIOL 70771 - Non-Thesis**

Selected when enrolling only for non-thesis examination or preparation for the examination.

**BIOL 70950 - Assigned Problems in Biology**

Limit 3 hours unless approved by graduate committee or department chair. Each of the assigned projects requires a minimum of 50 clock hours of field, laboratory or library work for each semester hour of credit.

**BIOL 70980 - Thesis**

A minimum of 3 hours of BIOL 70980 Thesis is required.

**BIOL 70990 - Thesis**

Prerequisite: BIOL 70980 and admission to candidacy. A minimum of 3 hours of BIOL 70990 Thesis is required.

## Chemistry

Students may earn the Master of Arts, Master of Science and Doctor of Philosophy in Chemistry.

*Prerequisites for the MA/MS degrees:* A baccalaureate degree in chemistry from an approved college or university with an academic record meeting the standards established by TCU. Students who have majored in related areas will be considered if it is believed that the relevant undergraduate chemistry background can be acquired during the first year of graduate study.

To pursue the PhD in Chemistry, a student must have earned a baccalaureate degree in chemistry from an approved college or university with an academic record meeting the standards established by TCU. Students who have majored in related areas will be considered if it is believed that the relevant undergraduate chemistry background can be acquired during the first year of graduate study.

## General Requirements

All graduate students must satisfy the core course requirements in three out of four areas of chemistry through placement examination or *appropriate courses*. The examinations are at the level expected for an ACS-certified BS degree. These examinations are given during the week prior to the beginning of the fall and spring semesters. *Students must take at least three exams upon entering the program.* Courses are selected from the following: CHEM 50133 Biochemistry, CHEM 50223 Organic Chemistry, CHEM 50282 and 50290 Physical Chemistry, and CHEM 50163 Inorganic Chemistry. A grade of "B" or better in the appropriate course is required to satisfy the requirement. *All graduate students must satisfy the core course requirements by the end of the third semester in residence.*

All graduate students are required to satisfactorily complete a course in laboratory safety.

The GRE must be taken by all entering graduate students. Normally, a student must submit the results of the exam to the Department of Chemistry before being admitted. In all cases, the examination must be taken before the end of the student's first semester residence in the program.

The time required for part-time students to meet requirements may be modified upon recommendation of a committee composed of the chair and two faculty advisers.

## Chemistry MA Requirements (Non-Thesis)

The MA in Chemistry (non-thesis option) requires a total of 36 approved hours, including at least 24 in chemistry with no more than six hours of credit in CHEM 50120, 50230, 60110, 60240, 60260, 60270 and 60280 combined. Each student is also required to pass an oral examination based upon the chosen program of study.

## Chemistry MS Requirements (Thesis)

The MS in Chemistry (thesis option) requires a total of at least 30 approved hours, including at least 15 in chemistry and six in thesis. Each student will defend his/her thesis in an oral examination.

The teaching experience is considered an important part of the graduate training program. Each student on an MA or MS track is required to participate in a minimum of two, but usually no more than four, semesters of teaching.

## Chemistry PhD Requirements

The PhD in Chemistry comprises the following components:

1. **Lecture courses** to provide the student with extensive depth and breadth of knowledge in major areas of chemistry.
2. **A seminar program** designed to supplement the traditional course program with presentations given both by visiting scholars and TCU students and faculty. Graduate students are required to present one departmental seminar on a topic selected from the current literature but not related to their own research. This is normally given in the second semester, and a second seminar describing the student's PhD work is given in the last semester in residence.
3. **A research progress report** written and oral, to be presented to the student's supervisory committee by the end of the second year in residence. The written report must provide a summary of the research results obtained up to that point as well as a plan for the future direction of the student's research project. The research progress is evaluated on the pass/fail basis.
4. **A cumulative examination program** designed to inform the faculty of the student's knowledge and ability in the chosen field and to guide the student in his/her own development. These examinations are given four times per semester during the academic year in the areas of inorganic, organic, physical chemistry and biochemistry. In general, they are based on advanced coursework and/or the current chemical literature. A student is expected to begin taking cumulative examinations no later than the beginning of the third semester. Once the cumulative examinations are begun, the student should normally pass two during the first six attempts and must pass a total of four within three semesters (12 attempts). Part-time students should consult with their faculty adviser concerning time limitations associated with the cumulative examinations.
5. **An original research proposal** covering a feasible research plan within their area of interest, but outside their current research efforts. This proposal should be at least five double-spaced pages, 12-point font, and not be longer than 10 pages, including references. The proposal is evaluated by a given student's supervisory committee on

a pass/fail basis, defended in oral presentation before the supervisory committee, and should be completed by the beginning of the second regular semester following completion of the cumulative exams. Upon completion of the proposal defense, a student is formally admitted to candidacy for the PhD degree. Admission to candidacy must occur at least one full semester before graduation.

6. **A teaching experience** that is considered an important part of the graduate training program. Each student is required to participate in four semesters of teaching, normally as an assistant in an undergraduate laboratory course. During these semesters the student enrolls in CHEM 50120.
7. **A dissertation** that is based upon the successful completion of an original research project. Each student defends the dissertation in an oral examination before the student's supervisory committee.

## Chemistry Courses

### CHEM 50001 - Laboratory Safety

Required of all graduate students in chemistry and undergraduate students who are conducting independent laboratory research, this course deals with the safe handling of chemicals, the inventory and safe disposal of chemicals, safe handling of radioactive materials and lasers as well as details of federal, state and city regulations that apply to safety in academic and industrial laboratories. The course is also required of students who will be handling radioactive materials and is highly recommended for all other graduate students in the physical sciences.

### CHEM 50111 - Laboratory Glassblowing

One 4-hour laboratory period per week. An introduction to the preparation of laboratory research equipment constructed of sodium and borosilicate glass.

### CHEM 50120 - Teaching of Chemistry

Prerequisite: Permission of the instructor. Members of this class act as Chemistry laboratory assistants. Techniques of laboratory instruction are illustrated and the importance of laboratory safety is stressed. 1-3 semester hours.

### CHEM 50133 - Biochemistry

Prerequisite: CHEM 30133 and 40123 or permission of the instructor. Three hours lecture per week. A general survey of structure and function of biologically important compounds with methods of analysis. (Crosslisted as BIOL 50133.)

### CHEM 50143 - Biochemistry

Prerequisite: CHEM or BIOL 50133. Biosynthesis, replication of DNA, synthesis and processing of RNA and proteins, and special topics e.g. brain and muscle functions, hormones and signal transduction, cancer, development, etc. (Crosslisted as BIOL/CHEM 50143.)

### CHEM 50153 - Medicinal Chemistry

Three hours lecture per week. Prerequisites: CHEM or BIOL 50143, or permission of the instructor. Molecular mechanism of drug actions, and methods of drug design, discovery and development. (Crosslisted as BIOL/CHEM 50153.)

### CHEM 50162 - Advanced Inorganic Chemistry Laboratory

One hour lecture and one 4-hour laboratory per week. Prerequisite: CHEM 50163 or concurrent registration. The laboratory emphasizes the synthesis, characterization and transformations of inorganic species.

### CHEM 50163 - Advanced Inorganic Chemistry

Three hours lecture per week. Prerequisite: CHEM 40123 or permission of the instructor. A survey of topics in modern inorganic chemistry with emphasis on synthesis, bonding and the mechanisms of reactions.

### CHEM 50182 - Biophysical Chemistry Laboratory

Two 4-hour laboratory periods per week. Prerequisite: Prior or concurrent registration in CHEM 50183. Physical chemical principles applied to biochemical systems.

### CHEM 50183 - Biophysical Chemistry

Three hours lecture per week. Prerequisite: CHEM 40123 and prior or concurrent registration in CHEM 50143. Biological systems are discussed from the viewpoint of physical chemical theories and methods.

**CHEM 50223 - Advanced Organic Chemistry**

Three hours lecture per week. Prerequisite: Chemistry 30132, 30133 or permission of instructor. A detailed study of stereochemistry, important organic reactions and mechanisms, organic syntheses and fundamentals of synthetic design.

**CHEM 50230 - Special Problems in Chemistry**

Advanced work in biochemistry, inorganic, organic and physical chemistry to be determined by the previous preparation and interests of the individual student.

**CHEM 50263 - Physical-Organic Chemistry**

Three hours lecture per week. Prerequisite: CHEM 30133 and prior or concurrent registration in CHEM 40123. An introduction to modern structural theory and reaction mechanism. Includes a discussion of physical methods.

**CHEM 50273 - Inorganic Reactions**

Three hours lecture per week. Prerequisite: CHEM 50163 or permission of the instructor. An advanced study of the preparative and derivative chemistry of important classes of transition metal and main group element compounds.

**CHEM 50282 - Advanced Physical Chemistry**

Two hours lecture per week. Prerequisite: Chemistry 40133. An introduction to Quantum Chemistry and Statistical Thermodynamics is presented. Continuation of Chemistry 40123-40133.

**CHEM 50290 - Chemical Thermodynamics**

Prerequisite: Chemistry 40113 or permission of instructor. An introduction to the applications of thermodynamics in chemistry. 1-3 hours of variable credit

**CHEM 50303 - Chemical Kinetics**

Three lecture hours per week. Prerequisite: CHEM 40123. Phenomenological and theoretical aspects of the subject are stressed. Emphasis is placed on the study of rates of reaction as a means of elucidating reaction mechanisms. The study of specific gas phase and solution reactions is undertaken to illustrate basic theoretical principles as well as to distinguish molecular, ionic and free radical pathways, applications of isotope effects, activation parameters, medium effects and linear free-energy relationships are considered. Selected topics in conventional and enzyme catalysis are discussed.

**CHEM 50502 - Biochemistry Laboratory**

Two four-hour laboratory periods per week. Prerequisite: CHEM 50143 or concurrent registration. (Crosslisted as BIOL/CHEM 50502.)

**CHEM 50783 - Environmental Chemistry**

Prerequisites: CHEM 10114-10124 or permission of the instructor. Three hours lecture per week. Chemistry of water, soil, energy, and air as related to environmental problems. Subjects include: nutrients and eutrophication, fluorocarbons, sulfur and nitrogen oxides, Eh-pH relationship, natural carbonate reactions, and cation exchange phenomena. Cross as CHEM/GEOL 50783.

**CHEM 50993 - Neurochemistry**

Three lecture hours per week. Prerequisite: CHEM 50133 or permission of instructor. The elucidation of biomedical phenomena that subserve the characteristic activity of the nervous system or are associated with neurological diseases.

**CHEM 60110 - Seminar**

Chemistry seminar.

**CHEM 60120 - Special Topics in Inorganic Chemistry**

Prerequisite: CHEM 50163 or permission of instructor. Significant advances in inorganic chemistry with emphasis upon material taken from recent literature. The subject matter will be fitted to the needs and interests of the class.

**CHEM 60123 - Chemistry of Heterocyclic Compounds**

Prerequisite: CHEM 50223 or equivalent. The synthesis and reactions of the principle heterocyclic systems, including some related natural products.

**CHEM 60130 - Special Topics in Biochemistry**

Prerequisite: CHEM 50143. Specialized aspects and new developments in the field.

**CHEM 60140 - Special Topics in Organic Chemistry**

Prerequisite: CHEM 50223 or equivalent. Recent advances in theoretical and synthetic organic chemistry. Highly specialized areas of organic chemistry may be taken up according to the needs of the class.

**CHEM 60150 - Special Topics in Physical Chemistry**

Prerequisite: Permission of the instructor. Topics of current interest in physical chemistry. The subject matter will be selected to meet the needs and interests of the class.

**CHEM 60240 - Graduate Research in Inorganic Chemistry**

Graduate research in inorganic chemistry.

**CHEM 60260 - Graduate Research in Organic Chemistry**

Graduate research in organic chemistry.

**CHEM 60270 - Graduate Research in Physical Chemistry**

Graduate research in physical chemistry.

**CHEM 60280 - Graduate Research in Biochemistry**

Graduate research in biochemistry.

**CHEM 60313 - Quantum Chemistry**

Prerequisite: CHEM 50282, Differential Equations is recommended. A brief review of the physical and historical background of quantum theory. The mathematical formalism along with some exactly solvable problems. Considerable time is spent on the approximate methods which are most applicable to chemical systems and allow a qualitative understanding of delocalization energies, spectra and chemical reactivity.

**CHEM 60323 - Quantum Chemistry**

Prerequisite: CHEM 50282, Differential Equations is recommended. A brief review of the physical and historical background of quantum theory. The mathematical formalism along with some exactly solvable problems. Considerable time is spent on the approximate methods which are most applicable to chemical systems and allow a qualitative understanding of delocalization energies, spectra and chemical reactivity.

**CHEM 60333 - Statistical Mechanics**

Prerequisite: CHEM 50290. After a brief mathematical introduction, the equilibrium theory of statistical mechanics is developed and used to interpret the laws of thermodynamics from the molecular standpoint. A detailed study of the relationships between the thermodynamic functions of gases, liquids and solids and their structure on the molecular scale.

**CHEM 60500 - Seminar in Chemistry of Behavior**

Prerequisite: Departmental approval. Weekly discussions of current topics in the Chemistry of Behavior. (Offered as CHEM or PSYC credit.)

**CHEM 70771 - Non-Thesis**

Selected when enrolling only for non-thesis examination or preparation for the examination.

**CHEM 70980 - Thesis**

A minimum of 3 hours of CHEM 70980 Thesis is required.

**CHEM 70990 - Thesis**

Prerequisite: CHEM 70980 and admission to candidacy. A minimum of 3 hours of CHEM 70990 Thesis is required.

**CHEM 90000 - Postdoctoral Research**

Postdoctoral Research.

**CHEM 90980 - Dissertation**

Prerequisite: Permission of the Chair of the Department. A minimum of 6 hours of CHEM 90980 Dissertation is recommended.

**CHEM 90990 - Dissertation**

Prerequisite: CHEM 90980 and admission to candidacy. A minimum of 6 hours of CHEM 90990 Dissertation is recommended.

## Environmental Science

Students may earn the Master of Arts, Master of Science and Master of Environmental Management.

**Prerequisites for the MA/MS degrees:** A bachelor's degree with a major in environmental science, biology, geology (or the equivalent) or a major in one of the other sciences, or engineering, or one of the social sciences. Students with undergraduate preparations different from these will be considered after careful review.

The student must have completed at least one year of biology, one semester of physical geology, one year of chemistry, one semester of calculus and one semester of introductory statistics. Satisfactory scores (minimum of 1000) on the GRE are required.

**Prerequisites for the MEM degree:** The department accepts students with a variety of undergraduate majors, including the humanities, social sciences, natural sciences and engineering. However, in order to be adequately prepared for the required coursework, MEM applicants should have completed two semesters in any combination of biology, geology or chemistry; one semester of either calculus or introductory statistics; and one semester of upper-level ecology. Students lacking some of this preparation may be accepted for admission, but are expected to make up the deficiencies prior to entrance by means of formal coursework or other arrangements agreed upon by the applicant and the director. Acceptable scores on the GRE (minimum of 1000) are also required.

### Program of Study

Each student prepares an individual Program of Study (POS) designed specifically for the student's particular background and goals. The POS is prepared in consultation with the student's major professor and the director of the program.

Each student, regardless of the graduate degree selected, is also required to pass an oral examination based upon the chosen program of study.

### Environmental Science MS Requirements (Thesis)

Students pursuing a Master of Science must complete at least 30 semester hours with a thesis. These semester hours are made up as follows:

#### Required Courses (6 semester hours)

ENSC 60203	Environmental Issues Seminar	3
BIOL 60001	Scientific Presentations (if major adviser is BIOL) or	1
ENSC 60001	Scientific Presentations (if major adviser is ENSC or GEOL)	1
ENSC 60011	Literacy of Science Review	1
ENSC 60021	Oral Examination	1

#### Thesis (6 semester hours)

Students, in consultation with a faculty member, should select an appropriate research topic normally at the end of their first year of graduate work. At this time, students present and defend a thesis proposal to the faculty, where they show a grasp of the literature and have a well-defined rationale and set of objectives, a planned methodology, and an appropriate budget. If approved, students proceed with their research until submission of the thesis as per TCU guidelines. Each student will defend his/her thesis in an oral examination.

#### Electives (18 semester hours)

The electives are selected in consultation with the student's major professor and the director of the program. At least 15 hours of electives must be ENSC, BIOL or GEOL courses. Students may count up to three hours of Independent Study toward their electives, though further Independent Study hours may be taken with the approval of the director of the program. Students may count up to six hours of Applied Projects (ENSC 50003) toward their electives, though further Applied Projects hours may be taken with the approval of the director of the program.

### Environmental Science MA Requirements (Non-Thesis)

Students pursuing a Master of Arts by coursework must complete at least 36 semester hours made up as follows:

#### Required Courses (6 semester hours)

ENSC 60203	Environmental Issues Seminar	3
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ENSC 60001	Scientific Presentations	1
ENSC 60011	Literacy of Science Review Examination	1
ENSC 60021	Oral Examination	1

#### Electives (27-30 semester hours)

The electives are selected in consultation with the director of the program. At least 21 hours of electives must be ENSC, BIOL or GEOL courses. Students may count up to three hours of independent study toward their electives, through further independent study hours may be taken with the approval of the director of the program. Students may count up to six hours of Applied Projects (ENSC 50003) toward their electives, though further Applied Projects hours may be taken with the approval of the director of the program. Each student also prepares an individual Program of Study (POS) in consultation with the director of the program.

#### Elective Internship (3 semester hours)

Students may complete an approved internship with a company, government agency or national laboratory. Three credit hours may count toward their degree plan through the internship. The purpose of the internship program is to train and equip students for future careers as environmental professionals. It provides the opportunity for students to experience first-hand actual environmental challenges in government, industry, public interest groups and scientific research organizations. The program reaches beyond the campus to provide practical experience individually tailored to each student's academic goals and capabilities. Part-time students who already work in their area of study may fulfill the internship requirement by working on a special project with their current employer. All projects require a brief proposal and approval from the program director. At the conclusion of this internship, students must present a summary of their internship project(s) in both oral and written form.

### Environmental Management Master's Degree Requirements

The Master of Environmental Management is a two-year professional degree by coursework. This degree is designed to equip students with the skills needed to bridge the gaps between science, business and government, and for those individuals who plan to enter or re-enter the workforce upon graduation. The degree plan requires coursework in both the natural sciences and business, with a particular focus on the relationship among science, management, and policy.

Students pursuing a Master of Environmental Management must complete at least 36 semester hours as follows:

#### Required (Core) Courses (30 semester hours)

The required core courses have been developed to account for a full range of physical, biological, societal, legal and economic principles essential for environmental problem solving. The core courses are generally designed to accommodate varying levels of knowledge.		
BIOL 50103	Terrestrial Ecosystems or	
BIOL 50703	Ecology of Lakes and Streams or	
ENSC 50783	Environmental Chemistry or	
ENSC 50203	Riparian Envirodiversity or	3
ENSC 50213	Terrestrial Envirodiversity <sup>1</sup>	3
GEOL 50493	Physical Hydrology <sup>2</sup>	3
ENSC 50773	Environmental Law	3
ENSC 50703	Environmental Compliance <sup>2</sup>	3
ENSC 60011	Literacy of Science Review Examination	1
ENSC 60021	Oral Examination	1
ENSC 60001	Scientific Presentations	1
ENSC 60203	Environmental Issues Seminar	3
FINA 60013	Management of Financial Resources	3
ACCT 60010	Accounting <sup>3</sup>	1.5
ACCT 60020	Financial Reporting <sup>3</sup>	1.5
MANA 60033	Managing People	3
MANA 60460	Business Ethics	1.5
MANA 70610	Essentials of Negotiation	1.5

<sup>1</sup>Students may choose an alternative BIOL course with the approval of the director of the program.

<sup>2</sup>Substitutions for these courses will not be allowed unless the student has had an upper-level equivalent course and the approval of the director of the program.

<sup>3</sup>Students taking ACCT 60010 and 60020 must take a prerequisite online preparatory course. Contact phone: 1.800 646 3375; Approximate cost is \$40. ([www.wallstreetprep.com/programs/supplementlcorp.php](http://www.wallstreetprep.com/programs/supplementlcorp.php))

#### Specialization/Electives/Internship (6 semester hours)

In addition to the core courses, which are intended to provide a broad training in the field of environmental management, students choose

two electives as part of their MEM. degree plan. These electives may be grouped to form a "specialization," either within the sciences or business, but may include courses from other departments on the TCU campus. However no more than three additional hours of business courses may be selected. The degree is restricted to a maximum of 15 hours of business courses.

In lieu of three hours of electives, students may choose to complete an internship with a company, government agency or national laboratory. The purpose of the internship program is to train and equip students for future careers as environmental professionals. It provides the opportunity for students to experience first-hand actual environmental challenges in government, industry, public interest groups and scientific research organizations. The program reaches beyond the campus to provide practical experience individually tailored to each student's academic goals and capabilities.

Part-time students who already work in their area of study may fulfill the internship requirement by working on a special project with their current employer. All projects require approval from the program director. At the conclusion of this internship, students must present a summary of their internship project(s) in both oral and written form.

## Environmental Science Courses

### ENSC 50003 - Applied Projects Partnership Program

Prerequisites: Must have C or better in at least 9 hours of approved courses in the minor or degree, plus permission of instructor and program advisor. ENSC faculty will identify opportunities for students to partner with local businesses, industry and consulting firms to solve real-world problems and create professional deliverables. Students will be matched with the positions that are available, based on observed talents and the type of experience they seek. This is a student-lead project. ENSC faculty provide oversight and guidance but will NOT manage the project or direct the team.

### ENSC 50203 - Riparian and Wetland Diversity

Prerequisites: Six hours of biology, geology, or environmental science courses. Note: students who enroll in this course may not enroll in ENSC 50246 for credit. This field-intensive course introduces skills to study the diversity of riparian and wetland habitats of North Central Texas. The curriculum introduces methods of sampling a site in terms of its macroinvertebrates, flora, vegetation, soils, and hydrologically relevant landforms. The field modules are macroinvertebrates, plant zonation, and description of substrates, topography, and landscape context. Some exercises may be done in conjunction with the Wetland Delineation class. The field trips run Thursday evening through Sunday, and are required for all students.

### ENSC 50213 - Terrestrial Envirodiversity

Prerequisites: Six hours in biology, geology, or environmental science. Note: students who enroll in this course may not enroll in ENSC 50246 for credit. This field-intensive course introduces skills to describe the diversity of terrestrial life and landscapes. The curriculum introduces methods of sampling a site in terms of its macroinvertebrates, flora, vegetation, rocks, soils, and landforms. Collections of invertebrates and plants are required. Field skill instruction includes context description, emphasizing vegetation structure correlated with soils, geology, and landforms. The three field modules are terrestrial invertebrates, plant communities, and geology-landforms-soils description. These field trips run Thursday evening through Sunday, and are required for all students.

### ENSC 50246 - Biodiversity

Prerequisites: Two semesters of college-level biology courses. This course introduces skills to describe and study the diversity of life. It is immersion, field-intensive instruction. General concepts include patterns of global biodiversity, biogeography of the Southern Plains, conservation biology, pressures on biodiversity, and national/international biodiversity protection efforts and policies. Field skill instruction starts with context description, emphasizing vegetation structure, followed by plant community description. Subsequent modules focus on inventorying animal communities, starting with insects and continuing with freshwater invertebrates, fish, amphibians, reptiles, birds and mammals. The field skill component of the course concludes with a week-long exercise in habitats outside of north-central Texas. Biodiversity information management is learned by developing a relational database coupled with a local Geographic Information System.

### ENSC 50503 - Wetlands Delineation and Management

Prerequisites: major field of study within the College of Science & Engineering, graduate enrollment, or permission of instructor. To develop a working understanding of the wetland delineation process using the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual and regional supplements. Students will be taught how to measure the three parameters required for a jurisdictional wetlands. In addition, students will learn a basic understanding of wetland ecology. At the end of the course students will be able to use the manual to assist in delineating wetlands.

### ENSC 50513 - Wetlands Restoration

Prerequisite: major field of study within the College of Science and Engineering, graduate enrollment or permission of instructor. To develop a working understanding of stream and wetland riparian ecology, methods to evaluate and categorize streams and wetlands, and methods to restore, enhance and create streams and wetlands. Students will be taught the various methods of stream/wetland evaluations and categorization and will apply these methods on an actual stream and wetland. Students will evaluate and develop a working plan for stream and wetland restoration. In addition, students will visit various restoration projects in the region.

### ENSC 50523 - Introduction to Geographic Information Systems

Basic introduction to GIS by use of ESRI-ArcGIS. Elements of spatial data, mapping, data representation, and geodatabases. Training in use of a GIS system to infer relationships among spatial features. Cross-listed as ENSC/GEOL 50523.

### ENSC 50703 - Environmental Compliance

This course is designed to teach the basics of environmental compliance for students seeking a career in either environmental consulting or environmental compliance for industry. At the completion of the course, students will understand the basics of environmental regulatory framework, how environmental regulations interrelate, federal versus state or local regulatory agency authority, basic permitting processes, and the fundamentals of compliance auditing. Students will have the opportunity to apply the knowledge they gain to re-life situations throughout the class.

### ENSC 50713 - Phase I and Phase II Environmental Site Assessment

Prerequisites: Must be a Science and Engineering major, grad student, or have permission of the instructor. This course is designed to teach the basics of Phase I and Phase II Environmental Site Assessments for students seeking a career in environmental consulting. At the completion of the course, students will understand the basics of performing environmental site assessments, the environmental regulatory framework, and the fundamentals of site investigation. Students will have the opportunity to apply the knowledge they gain to real-life situations throughout the class.

### ENSC 50723 - Water and Wastewater Technology

Prerequisites: Major field of study within the College of Science & Engineering, graduate enrollment or permission of the instructor. This course is designed to teach the basics of water and wastewater treatment technology, including regulations, for students seeking a career in environmental consulting. At the completion of the course, students will understand the basics of water and wastewater treatment, the regulations affecting water and wastewater treatment and pretreatment programs. Students will have the opportunity to apply the knowledge they gain to real-life situations throughout the class.

### ENSC 50733 - Hazardous Waste Operations and Emergency Response

Prerequisites: Must be a Science and Engineering major, grad student, or have permission of the instructor. This course is designed to teach the basics of worker protection for those who will work with hazardous substances during clean up operations and emergency response. The course is designed to meet the requirements of OSHA (Occupational Safety and Health Administration) regulations under 29 CFR 1910.120. At the completion of the course, students will understand the basics of hazardous materials/substances, routes of exposure, personal protective equipment, and permissible exposure limits. Students who complete the entire 40 hours of instruction will receive an occupational certification for the 40-hour initial course in accordance with 29 CFR 19101.120.

**ENSC 50743 - Environmental Impact Statements**

Prerequisites: Must be a Science and Engineering major, grad student, or have permission of the instructor. This course is designed to teach the basics of Environmental Impact Statements and the NEPA process for students seeking a career in environmental consulting. At the completion of the course, students will understand the basics of evaluating federally-funded development projects for impacts to the environment. Students will be able to evaluate if the project qualifies for a categorical exclusion, and perform environmental assessment (EA) and environmental impact state (IES). Students will have the opportunity to apply the knowledge they gain to real-life situations throughout the class.

**ENSC 50753 - Environmental Management Systems**

Prerequisites: ENSC 50703 or permission of instructor. This course is designed to provide an overview of environmental management systems (EMS) and how EMS can support environmental improvements at facilities that are subject to environmental regulations. At the completion of the course, students will have an understanding of how an EMS allows an organization to systematically manage its environmental and health safety matters. Students will also understand the state and federal requirements for an EMS and how an EMS compares with ISO14001 certification.

**ENSC 50763 - Groundwater Hydrology**

Prerequisites: major field of study within the College of Science & Engineering, or permission of instructor. This course is designed to teach the basics of groundwater hydrogeology including hydrologic cycle, aquifers, groundwater flow, groundwater recharge, water chemistry and groundwater contamination. At the end of this course, students will be able to understand the relationship between surface water and groundwater, groundwater protection, field methods, and groundwater development.

**ENSC 50773 - Introduction to Environmental Law**

Three hours lecture per week. Introduction to and analysis of selected federal statutes regulating environmental degradation and environmental clean-up, including the National Environmental Policy Act and regulation of air quality, water quality, wastes, hazardous and toxic substances and enforcement. (Crosslisted as BIOL/ENSC/GEOL 50773.)

**ENSC 50783 - Environmental Chemistry**

Prerequisites: CHEM 10114-10124 or permission of the instructor. Three hours lecture per week. Chemistry of water, soil, energy, and air as related to environmental problems. Subjects include: nutrients and eutrophication, fluorocarbons, sulfur and nitrogen oxides, Eh-pH relationships, natural carbonate reactions, and cation exchange phenomena. Cross listed as ENSC 50783/CHEM 40783.

**ENSC 60001 - Environmental Presentations**

The goal of this course is to acquaint the student with the organization, preparation and effective delivery of scientific seminars. Full-time students should register for this course during their second semester. Part-time students should register for this course with permission from the graduate advisor.

**ENSC 60011 - Literacy of Science Review**

Prerequisites: Candidacy for a Masters Degree in Environmental Science. The goal of this course is to acquaint the student with the demands of real-world projects and deadlines. The student will be given a topic within the realm of their environmental education, and will be tasked with writing a 2000-word research paper within 48-hours on the topic.

**ENSC 60021 - Oral Examination**

Prerequisites: Candidacy for a Masters Degree in Environmental Science and completion of ENSC 60011, and ENSC 60203. The oral exam is the capstone of the Masters program and must be taken by all students during the final full semester. Oral exams test the student's knowledge in three areas: 1) coursework, 2) selected readings, and 3) general environmental issues and global concerns.

**ENSC 60193 - Environmental Stewardship**

This course examines the case for environmental stewardship, defined as the need to make informed and responsible decisions with regard to the planet. Students meet in a seminar-type format and cover broad, integrating themes that then serve as a foundation for topics that address more specific environmental problems, such as global warming,

deforestation, sustainable development, and energy depletion. The course exposes students to the foundations necessary to enable them to develop their own environmental ethic.

**ENSC 60203 - Environmental Issues**

Prerequisites: Graduate standing or permission of instructor. A graduate-level seminar on environmental issues. The framing of issues and their uses in shaping policy are introduced. About twelve issues are introduced in assigned readings. Each student creates a summary document of the issue, derived from the readings and personal research. Students are expected to arrive at class prepared for questions and discussion. Each student is also expected to summarize an issue using a poster or web portfolio.

**ENSC 60503 - Environmental Methods and Statistics**

This course is a laboratory and field-based course that presents essential general science and specific environmental methods, techniques, and theory. Students are exposed to the basic tools of environmental science - observation and notation, data gathering, using statistics, sampling, lab and field techniques, surveying, and safety. Specific environmental methodologies relating to soil, water, and ecological systems are explained. The course presents a wide cross-disciplinary range of techniques and information.

**ENSC 70003 - Environmental Internship**

Students must spend at least 135 hours in approved practical work experience with an organization or company approved by the program director.

**ENSC 70970 - Special Problems**

Field or laboratory problems for graduate students in various aspects of environmental science. Fifty clock hours of laboratory, field or library work for each semester hour of credit.

**ENSC 70980 - Thesis**

A minimum of 3 hours of ENSC 70980 Thesis is required.

**ENSC 70990 - Thesis**

Prerequisite: ENSC 70980 and admission to candidacy. A minimum of 3 hours of ENSC 70990 Thesis is required.

## Geology Courses

Students may earn the Master of Science in Geology.

*Prerequisites:* A BA or BS from an acceptable college or university with an academic record meeting the standards of the TCU.

Students who have majored in an area other than geology may be admitted if undergraduate deficiencies can be removed within a reasonable time. An applicant's academic record should demonstrate knowledge both of the other sciences necessary to the field of concentration and of mathematics through differential and integral calculus. If these areas are deficient, the student may be counseled to take non-credit background courses.

**Geology M.S. Requirements (Thesis)**

Students must complete a total of at least 30 approved hours, including at least 12 in geology (of which three must be in GEOL 60710); six in thesis; approved electives or nine-hour minor in a related graduate field may be substituted for geology courses. Students must maintain a minimum GPA of 3.0.

**Geology****GEOL 50233 - Optical Mineralogy and Petrography**

Prerequisite: permission of the instructor. Two hours lecture and one three hour laboratory period per week. Analysis of the behavior of light in crystalline substances, complete treatment of crystal optics and the identification of non-opaque, rock-forming minerals using immersion media and thin section techniques. Intensive use of the microscope required.

**GEOL 50251 - Scanning Electron Microscopy**

Prerequisite: permission of the instructor. Use of the S.E.M. in geological applications.

**GEOL 50341 - Interpreting Seismic Data**

Prerequisite: GEOL 30243. Three hours laboratory per week for five weeks. A practicum in interpreting seismic data. Prerequisites: GEOL 50331 or equivalent.

**GEOL 50413 - Global Tectonics and Basin Analysis**

Prerequisite: permission of the instructor. Three hours lecture per week. Explores the relationship between plate motion and the evolution of sedimentary basins.

**GEOL 50423 - Petroleum Geology**

Prerequisite: permission of the instructor. Origin, migration and entrapment of hydrocarbons, exploration and production techniques used in the petroleum industry.

**GEOL 50493 - Physical Hydrology**

Prerequisite Geol 10113 and permission of instructor. Two hours lecture and two hours of laboratory per week. A study of the occurrence, movement, and exploitation of water in the hydrologic cycle including surface-atmosphere, groundwater, and surface water processes.

**GEOL 50523 - Introduction to Geographic Information Systems**

Basic introduction to GIS by use of ESRI-ArcGIS. Elements of spatial data, mapping, data representation, and geodatabases. Training in use of a GIS system to infer relationships among spatial features. Cross-listed as ENSC/GEOL 50523.

**GEOL 50543 - Sedimentary Environments and Facies**

Prerequisite: permission of the instructor. Three hours lecture per week. Facies analysis and facies models applied to the problem of interpreting stratigraphic sequences and reconstructing paleogeography.

**GEOL 50553 - Integrating and Interpreting Subsurface Geological Data**

Prerequisites: GEOL 50331 and 50361, or permission of instructor. A workstation-based practicum on managing and integrating geologic data. Students will become familiar with one or more widely-used software packages for handling multiple data sets used in oil and gas exploration and field development.

**GEOL 50563 - From Prospect to Production**

Prerequisites: Advanced standing in geology or permission of instructor. A broad overview of the geologic, engineering and business sides of the oil and gas industry. The course will acquaint students with all the steps in the production of oil and gas from developing a prospect to delivering a product: how geologists decide where to drill, how mineral rights are acquired, how contracts are structured, and how financing is obtained for oil and gas deals. Includes the study of drilling and completion operations and the technology required to produce oil and gas. Students will also be acquainted with the legal, regulatory and environmental issues encountered in drilling for oil and gas.

**GEOL 50593 - Hydrologic Modeling**

Prerequisites: GEOL 50493, or permission of instructor. Elements of surface and ground water modeling with applications. Topics covered include: modeling procedures, selection of appropriate model, and presentation of results. Class consists of 2 hours lecture, and 2 hours hands-on computer modeling laboratory.

**GEOL 50603 - Introduction to Geochemistry**

Prerequisite: CHEM 10114-10124 or permission of the instructor. Three hours lecture per week. Application of basic chemical principles to understanding the origin, distribution and migration of chemical elements in the earth's lithosphere, hydrosphere, atmosphere and biosphere.

**GEOL 50613 - Igneous and Metamorphic Petrology**

Prerequisite: GEOL 50233, or permission of instructor. Two hours lecture and one three hour laboratory period per week. Petrogenesis of igneous and metamorphic rocks based on field, petrographic, chemical and isotopic data. Inferences on the evolution and dynamics of the crust and mantle. Involves use of microscope.

**GEOL 50623 - Volcanology**

Prerequisite: GEOL 50233, or permission of instructor. Two hours lecture and one three hour laboratory period per week. Types and processes of volcanic eruptions; characteristics of modern volcanic

products; recognition and significance of ancient volcanic deposits in the stratigraphic record. Involves use of microscope. Field trip required.

**GEOL 50713 - Environmental Geology**

Prerequisite: permission of the instructor. Two hours per week of lecture, and three hours per week of laboratory work. Geologic processes, earth resources and engineering properties of crustal materials in the activities of society.

**GEOL 50731 - Remote Sensing Technology**

Prerequisite: Permission of the instructor. Three hours lecture per week for five weeks. An introduction to the technology used in remote sensing, including MSS, TM and SPOT, thermal scanners and radar imaging.

**GEOL 50741 - Image Processing**

Prerequisite: permission of the instructor. Three hours lecture per week for five weeks. An introduction to processing techniques used to enhance the display of remote sensing images with emphasis on those techniques useful in resource mapping.

**GEOL 50751 - Image Interpretation**

Prerequisite: permission of the instructor. Three hours lecture per week for five weeks. Geologic and resource mapping and environmental monitoring using satellite images.

**GEOL 50773 - Introduction to Environmental Law**

Three hours lecture per week. Introduction to and analysis of selected federal statutes regulating environmental degradation and environmental clean-up, including the National Environmental Policy Act and regulation of air quality, water quality, wastes, hazardous and toxic substances and enforcement. (Crosslisted as BIOL/ENSC/GEOL 50773.)

**GEOL 50813 - Meteorites, Asteroids, and Planets**

Prerequisites: GEOL 30213 or PHYS 30493, or permission of the instructor. Three hours lecture per week. An interdisciplinary course exploring the history and formation of the Solar System from the Big Bang through the formation and evolution of the planets. (Crosslisted as GEOL/PHYS 50813.)

**GEOL 50863 - Spatial Analysis**

Prerequisites: GEOL 50723, MATH 10043 or equivalent. Application of spatial methods to interpolate surfaces from point measurement, obtaining new spatial attributes on continuous fields, and the ability to defend hypothesis based on spatial information. This course provides analytical capabilities beyond GEOL 50723.

**GEOL 50901 - Computer Applications in Geology**

Prerequisites: COSC 10403 or equivalent and permission of the instructor. Three hours lecture per week for five weeks. The use of microcomputers in Geology.

**GEOL 50912 - Statistical Applications for Microcomputers**

Prerequisite: GEOL 50901. Three hours lecture per week for ten weeks. Statistical treatment of directional data and the use of multivariate and special regression techniques, analysis of variance, discriminate function analysis and factor analysis in solving geologic problems.

**GEOL 50922 - Mapping Applications for Microcomputers**

Prerequisite: GEOL 50901. Three hours lecture per week for ten weeks. Selecting and using mapping and drafting software.

**GEOL 60213 - Environmental Analysis**

Two hours of lecture and one laboratory period per week. Techniques of analysis using X-ray, atomic absorption, differential thermal, infrared absorption, chromatography and liquid scintillation.

**GEOL 60331 - Basic Seismics**

Prerequisite: Permission of instructor. Three hours of lecture per week for five weeks. An introduction to techniques of gathering, processing and interpreting seismic data.

**GEOL 60351 - Seismic Stratigraphy**

Prerequisites: GEOL 60331. Three hours of lecture per week for five weeks. An introduction to the principles of seismic stratigraphy and their application in oil and gas exploration.

**GEOL 60361 - Basic Well Log Interpretation**

Prerequisite: permission of instructor. Three hours of lecture per week for five weeks. An introduction to the use of borehole geophysical logs in formation evaluation, correlation and subsurface facies analysis.

**GEOL 60393 - Soils in the Environment**

Prerequisites: CHEM 10113, 10125. Two hours lecture and one three hour laboratory per week. This course covers the formation, distribution, and classification of soils: major soil properties; field evaluation of soils; the use of soil survey information; and soil hydrology. The emphasis is on the study of soils as products of biophysical processes, and on soil properties of interest to geoscientists and natural resource managers.

**GEOL 60413 - Advanced Map Interpretation**

Prerequisites: permission of instructor. Three hours lecture per week. Techniques used in the analysis of geological structures.

**GEOL 60423 - Overview of Petroleum Engineering**

Prerequisites: GEOL 50423. Petroleum engineering concepts and technology that are needed to find and produce oil and gas are discussed. This course focuses on drilling and production operations for non-engineers. Industry professionals will visit to discuss current technologies for producing hydrocarbon fluids. Graduate students will be expected to prepare and present a case study using current literature.

**GEOL 60493 - Hydrology**

Prerequisite: GEOL 50493 or permission from instructor. Two hours of lecture and two hours of laboratory per week. Principles of groundwater flow, aquifer analysis, chemical and physical properties of groundwater. Modeling of groundwater flow and contaminant transport.

**GEOL 60513 - Carbonate Petrology**

Two hours lecture and one laboratory period per week. An examination of the chemical sedimentary rocks: limestones, dolomites, evaporites, chert, ironstones and phosphates, including their classification, genesis and diagenesis. The course has a large component of microscope study and fieldwork.

**GEOL 60523 - Sandstone Petrology**

Two hours lecture and one laboratory period per week. Study of provenance, diagenesis and classification of sandstone using the petrographic microscope; consideration of the relationship between tectonics and sedimentation, especially sandstone composition.

**GEOL 60710 - Geology Seminar**

Formal presentation and discussion of controversial topics with emphasis on geologic principles involved. For seniors with permission of instructor and graduate students.

**GEOL 70771 - Non-Thesis**

Selected when enrolling only for non-thesis examination or preparation for the examination.

**GEOL 70970 - Special Problems**

Field or laboratory problems for graduate students in various aspects of environmental science. Fifty clock hours of laboratory, field or library work for each semester hour of credit.

**GEOL 70980 - Thesis**

A minimum of 3 hours of GEOL 70980 Thesis is required.

**GEOL 70990 - Thesis**

Prerequisite: GEOL 70980 and admission to candidacy. A minimum of 3 hours of GEOL 70990 Thesis is required.

## Mathematics

Mathematics is available on the Master of Arts in Teaching, Master of Science, and Doctor of Philosophy degrees.

*Prerequisites for the MAT:* A baccalaureate degree with the equivalent of a major in mathematics consisting of courses through elementary calculus of one and several variables, linear algebra and at least eight hours of approved advanced courses.

*Prerequisites for the MS:* BA or BS degree with a mathematics major or 24 semester hours of mathematics, including courses in elementary calculus of one and several variables, linear algebra and at least eight

hours of departmentally approved advanced undergraduate courses in mathematics. Students deficient in any area of preparation may be required to take the necessary coursework during the first year of graduate study. Scores on the GRE are used as an aid in the overall evaluation of the applicant's graduate potential.

*Prerequisites for the PhD:* BA or BS with a mathematics major or 24 semester hours of mathematics, including courses in elementary calculus of one and several variables, linear algebra, abstract algebra and real analysis. Students deficient in any area of preparation may be required to take the necessary coursework during the first year of graduate study. Scores on the GRE are used as an aid in the overall evaluation of the applicant's graduate potential.

### Mathematics MAT Degree Requirements

The Master of Arts in Teaching program includes 24 hours of graduate mathematics courses and at least nine hours of graduate education courses. The MAT Program totals 36 hours. The remaining three-hour course may be chosen in either graduate mathematics or education, with approval of the MAT graduate program director. A thesis of six hours may be substituted for six hours of the required mathematics. Mathematics coursework must include MATH 50253, 50503 and 60023. All 50000-level courses count towards the MAT degree, subject to University limitations.

Graduate education coursework shall include at least three classes from among:

EDUC 50143: Theories of Human Development  
EDUC 60213: Thinking, Learning and Teaching  
EDUC 60313: Educational Assessment  
EDUC 60253: Historical and Philosophical Foundations of Education  
EDSP 50633: Motivating and Managing Students  
EDSP 60233: Understanding Exceptional Children and Youth At-Risk

Students seeking a secondary certificate in mathematics must independently apply to and be accepted by the Teacher Education Program in the TCU College of Education upon their enrollment in the MAT Program. Note that additional coursework in graduate education is likely and will be determined by the College of Education, depending upon the student's background.

### Mathematics MS Degree Requirements

The Master of Science program consists of 36 hours of graduate coursework, from the three areas specified below. In accordance with University policy, a GPA of at least 2.75 must be maintained with no more than two grades of "C+" or lower being utilized in satisfying the degree requirement.

#### *Core Coursework (15 hours)*

Coursework for the MS degree must include the following five core courses:

MATH 50253 Abstract Algebra I  
MATH 50403 Complex Analysis  
MATH 50503 Real Analysis I  
MATH 60513 Real Analysis II  
MATH 60223 Applied Linear Algebra

An advanced student may be waived from any or all of these required courses by passing the corresponding PhD preliminary exam(s) or otherwise showing proficiency in the material, as determined by the department.

#### *Specialized Coursework (12 hours)*

In addition to the five core courses, at least four courses are to be chosen from either the Pure Mathematics Option or the Applied Mathematics Option (refer to course listings below).

**Pure Mathematics Option:** This track of the MS Program is intended to prepare students for careers in academia. Each student selecting this track will take at least four of the pure mathematics courses listed below:  
MATH 50323 Differential Geometry  
MATH 50703 Number Theory  
MATH 60263 Abstract Algebra II  
MATH 60313 Topology  
MATH 60323 Algebraic Topology I  
MATH 60413 Advanced Complex Analysis  
MATH 60523 Measure Theory  
Any MATH 70000+ level 3-hour course

**Applied Mathematics Option:** This track of the MS Program is intended for students planning to use mathematics in careers outside academia.

Each student selecting this track will take at least four applied mathematics courses from the list below:

- MATH 50613 Partial Differential Equations
- MATH 50623 Applied Mathematics I
- MATH 60103 Graph Theory
- MATH 60543 Numerical Analysis
- MATH 60553 Modern Fourier Analysis
- MATH 60603 Game Theory
- MATH 60613 Differential Equations of Mathematical Physics
- MATH 60633 Applied Mathematics II
- MATH 60643 Dynamical Systems and Applications

Up to six hours of the applied mathematics courses may be substituted with graduate coursework taken in the departments of Biology, Chemistry, Computer Science, Engineering, Environmental Science, Geology, or Physics and Astronomy, with approval from the student's graduate adviser in the Department of Mathematics.

*Master's Thesis or Electives (9 hours)*

The student may choose either to write a master's thesis (three hours of MATH 70980 and three hours of MATH 70990) and complete three hours of approved elective coursework, or to complete nine hours of approved elective coursework. The thesis should be written over two semesters and approved by the department. The thesis need not contain original research, but must demonstrate a deep and thorough understanding of some area of mathematics.

**Mathematics PhD Degree Requirements**

The PhD Program consists of 72 semesterhours of full-time graduate study beyond the baccalaureate degree or 39 semester hours beyond the MS degree, as specified below. In accordance with University policy, a GPA of at least 2.75 must be maintained with no more than two grades of "C+" or lower being utilized in satisfying the degree requirement.

*Core Coursework (27 hours):*

Coursework for the PhD must include the following nine core courses:

- MATH 50253 Abstract Algebra I
- MATH 60263 Abstract Algebra II
- MATH 50503 Real Analysis I
- MATH 60513 Real Analysis II
- MATH 60223 Applied Linear Algebra
- MATH 60313 Topology
- MATH 60323 Algebraic Topology I
- MATH 60413 Advanced Complex Analysis
- MATH 60523 Measure Theory

Any or all of these courses may be waived for more advanced students by departmental permission.

**Preliminary Examinations**

The program requires substantial training in algebra, real analysis, topology, and complex analysis. The student must pass three of the following four preliminary written exams:

- Real Analysis Exam (based on MATH 50503 and 60513)
- Algebra Exam (based on MATH 50253 and 60263)
- Topology Exam (based on MATH 60313 and 60323)
- Complex Analysis Exam (based on MATH 50403 and 60413)

These exams are administered twice each year and must be passed by the end of the first semester of the third year.

**Research-Specific Coursework**

After passing the preliminary examinations, the student decides on his/her direction of research and thesis adviser. Based on the recommendation of the department, the dean appoints an advisory committee of at least three members, including the thesis adviser as chair.

Possible areas of research specialization include real analysis, complex analysis, functional analysis, algebraic geometry, differential geometry, number theory, topology, global analysis and K-theory.

Students must also take at least one semester of three hours of MATH 80880 Graduate Student Seminar, providing training in the oral presentation of research-level mathematics.

*Qualifying Examination*

The student and advisory committee agree on a detailed plan of study to prepare the student for mathematical research. They decide on a syllabus of qualifying topics; after due preparation, the student takes the

oral qualifying exam on these topics, administered by the advisory committee. In accordance with University requirements, the exam can only be taken after passing the preliminary examinations and not before the second semester of the second year. If the exam is not passed, at most one re-examination is allowed.

*Admission to Candidacy*

The student advances to candidacy after passing the qualifying examination.

*Research*

The student performs research in his/her area of specialization, which leads to a dissertation, if successful.

*Dissertation (at least 12 hours)*

Admission to candidacy is the prerequisite to enrollment in dissertation research, consisting of an original research project directed by a graduate faculty member at TCU. Six hours of MATH 90980 Dissertation and six hours of MATH 90990 Dissertation are required. According to University policy, the time allowed to complete the dissertation is at most six years after advancement to candidacy. Also in accordance with University rules, the student must submit an Intent to Graduate form at the beginning of the last semester, for which there is a non-refundable fee. At the completion of the dissertation, a final oral examination is required, which is open to the public.

**Mathematics Courses**

**MATH 50073 - History of Mathematics**

Prerequisite: MATH 20524. A survey of the history of mathematics from ancient times to contemporary times. The selection of topics may vary from semester to semester, but topics closely related to contemporary mathematics are usually emphasized.

**MATH 50253 - Abstract Algebra I**

Prerequisite: MATH 20123 and MATH 30224. Introduction to groups and rings. Homomorphisms, isomorphisms, subgroups, and ideals. Quotient and product structures.

**MATH 50323 - Differential Geometry**

Prerequisite: MATH 30224 and 30524. Calculus on Euclidean space. Geometry of curves and surfaces.

**MATH 50403 - Complex Analysis**

Prerequisite: MATH 30524. Analytic functions, harmonic functions, and the Cauchy-Riemann equations. Conformal mappings. Cauchy's integral theorem and formula, with applications. Power series and analytic continuation.

**MATH 50503 - Real Analysis I**

Prerequisite: MATH 20123, MATH 30224, and MATH 30524. A rigorous development of elementary limit processes. Continuity, sequences, series, differentiation, integration.

**MATH 50613 - Partial Differential Equations**

Prerequisite: Math 30613. Basic theory of hyperbolic, parabolic, and elliptic partial differential equations.

**MATH 50623 - Applied Mathematics I**

Prerequisite: Math 30224, Math 30524 and Math 30613. Selected topics, such as linear and nonlinear systems, equilibria, Fourier series, computational graph theory, optimization and linear programming, calculus of variations, complex integration.

**MATH 50703 - Number Theory**

Prerequisite: MATH 20123 and MATH 30224. Properties of the integers. Divisibility, prime numbers, modular arithmetic, Chinese Remainder Theorem, Diophantine equations.

**MATH 60003 - The Teaching of Mathematics**

Teaching methods, including both general principles and specific techniques, and supervised teaching. Focus is on teaching topics from upper secondary level and entry level college courses.

**MATH 60023 - Survey of Mathematical Problems I**

Prerequisite MATH 30224. Mathematical reasoning and proof techniques from various areas of mathematics such as Logic,

Probability, Graph Theory, Number Theory, Cryptography and Constructibility.

#### **MATH 60033 - Survey of Mathematical Problems II**

Prerequisite: MATH 60023. Mathematical reasoning and proof techniques from various areas of mathematics such as Game Theory, Set Theory, Limits, Functions, Plane Geometry and Extensions of the Real Numbers.

#### **MATH 60050 - Foundation of Mathematics**

Prerequisite: Graduate standing in mathematics. The real number system. Set Theory. Abstract systems. (1-3 semester hours)

#### **MATH 60053 - Foundation of Mathematics**

Naive set theory, including cardinality, the Axiom of Choice, Zorn's Lemma, and other topics.

#### **MATH 60103 - Graph Theory**

Prerequisites: MATH 30224 or equivalent. Graphs, directed graphs and their representations, weighted graphs, shortest path, Hamiltonian and Eulerian circuits, spanning trees, matching, connectedness, flows, Euler's formula, planarity, duality, polyhedra, coloring theorems with applications to map coloring and scheduling problems. Ramsey theory, enumeration and random walks, if time allows.

#### **MATH 60223 - Applied Linear Algebra**

Prerequisite: MATH 30224 or equivalent. Vector spaces and bases, linear transformations and operators, Jordan canonical form of a matrix, inner products, Hermitian and unitary operators, and topics selected from Fourier series and transforms, applications to ordinary and partial differential equations, applications to Markov processes.

#### **MATH 60250 - Theory of Numbers**

Prerequisite: MATH 30224 and permission. Topics selected from the following: The natural numbers developed from the Peano postulates. Prime number theory, including units and associates. Divisibility and integral domains. Modular arithmetic and algebra. Diophantine equations and quadratic residues. (1-3 semester hours)

#### **MATH 60263 - Abstract Algebra II**

Prerequisites: MATH 50253. A continuation of MATH 50253. Introduction to field extensions and Galois Theory. Advanced topics in groups and rings.

#### **MATH 60313 - Topology**

Introduction to the basics of point-set topology, including elements of set theory, topological spaces, open and closed sets, subspaces, product topologies, metric topologies, connectedness and compactness. Additional topics to be chosen by the instructor, such as classification of surfaces or elementary knot theory.

#### **MATH 60323 - Algebraic Topology I**

Prerequisite: MATH 60313 and 50253. Basic topics in algebraic topology, including the fundamental group, covering spaces, and introduction to homology theory with applications to the study of topological spaces.

#### **MATH 60403 - Higher Geometry**

Prerequisite: MATH 50400 or graduate standing in mathematics. The foundations of geometry. The basic concepts of Euclidean and non-Euclidean geometry. Geometric transformation. Geometric constructions.

#### **MATH 60413 - Advanced Complex Analysis**

Prerequisites: MATH 50403 and Math 50503, or equivalents. A rigorous development of the theory of complex analysis. Analytic functions, branches of functions, harmonic functions and Dirichlet problems. Complex integration, Cauchy's Integral Theorem, winding numbers, topology of the complex plane. Taylor series and Laurent series, singularities of analytic functions, and function theory on the extended plane. Conformal Mapping and Riemann Mapping Theorem.

#### **MATH 60500 - Introduction to Approximation Theory**

Prerequisite: The equivalent of MATH 50503, and permission. Topics from the theory of uniform, or Tchebycheff approximation, including uniform approximation by polynomials and other linear families, the Weierstrass theorem and the Haar unicity theorem. (1-6 semester hours)

#### **MATH 60513 - Real Analysis II**

Prerequisite: MATH 50503. A continuation of MATH 50503. Multivariable calculus, including the Implicit Function Theorem and change of variables. Other selected topics.

#### **MATH 60523 - Measure Theory**

Prerequisite: MATH 50503 or equivalent. Introduction to measure theory and function spaces. Topics will include basic Lebesgue measure and integration theory as well as an introduction to Banach and Hilbert spaces.

#### **MATH 60543 - Numerical Analysis**

Prerequisites: MATH 30224 and 30613, or equivalents. Introduction to numerical methods for solving mathematical problems that arise in the sciences. Topics include linear systems, floating point arithmetic, error analysis, least squares, quadrature, and random numbers.

#### **MATH 60553 - Modern Fourier Analysis**

Prerequisites: MATH 30224, 30524 and 30613, or equivalents. Fourier series and Fourier transform, discrete Fourier transform and numerical methods, convolution, signal processing, filtering, wavelet analysis.

#### **MATH 60603 - Game Theory**

Prerequisites: MATH 30224, 30524 and 30803, or equivalents. Sequential move games, game trees, perfect information games and games of chance. Matrix games, dominated and mixed strategies, the mini-max theorem, linear programming. Continuous games, games of timing. Multi-player games and Nash equilibrium, cooperative games: core and stable sets, bargaining, nucleolus. If time permits, special topics can include side payments, power indices, imperfect information and artificial intelligence.

#### **MATH 60613 - Differential Equations of Mathematical Physics**

Prerequisites: MATH 30224, 30524 and 30613, or equivalents. Conservation laws, solutions to initial value problems to the diffusion, wave, and other partial differential equations in one or more dimensions. Laplace and Fourier transform methods. Solutions to physical boundary value problems using Fourier series and other orthogonal expansions. Finite element method of solving such equations numerically.

#### **MATH 60633 - Applied Mathematics II**

Prerequisite: MATH 50623. Continuation of MATH 50623.

#### **MATH 60643 - Dynamical Systems and Applications**

Prerequisite: MATH 30613, or equivalent. Dynamical systems on the line and on the circle, bifurcations, two-dimensional flows, linearization, limit cycles, Lorenz equation and chaos, logistic map, fractals, strange attractors, applications to physics, biology, and engineering.

#### **MATH 60653 - Integral Transforms**

Prerequisite: One semester of complex analysis, or permission. Laplace transforms. Inversion formulas and methods of residues. Applications to systems of ordinary and partial differential equations. Problems in heat conduction and mechanical vibrations. Other transforms, including the Fourier.

#### **MATH 60970 - Special Topics**

Prerequisite: Graduate standing in mathematics. (1-12 semester hours)

#### **MATH 70200 - Algebra**

Prerequisite: The equivalent of MATH 50263. Groups with operators. Modules and ideals. Elementary field theory. (1-9 semester hours)

#### **MATH 70273 - Commutative Algebra**

Prerequisites: MATH 60263, or equivalent. The course will cover the fundamental concepts of commutative algebra. These include commutative rings and homomorphism, ideals and quotient rings, prime ideals, modules over a ring and associated constructions (tensor Product, direct sum), exact sequences, rings and modules of fractions, primary decomposition, Noetherian and Artinian rings, and dimension theory.

#### **MATH 70283 - Algebraic Geometry**

Prerequisites: MATH 70273, or equivalent. Algebraic sets and the Zariski topology, projective varieties and their invariants, algebraic maps and linear systems, rational maps and blow-ups, smoothness and the Zariski tangent space, products and the Segre embedding.

**MATH 70333 - Algebraic Topology II**

Prerequisites: MATH 60313, 60323, or equivalents. Advanced topics in algebraic topology, continuing from MATH 60323. Topics include the fundamentals of homology and cohomology theory with applications to the study of the properties of topological spaces.

**MATH 70373 - Topological K-Theory**

Prerequisites: MATH 60263, MATH 60313, or equivalents. MATH 60323 is recommended as a prerequisite, but is not required. An introduction to K-theory of topological spaces. Topics include vector bundles, idempotents, projective modules, the Grothendieck completion of a group, the Bott periodicity theorem, the Thom isomorphism theorem, and application. MATH 60323 is recommended as a prerequisite, but is not required.

**MATH 70403 - Projective Geometry**

Prerequisite: Graduate standing in mathematics and permission.

**MATH 70420 - Differential Geometry**

Prerequisite: MATH 50513 and permission. Differential structures on manifolds. Differential forms and integration. Stokes' Theorem. Vector fields and flows. Poisson brackets and Lie derivatives. Affine connections and Riemannian metrics. Geodesics and completeness. (1-9 semester hours)

**MATH 70500 - Real and Complex Analysis**

Prerequisite: MATH 50513, and permission. (1-12 semester hours)

**MATH 70550 - Operators in Hilbert Space**

Prerequisite: A knowledge of the Lebesgue integral, and permission. Topology of Hilbert space. Projections and closed linear subspaces. General properties of normal, Hermitian and unitary operators. Compact operators. Spectral analysis of bounded and unbounded operators. Applications. (1-6 semester hours)

**MATH 70553 - Global Analysis and Differential Geometry**

Prerequisites: Permission of the instructor. This is an advanced reading course on special topics in global analysis and differential geometry intended for research level Ph.D. candidates. Topics will be chosen based upon the interests of the student and the instructor.

**MATH 70653 - Functional Analysis**

Prerequisite: Five semester hours of MATH 70500, and permission. Desirable: Three semester hours of topology. Linear topological spaces. Convex sets. Normed linear spaces. Banach spaces, and Hilbert spaces. Linear operators. Spectral analysis. Banach algebras and C\*-algebras.

**MATH 70713 - Algebraic Number Theory**

Prerequisites: MATH 60263, or equivalent. Number fields. Dedekind domains. Valuations. Fractional ideals. Factorization, completions, extensions, and ramifications. Class numbers and class groups. Lattices and units. Quadratic and cyclotomic fields. Diophantine Equations. Function fields, adeles and ideles, as time permits.

**MATH 70723 - Analytic Number Theory**

Prerequisites: MATH 60413, and either MATH 60263 or MATH 50703. Arithmetic functions. Groups and characters. Dirichlet series and Euler products. The Reimann zeta function, other zeta functions, and L-functions. The Prime Number Theorem. Primes in arithmetic progressions.

**MATH 70771 - Non-Thesis**

Selected when enrolling only for non-thesis examination or preparation for the examination.

**MATH 70980 - Thesis**

A minimum of 3 hours of MATH 70980 Thesis is required.

**MATH 70990 - Thesis**

Prerequisite: MATH 70980 and admission to candidacy. A minimum of 3 hours of MATH 70990 Thesis is required.

**MATH 80880 - Graduate Student Seminar**

Prerequisite: Permission of the instructor. Student-presented lectures on various current mathematical topics, selected by the students and the instructor.

**MATH 80970 - Advanced Topics**

Prerequisites: Permission of the instructor. This is an advanced reading course on special topics intended for research level Ph.D. candidates. Topics will be chosen based upon the interests of the student and instructor.

**MATH 90980 - Dissertation**

Prerequisite: Permission of advisor. A minimum of six hours is required. Enrolled students will pursue their dissertation research under the stewardship of their advisors.

**MATH 90990 - Dissertation**

Prerequisites: MATH 90980 and admission to candidacy. A minimum of 6 hours required. Enrolled students will pursue their dissertation research under the stewardship of their advisors.

**Psychology**

Students may earn the Master of Arts, Master of Science and Doctor of Philosophy in Psychology. Studies leading to a master's or doctoral degree in general-experimental psychology are offered. Students who want only a master's degree and do not plan to complete the doctoral program at TCU are not typically accepted.

*Prerequisites for the MA and MS Degrees:* BA or BS in Psychology or a 24-hour equivalent. Satisfactory scores on the GRE are required. Students with majors in other disciplines will be considered upon request, but may be required to make up any deficiencies in their undergraduate preparations.

*Prerequisites for the PhD Degree:* BA or BS in Psychology or a 24-hour equivalent. Satisfactory scores on the GRE are required. Students with majors in other disciplines will be considered upon request, but may be required to make up any deficiencies in their undergraduate preparations. Students who do not plan to complete the doctoral program at TCU are not typically accepted.

**National Honor Society**

The Department of Psychology sponsors the TCU chapter of Psi Chi, national honorary society for psychology.

**Psychology MA/MS Requirements**

A *pre-doctoral* MA or MS in Psychology requires a minimum of 30 approved semester hours, including at least six semester hours of thesis. This program is recommended for students who plan to pursue doctoral-level graduate study in the Psychology Program at TCU. Students who do not plan to complete the doctoral program at TCU are not typically accepted.

**Psychology PhD Requirements**

The program leading to the PhD in Psychology has a research emphasis reflecting the study of psychology as a science rather than the therapeutic aspects of psychology. The term "research" should be interpreted broadly. The program is not limited to traditional experimental psychology, nor is it committed solely to laboratory-based methods. The department believes that a measure of specialized knowledge is built upon a firm but broad base of psychological principles and methods that constitute the best plan for most of its students. Although the graduate program leads to a PhD in General-Experimental Psychology, the student is expected to pursue a specialized area of research. For information about areas of research interests of the faculty, contact the Department of Psychology or visit [www.psy.tcu.edu](http://www.psy.tcu.edu). Students who enter the Ph.D. program having completed a thesis-based master's degree at an accredited institution can request on first entering the program that the graduate faculty design a course sequence tailored to their individual needs, which might include different courses than those listed below.

All other entering students must take and "pass" (grade of "B-" or better in each) five core courses that include:

- PSYC 50403      Advanced Neuroscience
- PSYC 60553      Conditioning and Learning
- PSYC 60663      Advanced Social Psychology

Plus

- One of:*
- PSYC 50423      Graduate Statistics

PSYC 50523	Experimental Design
<i>One of:</i>	
PSYC 50583	Cognition
PSYC 50563	Developmental Psychology

Beyond those required courses, each student takes any and all courses required by his/her area committee. Successful completion of the PhD requires completing the course requirements; successfully defending a master's thesis if required by the faculty; passing the preliminary evaluation vote by the full faculty; passing a qualifying examination that has both written and oral components in order to advance to doctoral candidacy; and defending a PhD dissertation.

The usual timeline involves completing the five core courses listed above by the end of the second year; completing the master's thesis, when required, by the end of the second year; continuing to take any and all additional courses required by the area committee; passing the preliminary evaluation vote by the end of the third year; passing the qualifying examination to advance to doctoral candidacy by the end of the fall semester of the fourth year; and successfully defending the PhD dissertation within six years after advancing to doctoral candidacy.

## Psychology Courses

### PSYC 50213 - Interactive Data Analysis

### PSYC 50403 - Advanced Neuroscience

Prerequisite: Senior or Graduate standing and PSYC 30463 or approval of instructor. An in depth analysis of the neural and endocrine components of normal and abnormal behavior with emphasis on classic studies in the field.

### PSYC 50411 - Theoretical Foundations of Statistical Inference

Prerequisite: Graduate standing in Psychology; Ph.D. students must take concurrently with PSYC 50423. Supplements PSYC 50423. Provides an in-depth view of the models and theories underlying analysis of variance, correlation and regression analysis, and the nonparametric techniques.

### PSYC 50413 - History and Systems of Psychology

Prerequisite: Senior or graduate standing in Psychology, or approval of instructor. The scientific and philosophic antecedents of contemporary psychology in relation to their current influence on the field.

### PSYC 50423 - Graduate Statistics

Prerequisite: Senior or Graduate standing or approval of instructor. The conceptual basis of statistical inference. Topics include: analysis of variance models, correlation and regression analysis, and nonparametric techniques.

### PSYC 50433 - Vulnerable Child I: Theory

The Vulnerable Child is a two-part series of multidisciplinary courses which investigate the challenges faced by families and professionals who work with children who have emotional, behavioral, and/or physiological challenges. The Vulnerable Child I: Theory will focus on the theory and research which is the basis of these challenges. If our Hope Connection summer camp for adopted children is taking place, both Vulnerable Child courses are required before students can work in it.

### PSYC 50443 - Vulnerable Child II: Practice

Prerequisites: PSYC/CHDV 50433. The Vulnerable Child is a two-part series of multidisciplinary courses which investigate the challenges faced by families and professionals who work with children who have emotional, behavioral, and /or physiological challenges. The Vulnerable Child II: Practice will focus on the training students need to evaluate and apply intervention strategies for these families and children based on the theory and research learned in the first course. Both Vulnerable Child I & II are required for students wishing to apply for Independent Studies' hours to work in The Hope connection summer camp for at-risk adopted children.

### PSYC 50453 - Experimental Social Psychology

Two lectures and one laboratory period per week. Prerequisite: PSYC 30353 or its equivalent, or approval of instructor. Concepts and methods of research on attitudes, communication and persuasion, group structure, and group processes.

### PSYC 50463 - Functional Neuroanatomy

Prerequisite: Graduate or senior standing or approval of the instructor. The fundamentals of functional neuroanatomy and neurophysiology with an emphasis on experimental and theoretical analysis of the basic brain behavior relationships. (Crosslisted as BIOL/PSYC 50463.)

### PSYC 50472 - Laboratory in Physiological Psychology and Neuroscience

Prerequisite: PSYC 30463 or its equivalent or PSYC 50653 or its equivalent, or concurrent registration in either PSYC 50436 or PSYC 30463. One lecture and one laboratory per week. Emphasis will be on the laboratory techniques employed in physiological psychology and neuroscience in analyzing the neural and hormonal correlates of behavior (Crosslisted as BIOL/PSYC 50472.)

### PSYC 50482 - Laboratory in Physiological Psychology and Neuroscience

Prerequisite: PSYC 30463 or its equivalent or PSYC 50653 or its equivalent, or concurrent registration in either PSYC 50436 or PSYC 30463. One lecture and one laboratory per week. Emphasis will be on the laboratory techniques employed in physiological psychology and neuroscience in analyzing the neural and hormonal correlates of behavior (Crosslisted as BIOL/PSYC 50482)

### PSYC 50493 - Advanced Personality

Prerequisite: Senior or graduate standing in psychology and PSYC 40443, or approval of instructor. Current topics from the empirical and theoretical literature on personality.

### PSYC 50513 - Psychopharmacology

Prerequisite: PSYC 10213, or 10514, or 10524, or approval of instructor. Theory and principles of behavioral and biochemical methods of assaying drug action, with primary emphasis on the study of the effects of neuropharmacological agents or endogenous systems.

### PSYC 50523 - Experimental Design

Prerequisite: PSYC 50423 or approval of instructor. The planning and design of behavioral research including the specification of research problems, development of appropriate designs, the use of appropriate analytic techniques and the interpretation of results. Primary attention is given to analysis of variance models as analytic techniques, but multivariate techniques such as regression and discriminant function models are also considered.

### PSYC 50533 - Case Studies in Child Development

This course is designed to present an integrated and comprehensive overview of numerous issues in child development as well as treatments/solutions for those issues. This diverse array of developmental problems will be presented in a series of case-studies by professors from several departments as well as by community professionals who specialize in children's issues. This course is a requirement for the Child Development Minor as well as an elective course in Psychology.

### PSYC 50563 - Developmental Psychology

Prerequisite: Senior or graduate standing in Psychology, or approval of instructor. Data and research methods related to the development of the human organism from its prenatal origins through old age.

### PSYC 50583 - Cognition

Prerequisite: Senior or graduate standing in Psychology, or approval of instructor. Current topics in the area of cognition including thinking, language, memory, decision making, and problem solving.

### PSYC 50603 - Contemporary Learning Theory

Prerequisite: Senior or graduate standing in Psychology, or approval of instructor. Selected theoretical principles important for understanding complex behavior, and their recent extensions and application to human social behavior, autonomic and psychosomatic function, etc.

### PSYC 51000 - Seminar on Ethics and Science

Senior or graduate standing or permission of the instructor. The course will look at the range of ethical decisions that are required of scientists. We will focus on identifying ethical dilemma throughout the history of scientific discovery. Case studies will include both moral exemplars and instances of scientific misconduct. These case studies will cut across scientific disciplines and include examples from biology, medical research, biotechnology, and psychology.

**PSYC 60000 - Special Study**

Prerequisite: Departmental approval. May be independent study or research under Code 1, or may be a special course in an area not covered in regular courses (Code 2 or higher).

**PSYC 60500 - Seminar in Chemistry of Behavior**

Prerequisite: Departmental approval. Weekly discussions of current topics in the Chemistry of Behavior. (Offered as CHEM or PSYC credit.)

**PSYC 60533 - Perception**

Prerequisite: Graduate standing in psychology or approval of instructor. The relations of sensation and perception, stimulus and receptor correlates, phenomenological and configurational theories and the integration of perception with the phenomena of motivation and learning.

**PSYC 60543 - Sensory Processes**

Prerequisite: Graduate standing in psychology or approval of instructor. Energy transduction in the external and internal senses, afferent control via receptor adjustment and neural interaction, centripetal information processing and the relation of sensors to homeostatic regulation.

**PSYC 60553 - Conditioning and Learning**

Prerequisite: Graduate standing in psychology or approval of instructor. Basic research in the field of learning, emphasizing empirical study of classical conditioning, instrumental conditioning, generalization, discrimination and extinction.

**PSYC 60561 - Laboratory in Conditioning and Learning**

Prerequisite: Concurrent or prior registration in PSYC 60553, or approval of instructor.

**PSYC 60563 - Psychology of Human Learning**

Prerequisite: Graduate standing in psychology or approval of instructor. A review of research methods and theories of human learning with special emphasis on the acquisition of verbal and social behavior in both children and adults.

**PSYC 60613 - Multivariate Analysis**

Prerequisite: PSYC 50423 or approval of instructor. Multivariate correlation methods, discriminant function analysis, factor analysis and related techniques.

**PSYC 60663 - Advanced Social Psychology**

Prerequisite: Graduate standing in psychology or approval of instructor. A survey of the literature of social psychology with emphasis upon recent research.

**PSYC 60683 - Advanced Comparative Psychology**

Prerequisite: Graduate standing in psychology or approval of instructor. The development of anatomical structures, environmental factors and behavior of species throughout the animal kingdom. Emphasis is on interspecies comparison and the understanding of human behavior in terms of its evolutionary antecedents.

**PSYC 60723 - Motivation**

Prerequisite: Graduate standing in psychology or approval of instructor. Concepts, theories and systematic investigations of motivation, covering historic lines of development with particular emphasis on recent contributions.

**PSYC 60823 - Group Processes**

Prerequisite: PSYC 60663 or approval of instructor. Theories and systematic investigations in the social psychological literature on group processes with a historical as well as contemporary focus.

**PSYC 60833 - Attitudes**

Prerequisites: PSYC 60663 or approval of instructor. Theories and systematic investigations of attitude change with a historical as well as contemporary focus.

**PSYC 70130 - Advanced Teaching of Psychology**

Prerequisite: Departmental approval. Supervised practice in college teaching. Note: No more than 4 semester hours in PSYC 70120 and PSYC 70130 may be applied toward the Master of Arts or Master of Science degree.

**PSYC 70530 - Experimental Instrumentation**

Prerequisite: Graduate standing in psychology or approval of instructor. Instruction in the design, maintenance and use of complex instruments for measuring psychological and behavioral events.

**PSYC 70980 - Thesis**

Prerequisites: Graduate standing and approval of Director of Graduate Studies in Psychology. A minimum of 3 hours of PSYC 70980 Thesis is required.

**PSYC 70990 - Thesis**

Prerequisite: PSYC 70980 and admission to candidacy. A minimum of 3 hours of PSYC 70990 Thesis is required.

**PSYC 80100 - Special Topics in Quantitative Methods**

Prerequisite: Departmental approval. Seminars or other special courses.

**PSYC 80200 - Special Topics in Learning and Motivation**

Prerequisite: Departmental approval. Seminars or other special courses.

**PSYC 80300 - Special Topics in Perception and Cognition**

Prerequisite: Departmental approval. Seminars or other special courses.

**PSYC 80400 - Special Topics in Physiological Psychology**

Prerequisite: Departmental approval. Seminars or other special courses.

**PSYC 80500 - Special Topics in Social Psychology and Personality**

Prerequisite: Departmental approval. Seminars or other special courses.

**PSYC 80600 - Special Topics in Contemporary Psychology**

Prerequisite: Departmental approval. Seminars or other special courses.

**PSYC 90100 - Advanced Studies in Quantitative Methods**

Prerequisite: Departmental approval. Individual study or research.

**PSYC 90200 - Advanced Studies in Learning and Motivation**

Prerequisite: Departmental approval. Individual study or research.

**PSYC 90300 - Advanced Studies in Perception and Cognition**

Prerequisite: Departmental approval. Individual study or research.

**PSYC 90400 - Advanced Studies in Physiological Psychology**

Prerequisite: Departmental approval. Individual study or research.

**PSYC 90500 - Advanced Studies in Social Psychology and Personality**

Prerequisite: Departmental approval. Individual study or research.

**PSYC 90600 - Advanced Studies in Contemporary Psychology**

Prerequisite: Departmental approval. Individual study or research.

**PSYC 90980 - Dissertation**

Prerequisite: Permission of the Chair of the Department. A minimum of 6 hours of PSYC 90980 Dissertation is required.

**PSYC 90990 - Dissertation**

Prerequisite: PSYC 90980 and admission to candidacy. A minimum of 6 hours of PSYC 90990 Dissertation is required.

## Physics and Astronomy

Students may pursue the Master of Arts, Master of Science and Doctor of Philosophy in Physics.

*Prerequisites for the MA, MS or PhD Degrees:* B.A. or B.S. in Physics, or 24-semester-hour equivalent, including intermediate or advanced undergraduate courses in mechanics, electricity and magnetism, atomic and nuclear or modern physics or their equivalents. Twelve semester hours must be of junior or senior level. Required are mathematics through differential equations and a course in general chemistry. Prerequisites to a graduate minor in physics are 20 hours of physics, including advanced courses in mechanics, electricity and magnetism, and modern physics or their equivalents.

Students deficient in any area of preparation may be required to take the necessary coursework during the first year of graduate study. Scores on

the GRE are used as an aid in the overall evaluation of the applicant's graduate potential.

### Teaching Requirement

As part of their professional training full-time graduate students in physics are required to participate in the undergraduate teaching function of the department. This requirement is met by assisting in undergraduate labs, giving laboratory instructions, grading papers, conducting problem sessions or offering tutorial help. The assignment varies depending on the interest and experience of the student, and the degree of involvement in thesis or dissertation research. It usually amounts to 10 hours per week or less.

### Physics MA Requirements (Non-Thesis)

The MA in Physics requires 30 approved semester hours of graduate courses with a minimum of 18 semester hours in physics and knowledge of one foreign language. A thesis and a minor are optional. An oral exam over coursework and thesis, if any, is required.

### Physics MS Requirements (Thesis)

The MS in Physics requires 30 approved semester hours with a thesis or 36 semester hours without a thesis. Course requirements for the degree are PHYS 60303, 60313; three from PHYS 60203, 60403, 60413, 60503 and 60603; plus a minimum of six additional semester hours in physics. There is no foreign language requirement. An oral exam over coursework and thesis, if any, is required.

### Physics PhD Requirements

#### Coursework

Completion of the following courses with a GPA of 2.75 or better:

PHYS 60303, Quantum Mechanics  
60313

Plus four from the following:

PHYS 60203 Classical Mechanics  
PHYS 60403, Electrostatics  
60413  
PHYS 60503 Solid State Physics  
PHYS 60603 Statistical Physics

A minimum of nine hours of PHYS 60970 Research Problems must be completed with an average grade of 2.75 or better.

Additional coursework may be required to ensure adequate preparation for the specified courses. Each full-time student is required to participate in graduate seminars.

The course requirements for any course other than PHYS 60970 Research Problems may also be met by satisfactory performance on a written examination administered by the faculty over the subject matter of that course or by transfer of credit in an equivalent course from another institution.

There is no language requirement for the PhD in Physics.

### Pre-Dissertation Qualifying Exam

This exam, which is normally taken during the fourth semester of graduate study, consists of three parts:

1. An acceptable written report concerning either research completed at TCU or a proposal for the dissertation research, including a description of any research already completed. The written report must be submitted to the graduate faculty of the department at least two weeks prior to the oral exam. Details on the required format for the report are available from the department.
2. An oral presentation at a physics department colloquium, usually on the subject of the written report.
3. A comprehensive oral exam administered by the graduate faculty of the department to assess a student's preparation in basic physics and readiness to carry out the dissertation research. If the graduate faculty of the department attach a condition to passing the predissertation exam, (e.g. revision of the predissertation report or submission of additional material), the additional work must be completed by a specified deadline. The removal of the condition is subject to the approval of the graduate faculty.

The predissertation qualifying exam, in whole or in part, may be repeated once. Students who do not pass the exam are encouraged to complete the requirements for a master's degree if they have not already done so.

Completion of the above course requirements and the predissertation qualifying exam constitute admission to candidacy for the PhD degree.

### Dissertation

Completion of a dissertation consisting of an original research project directed by a faculty member at TCU. Six hours of PHYS 90980 Dissertation and six hours of PHYS 90990 Dissertation are required. A final oral exam in defense of the dissertation is required and a paper based on the dissertation research must be submitted for publication in an appropriate scientific journal.

### Physics/Astrophysics PhD Requirements

The PhD in Physics is also available with an astrophysics option.

#### Coursework

Completion of the following courses with a GPA of 2.75 or better:

PHYS 60743 Astrophysics  
PHYS 60303 Quantum Mechanics  
PHYS 60403 Electrodynamics

Plus three from the following:

PHYS 60203 Classical Mechanics  
PHYS 60313 Quantum Mechanics  
PHYS 60413 Electrodynamics  
PHYS 60603 Statistical Physics

A minimum of nine hours of PHYS 60870 Research Problems in Astronomy must be completed with an average grade of 2.75 or better. Students in the astrophysics option may also be required to take PHYS 70743 Advanced Topics in Astrophysics to ensure an adequate background for their dissertation research.

Except for the courses specified above, the remaining regulations concerning coursework, predissertation qualifying exam and dissertation are the same as those prescribed above for the PhD in Physics.

### Physics/Business PhD Requirements

The PhD in Physics is also available with a business option. Students entering the PhD program with a B.S. are normally expected to complete the PhD requirements within five years. At the end of the fourth year of graduate studies, a candidate for the PhD in Physics who has demonstrated sufficient progress in research (dissertation), may submit a written request to the Department of Physics for admission to this program. Providing there is a clear indication that the student can reasonably be expected to complete all the requirements for the PhD within five years, permission will be granted to apply to the director of admissions of the MBA Program of the Neeley School of Business. During the fifth year, the student is expected to continue with the dissertation on a reduced scale, and, if on departmental teaching assistantship, to perform designated departmental teaching duties. Students entering the PhD program with advanced standing (M.S. degree or more) can request an accelerated program.

In addition to the course work, qualifying examinations and dissertation requirements specified for the PhD degree in Physics, the student will satisfy the following conditions specified by the Neeley School of Business:

1. Students electing to take the business option will take the 18 hours of MBA coursework over the course of two consecutive semesters (entering in the fall and finishing in the spring semesters).
2. Students are required to attend the START Workshop conducted by the Neeley School that occurs just before the start of the fall semester. Students are assessed a fee for the workshop.
3. The Neeley School will accept the results of the GRE.
4. The director of admissions has sole authority to admit physics PhD candidates to the MBA program (whether they seek the MBA degree or the option).
5. Under the assumption that the students come to the program with a good background in statistics, they would take the following courses:

#### Fall Semester (9 credits)

ACCT 60010	Financial Reporting	1.5
ACCT 60020	Managerial Accounting	1.5
FINA 60013	Management of Financial Resources	3
MANA 60033	Managing People	3

#### Spring Semester (9 credits)

MARK 60013	Market-Driven Strategy (evening course)	3.0
INSC 60040	Managing Information Technology	1.5
INSC 60600	Supply Chain Concepts	1.5
MANA 60063	Strategic Management in a Global	3

Environment

6. The foregoing may be adjusted in the event of a realignment in the sequence of courses in the MBA program.
7. Students who wish to continue their studies in the program after their first year of business courses and pursue the MBA degree:
  - a. Will, with the approval of the director of the MBA Program, be permitted to transfer in for credit a total of six hours of 60000 or 70000 level graduate physics coursework. Transfer will be approved for a graduate-level course that is equivalent to DESC Statistics and other 60000- or 70000-level coursework taken in the Department of Physics.
  - b. Will be required to complete such additional coursework as required of other MBA students and as is provided in the applicable *TCU Graduate Studies Catalog*. The student will work closely with the academic program director to plan his/her schedule.

Prospective candidates for the PhD in Physics or the PhD with Business Option should be advised that the maximum term of fellowship or assistantship support through the Department of Physics is five years, and support for MBA courses from the TCU Department of Physics fellowships or assistantship is limited to 18 hours. Financial support for additional hours required for completion of the MBA degree would be the student's responsibility; students would be eligible to apply for financial aid for the second year of MBA study from the Neeley School of Business.

**Physics Courses**

**PHYS 50030 - Seminar in Contemporary Physics**

Prerequisite: Permission of instructor. Students enrolled will be expected to participate in, prepare, and lead discussions on selected topics in physics as suggested by the current journal literature. (1-4 hours)

**PHYS 50703 - Nonlinear Dynamics**

Prerequisite: permission of the instructor, PHYS 30553 is recommended. Characterization of Chaos, Routes to Chaos, Dissipative Dynamical Systems, Hamiltonian Systems.

**PHYS 50713 - Contemporary Topics in Physics**

Prerequisite: Departmental permission. Regularly scheduled course on a subject of interest to students and faculty. Possible topics: Acoustics, Biophysics, Mathematical Physics, Modern Optics, and Nuclear Physics.

**PHYS 50723 - Introduction to Solid State Physics**

Prerequisite: PHYS 30493; MATH 30524. Crystal structure, lattice dynamics, free electron theory, band theory, optical, electric and magnetic properties of solids.

**PHYS 50733 - Computational Physics**

Prerequisites: PHYS 20484 and MATH 30524. Computational methods used in physics, systems of linear equations, eigenvalues problems, numerical solution of differential equations using FORTRAN, C++, and Mathematica.

**PHYS 50743 - Astrophysics**

Prerequisite: Departmental permission. Spectra and spectral line formation, stellar atmospheres and interiors, star formation and evolution, structure of the Universe, selected topics in cosmology.

**PHYS 50813 - Meteorites, Asteroids, and Planets**

Prerequisites: GEOL 30213 or PHYS 30493, or permission of the instructor. Three hours lecture per week. An interdisciplinary course exploring the history and formation of the Solar System from the Big Bang through the formation and evolution of the planets. (Crosslisted as GEOL/PHYS 50813.)

**PHYS 50970 - Special Problems in Physics**

Prerequisite: Departmental permission. Advanced work in physics the nature of which is to be determined by the previous preparation and interest of the individual. Credit will depend upon the nature of the study and the amount of work taken. (1-12 hours)

**PHYS 60203 - Classical Mechanics**

Prerequisites: PHYS 30553 or equivalent. Variational principles and Lagrange equations, rigid body motion, Hamiltonian mechanics,

canonical transformation, Lagrange and Poisson brackets, Hamilton-Jacobi theory, continuous systems and fields.

**PHYS 60303 - Quantum Mechanics**

Prerequisite: PHYS 40113 or equivalent. Foundations of quantum mechanics, with applications to atomic, molecular, solid state, and nuclear physics.

**PHYS 60313 - Quantum Mechanics**

Prerequisite: PHYS 60303. Continuation of 60303.

**PHYS 60403 - Electrodynamics**

Prerequisite: PHYS 40653 or equivalent. Electrostatic and magnetostatic fields. Time-dependent electromagnetic phenomena. Maxwell's equations and general electrodynamic theorems derivable therefrom. Electromagnetic radiation. Covariant formulation of the electromagnetic field equations.

**PHYS 60413 - Electrodynamics**

Prerequisite: PHYS 60403 or permission of instructor. This is a second part of the two semester course. It includes electromagnetic radiation, coherent optics, diffraction, Fourier optics, wave guides, lasers and discussion of non-linear phenomena.

**PHYS 60503 - Solid State Physics**

Prerequisite: PHYS 60303 and 60313 and 50723 or equivalent. Symmetry and crystal structure, ionic and covalent bonds, metals, band theory, thermal and optical effects in solids, and selected topics on magnetic properties, superconductivity and surface science.

**PHYS 60603 - Statistical Physics**

Prerequisite: Physics 30603 or equivalent and Physics 60203, 60313. General principles, kinetic theory, partition functions, Bosons and Fermions, linked cluster expansions, distribution functions, Brownian motion.

**PHYS 60743 - Astrophysics**

Prerequisite: Departmental Permission. Origin and interpretation of stellar spectra. Energy generation and transport, nucleosynthesis. Stellar structure and stellar evolution. Interstellar medium, nebulae. Galaxies. Cosmology.

**PHYS 60870 - Research Problems in Astronomy**

Prerequisite: Departmental Permission. Directed research in the following areas: Observational astronomy, Galaxy structure and evolution, Stellar populations, Large-scale structure

**PHYS 60960 - Physics Seminar**

Prerequisite: Graduate standing in Physics or approval of instructor. Participation in graduate colloquium and occasional presentation of appropriate topics to graduate faculty.

**PHYS 60970 - Research Problems**

Directed research in the following areas: Atom optics, Electron-atom collisions, Molecular and solid state physics, Statistical physics, Positron annihilation spectroscopy

**PHYS 70133 - Atomic Collision Physics**

Prerequisite: PHYS 60303 and 60313. Theoretical, computational and experimental techniques used in electron, photon, atomic and molecular collision physics.

**PHYS 70203 - Nuclear and Particle Physics**

Prerequisite: PHYS 60313. Nuclear and particle classifications and properties; nuclear two-body problem; nuclear models; passage of radiation through matter; detection methods and accelerators; nuclear and particle spectroscopy; gamma decay, beta decay and the weak interactions, Kaons, particle resonances; nuclear reactions; experiments at high energy.

**PHYS 70303 - Advanced Quantum Mechanics**

Prerequisite: PHYS 60313. An introduction to the relativistic Dirac theory of the electron and to the non-relativistic quantum mechanical many-body problem.

**PHYS 70413 - Statistical Physics**

Prerequisite: PHYS 70403. Lattice statistics, critical phenomena, propagators and methods for distribution functions, transport

phenomena and irreversibility, second quantization and Green's functions.

#### **PHYS 70503 - Molecular Physics**

Prerequisite: Graduate standing in physics or approval of instructor. Electronic, vibrational and rotational spectroscopy of polyatomic molecules. Applications of group theory to molecular spectra and structure. Fourier transform laser, electron paramagnetic resonance and other spectroscopic techniques.

#### **PHYS 70703 - Chemical Physics**

Prerequisite: PHYS 60303. Quantum Chemistry, structure of molecules and intermolecular forces, molecular relaxation processes, light scattering, nonlinear optical methods, molecular beams, NMR and other experimental techniques.

#### **PHYS 70743 - Advanced Topics in Astrophysics**

Prerequisite: PHYS 60870 or Departmental Permission. Regularly scheduled course on advanced topics in astronomy and astrophysics, including the following: Stellar Atmospheres: Basic methods and applications of radiative transfer. Theory and interpretation of astronomical spectra: line profiles, LTE and non-LTE line formation, abundances, model atmospheres, curve-of-growth. Stellar Interiors: Solution of the equations of stellar structure, analytic approximations and theory relating to equilibrium stellar models, nucleosynthesis in massive stars, final phases of stellar evolution. Galactic Structure: The interstellar medium, galaxy kinematics, interacting galaxies, evolution and classification of galaxies, extragalactic radio sources, quasars, cosmological models.

#### **PHYS 70771 - Non-Thesis**

Selected when enrolling only for non-thesis examination or preparation for the examination.

#### **PHYS 70803 - Theoretical Atomic and Molecular Physics**

Prerequisite: PHYS 60303 and 60313. Theoretical study of electronic structure and molecular vibrations and rotation, Hartree-Fock and Many Body Perturbation Theory. Computer calculation of electronic structure.

#### **PHYS 70903 - Quantum Optics**

Prerequisite: PHYS 60203 and 60213. Study of Laser Physics, interaction of light and matter, nonlinear phenomena and quantum nature of light.

#### **PHYS 70980 - Thesis**

Prerequisite: Permission of Chair of Department. A minimum of 3 hours of PHYS 70980 Thesis is required.

#### **PHYS 70990 - Thesis**

Prerequisite: PHYS 70980 and admission to candidacy. A minimum of 3 hours of PHYS 70990 Thesis is required.

#### **PHYS 80090 - The Teaching of Physics at the College Level**

Prerequisite: Graduate standing in physics and approval of instructor. Supervised preparation and delivery of lectures and demonstrations, and preparation and evaluation of examinations.

#### **PHYS 90960 - Seminar in Theoretical Physics**

Prerequisite: Graduate standing and approval of the instructor.

#### **PHYS 90970 - Research Problems in Physics**

Prerequisite: Graduate standing and departmental permission.

#### **PHYS 90980 - Dissertation**

Prerequisite: Permission of the Chair of the Department. A minimum of 6 hours of PHYS 90980 Dissertation is required.

#### **PHYS 90990 - Dissertation**

Prerequisite: PHYS 90980 and admission to candidacy. A minimum of 6 hours of PHYS 90990 Dissertation is required.

# Directory Information

## Administration

### Board of Trustees

An educational corporation first chartered by the state of Texas on April 11, 1874, Texas Christian University is controlled by a Board of Trustees. They may number from 24 to 50, at least one-sixth of whom and not more than one-half less one, shall be members in good standing of some local congregation of the Christian Church (Disciples of Christ). The trustees nominate and elect their own members as terms expire or vacancies occur. Members serve for four-year terms. In June 2008 members were:

#### Term Expires Annual Spring Meeting 2013

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 Clarence Scharbauer III, since 1990, Midland  
 Lissa N. Wagner, since 1993, Midland  
 Robert J. Wright, since 1993, Dallas  
 Billy Rosenthal, since 1997, Fort Worth  
 Peter L. Bermont, since 2001, Miami, FL  
 John F. Davis III, since 2001, Dallas  
 Ronald C. Parker, since 2001, Plano  
 Kenneth J. Huffman, since 2005, Newtown Square, PA  
 Bruce W. Hunt, since 2009, Dallas  
 Duer Wagner III, since 2009, Dallas

#### Term Expires Spring Meeting 2012

G. Malcolm Loudon, since 1980, Fort Worth  
 J. Luther King, Jr., since 1992 (Chairman of the Board 2005- ), Dallas  
 Roger A. Ramsey, since 1992, Houston  
 Joan G. Rogers, since 1996, Fort Worth  
 Edgar H. Schollmaier, since 1996, Fort Worth  
 Charlie L. Geren, since 2000, Fort Worth  
 Amy Roach Bailey, since 2004, Fort Worth  
 Marcia Fuller French, since 2004, Fort Worth  
 Nick A. Giachino, since 2004, Chicago, IL  
 Rick L. Wittenbraker, since 2004, Houston  
 Kit Tennison Moncrief, since 2005, Fort Worth  
 Rafael G. Garza, since 2008, Fort Worth  
 Trevor D. Rees-Jones, since 2008, Dallas  
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#### Term Expires Annual Spring Meeting 2011

F. Howard Walsh, Jr., since 1983, Fort Worth  
 Ann M. Jones, since 1988, Albany  
 J. Kelly Cox, since 1990, Midland  
 Alan D. Friedman, since 1997, Dallas  
 Patricia Penrose Schieffer, since 1999, Washington, D.C.  
 Matthew K. Rose, since 2002, Fort Worth  
 Mark L. Johnson, since 2003, Fort Worth  
 Mary Ralph Lowe, since 2003, Fort Worth

#### Term Expires Annual Spring Meeting 2014

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 William E. Steele III, since 1986, Fort Worth  
 J. Roger King, since 1992, Fort Worth  
 Jerry J. Ray, since 1992, Austin  
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 Brenda A. Cline, since 1998, Fort Worth  
 Roy C. Snodgrass III, since 1998, Austin

Lou Hill Davidson, since 2002, Washington, D.C.  
 J. Roger Williams, since 2002, Fort Worth  
 Leanne Acuff, since 2010, Colorado Springs, CO  
 Hunter Enis, since 2010, Fort Worth  
 John H. Pinkerton, since 2010, Dallas

### Ex-Officio Members

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 Christopher Del Conte, B.A., M.Ed.—Director of Intercollegiate Athletics  
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 Tyrone Jimmison, B.S.—Admission Counselor  
 Joael Kelly, B.S.—Director of Transfer Admission  
 Alexis Ludwig, B.S.—Senior Admission Counselor  
 Sandra Mackey—Director of Administrative Services  
 Michael Marshall, B.A.—Assistant Director of Admission  
 Mike Mooneyham, B.B.A.—Admission Counselor  
 Candace Morrison, B.S.—Director of Information Technology  
 Elizabeth Perkins, B.S.—Director of Admission Marketing and Communication  
 Jill Sangl, B.S.—Assistant Director of Admission, Chicago  
 Karen Lind Scott, B.S., M.L.A.—Director of International Admission  
 Brittney Smith, B.A.—Admission Counselor  
 Emily Sullivan, B.S.—Admission Counselor  
 Wes Waggoner, B.A., M.B.A.—Director of Freshman Admission

**Affirmative Action Directory**

Darron Turner, B.S. M.S.—AA Officer  
 Jill Laster B.A., M.Ed., A.R.M.—Deputy AA Officer

**Assessment Office**

Catherine Wehlburg, B.S., M.Ed., Ph.D.—Director

**Athletics**

Christopher M. Del Conte, B.A., M.Ed.—Director of Intercollegiate Athletics  
 Monica Ray—Executive Assistant to the Athletics Director  
 Courtney Holm, B.B.A.—Special Events Coordinator for Athletics  
 Jack Hesselbrock, B.S., M.B.A.—Associate Director of Athletics  
 Davis Babb, B.S.—Associate Director of Athletics  
 Kimberly N. Johnson, B.S., M.A., M.S.—Associate Director of Athletics  
 T. Ross Bailey, M.Ed.—Associate Director of Athletics

Scott Kull, B.B.A., M.A.—Associate Director of Athletics  
 Andrea Nordmann, B.S., M.B.A. —Associate Director of Athletics, Compliance  
 John Cunningham, B.A., J.D. —Director of Compliance  
 Rebecca Holmes, B.S., M.S., J.D.—Assistant Director of Compliance  
 Mark Cohen, B.A.—Director of Media Relations  
 Andy Anderson, B.A.—Assistant Media Relations Director  
 Matt Hoover, B.S., M.S. —Assistant Media Relations Director  
 Brandie Davidson, B.S., M.L.A.—Media Relations Assistant  
 Joe Monaco, B.S., M.S.—Associate Media Relations Director  
 Jason Byrne, B.S., M.S. —Director of Marketing for Athletics  
 Zack Kulesz, B.A. —Assistant Director of Marketing  
 John Festervand, B.S., M.S.— Assistant Director of Marketing  
 Julie May, B.G.S, M.Ed.—Assistant Director of Marketing  
 Lindsay Shoulders, B.A.—Spirit Coordinator  
 Tommy C. Love, B.A.—Athletics Business Manager  
 Chris Uchacz, B.A., M.A., PhD., M.H.K—Director of Athletic Academic Services  
 Shawn Worthen, B.B.A., M.Ed.—Assistant Director of Athletic Academic Services  
 Judy Golden, B.S., M.L.A.—Assistant Director of Athletic Academic Services  
 Kelle Branting, B.S., M.S.— Assistant Director of Athletic Academic Services  
 Kathy Raines, B.A., M.A.—NCAA CHAMPS/Life Skills Coordinator  
 Sam Haraldson, B.S., M.D.—Team Physician  
 Chris Hall, B.S., M.L.A.—Director of Sports Medicine  
 David Gable, B.S., M.S.—Associate Director of Sports Medicine  
 Valerie Tinklepaugh, B.S., M.S.—Assistant Athletics Trainer  
 Junko Yazawa, B.S., M.S.—Assistant Athletics Trainer  
 Danny Wheat, B.S.—Assistant Athletics Trainer  
 Sean Conner, B.S.—Ticket Office Operations Manager  
 Chip Heiss, Jr., B.S.—Ticket Office Customer Service Manager  
 Lacey Arndt, B.S., M.S.—Assistant Manager of Athletics Tickets  
 Don Sommer, B.S., M.S., M.S.C.C.—Director of Strength and Conditioning  
 Matt Parker, B.S.—Associate Director of Strength and Conditioning Coach  
 Zachariah Dechant, B.S.—Assistant Strength and Conditioning Coach  
 Todd Kensler, B.S.—Assistant Strength and Conditioning Coach  
 Stephen Gephardt, B.S., M.Ed.—Assistant Strength and Conditioning Coach  
 Mike Maples, B.A.—Video Coordinator  
 Mark DeBreaux, B.A.—Assistant Video Coordinator

**ISP Sports**

Rudy Klancnik, B.S.—General Manager  
 Traci Larrison, B.S.—Account Executive

**Baseball**

Jim Schlossnagle, B.A.—Head Baseball Coach  
 Todd Whitting, B.S.—Associate Head Baseball Coach  
 Randy Mazey, B.S., M.B.A.—Assistant Baseball Coach

**Basketball (Men's and Women's)**

Jim Christian, B.A.—Head Men's Basketball Coach  
 Bill Wuczynski, B.PhEd.—Assistant Men's Basketball Coach  
 Eric Haut, B.A.—Assistant Men's Basketball Coach  
 Cody Hopkins, B.A.—Director of Men's Basketball Operations  
 Jeff Mittie, B.A., M.S.—Head Women's Basketball Coach  
 Tricia Davern, B.B.A., M.L.A.—Assistant Women's Basketball Coach  
 Brian Ostermann, B.S., M.S. —Associate Head Women's Basketball Coach  
 Tonya Benton Haut, B.S.—Assistant Women's Basketball Coach

**Football**

Gary Patterson, B.A., M.A.—Head Football Coach  
 Eddie Williamson, B.A., M.A.—Assistant Head Football Coach  
 Jarrett Anderson, B.A., M.L.A.—Assistant Football Coach  
 Richard Bumpas, B.S.—Assistant Football Coach  
 Chad Glasgow, B.S.—Assistant Football Coach  
 Rusty Burns, B.S., M.Ed.—Assistant Football Coach  
 Dan Sharp, B.A., M.L.A.—Assistant Football Coach  
 Tony Tademy, B.S.—Assistant Football Coach  
 Justin Fuente, B.S.—Assistant Football Coach  
 Clay Jennings, B.S.—Assistant Football Coach  
 Mike Sinquefield, B.G.S.—Director of Football Operations  
 Chris Gillert, M.G.S., M.L.A.—Assistant Director of Football Operations

**Golf (Men's and Women's)**

Bill Montigel, B.A., M.S.—Men's Golf Coach  
 Angie Ravaoli-Larkin, B.A.—Women's Golf Coach  
 Lori Tate, B.A.—Assistant Women's Golf Coach

**Rifle**

Karen Monez, A.A.—Women's Rifle Coach

**Soccer (Women's)**

Dan Abdalla, B.A.—Head Soccer Coach  
 Mark Plakorus, B.S.—Associate Head Soccer Coach  
 Michelle Royal, B.S., M.Ed.—Assistant Soccer Coach

**Swimming (Men's and Women's)**

Richard Sybesma, B.S., M.L.A.—Head Swimming Coach  
 Bill Koppelman, B.S., M.S.—Assistant Swimming Coach (Women's)  
 Keegan Walkley, B.S.—Assistant Swimming Coach (Men's and Women's)

**Tennis (Men's and Women's)**

Dave Borelli, B.A., J.D.—Head Men's Tennis Coach  
 Jason Marshall, B.B.S.—Assistant Men's Tennis Coach  
 Jeff Hammond, B.A.—Head Women's Tennis Coach  
 Sarah Gray, B.A.—Assistant Women's Tennis Coach

**Track (Men's and Women's)**

Darryl Anderson, B.S., M.S.—Head Track Coach  
 John Kenneson, B.S., M.Ed.—Assistant Track Coach  
 Shawn Winget, B.S., M.S.—Assistant Track Coach  
 Nic Petersen, B.S.—Assistant Track Coach

**Volleyball (Women's)**

Prentice Lewis, B.A.—Head Women's Volleyball Coach  
 Jason Tanaka, B.A.—Assistant Women's Volleyball Coach  
 Linda Hampton-Keith, B.S.—Assistant Women's Volleyball Coach

**Business Services**

Travis Cook—Director of Business Services  
 Patti Sellers—Telecommunications Coordinator  
 Glen Bradford—Manager Printing Services  
 Glen Hulme, B.A., M.L.A.—Manager Mailing Services and Post Office  
 Vince Pankey, B.F.A.—Conference Services Manager

**Center for Academic Services**

Marsha Ramsey, B.S., M.A.—Director  
 Deidra Turner, B.A., M.Ed., Ph.D.—Associate Director  
 Laurel Overby, M.Ed.—Coordinator, Student Disabilities Services  
 Terence Kennedy, B.S., M.Ed.—Academic Adviser

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 Robert E. Bolen, B.S.—Senior Advisor to the Chancellor

Ann Loudon, B.A., M.L.A.—Chancellor's Associate for External Relations

Sheri Miller, B.S.H.E., M.B.A.—Chancellor's Special Events Coordinator

**Extended Education**

David Grebel, B.A., M.Div., M.A.—Director  
 Julia Lovett, B.S., M.Ed.—Assistant Director  
 Susan M. Harris, B.S., M.S.—Coordinator, Special Programs  
 Judith Shannon, B.A.—Coordinator, Special Programs

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 Richard (Dick) P. Hoban, B.B.A., C.P.A.—Assistant Treasurer  
 Terry Haney—Executive Assistant

**Budget and Financial Planning**

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 Megan Soyer, B.B.A., M.S.A., C.P.A., Budget Manager

**Financial Services**

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 Brad Davis, B.B.A., C.P.A.—Student Financial Systems and Collections Administrator  
 Peg Merony—Director of Financial Operations  
 Roger Fuller, B.A.—Director of Purchasing  
 Evelyn H. Richardson, B.A., M.B.A.—Manager of Accountability and Control  
 Henry Sanchez, B.B.A., M.B.A.—Financial Systems Administrator  
 Tammy L. Wallace, B.B.A., M.S.A., C.P.A.—Director of Accounting  
 Cheryl Wilson, B.B.A., C.P.A.—Associate Vice Chancellor and Controller

**Roach Honors College Directory**

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 Ron Pitcock, B.A., M.A., Ph.D.—Wilson Faculty Fellow and Director of Prestigious Scholarships  
 Lea S. Robinson, B.B.A.—Academic Program Coordinator

**Human Resources**

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 Elaine Brown, B.B.A., C.C.P., P.H.R.—Compensation Manager  
 Shari Barnes, B.S., M.L.A.—Director of Employee Relations  
 Debby Watson, B.S.—Director of Payroll Services  
 Susan Oakley, B.S., M.L.A.—Human Resources Training Manager  
 Tracy R. Thompson, B.S.—Benefits Manager  
 Travis Reynolds, B.B.A., M.B.A.—Human Resources Business Systems Analyst  
 Jenny Dick, B.B.A.—HRIS Manager  
 Shelli Barr Majors—Payroll Tax Coordinator  
 Matthew Millns, B.A., M.B.A.—Benefits and Compliance Analyst

**Risk Management**

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 Jonathan G. Brown, B.S.—Environmental Health and Safety Coordinator  
 Jonathan Roark, B.S.—Director of Emergency Planning & Business Continuity  
 Paul F. Fox, B.S.—Director of Risk Management

**Institute of Behavioral Research**

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 Norma G. Bartholomew, M.A., M.Ed.—Research Associate  
 Donald F. Dansereau, Ph.D.—Associate Director for Cognitive Interventions and Professor of Psychology

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 George W. Joe, Ed.D.—Associate Director for Process and Outcome Studies  
 Danica Kalling Knight, Ph.D.—Research Scientist  
 Kevin Knight, Ph.D.—Associate Director for Criminal Justice Studies  
 Grace A. Rowan-Szal, Ph.D.—Research Scientist  
 D. Dwayne Simpson, Ph.D.—Senior Research Scientist and Saul B. Sells Chair of Psychology

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 Catherine L. Coghlan, A.B., M.S.S.W., Ph.D.—Assistant Director  
 Amanda Sanchez, B.S.—Research Analyst

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 Kathryn Hopper, B.A.—Staff Writer  
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 Ma'lisa Yost, B.S.—Assistant Director of Advancement Communications  
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 Lisa Albert, B.S.—Assistant Director of Communications  
 Sandra Hawk Record, B.A.—Internal Communications Manager  
 Victor Neil, B.S.—Director of Web site Management  
 Elaine Tubre, B.A., M.S.—Assistant Director of Web Site Management  
 Jennifer Zarate, B.F.A.—Web Services Coordinator II  
 Amy Peterson, B.A.—New Media Specialist  
 Elizabeth Perkins, B.S.—Director of Admission Marketing  
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 Allie Regan, B.F.A.—Assistant Director of Publications  
 John K. Maddox, B.A.—Senior Art Director  
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 Brenda Barnes, B.S., M.S.L.S.—Head of Reference  
 Charles Bellinger, B.S., M.A., PhD., M.S.L.S.—Brite Librarian  
 Walter Betts, B.M., MLS—Systems Librarian  
 Diana Boerner, B.A., M.L.I.S.—Reference/Business Librarian  
 Jeffrey Bond, B.S., B.M.E., M.L.S.—Science Librarian  
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 Sara Dillard, B.A., M.A., M.S.L.S.—Catalog Librarian  
 Vinita Dobson, B.A., M.S.L.S.—Catalog Librarian  
 Claire Galloway, B.A., M.A.—Archivist

Dennis Gibbons, B.A., M.L.S.—Head, Collection Development  
 Melissa G. Fairfield, B.S., M.A., M.L.I.S.—Head, Government Documents  
 Stephanie Folse, B.A., M.A., M.L.I.S.—Information Technology Librarian  
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 Tracy Hull, B.A., M.A., M.S.L.S.—Associate Dean of the Library  
 Michael Lampley, B.A., M.L.I.S.—Periodicals Librarian  
 James Lutz, B.A., B.A., M.S.L.S.—Director of Library Administrative Services  
 Dennis Odom, B.A., M.L.S.—Head, Acquisitions  
 Roger Rainwater, B.A., M.A., M.L.S.—Head, Special Collections  
 Laura Ruede, B.M., M.L.S.—Van Cliburn Archivist  
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 Sally Sorensen, B.A., M.S.L.S.—Head, Cataloging  
 Laura Steinbach, B.F.A., M.F.A., M.L.S.—Instruction Librarian  
 Michael Strom, B.A., M.A., M.L.I.S.—Senior Archivist

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 Richard T. Bryan, B. Arch, M.U.P.—Associate Director, Operations  
 Harold J. Leeman, Jr., P.E., LEED AP, B.S., M.S.C.E. (2)—Associate Director, Major Projects  
 David C. Mestemaker, B.S., M.A.—Assistant Director of Physical Plant, Resources  
 Hollis Dyer, B.S.—Assistant Director of Physical Plant, Building Maintenance  
 Robert Sulak, B.S.—Assistant Director of Physical Plant, Landscaping and Grounds  
 Rex Bell, A.A.—Assistant Director of Physical Plant, Mechanical Maintenance  
 George Bates, P.E., B.S., E.E.—Assistant Director of Physical Plant, Electrical Maintenance  
 Shelton Riley, B.A.F.—Assistant Director, Facility Services  
 Joseph Laster —Director, Facility Services  
 Paul Alan Hood, C.I.E., B.S. Eng. Tech.—Project Engineer  
 David Hoyler, A.I.A., LEED AP, B.S. Arch.—Project Architect  
 Donald W. Bruner, B. Arch.—Project Manager  
 Jesus Rangel, Jr., P.E., B.S., M.B.A.—Project Manager  
 Patrick Mucker, LEED AP, B.S.—Project Manager  
 Lisa Aven, B.S. Interior Design, --Interior Designer  
 Lisa Hall, B.S. Interior Design—Interior Designer  
 Dan Dehart, B.A.A.S.—Purchasing Manager  
 Everlyn M. Williams, B.S., M.S.—Financial Analyst

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 Terri Gartner—Assistant to the Provost and Vice Chancellor  
 Cindy Odiorne—Assistant to the Vice Chancellor for Academic Affairs  
 Janet Bryant—Administrative Support Assistant

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 Mary W. Kincannon, B.S. M.L.A.—Associate Registrar  
 Vanessa Lanzarotti, B.G.S., M.B.A.—Associate Registrar  
 Kristi Harrison, B.M., M.L.A.—Manager, Academic Progress Services  
 Tiffany T. Wendt, B.S., M.B.A.—Academic Audit Developer/Analyst

**Sponsored Research**

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 Trudy Conner, B.B.A.—Financial Aid Adviser  
 Bianca Allen, B.A.—Financial Aid Adviser  
 Debbie Mar—Graduate Adviser

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### Brown-Lupton University Union

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 Natalie Boone, B.S., M.S.Ed.—Assistant Director of University Union/Programming Council Adviser  
 Kim Appel Turner, B.B.A.—Activities Coordinator  
 Shannon Sumerlin, B.S., B.S., J.D.—Director of Fraternity & Sorority Affairs  
 Shawn Wagner, B. S., —Coordinator of Events University Union  
 Kent Mire, B.S., M.S., —Coordinator of University Union Night Operations

### Campus Life

Susan Adams, B.S., M.S.—Associate Vice Chancellor for Student Affairs, Dean of Campus Life  
 Glory Robinson, B.S., M.Ed.—Associate Dean of Campus Life  
 Tracy Tucker, B.S., M.L.A.—Assistant Dean of Campus Life  
 Brook Somerton Scogin, B.F.A, B.S., M.A.,—Assistant Dean of Campus Life  
 Nick Whitesell, B.S., M.Ed.—Assistant Dean of Campus Life  
 Karen Bell, B.S., M.P.H. —Assistant Dean of Campus Life for Health Promotion

### Campus Police

Steve McGee, B.B.A., J.D.—Chief  
 J.C. Williams—Assistant Chief  
 DeAnn Jones—Coordinator of Parking and Traffic Services

### Career Services

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 Susan Nethery, B.A., M.B.A.—Associate Director of Programs and Marketing  
 Vanden Thong, B.S., M.S.—Assistant Director  
 Terrence Hood, B.A., M.S.— Assistant Director of Advising  
 Matthew Riordan, B.A., M.Ed. —Assistant Director of Advising  
 Rachel Thomas, B.S. —Career Adviser  
 Nicole Kinworthy, B.A.—Recruitment Coordinator

### TCU Press

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 Melinda Esco, B.A.—Production Manager

### University Advancement

Donald J. Whelan, Jr., B.S., EMIB—Vice Chancellor

### Advancement Operations

Roby V. Key, B.S., M.Ed., Ed.D.—Associate Vice Chancellor of Advancement Operations  
 Yvonne Mann, B.B.A.—Associate Director of Development Information Services  
 Michele Ware, B.S.—Gift Processing Manager  
 Trey Lawyer, B.G.S.—Technical Services and Reports Manager  
 Chrys Weyer—Technical Services Analyst  
 Sujatha Kulkarni, B.S., M.B.A.—Technical Services Analyst  
 Veleria Cowsen—Data Control Supervisor

Cathleen Whillock, B.B.A., M.Ed.—Web Services Manager  
 Kristi Kolpanen, B.B.A.—Web Services Coordinator  
 Alice Carter, B.A., M.A.—Director of Advancement Research  
 Andrea Heitz, B.A., M.S., M.T.S.—Research Officer  
 Virginia Schmidt, B.A.—Research Officer  
 Robin Richey—Research Officer

### Alumni Relations

Kristi Hoban, B.S., M.S.—Associate Vice Chancellor of Alumni Relations  
 Rebekah Waits, B.B.A., M.Ed.—Director of Alumni Relations  
 Laura Chudy, B.B.A.—Associate Director of Alumni Relations  
 Carrie Brown, B.S., M.L.A.—Assistant Director of Alumni Relations  
 Jenya Felder, B.B.A.—Assistant Director of Alumni Relations  
 Kristi Kolpanen, B.B.A.—Web Services Coordinator  
 Melissa Austin-Weeks, B.S.N.—Coordinator of Senior Adult Programming

### Athletic Fund-Raising (Frog Club)

David Babb, B.S.—Associate Director of Athletics, Assistant Vice Chancellor of Athletic Fund Raising  
 John Denton, B.A.—Director of Frog Club  
 Greg Blackwell, B.A.—Assistant Director of Frog Club/Lettermen's Association

### Donor Relations and Special Projects

Nancy Petruso, B.A. M.A.—Associate Vice Chancellor of Donor Relations and Special Projects  
 Nancy Madsen, B.S., M.A.—Director of Donor Relations  
 Carrie Moore, B.S., M.A.—Assistant Director of Donor Relations, Clark Society Liaison and Event Planner  
 David Ferrell, B.A.—Assistant Director of Donor Relations, Endowed Fund Stewardship  
 Regan Landreth, B.A.—Assistant Director of Donor Relations, Scholarship/Stewardship Coordinator  
 Anna Ruth Overbey, B.S.—Assistant Director of Donor Relations, Stewardship Coordinator

### University Development

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 Dennis Alexander, B.S.—Director of Foundation Relations  
 Penny Bishop, B.S.—Director of Corporate Relations  
 April Culver, B.S., M.A.—Director of Parent Relations  
 Merrilee Kuylen, B.A., C.P.A.—Director of Gift Planning  
 Beth Cardwell, B.B.A.—Assistant Director of Gift Planning  
 Steve Shineman, B.A., M.B.A.—Assistant Director of Gift Planning  
 Janine Kraus, B.S., M.Ed., Ph.D.—Director of Annual Giving  
 Jerome Douglas, B.A., B.B.A.—Director of Phonathon  
 Jason Eager, B.A., B.S., M.Ed —Gift Officer Student and Young Alumni Programs  
 Julie Whitt, B.B.A.—Assistant Director of Annual Giving and Director of Reunion Giving Program  
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 Diane Murray—Development Director of Central U.S. and East Texas  
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 DeVonna Tinney, B.B.A.—Development Director of Nursing and Health Sciences

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 Cynthia Shearer, B.A., M.A.—Assistant Director  
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**William H. Koehler Center for Teaching Excellence**

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 Romana Hughes, B.A.A.S., M.L.A.—Assistant Director  
 Kerrie Conover, B.F.A.—Instructional/Graphic Designer  
 Natasha Faidley, B.A.—Project Coordinator  
 Lai Sze, B.S., M.B.A.—Instructional Designer/Web Master

**Faculty**

**Neeley School of Business at TCU Directory**

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 William C. Moncrief III, *Senior Associate Dean*  
 William L. Cron, *Associate Dean, Graduate Programs*  
 Mark Muller, *Assistant Dean, Finance and Administration*  
 Peggy Conway, *Director, Graduate Admissions*  
 LaTanya Johns, *Director, Graduate Career Service Center*  
 Ed Riefenstahl, *Director, MBA Experiential Learning*  
 Linda Smith, *Director, Graduate Programs Administration*  
 Jerry Turner, *Director, Master of Accounting Program*  
 Nancy W. Nix, *Executive Director, Executive MBA Program*

**Accounting**

ARNOLD BARKMAN, *Associate Professor*. Ph.D. (University of Houston)  
 SANDRA R. CALLAGHAN, *Associate Professor*. Ph.D. (Michigan State University)  
 RICHARD CAZIER, *Assistant Professor*. Ph.D. (University of Iowa)  
 HUIJING FU, *Assistant Professor*. Ph.D. (University of Minnesota)  
 IN-MU HAW, *Professor*. Ph.D. (University of Alabama)  
 STEVE LIM, *Associate Professor*. Ph.D. (University of Pennsylvania)  
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 RAY J. PFEIFFER, JR., *Professor of Accounting and Chair*. Ph.D. (University of North Carolina-Chapel Hill)  
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 DANIEL G. SHORT, *Professor*. Ph.D. (University of Michigan)  
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 WILLIAM WEMPE, *Associate Professor*. Ph.D. (Texas A&M University)

**Finance**

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PETER LOCKE, *Professor*. Ph.D. (Texas A&M University)  
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 TERRY E. DIELMAN, *Professor*. Ph.D. (University of Michigan)  
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STUART A. YOUNGBLOOD, *Professor*. Ph.D. (Purdue University)

**Marketing**

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SHANNON H. SHIPP, *Associate Professor*. Ph.D. (University of Minnesota)

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ERIC YORKSTON, *Associate Professor*. Ph.D. (New York University)

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MELISSA SCHROEDER, *Associate Dean*

**Schieffer School of Journalism**

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SUZANNE HUFFMAN, *Professor*. Ph.D. (University of Missouri)

JULIE O'NEIL, *Associate Professor*. Ph.D. (University of Utah)

DAXTON "CHIP" STEWART, *Assistant Professor*. LL.M. (University of Missouri); Ph.D. *Ibid*)

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**Communication Studies**

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CHRIS R. SAWYER, *Associate Professor and Chair*. Ph.D. (University of North Texas)

PAUL SCHRODT, *Associate Professor*. Ph.D. (University of Nebraska-Lincoln)

MELISSA SCHROEDER, *Associate Dean, Associate Professor and Director of Graduate Studies*. Ph.D. (SUNY-Buffalo)

PAUL L. WITT, *Associate Professor*. Ph.D. (University of North Texas)

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Kay Stevens, *Associate Dean*

SUSAN ANDERSON, *Associate Professor*. Ed.D. (University of Virginia)

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