1991

# The University of Texas of the Permian Basin Catalog 1991-93

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The mission of The University of Texas of the Permian Basin is to provide to students opportunities for realization of their fullest potential both personally and professionally. The educational experience at U. T. Permian Basin offers students opportunities to develop powers of judgment and to mature both emotionally and intellectually. This experience provides opportunities whereby students may prepare themselves to earn a satisfactory livelihood and to make a worthwhile contribution to the nation's social and economic life.

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No person shall be excluded from participation in, denied the benefits of, or be subject to discrimination under, any program or activity sponsored or conducted by The University of Texas System or any of its component institutions, on any basis prohibited by applicable law, including, but not limited to, race, color, national origin, religion, sex, age, veteran status, or handicap.

The University of Texas of the Permian Basin reserves the right to withdraw courses at any time, change fees, rules, calendar, curriculum, degree programs, degree requirements, graduation procedures, and any other requirements affecting students. Changes will become effective whenever the appropriate authorities so determine and may apply to both prospective students and those already enrolled. The provisions of this catalog do not constitute a contract, express or implied, between any applicant, student, or faculty member and The University of Texas of the Permian Basin or The University of Texas System.

University Administration

# University Administration

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University Calendar 1991-93

# University Calendar

## UNIVERSITY CALENDAR 1991-92

Fall Semester 1991

### FALL SEMESTER 1991

| | |
|---|---|
| September 3 | Freshmen registration |
| September 4 | Registration for returning & new students (not freshmen) |
| September 5 | Classes begin |
| September 18 | Last day of late registration |
| | Last day to add classes |
| | Last day to add contract study courses |
| September 20 | Last day to file for graduation |
| | Last day to drop a class with 100% refund |
| | Last day to drop or withdraw without creating an academic record |
| | Last day to request ENCORE or cancel ENCORE status |
| November 8 | Last day to drop or withdraw |
| November 20 | Last day to add self-paced (SPI) courses |
| November 27 | Last day to submit Master's thesis and reports to committee |
| | Last day to take oral exams (graduate students) |
| | Thanksgiving Holiday begins at 5 p.m. |
| November 28-29 | Thanksgiving Holiday |
| December 2 | Classes resume 8 a.m. |
| December 13 | Last day to submit final copies of approved thesis/project to Graduate Studies Office |
| | Last day of classes |
| December 16-19 | Final examinations |
| December 20 | Semester ends |

University Calendar 1991-93

# University Calendar

Spring Semester 1992

**SPRING SEMESTER 1992**

| | |
|---|---|
| January 13 & 14 | Registration |
| January 15 | Classes begin 8 a.m. |
| January 28 | Last day of late registration |
| | Last day to add classes |
| | Last day to apply for ENCORE status or cancel ENCORE status |
| | Last day to add contract study courses |
| January 30 | Last day to file for graduation |
| | Last day to drop or withdraw without creating an academic record |
| March 9-13 | Spring recess: classes dismissed |
| March 16 | Classes resume 8 a.m. |
| March 27 | Last day to drop classes or withdraw from the university |
| April 10 | Last day to add self-paced (SPI) courses |
| | Last day to submit master's thesis and reports to committee |
| April 17 | Last day to take oral examinations (graduate students) |
| April 17 | Good Friday, classes dismissed all day |
| April 20 | Classes resume 8 a.m. |
| May 1 | Last day of classes |
| | Last day to submit the final copies of approved thesis/project to the Graduate Studies Office |
| May 4-7 | Final examinations |
| May 8 | Semester ends |

Summer Semester 1992

**Summer Session 1992**

A detailed calendar will be published in the Summer Class Schedule.

**A detailed calendar for the 1992-93 school year will be published during the 1992 summer session and will be available in the offices of Admissions and Records.**

The University

# The University

The University of Texas of the Permian Basin is an upper level general academic component of The University of Texas System. As a component institution of The University of Texas System, the university is committed to pursue high standards of achievement in instruction, student performance, research and scholarly accomplishment.

Within an environment of academic freedom, students learn from faculty scholars who have in-depth expertise in the arts, the sciences, and the professions of business, engineering, and teacher education. The faculty engage in research and creative activity, both to develop and maintain their own scholarly expertise and to extend human knowledge. The results of that research and creative work are made available to students in the classroom and to the general public through publications and public service activities.

At the core of the university curriculum are the arts and the sciences, those academic disciplines common to nearly all colleges and universities in the United States. Courses are offered in these disciplines to support a general liberal education at the baccalaureate level. In addition, degree programs through the master's level are offered in many discipline categories.

As a state-supported public institution, the university is open to all citizens of the state who meet the academic standards for admission. Although some students from outside the State are admitted, the majority of the students come from the geographic area in which the institution is located. Degree programs and course offerings beyond those in the arts and sciences core are selected primarily to meet the needs and desires of the citizens of this region.

While the region has no specific boundaries, it is useful to think of it in terms of the seven county region surrounding the Odessa/Midland area, a region which grew by 16 percent between 1970 and 1980 to a population of approximately 300,000. The Permian Basin, with its enormous petroleum industry, puts special demands on the university's curriculum, as well as on its research and service efforts.

To support the social, cultural and economic development of this region, the university believes it is desirable to offer programs through the master's level in business, education, and some aspects of engineering in addition to those in the arts and sciences core.

Many of the people who are served by The University of Texas of the Permian Basin must schedule their involvement with the university around a variety of personal and professional activities. They attend the university as part-time students, and some are employed full time. For many, U. T. Permian Basin provides the only access to higher education because of their other commitments within the region. This access is particularly important to their employers. Consequently, the university continually strives to identify and respond to those special regional needs. Special scheduling and some special services are needed to make the resources of the university most useful to this segment of the community.

# The University

While all of the faculty engage in research and scholarly activity, many are engaged in sponsored research. This research not only strengthens the scholarly base of the instructional program but also serves the direct needs of the sponsors. Of particular note is the university's special research strength in energy-related business.

**The University of Texas of the Permian Basin is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award Bachelor's and Master's degrees.**

Under-Graduate Studies

# Admissions

**TEXAS ACADEMIC SKILLS PROGRAM (TASP)**
As a condition of admission, applicants that have NOT completed at least three semester hours of college level work PRIOR to the Fall 1989 semester, MUST provide official evidence that they have passed ALL sections (reading, writing and mathematics) of the Texas Academic Skills Program (TASP).

**A student may be admitted to U. T. Permian Basin according to any one of the following classifications:**

1. Regular undergraduate - seeking a first or second bachelor's degree.
2. Regular graduate - seeking a master's degree.
3. Nondegree - seeking one or a series of courses only and wanting credit and grade.
4. ENCORE - seeking one or a series of courses only and not desiring a grade or credit (similar to audit).
5. Special Student - seeking to enroll in one or a series of courses for credit prior to meeting the 54 semester hour admission requirement. Special Review Application REQUIRED.
6. International student - seeking bachelor's or master's degree, not a U. S. citizen or permanent resident, and seeking F-1 or J-1 visa status.

## Admission Requirements

**The requirements for admission are as follows:**

1. A student seeking regular admission to pursue a degree program must have completed at least 54 semester credit hours at a community college, senior college or university. The institution must be fully accredited by the state and a regional accrediting association. This previous coursework is normally elected at the freshman and sophomore level to complete the basic core of courses recommended by the Texas Higher Education Coordinating Board.
2. The student having fewer than 54 semester hours of college level work but who has satisfied all basic general education requirements may be admitted on an individual basis through a special admission process utilizing an institutional committee. A "special review application" must be completed, in addition to the regular admission application. These and official college transcripts should be submitted 30 days prior to the term in which enrollment is desired.

Under-Graduate Studies

# Admissions

3. In some cases, a student with fewer than 48 semester hours of previous college level work wishing to take upper level courses for credit may be admitted by the institutional committee. In most cases, concurrent enrollment at a community college will be a requisite to being granted special admission. A special review and a regular application and college transcripts should be submitted 30 days prior to the term in which enrollment is desired. Should admission be denied, the student may wish to consider enrolling on a non-credit basis utilizing the ENCORE option.

   Students granted special admission and wishing to continue their enrollment at U.T. Permian Basin in a subsequent term MUST reapply at least 30 days prior to the term in which they wish to enroll. A decision to allow continued enrollment will be made upon receipt of a supplementary transcript from the community college showing additional hours completed.

4. A student seeking regular admission must have a 2.00 GPA (or **C** average) for all courses previously taken at other colleges and universities. Grades of **F** carry no transferable credit to the university. **D** grades may be included in the total number of credit hours to be accepted for transfer to U. T. Permian Basin. No **D** grades, however, will be accepted to fulfill the requirements of a major, minor or any General Education requirement.

5. The student must be in good standing at the institutions previously attended and qualify for readmission to those institutions. Students unable to obtain transcripts from any one of the institutions previously attended due to an outstanding financial obligation, or any other "hold" on their records are not considered to be in "good standing."

6. Each student must submit the completed admission form and request an official transcript from each institution previously attended. These transcripts should be sent from the registrar of each college attended directly to the U. T. Permian Basin Admissions Office. Student carried copies cannot be accepted.

   All transcripts and supporting information submitted to determine the student's eligibility to U. T. Permian Basin become a permanent part of the student's file and will not be returned to the student. Students wishing copies of transcripts submitted must request them from the originating institution. It is not possible for the university to dispatch official transcripts for another institution.

   Students permitted to enroll at U. T. Permian Basin without transcripts from previous colleges attended will be given 30 days for these to arrive at the Admissions Office. If the transcripts have not arrived by the end of

# Admissions

the first semester of enrollment, the student will not be allowed to register for any subsequent semester until transcripts have arrived and have been verified and evaluated by the Admissions Office. In addition, grades earned during the first semester will not be released until transfer transcripts have been verified and evaluated.

To obtain an admission form or additional information, write to:

Office Of Admissions
The University of Texas
of the Permian Basin
4901 E. University Blvd.
Odessa, Texas 79762-0001

While there is no specific deadline for application for admission to the university, applicants are encouraged to submit applications and transcripts two months prior to the beginning of the semester they plan to attend. The application file should be completed at least one week prior to the scheduled registration date.

## International Student Admissions

International students must apply at least 3 months prior to the semester they plan to enroll to allow documents to arrive in time. All correspondence and supportive documents for admission purposes should be sent by airmail, not surface mail, from points outside the United States. International students must have all admissions documents submitted and approved at least 8 weeks prior to the beginning of the semester in which they plan to enroll.

**In addition to the general requirements, the following regulations apply to all international students:**

1. Certified transcripts of student's academic record (mark sheets) from universities previously attended in the home country must be submitted. Both a copy of the official foreign academic record and an official English translation must be included. Moreover, where university level studies are to be considered for possible undergraduate transfer credit, a syllabus, catalog or similar bulletin must be submitted which describes the courses in sufficient detail for proper evaluation.
2. Signed statements guaranteeing the student's ability to pay expenses while at U. T. Permian Basin must be accompanied by documentation supporting the statement in the form of a current letter from a bank or other reliable institution or from the sponsor's employer. (Photostatic copies of support statements furnished to meet another university's requirements are not acceptable.)
3. In addition to the sponsor's letter guaranteeing support, a $6,000 deposit is required for students from certain countries. Contact the Admissions Office for a list of these countries.

Under-Graduate Studies

# Admissions

4. Test of English as a Foreign Language (TOEFL) scores must be submitted before admission will be granted. Minimum score for admission consideration is 550. Information concerning the TOEFL may be obtained by writing to: TOEFL, Box 899, Princeton, NJ 08540. (U. T. Permian Basin institution number: 6914)
5. It is compulsory for international students on F-1 visas to carry medical and hospitalization and repatriation insurance for themselves. Proof of insurance must be submitted prior to an I-20 being issued. Insurance for dependents is optional.
6. Students on F-1 visas do not normally have employment privileges. Government regulations require international students to certify that they have finances deemed sufficient by the university to pursue a full course of study without employment.
7. Holders of F-1 student visas must enroll for a full load of study. For undergraduate students or "undergraduate to qualify for graduate studies," the minimum load is 12 semester hours; and, nine for graduate students. For students NOT planning on enrolling during the summer sessions, full-time enrollment should be 15 and 12 semester hours respectively.
8. Students wishing admission to graduate programs must comply with all of the above requirements in addition to the graduate student requirements.
9. Students transferring from a U. S. college or university must have the former foreign-student advisor (or equivalent) complete Form FS2-73. These forms are available from the Admissions Office.

Summer School

**Summer Transients or non-degree students.** Students in good standing at another college or university may be considered for regular or special admission during the summer or for one of the long sessions. Only a current transcript from the last institution will be required prior to enrolling at U. T. Permian Basin. A student will not be admissible if he is ineligible to return immediately to his former institution(s).

A student granted admission as a summer transient or as a nondegree student may enroll in subsequent terms to pursue a degree from U. T. Permian Basin. A new application must be completed and official transcripts must then be ordered from all other universities previously attended and from which no transcripts have been requested for U. T. Permian Basin.

Re-Admission Of Former Students

**Readmission for former students.** Former students must notify the Admissions Office of their intentions to return to U. T. Permian Basin. Notification of attendance at another institution(s) since their last enrollment at U. T. Permian Basin must also be made, and transcripts from those institutions must be submitted.

Under-Graduate Studies

# Admissions

Students who have not attended U. T. Permian Basin for one academic year or longer must complete a new admission application and submit transcripts from all institutions attended since the last date of enrollment at U. T. Permian Basin.

Students who have not attended U. T. Permian Basin for three years or longer must complete a new admission application and request current official transcripts from EVERY institution previously attended, except U. T. Permian Basin.

Students who have graduated or are scheduled to graduate from U. T. Permian Basin and wish to enroll in a subsequent term to pursue another educational objective MUST complete a new admission application.

A student who is not eligible to return immediately to his/her former institution is not eligible to enroll at U. T. Permian Basin. Normally a student who is dismissed for disciplinary reasons from another institution will not be admitted.

Under-Graduate Studies

# Transfer Of Credit

**Undergraduate.** As an upper level university, U. T. Permian Basin offers only junior and senior level courses for the bachelor's degree. Students must have completed prerequisites usually offered at the freshman and sophomore level before enrollment in most courses at U. T. Permian Basin. Students must complete lower level requirements before the bachelor's degree can be granted. Coursework shown on transcripts from other academic institutions is subjected to two separate evaluations:

1. For Admission. Coursework is evaluated to determine the transferable credit for admission purposes. This evaluation is performed by the admissions officers during the admission procedure.

2. Applicability toward degree requirements. Coursework is evaluated to determine whether the student's lower level courses provide the necessary preparation for upper level courses at U. T. Permian Basin and to determine the applicability of previous upper level coursework towards degree requirements at U. T. Permian Basin. This evaluation is performed by an academic advisor in the student's chosen field of study.

It should be noted that at least 120 hours of applicable college credits are required for the bachelor's degree; however, the requirements specific to a major area of concentration may result in a degree plan that exceeds that number. In short, the undergraduate degree-seeking student should approach a career at U. T. Permian Basin not in terms of what has been done elsewhere but in terms of what remains to be done at U. T. Permian Basin.

**General Regulations**

1. The college or university from which the credit is to be transferred must be accredited by a regional accrediting agency.

2. Courses transfer to U. T. Permian Basin on the same level and with the corresponding number of credit hours earned at another institution. Courses taken at the freshman/sophomore level cannot transfer as upper division (junior or senior) credits. Grades are never lowered in transfer. **D** grades may be included in the total number of credit hours to be accepted for transfer to U. T. Permian Basin. No **D** grades, however, will be accepted to fulfill the requirements of a major, minor or any General Education requirement.

3. When a course has been repeated for credit, the most recent grade and credit hours will be used to determine the acceptance of the course and also to determine if the student meets the minimum grade point average entrance requirement.

Under-Graduate Studies

# Transfer Of Credit

4. The following are not accepted by the university toward admission or degree requirements:
   a. Orientation, remedial English, remedial reading courses, remedial mathematics courses, remedial writing (composition).
   b. General Education Development Tests on high school or college level.
5. Sectarian courses in religion are counted **for** admission purposes **only** but do not apply toward degree requirements. However, courses in the philosophy of religion or the Bible as a literary work are applicable as free electives.
6. Vocational and technology courses will be applied toward the admission requirements but acceptance for degree purposes will be determined on an individual course basis by the faculty advisor with the approval of the Division Director. In most cases none, or a very limited number, of these courses will be applicable toward a degree.
7. Except for physical education majors, a maximum of 4 credit hours will be accepted in physical activity courses toward admission requirements and total credits toward degree. A maximum of 4 upper level credits in ROTC can be accepted in lieu of physical education.
8. If The University of Texas of the Permian Basin does not accept lower division course credit earned by a student at another institution of higher education, U. T. Permian Basin shall give written notice to the student and the other institution that the transfer of the course credit is denied. The two institutions and the student shall attempt to resolve the transfer of the course credit in accordance with Texas Higher Education Coordinating Board rules and/or guidelines. If the transfer dispute is not resolved to the satisfaction of the student or the institution at which the credit was earned within 45 days after the date the student received written notice of the denial, U. T. Permian Basin shall notify the Commissioner of the Texas Higher Education Coordinating Board of its denial and the reason for the denial. The commissioner of higher education or the commissioner's designee shall make the final determination about a dispute concerning the transfer of course credit and give written notice of the determination to the involved student and institutions.

**Junior/Community College Transfer Regulations.** Junior/Community College degree programs do not always apply towards a degree program at U. T. Permian Basin. For a smooth transfer from a junior/community college to U. T. Permian Basin, it is suggested that the student seek advice on course elections from a U. T. Permian Basin faculty member in the prospective field of study or from the U. T. Permian Basin Office of Admissions, prior to the sophomore year

# Transfer Of Credit

at the junior/community college. This advice may help avoid unnecessary courses and ensure that all of the proper courses prerequisite to the U. T. Permian Basin degree program are taken.

Courses will transfer from junior/community colleges under the following conditions:

1. Courses taken at a junior/community college cannot transfer as upper division (junior or senior) credits.
2. While there is no limit to the number of credits transferable from a junior/community college, it is strongly recommended that students not exceed 66 semester hours of freshman/sophomore coursework since a student must earn a minimum of 54 semester hours of upper level course work for a bachelor's degree. Of these, 30 semester hours must be completed at U. T. Permian Basin.
3. The approved 'Transfer Curricula' courses will transfer as described by the Coordinating Board rules and regulations.

**Upper Level Transfer Regulations.** Students who have completed 60 semester credit hours are usually admitted with junior standing. A student may be admitted with senior standing if 90 transferable credit hours have been completed and a minimum of 24 of those credits are in upper level courses. Students with upper level credit should note:

1. Normally, only courses with a grade of **C** or better will apply toward a degree.
2. A minimum of 30 semester credit hours must be completed at U. T. Permian Basin in order to earn a bachelor's degree. Of these, the last 24 credit hours must be in residence.

**Correspondence and Extension Credit.** The University of Texas of the Permian Basin does not offer correspondence courses. A student may apply toward a bachelor's degree correspondence or extension credit if appropriate to the curriculum and entered onto a transcript of a regionally and state accredited college or university, subject to the following limitations:

1. The maximum transferable credit is 15 semester hours of correspondence credit, 30 semester hours of extension credit or 30 semester hours of correspondence and extension credit combined.
2. A maximum of six semester hours in the major may be correspondence credit.
3. The Division of Business does not accept transfer of any upper level business courses taken by correspondence.

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# Transfer Of Credit

**Credit by Examination (Advanced Placement).** The university does not offer CLEP (College Level Examination Program) exams nor does it enter CLEP credit onto U. T. Permian Basin transcripts. Up to 28 semester hours of lower division credit will be honored for admission purposes. Such credit must first be entered onto the transcript of a regionally and state accredited college or university.

The faculty advisor and/or Division Director will determine the applicability and the transferability of this credit for degree purposes.

**Evaluation of Transfer Credit.** Transfer credit is evaluated by the admission officer at the time the student is admitted to the university. Credit is further evaluated by the faculty advisor for degree purposes when the degree plan is developed.

Prospective students often have questions about transfer of courses. Students are invited and encouraged to seek advice about courses and degree programs from the admissions advisors and, if necessary, the student will be referred for consultation with faculty members in the student's prospective discipline.

# Financial Aid

A full complement of financial aid and scholarship programs is available for students attending The University of Texas of the Permian Basin. Grants, loans, and part-time jobs exist which are designed to help students needing financial assistance to meet educational expenses and scholarships have been developed to recognize merit and academic achievement. The information outlined below is intended to provide useful information about the operation of the many financial aid programs at U. T. Permian Basin. Additional information is published in the form of a consumer guide available through the financial aid office.

## Application for Funds And Selection Of Recipients

Because of the complexity of the many financial aid programs, an effort is made to keep the application process at the university as simple as possible. A set of basic applications is used to apply for all programs, whether the programs are federal, state, or institutional in nature. This design should eliminate any confusion students may have over which application to complete for a particular program.

The application process begins with the completion of at least one of two documents. A Scholarship and Financial Aid Application is required for all programs administered through the university, whether based on merit or need. A Family Financial Statement (FFS) is required for all needs-based programs, which include federal and state grants, loans and employment programs. Some local scholarship funds also rely on data provided through the FFS, so it is advisable to complete this document to make sure all application details have been covered.

Since many financial aid programs are funded through federal and state sources, other documents besides the application forms just mentioned are required to complete an application file. Each applicant constitutes an individual case, but examples of supporting documentation needed most often are copies of federal income tax returns, verification forms which substantiate household size and numbers in college, Pell Grant Student Aid Reports, and financial aid transcripts. The Financial Aid Office will notify each applicant of the documentation needed to complete his or her file. The important note that should be made of this requirement is that any financial aid for which a student may be eligible cannot be awarded until the file is complete.

Although strict deadlines for the awarding of financial aid are not maintained by the university, some guidelines are necessary in the administration of the programs to provide for fairness and equity among students. Priority application schedules for summer attendance periods is May 1, while the priority application time-frame for fall and spring semesters is June 1.

Thus, on May 1 of each year, the Financial Aid Office will award available funds to eligible students planning to attend the university during the summer. Similarly, on June 1, the Financial Aid Office will make awards for the following fall and spring semesters. (The spring semester is not treated as a separate application period.) Files completed after these dates are awarded on a first-come, first-served basis. Because of funding limitations it is advantageous to be among the first award group. That is, early applicants usually receive better award packages.

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# Financial Aid

On the dates noted above, the Financial Aid Office will begin to make needs-based awards by constructing "award packages" for eligible students. The "packages" are developed by attempting to meet a student's need, which is the difference between the cost of education and the amount the student is expected to contribute toward that cost. This expected contribution is based on a formula evenly applied to each student from the data provided through filing a Family Financial Statement. Award "packages" usually consist of one-half gift aid and one-half self-help assistance. Gift aid consists of grants and scholarships while self-help sources are loans and employment. Every attempt will be made to fully meet a student's need; however, some circumstances, such as insufficient levels of funds, an extremely large student budget, and the late filing of an application could prevent complete funding.

Students will be notified of amounts awarded through an "Award Letter". The Award Letter is the official notice of eligibility and provides the amounts to be received as well as amounts awarded within individual programs. The Award Letter must be signed by the student and returned to the Financial Aid Office as instructed on the document. Other literature will also accompany the Award Letter to further explain the programs.

Scholarship-only applicants are treated in much the same manner as described above except that "packages" are not developed for individual students. Instead, applications that are completed and submitted by the priority dates mentioned above will be reviewed and scholarship offers will be made to students who possess qualifications unique to each scholarship category. Students selected for a scholarship will be notified by the Financial Aid Office.

## Types of Financial Aid Scholarships

The basic criterion for scholarship eligibility is academic success, although not all scholarships depend upon grade point average alone. Some are more heavily weighted toward financial need while others use a combination of need and grades. The following listing describes many of the scholarships available at U. T. Permian Basin along with a brief description of the scholarship, the amount granted, and other criteria involved in selecting recipients.

The **American Petroleum Institute** has established a program at the university which is available to full-time students who are Permian Basin residents. Recipients must maintain a 3.00 grade point average and pursue a course of study related to the petroleum industry. Financial need, along with character, leadership, and a desire to excel are requirements. An annual renewal application is required. The award is available to undergraduate and graduate students.

The **Warren Burnett Scholarship** has been established to help minority women with their education pursuits. Merit and need are considered in the awarding of these funds, and the amount of the award ranges up to $1000 per academic year. Only undergraduate women are eligible.

Under-Graduate Studies

# Financial Aid

The **Edwin B. Kurtz Scholarship** has been established to honor the former professor of life sciences. The award is reserved for students studying in an area of pre-health professions. The award is available for undergraduates while individual circumstances are considered for graduate students.

The generosity of Ellen Noel and her late husband, W.D. Noel, provides for the **Noel Scholarship Program.** While the Noel "A" award is only for certain dependents of employees of a business started by Mr. Noel, the Noel "B" award is for Ector County, Texas, residents. The scholarship may be applied to tuition, fees, and books. Both award categories require annual renewal application. Undergraduates and graduates are eligible to apply.

The **Mrs. Paul Moss Journalism Scholarship** is an undetermined amount for students with outstanding abilities in mass communications. An annual renewal application is also required.

The **Nojem Libson Scholarship** is in the amount of $200-$300 per semester to members of an ethnic minority. Preference is given to Odessa College transfer students. An annual renewal application is required, and preference is reserved for undergraduates.

The **Permian Honor Scholarship Foundation** is a non-profit enterprise which makes honor scholarships available to students to attend area community colleges and U. T. Permian Basin. Additional information may be obtained by writing the foundation in care of U. T. Permian Basin. Funds are available for both graduates and undergraduates.

The **U. T. Permian Basin Merit Award** annually recognizes outstanding students. The award is as much as $400 per academic year. A 3.00 minimum grade point average is required as is an annual renewal application. This fund is reserved for undergraduates only.

The university would also like to recognize the following organizations for their continuing support in providing scholarship assistance to many students to attend U. T. Permian Basin:

**American Association of University Women, Midland Chapter**
**American Association of University Women, Odessa Chapter**
**Data Processing Management Association**
**Mexican-American Scholarship Committee (MASC)**
**Permian Basin Advertising Federation**
**Permian Historical Society**
**State Society of CPA's, Local Chapter**

## Grants

The **Pell Grant Program** is the largest of the gift aid programs and provides the foundation for all needs-based assistance. Financial need is the single criterion used to determine eligibility, but students must also meet certain other stipulations to receive a Pell Grant. For example, students must be enrolled in an undergraduate degree program, but not have a baccalaureate degree.

Under-Graduate Studies

# Financial Aid

A Family Financial Statement is the form used to apply for a Pell Grant. The student will receive a report in the mail called a Pell Grant Student Aid Report as a part of the application process. All pages of that document are to be submitted to the University Financial Aid Office. The Student Aid Report is the document which authorizes payment.

Pell Grants are awarded in accordance with a student's enrollment status. Enrollment in 12 or more credit hours per semester yields a full-time award; enrollment in 9 - 11 hours produces approximately three-fourths of a full-time award; and enrollment in 6 - 8 credit hours calls for a half-time award. Awards are not available for less than half-time attendance, and the actual amount a student may receive depends upon the cost of attendance, student aid index, and enrollment status.

The **Supplemental Educational Opportunity Grant Program** is for students with exceptional financial need. It must be used first for students who also qualify for Pell Grants. Application is made by completing a Family Financial Statement. First consideration is given to full-time students. Awards may be up to $4000.00 per academic year. Only undergraduates are eligible for program participation.

The **Texas Public Educational Grant Program** is a state administered program for students which is needs-based. Application is made by completing a Family Financial Statement. Priority consideration is given to full-time undergraduate students, but graduate students are eligible also.

**Texas Public Education State Student Incentive Grant Program.** This is a federal/state supported program. The TPEG-SSIG applicant must be a U.S. citizen, a national or permanent resident and otherwise eligible to pay Texas resident tuition, be enrolled for a minimum of 6 credits, and exhibit need of not less than $200 for the academic year. Applicants must file the Family Financial Statement with the American College Testing Program for determining financial need. No grant in this program will exceed $2,000 on behalf of any student during one fiscal year. Undergraduates receive priority consideration.

## Loans

The **Stafford Loan Program** (formerly the Guaranteed Student Loan Program) is a needs-based loan program whose application begins with the completion of a Family Financial Statement. Eligibility for a Pell Grant must also be determined before a Stafford Loan can be certified.

Students participating in the Stafford Loan Program borrow through a private lender such as a bank, savings and loan, or credit union. The university encourages students to use their own lender, but because all financial institutions do not participate in the program, the Financial Aid Office will help students locate a lender if one cannot be found.

Under-Graduate Studies

# Financial Aid

Loan maximums for undergraduates are $4,000.00 **per year** in most instances. This maximum is determined by the need established through the application process. The aggregate **total** students may borrow is $17,500.00. Graduate students may have a total aggregate limit of $54,750, including any loans made at the undergraduate level and may borrow up to $7,500 per year depending upon need.

(For most students) Loan repayments begin either six months after a student graduates, leaves school or drops below half-time status. Those who borrowed several years ago and have a seven percent interest rate begin repayment twelve months after graduation, leaving school, or dropping below half-time status. Interest rates currently are not below eight percent, and may be over ten percent. Generally, a lender must allow a student at least five years to repay the loan and may allow up to ten years. These particulars are provided to students at the time the loan is made.

The important point to remember about a loan is that it must be repaid. If it is not, the Federal Government or the agency which guaranteed the loan can sue for collection, and a demand for immediate payment in full could result. Also, credit bureaus will be notified of the default, which could hurt future credit ratings, and the Internal Revenue Service could also withhold any income tax refund and apply it toward the loan. Any additional financial aid for which a student could qualify would also be jeopardized until the loan was repaid. Be serious about borrowing. Educational loans **MUST** be repaid in full.

In addition to **Stafford Loans, Plus** loans and **Supplemental Loans for Students** are also available. **Plus** loans are for parent borrowers who wish to borrow to help their children through school. Need is not a criteria, and parents may borrow up to $4,000. per year, to a total of $20,000, for each child. **Supplemental Loans for Students** are for independent undergraduate students who generally do not meet the needs requirements of regular Guaranteed Student Loans. **Plus** loans and **Supplemental Loans** do not automatically qualify for deferments, meaning that payment begins within sixty days after disbursement of the loan. Some lenders, however, will authorize a deferment period to full-time students. Details will be provided during the application process.

**Short-term Institutional Loans** are also available for students attending the university. These loans are for tuition and fees only and are repayable in installments within ninety days. Applications are available from the Office of Accounting.

## Employment

The **College Work-Study Program** provides on-campus employment opportunities for students to work as professional assistants, in the library, in student services, and in many other locations throughout the university. Because it is a needs-based program an application begins with a Family Financial Statement.

# Financial Aid

The number of hours per week is determined by a student's aid package, but students may not work over 19 hours per week. Pay is based on a sliding scale, but no one receives less than minimum wage. The program is open to undergraduates and graduates.

**Regular Student Employment** is sometimes available through individual departments. These part-time jobs are not related, and the employment department has considerable latitude in meeting personnel needs. Application is made at the department level, but students may not work over 19 hours per week.

Although state and national policy has established many objectives for student financial aid programs, one clear purpose is to fund only students who meet certain academic standards. Institutions are therefore required by law to formulate standards to gauge the progress of students receiving financial aid by applying both qualitative and quantitative measurements to academic work. A maximum time limit for the completion of a degree and a minimum grade point average (GPA) must be incorporated into institutional policies.

The time-frame established for the completion of a degree at The University of Texas of the Permian Basin is the equivalent of six full-time semesters for both graduate and undergraduate students. A student's entire attendance history must, by federal regulation, be taken into consideration when evaluating degree progress, whether or not aid has ever been received.

## Satisfactory Academic Progress

Students are considered to be making satisfactory academic progress for purposes of financial aid eligibility when at least the minimum standards established in the following schedules are met:

**Full-Time Undergraduate Students** (Enrolled in 12 or more credit hours) must complete at least the number of credit hours at the end of the semester indicated with the minimum GPA noted:

| | | | | | | |
|---|---|---|---|---|---|---|
| Semester | 1 | 2 | 3 | 4 | 5 | 6 |
| Hours | 8 | 16 | 27 | 38 | 49 | 60 |

GPA: A minimum 2.00 cummulative GPA is required. Only grades of "A" - "D" will satisfy the course-completion requirements.

**Three Quarter-Time Undergraduate Students** (Enrolled in 9 to 11 credit hours) must complete at least the number of credit hours at the end of the semester indicated with the minimum GPA noted:

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Semester | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Hours | 4 | 10 | 16 | 22 | 28 | 36 | 44 | 52 | 60 |

A minimum 2.00 cummulative GPA is required. Only grades of "A" - "D" will satisfy the course completion requirements.

Under-Graduate Studies

# Financial Aid

**One Half-Time Undergraduate Students** (Enrolled in 6 to 8 credit hours) must complete at least the number of credit hours at the end of the semester indicated with the minimum GPA noted:

| Semester | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hours | 4 | 8 | 13 | 18 | 23 | 28 | 33 | 38 | 43 | 48 | 54 | 60 |
| GPA | A minimum 2.00 cummulative GPA is required. Only grades of "A" -"D" will satisfy the course completion requirements. | | | | | | | | | | | |

**Full-Time Graduate Students** (Enrolled in 9 or more credit hours) must complete at least the number of credit hours at the end of the semester indicated with the minimum GPA noted:

| Semester | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Hours | 8 | 16 | 27 | 38 | 49 | 60 |
| GPA | A minimum 3.00 cummulative GPA is required. Only grades of "A" -"D" will satisfy the course completion requirements. | | | | | |

**One Half-Time Graduate Students** (Enrolled in 6 to 8 credit hours) must complete at least the number of credit hours at the end of the semester indicated with the minimum GPA noted:

| Semester | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hours | 4 | 8 | 13 | 18 | 23 | 28 | 33 | 38 | 43 | 48 | 54 | 60 |
| GPA | A minimum 3.00 cummulative GPA is required. Only grades of "A" -"D" will satisfy the course completion requirements. | | | | | | | | | | | |

## Policy Application - Financial Aid Probation and Suspension

Obviously, negative consequences are of no concern to a student as long as he or she progresses toward a degree objective within the policy guidelines. Failure to meet the minimum standards described above will result in sanctions ranging from being eligible for assistance to termination of any financial aid eligibility. Application of this policy will be as follows:

1. A student failing to meet the minimum standards for the first time will be eligible to receive financial aid for the following semester under a probationary condition provided the student can be expected to improve his or her academic performance to the level required by the appropriate schedule during the next semester of attendance.

2. A student failing to meet the minimum standards for the first time who cannot be expected to improve his or her academic performance to the minimal level required by the appropriate schedule during the following semester of attendance will be suspended from receiving any further financial aid.

3. A student placed on financial aid probation as noted in step 1, must bring his or her deficiencies up to the minimal requirements during the probationary semester to avoid being suspended from future financial aid.

Under-Graduate Studies

# Financial Aid

4. Attendance during summer session(s) will be evaluated in the same manner as attendance during a regular semester except enrollment in less than six credit hours during the entire summer enrollment period will not be counted as a semester for purposes of the six semesters of eligibility. Likewise, enrollment in any other semester in less than six credit hour will not be considered as a semester for these same purposes.

## Appeal Process

A student placed on financial aid suspension may appeal for removal from his or her suspension. In order for an appeal to be considered, a student must submit a written request to the director of financial aid for an appeal and include in the request an explanation and documentation of the reason(s) why the minimum academic standards required by this policy were not achieved. Appeals will be heard before a review board which shall have the authority to uphold or overturn the suspension. The review board shall have the authority to place conditions upon the receipt of any financial aid for those cases where aid is reinstated. The membership of the review board is composed of a divisional director and faculty member appointed by the Vice-President for Academic Affairs. The Dean of Admissions is a standing member and the director of financial aid is an ex-officio member of the board.

**Off-campus employment.** The Career Services Office operates a centralized referral agency for students desiring to obtain employment off campus. This office maintains a listing of available jobs and employers as a service to both the student and the employer. **G & U**

**Veterans Education Benefits.** The university participates in all aspects of the Veterans Administration programs available to returning veterans enrolling as students. A veterans advisor under the auspices of the Veterans Administration Program is available for individual consultation and assistance on the U. T. Permian Basin campus. The advisor is located in the Registrar's Office. **G & U**

**Texas Rehabilitation Assistance for Students.** The Texas Rehabilitation Commission (TRC) offers assistance for tuition and nonrefundable fees to students having certain disabling conditions provided their vocational objectives have been approved by a TRC counselor. Examples of such conditions are orthopedic deformities, emotional disorders, diabetes, epilepsy, heart conditions, and the like. Other services are also available to assist handicapped students in becoming employable. Application for such service should be made to:

Texas Rehabilitation Commission
701 East Seventh Street
Odessa, Texas 79761

Under-Graduate Studies

# Registration

Students are encouraged to visit with faculty advisors during the fall and spring semesters for degree and class schedule planning. At announced times, students will be permitted to advance register for courses in the subsequent term. Advisors in all disciplines are available during registration. The Office of Admissions will assist students to identify and contact their faculty advisor. Dates of late registration can be found in the class schedule. Students may not register for conventionally taught, partially self-paced or contract study courses after those dates. Students must be offically enrolled at U. T. Permian Basin in the semester in which they graduate. Students may not register as ENCORE students for contract study, self-paced courses, thesis, research or practicum.

International students must meet additional requirements dependent upon the type of visa they hold and other factors. Therefore, international students should contact the Office of Admissions for further information.

ENCORE

Persons who do not desire to pursue a degree or course credit may enroll in one or more regular courses at the university without declaring a major and a degree goal. These students may enroll as ENCORE students which allows them to attend the classes and participate in the discussion, studio and laboratory work. There is no requirement to complete work outside the classroom or sit for exams. Upon completion of the course, the student will receive a grade of NG (no grade). Credit eamed in this program does not count toward a degree and does not carry the university's sanction as transfer credit. The student must notify the Registrar by the last day of registration of his intent to enroll as an ENCORE student.

Regular students enrolled in the university also wanting to select one or more courses in this program may do so but they should understand that the course will not transfer nor count toward a degree. The degree and credit regulations stated above also apply to students matriculated in a degree program.

Students applying for this program are not required to meet all admission requirements. For further information about ENCORE, contact the Admissions Office.

Continuous Registration (Self-Paced Coursework)

A number of courses are offered on a self-paced instruction basis. With permission of the instructor and the Division Director, students may enroll in a self-paced course any time up to four weeks prior to the last day of classes during the regular semester. During the summer an equivalent date will be determined for the summer term. Please refer to the calendar in the class schedule for specific dates.

Registration for self-paced instruction courses alone does not involve a late registration fee, unless it is the student's initial registration for that particular semester. Students must finish the self-paced course within the given semester

# Registration

or reregister for the same course in a subsequent semester. At the end of each semester, a grade is assigned. If work for a self-paced course has not been completed but satisfactory progress is underway, the student usually is assigned a grade of **Z**. The student must reregister for the course the next time it is offered to earn a letter grade and credit in the course. The initial **Z** grade will remain on the record.

## Concurrent Enrollment

Students who wish to enroll concurrently at U. T. Permian Basin while attending another institution should apply for special admission if they have not completed necessary lower division courses. U. T. Permian Basin normally limits concurrent enrollment to community colleges. Students desiring credit for concurrent enrollment at another four-year or upper level institution must have the prior express permission in writing from the appropriate Division Director before enrollment.

When a student registers at more than one public institution of higher education at the same time, charges shall be determined in the following manner:

Tuition credit is available if four hours or less are being taken at U. T. Permian Basin while concurrently enrolled at an area community college. The student **must** first register at the area college and bring a receipt to U. T. Permian Basin. U. T. Permian Basin's tuition charge will be the difference between the student's total tuition at each of the institutions, but never less than the hourly rate at U. T. Permian Basin.

## In *Absentia* Registration

A candidate for a degree who has completed all the courses and other requirements for graduation and who must register in the university for the purpose of having a degree conferred, must register *in absentia*. This is the only purpose for which a student may register *in absentia*. After registration for credit during a semester or summer session, a student wishing to change to *in absentia* status must have the request approved by the student's academic Division Director and processed through the add/drop procedure. All fees, less the *in absentia* fee will be refunded if the change is made during the first 12 class days. After the 12th class day, no refunds will be made and no additional charge will be assessed for the *in absentia* fee. The university ID card and original paid fee receipt must be returned before a refund can be issued. No refund is made for the cancellation of an *in absentia* registration.

If the student requests a change from *in absentia* status to regular registration for courses, *in absentia* fees paid will apply toward the tuition due.

## Class Hours & Extension Classes

The class day begins at 8 a.m. and ends at 9:45 p.m. Unlike some universities in which courses offered after 5 p.m. are provided through an extension division, U. T. Permian Basin offers courses in the late afternoon and evening as part of the regular offerings. Students enrolling in these courses register in the same manner as students who are taking only daytime courses. Full-time students may have both day and evening classes.

Under-Graduate Studies

# PASS Center

The Office for Programs Assisting Student Study (PASS) is a multiple resources center for students. This office has the flexibility to help the older returning student as well as the traditional student.

**Orientation.** New students are encouraged to attend orientation prior to their first semester. At orientation students will be made more familiar with a variety of services available to students. A short tour of the campus is included.

**Child Care.** The university has made arrangements with a private child care facility. U. T. Permian Basin will subsidize one-half of the cost for child care. Interested students must contact the PASS office in order to qualify if they do not sign up at registration. Hours for which students qualify is dependent on the number of hours in which they are enrolled.

**Carpool Matching.** Names, phone numbers, and class schedules of students who are interested in car pooling will be kept in the PASS Office. Students may sign up for this service at registration or by visiting or calling the PASS Office at any time during office hours.

**Tutor Referral Service.** The PASS Office will obtain a list of students who are interested and capable of tutoring. Information on these students will be available for students desiring tutoring. Some tutors may be available free of charge to tutees. Otherwise, scheduling tutorial sessions and arranging fees should be negotiated by the tutor and the tutee. Students who are interested may sign up for this service at registration or by visiting the PASS Office. Students interested in tutoring will be required to have appropriate recommendations sent to the PASS Office.

**Study Guides and Remedial Books.** Several study guides for reading, writing, mathematics and study skills are available at the PASS Office. Remedial books are also provided to assist students in brushing up on past course work or to improve understanding of new material.

**Testing Room.** The PASS Office provides a quiet room in which students may take tests which are not administered in the classroom. This room serves students who are taking self-paced courses, correspondence courses, or make-up exams. Students need to make arrangements in advance by calling the PASS Office.

**Standardized Test Preparation.** Study guides are available in the form of handouts, books, and/or tapes to better prepare students for the GMAT or the GRE, and LSAT.

Under-Graduate Studies

# PASS Center

**Personal Computers.** Personal computers are available for use by students in the PASS Office. Word processing, filing, and computational software are provided and must be checked out. It is recommended that students make appointments for use of the personal computers. Any required storage diskettes must be provided and maintained by the student.

**Mini-seminars.** The PASS Office holds mini-seminars that will assist students in a variety of ways. Such seminar topics might include test anxiety, time management, interviewing techniques, assertiveness, etc. Because topics vary and are influenced by student requests, students are encouraged to submit their suggestions to the PASS Office.

**Career Library.** Various books and magazines are available for students to use in surveying career options and adjusting to changing careers. These also include sources of resume writing and interviewing hints.

Under-Graduate Studies

# Degree Requirements

Minimum university requirements for the baccalaureate degree are specified by the faculty and range from a minimum of 120 to 140 semester credits. At least 54 semester credits (57 in the Division of Business Administration) must be at the junior and senior level to fulfill the requirements of the degree program. The student must have a **C** average (GPA 2.00) or better and no **F** grades in any credits required for the degree. Any **D** grades in any credits earned at U. T. Permian Basin and presented for the degree must be offset with an appropriate number of **B** or **A** credits. **There may be differences between the acceptance of credit for admission purposes and the applicability of credit for degree purposes. All students in degree programs must consult with their advisor or Division Director to determine course applicability toward their degree.**

A student must make a grade of **C** or better in all courses in the major. Courses in which a **D** was made must be repeated and at least a **C** obtained.

Engineering majors must earn a **C** or better in engineering courses as well as support courses in related areas (science and mathematics) in order to receive credit.

A minimum of 30 credits must be completed at U. T. Permian Basin of which at least 6 of the minimum must be advanced credits in the student's major field. Of the last 30 credits earned toward a degree, at least 24 must be completed at U. T. Permian Basin. See "Credit for courses taken elsewhere."

Students may obtain a degree according to the course requirements of the catalog in force at the time of admission to the university (so long as the courses required for the degree are still offered by the university) or of the course requirements of a later catalog in force during the period of enrollment. This option shall be available for a six year period dating from the time of the initial admission of the student to the university. If a student drops out for one or more semesters and returns to U. T. Permian Basin as a former student he or she may choose to use the catalog in force at the time of re-entrance, thereby beginning a new six year time limit. This regulation applies to degree requirements, but not to operating regulations, procedures, and fees.

**University General Education Requirements**

For the next two years, the present Divisional General Education requirements will be continued.

U. T. Permian Basin has adopted new General Education requirements for all students in all undergraduate major programs. These are a requirement for all students entering college September, 1991, and for all students who transfer to U. T. Permian Basin on and after September, 1993.

Under-Graduate Studies

# Degree Requirements

| | | |
|---|---|---|
| 1. | Composition/Written communication: | 6 sch |
| 2. | Crosscultural Studies:<br>(3 sch of a foreign language beyond the first year can be used to satisfy this requirement. Other specific courses will be identified by the faculty and published prior to September, 1991. | 3 sch |
| 3. | History: | 6 sch |
| 4. | Literature: | 3 sch |
| 5. | Philosophy or Literature: | 3 sch |
| 6. | Mathematics:<br>(college algebra or above, excluding any statistics courses) | 6 sch |
| 7. | Physical and Life Sciences:<br>(a one-year sequence, with lab) | 8 sch |
| 8. | Political Science: | 6 sch |
| 9. | Visual and Performing Arts: | 3 sch |
| 10. | Oral Communication: | 3 sch |
| 11. | Students will take an additional 9 sch distributed among three of the following areas:<br>Health and Wellness (exclusive of activity courses)<br>Environmental Science<br>Non-Western Studies<br>Social Science (psychology, sociology, economics, anthropology)<br>Capstone (a university-wide 6-sch capstone course may count as two of the three areas; a division-specific capstone requirement will count as one.) | |

**Total sch required: 56**

NOTE: A list of specific courses that may meet the requirements listed above will be published by September 1, 1991.

**In absentia registration.** A candidate for a degree who has completed all the courses and other requirements for graduation and who must register in the university for the purpose of having a degree conferred, must register in absentia. This is the only purpose for which a student may register in absentia. See "**Registration**" for additional information concerning in absentia registration.

**Government & history.** Texas law requires that all students who receive a bachelor's degree from U. T. Permian Basin must earn 6 semester credits in American government, including federal and Texas constitutions, and 6 semester credits of American history (3 semester credits in the history of Texas may be substituted for 3 of the American history credits). These usually are completed at the lower division; however, these requirements may be completed at U. T. Permian Basin.

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# Degree Requirements

**Writing and conversation.** Every student pursuing a bachelor's degree should be able to write the English language and to hold a conversation with another person in English.

**Lifetime sports.** Every student is encouraged to enroll in lifetime sports. A maximum of two credits may be applied as electives toward requirements for a bachelor's degree.

**Summary of University Requirements for Bachelor's Degree.** To meet the requirements for graduation, the student must:

Summary Requirements For Bachelor's Degree

1. Complete the total number of semester credit hours established for the chosen degree program. The minimum number is 120 semester credits with 54 at the upper level (57 in some programs).
2. Have earned all transfer credits at a regionally accredited college or university.
3. Complete 6 credits in American government (including Texas constitution) and 6 credits in American history.
4. Demonstrate proficiency in writing the English language in their coursework.
5. Demonstrate proficiency in conversation in English in their coursework.
6. Maintain at least a **C** average in all courses applicable toward degree.
7. Obtain a grade of **C** or better in all courses in the major field of study.
8. Complete at least 24 credits in the major (more in most curricula), at least 18 of which must be upper level; at least six credits in the major must be taken at U. T. Permian Basin. Of the last 30 credits earned toward the degree, at least 24 must be in residence.
9. Complete a minor of at least 18 credits, 12 of which must be upper level, in one field or closely related fields (distributed minor). A minor will be granted only if it is offered by U. T. Permian Basin. The following programs do not require completion of a minor:

   (a) Bachelor of Business Administration
   Accountancy & Information Systems
   Finance
   Land Management
   Management
   Marketing

# Degree Requirements

(b) Bachelor of Arts
Humanities
Art (the 49 art-credit program only)
(c) Bachelor of Science
Control Engineering
(d) Second bachelor's degree
(e) Double majors

10. Initiate a degree check with the Records Office during the first 12 class days of the semester of expected graduation.

## Graduation With Honors

Latin Honors are awarded to recipients of first baccalaureate degrees who have completed a minimum of 54 semester credit hours at U. T. Permian Basin. Latin Honors will be awarded based upon the following GPA scale:

| | |
|---|---|
| 3.50 - 3.79 | Cum Laude |
| 3.80 - 3.89 | Magna Cum Laude |
| 3.90 - 4.00 | Summa Cum Laude |

# Centers For Learning Resources

Under-Graduate Studies

The Centers for Learning Resources provide tools and services to the faculty, staff and students to facilitate learning and research. The Centers operate through three individual components: library services, instructional media services and computer services. These components operate as follows:

1. **Library Services.** The library services component contains a collection of more than 500,000 volumes of books, microform and periodicals. The library subscribes to approximately 1,200 periodicals and newspapers and maintains a collection of video tapes, audio cassettes, motion pictures, records, simulations, kits and even complete self-paced courses. The library services component acts as the distribution center for all learning materials and maintains listening and viewing carrels as well as television receivers for video tapes and many other learning innovations.

   In addition, the library has a special collections room which contains items relating to the history of the Permian Basin, a sizeable collection of materials by and about J. Frank Dobie, manuscripts of major Texas writers, a Texana collection which supports in-depth research in Texas history and culture, a Spanish language collection, and the university archives.

2. **Instructional Media Services.** To enhance teaching and learning, instructional media services provides a wide array of teaching technology, such as audio and video recording services, video cassette distribution, production of audio and video tapes and film loops, and graphic art work.

3. **Computer Services.** The Computer Services Division provides computer support to the university community through the operation of several on-site systems. Local facilities provide direct access to personal computers and the in-house mainframe. Access is also provided to several remote systems via The Higher Education Network (THE-Net). This network provides access to several large computing facilities. Computer facilities are available for use by faculty, staff and students to support course work, research and records management. Computer Services staff members are available to assist users in solving data processing problems.

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# Career Services

The U. T. Permian Basin Career Services Office serves as a liaison between students seeking employment and prospective employers. Services available include job listings, placement files, on-campus interviews, and resources pertaining to job hunting skills. Placement files contain a student's resume, transcripts, letters of recommendation, and other pertinent information requested by the student.

Career services are available to all students and alumni. Students desiring to utilize this service should contact the Career Services Office two semesters prior to graduating.

The Career Services Office is located in the PASS Office.

Under-Graduate Studies

# Student Life

Student life includes the programs and events which complement learning experiences and which provide diverse opportunities for students to grow academically, professionally and personally. Student life services are related specifically to the varied student population at U. T. Permian Basin. The programs and events address themselves to a broad range of interests and personal needs of the student body. To this end, the student life staff seeks student ideas and help in planning and staging campus events, programs and services. Admission to student life events is not based on race, income, age, sex, handicap, ethnicity or social barriers.

**Student Senate.** The Student Senate of U. T. Permian Basin is the legislative body representing the interests and needs of the student body. The Student Senate is recognized by the administration of U. T. Permian Basin and by the Board of Regents of the U. T. System as the elected governing body for students at U. T. Permian Basin. The Student Senate recommends allocation of the Student Services Fee and makes recommendations to the administration on policies that affect the student body.

The president, vice-president, secretary and treasurer of the Student Senate are elected by the student body each spring to serve for the subsequent academic year. Senators representing the academic divisions are elected at the end of September to serve through August. Candidate registration forms are available at registration or by contacting the Student Senate Office.

**Program Board.** The Program Board is responsible for identifying, budgeting and developing cultural, social and recreational programs for the student body. The Board is composed of a member of each functioning club and organization.

The Program Board Director will be elected each May by the Program Board from its membership and will serve during the subsequent long term of the academic year.

**Clubs & Organizations.** Students are encouraged to develop an organization that unites students for a common cause or interest. U. T. Permian Basin has approximately 25 clubs and organizations registered that represent academic disciplines, special interests and political party affiliation. These organizations allow students to pursue specialized interests and to have an opportunity to interact with classmates and professors in an atmosphere different from that of the classroom.

The Student Life Office is responsible for the registration of clubs and organizations. Also, the Student Life Office publishes a handbook for the development of clubs and organizations.

Under-Graduate Studies

# Student Life

**Solicitations.** No solicitations may be made without the prior approval of the Chief Business Officer. Exceptions include collection of membership dues by faculty, staff or student organizations and approved fund-raising performed by registered student organizations.

**Publications.** The dissemination of news and information of student interest and the publication of literary and artistic student work is supported by Student Life.

*The Sandstorm* is an annual magazine-yearbook publication. *The Sandstorm* is a collection of poems, short stories and essays submitted by students and selected by a panel for publication. The magazine also prints photographs of student art that includes painting, sculpture, pottery and photography.

*The Sandstorm* is a student publication with its editor and staff selected from the student body each September. Applications for editor are received from returning students and incoming transfer students with publication experience.

*The Mesa Journal* is the student newspaper for U. T. Permian Basin. It is a bi-monthly newspaper which publishes news and information regarding the university and its students. *The Mesa Journal* provides an opportunity for students to gain newspaper journalism experience while attending the university. It serves the university as an academic tool through the Mass Communications discipline and as an information service to the students.

The editor and staff for *The Mesa Journal* are selected from the student body. The newspaper staff receives professional advice from the faculty of Mass Communications. The Journal receives financial support from the Student Services Fee and through advertising revenue.

**The Gymnasium/Pool Complex.** This complex is a three story building designed for recreational use by students, faculty and staff and their families. Dependent family members of students may use the Gymnasium/Pool complex for a nominal fee.

The Gymnasium/Pool Complex consists of four racquetball courts, two volleyball and badminton courts, a tennis court and two basketball courts. The complex has an exercise room equipped with weights, dance bars, floor exercise mats and a full wall mirror. The complex includes a 50 meter swimming pool.

In addition, there are two outdoor tennis courts, five outdoor racquetball courts, an athletic field and a 1.8 mile fitness trail.

**Housing.** The university offers apartment-style living in mobile home units for single students and for married students and their families. Students have the option of an efficiency or a one bedroom apartment. Two bedroom apartments

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are also available. Each unit is fully furnished and has central heating and air conditioning. The university's modular housing units are arranged around a centrally located laundry facility and clubroom. The housing area is within easy walking distance of the university. Rental rates are reasonable and include the cost of electricity, water, sewer, garbage collection, maintenance and police security. While generally available on a first-come, first-serve basis, preference is given to students who live outside a reasonable commuting distance. Additional information and housing applications are available through the Student Housing Office.

**Hazing.** The 70th Texas Legislature enacted a law concerning hazing which became effective on September 1, 1987. Under the law, individuals or organizations engaging in hazing could be subject to fines and charged with a criminal offense.

According to the law, a person can commit a hazing offense not only by engaging in a hazing activity, but also by soliciting, directing, encouraging, aiding or attempting to aid another in hazing; by intentionally, knowingly or recklessly allowing hazing to occur; or by failing to report in writing to the Dean of Admission and Student Life first hand knowledge that a hazing incident is planned or has occurred. The fact that a person consented to or acquiesced in a hazing activity is not a defense to prosecution for hazing under this law. In an effort to encourage reporting of hazing incidents, the law grants immunity from civil or criminal liability to any persons who report a specific hazing event to the Dean of Admission and Student Life; and immunizes that person from participation in any judicial proceeding resulting from that report. The penalty for failure to report is a fine of up to $1,000.00, up to 180 days in jail, or both. Penalties for other hazing offenses vary according to the severity of the injury which results and range from $500.00 to $10,000.00 in fines and up to two years confinement.

The law defines hazing as any intentional, knowing, or reckless act, occurring on or off the campus of an educational institution, by one person alone or acting with others, directed against a student, that endangers the mental or physical health or safety of a student for the purpose of pledging, being initiated into, affiliating with, holding office in, or maintaining membership in any organization whose members are or include students at an educational institution. Hazing includes but is not limited to:

A. any type of physical brutality, such as whipping, beating, striking, branding, electronic shocking, placing of a harmful substance on the body, or similar activity;

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B. any type of physical activity, such as sleep deprivaton, exposure to the elements, confinement in a small space, calisthenics, or other activity that subjects the student to an unreasonable risk of harm or that adversely affects the mental or physical health or safety of the student;

C. any activity involving consumption of food, liquid, alcoholic beverage, liquor, drug, or other substance which subjects the student to an unreasonable risk of harm or which adversely affects the mental or physical health of the student;

D. any activity that intimidates or threatens the student with ostracism, that subjects the student to extreme mental stress, shame, or humiliation, or that adversely affects the mental health or dignity of the student or discourages the student from entering or remaining registered in an educational institution, or that may reasonably be expected to cause a student to leave the organization or the institution rather than submit to acts described in this subsection;

E. any activity that induces, causes, or requires the student to perform a duty or task which involves a violation of the Penal Code.

**Student Insurance.** Students needing health insurance may obtain information from the Student Life Office.

**AIDS/HIV Policy.** Students who test positive for Human Immunodeficiency Virus (HIV) or who have been diagnosed as having Acquired Immune Deficiency Syndrome (AIDS) will not be discriminated against. This information will remain confidential throughout the university, but may be released if so required by law or with the student's written permission. Further information concerning the AIDS/HIV policy is contained in the Student Handbook. Brochures pertaining to HIV and AIDS are available in the Student Life Office.

**Conduct.** The university considers all students to be adult; therefore, their behavior is subject to all expectations of The University of Texas Regents, U. T. Permian Basin rules and regulations as well as local, state and federal laws. The university reserves the right to restrict the enrollment of any student for disciplinary or academic reasons.

**Disciplinary Procedures.** According to the Regent's Rules, the Dean of Admissions and Student Life has the authority to take interim disciplinary action when the continuing presence of the student poses a danger to persons or property or an ongoing threat of disrupting any authorized university activity.

The Dean may summon the student for the purpose of discussing the allegations by mailing, to the address appearing in the registrar's records, a written request for the student to appear at a certain place and time at least three

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weekdays after the date of the letter. If the Dean finds that the allegations of misconduct are not unfounded, the Dean shall notify the student of the allegations and proceed with a hearing. If a student fails to appear without a valid reason, the Dean may implement hearing procedures in the absence of the student or may bar or cancel the student's enrollment until the student appears or responds to the summons.

If the accused student does not dispute the facts upon which the charges are based and executes a written waiver of the hearing procedures, the Dean shall assess an appropriate penalty and inform the student of such in writing. The student may appeal the penalty.

If the student does dispute the facts on which the charges are based, such charges shall be heard and determined by a fair and impartial person, hereinafter called the Hearing Officer. Except in cases where immediate interim disciplinary action has been taken, the accused student shall be given at least ten days notice of the date, time, and place for such hearing and the name of the Hearing Officer. The notice shall include a written statement of the charge(s) and a summary statement of the supporting evidence. The notice shall be delivered in person or mailed to the student at the address appearing in the registrar's records. Hearings held following the interim disciplinary action will be held as soon as possible within ten days after the interim disciplinary action has been taken.

Each party shall provide the other party a list of witnesses, a brief summary of the testimony to be given by each, and a copy of documents to be introduced at the hearing at least three days prior to the hearing. Each party shall have the right to appear and present evidence in person or through a designated representative or counsel of choice. Each party, or his or her designated representative or counsel, shall have the right to cross-examine witnesses. The hearing will be recorded. If either party desires to appeal the finding, the record shall be transcribed and both parties will be furnished a copy of the transcript. The accused student may challenge the impartiality of the Hearing Officer up to three days prior to the hearing. The Hearing Officer shall be the sole judge of whether he or she can serve with fairness and objectivity. The Hearing Officer shall render and send to both parties a written decision which shall contain findings of facts and conclusions as to the guilt or innocence of the accused student and shall assess one of the penalties listed below.

The following penalties may be assessed by the Dean or the Hearing Officer.

- -Disciplinary probation.
- -Withholding of grades, official transcript and/or degree.
- -Bar against readmission.
- -Restitution or reimbursement for damage to or misappropriation of institutional or System property.

# Student Life

-Suspension of rights and privileges, including participation in athletic or extracurricular activities.
-Failing grade for an examination or assignment or for a course and/or cancellation of all or any portion of prior course credit.
-Denial of degree.
-Suspension from the institution for a specified period of time.
-Expulsion (permanent separation from the institution).
-Revocation of degree and withdrawal of diploma.
-Other penalty as deemed appropriate under the circumstances.

The minimum penalty for illegal use, possession, and/or sale of a drug or narcotic on campus shall be suspension from the institution for a specified period of time and/or suspension of rights and privilieges.

Further information regarding the university's rules on conduct and due process procedures is provided in the Student Handbook.

**Intoxicating Beverage.** The use of intoxicating beverages is prohibited in classroom buildings, laboratories, auditoriums, library buildings, museums, faculty and administrative offices, intercollegiate and intramural athletic facilities, and all other public campus areas. However, with the prior consent of the chief administrative officer, the foregoing provisions of this Subsection may be waived with respect to any specific event which is sponsored by the institution. In any case, state law will be strictly enforced at all times on all property controlled by the System and its component institutions.

**Drug/Narcotic.** Any student who is guilty of the illegal use, possession and/or sale of a drug or narcotic on the campus of U. T. Permian Basin or any other U. T. System component institution is subject to discipline. If a student is found guilty of the illegal use, possession, and/or sale of a drug or narcotic on campus, the minimum penalty shall be suspension from the institution for a specified period of time and/or suspension of rights and privileges.

**Solicitation.** No individual, organization, group, association, or corporation may use the grounds, buildings, or facilities owned or controlled by any component institution or by the System except as permitted by the provisions of the Regents' Rules and Regulations and approved institutional rules and regulations.

The term "solicitation" as used herein means the sale or offer for sale of any property or service, whether for immediate or future delivery; the distribution of material that is designed to encourage the purchase or rental of any property, product, or service; the oral or written appeal or request to support or join an organization other than a registered student, faculty, or staff organization; the receipt of or request for any gift or contribution; and the request that a vote be cast for or against a candidate, issue, or proposition appearing on the ballot at any election held pursuant to state or federal law.

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# Auxiliary Services

**Bookstore.** Textbooks and academic supplies may be purchased on campus at the university Bookstore. Costs of such items will depend on the courses selected.

The university Bookstore will purchase used textbooks from students which are in good condition provided that such textbooks continue to be used by the various departments. Buy back periods are limited to the final week of fall and spring semesters, and the last day of finals for summer sessions.

Cards, gifts and sundry items also are available for purchase.

**Food Service.** The university operates a snack bar food service off the main lounge on the ground floor of the classroom building. Normally, the service is available whenever classes are in session during the day and evening. The service is not available on weekends nor during vacation periods.

**Psychological Services.** Psychological services are available to students free of charge through the Center for Behavioral Analysis. Students who have personal problems are encouraged to use the services of the Center.

**Directory Information.** All educational records of students at The University of Texas of the Permian Basin are maintained in accordance with State and Federal laws. A student's consent to release directory information is presumed, unless a written request to restrict the information as confidential is made by the student in the Registrar's Office on a prescribed form no earlier than the first day of registration and no later than the 12th class day in a semester or the 4th class day in a summer term. This consent or restriction remains in effect for the duration of the semester or summer term and must be refiléd each subsequent semester or term that the student wishes to restrict the information. In those cases where a student files a request for restriction of information, such information is treated as confidential, and, in response to public inquiries. The university will verify only whether an individual is currently enrolled.

For more specific information concerning the disclosure, review, release, and confidentiality of student records under the Family Educational Rights and Privacy Act of 1974, 20 U.S.C. Section 1232g, consult the Office of the Registrar.

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# Tuition, Fees And Deposits

## Tuition

All tuition is subject to change by the Legislature without prior notice.

Resident (in-state) . . . . . $ 20.00 per semester credit hour
Nonresident (out-of-state) . . . . . $128.00 per semester credit hour
Foreign Student (international) . . . . . $128.00 per semester credit hour

* Note: All tuition charges are subject to change following the Coordinating Board's calculation of the average cost of education per Education Code Sec. 54.0511.

**Exceptions**

1. Nonresident or foreign students who are recipients of a competitive academic scholarship in the amount of $200 or more awarded for the academic year or the summer term by U. T. Permian Basin may pay the in-state tuition rate.

2. Nonresident students who hold appointments as graduate teaching assistants or graduate research assistants may pay the in-state tuition rate provided they are employed half time or more in positions which relate to their degree programs.

3. The Texas Veterans Exception (Hazlewood Act) Section 54.203 Texas Education Code, provides an exemption from tuition and some fees. A Texas veteran may qualify for this exemption provided he/she:
   a. Was a Texas resident at the time he/she entered the service and is currently considered a Texas resident for tuition assessment.
   b. Had active military duty (for purposes other than training) for more than 180 days beginning after February, 1955, or served on active duty for any period of time between December 7, 1941 and January 31, 1955.
   c. Is honorably discharged from active service; and
   d. Has exhausted veterans educational benefits under federal legislation.

   Some types of discharges are excluded from eligibility. Application forms and instructions are available at the Admissions Office.

**Texas Residency for Tuition.** Students claiming residency by virtue of parental dependency must provide sufficient documentation to support the residency claim of the parent. Residency is determined by state statutes and in accordance with the guidelines promulgated by the Texas Higher Education Coordinating Board. The Registrar determines all residency classifications. To appeal the decision of the Registrar in residency matters, students may present their case to the Dean of Students. If students wish to appeal that decision, they may address the President of the university whose decision is final.

# Tuition, Fees And Deposits

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**Refund of Tuition and Fees for Students Withdrawing from the University or Reducing Courseload.** Upon completing a withdrawal form or a course drop form and submitting it to the Registrar, the percent of tuition refund will be determined. Refund amounts are based on the total number of hours in which a student was originally enrolled and the total number of hours, if any, remaining on the student's schedule at the end of the refund period. Students who drop one or more courses during the 100% refund period, and who then withdraw before the end of the withdrawal refund period, will receive a refund amount based on the total number of hours in which they were originally enrolled and the percentage of refund authorized on the day of withdrawal. The rate of refund is as follows:

| | |
|---|---|
| 1. prior to first class day from which a $15 matriculation fee shall be assessed | 100% |
| 2. during the first 5 class days | 80% |
| 3. during the second 5 class days | 70% |
| 4. during the third 5 class days | 50% |
| 5. during the fourth 5 class days | 25% |
| 6. after the fourth 5 class days | NONE |

These rates of refund are prorated over the shorter terms of the summer.

All policies regarding the payment or refunding of tuition, fees and charges are approved by the Board of Regents of The University of Texas System and comply with applicable state statutes. If a person desires clarification of any matter relating to payment or refund of such charges, or believes special circumstances warrant exceptions to the published policy, the Registrar should be contacted.

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

a) Bar against readmission at the institution;

b) Withholding of grades, degree and official transcript; and

c) All penalties and actions authorized by law.

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# Tuition, Fees And Deposits

## Fees & Deposits

Students are not entitled to enter a class or laboratory until their fees and deposits have been paid. Payment may be made by personal check for the exact amount due, provided the bank transit number is encoded thereon in compliance with revised Federal Reserve Bank regulations. Checks for larger amounts, the difference to be paid in cash to the student, cannot be accepted. In paying fees by check, students should exercise care. A bad check, whether given by mistake or otherwise, unless the admitted error of the bank concerned, is likely to delay actual payment and thus result in a penalty for late registration. Fees may be paid and books purchased by charging on VISA, Mastercard and Discovery accounts.

All fees are subject to change by the Legislature or Board of Regents without notice.

**Property Deposit.** A ten dollar property deposit shall be collected from each student. The deposit shall be returned on the withdrawal or graduation of the student who so requests, less any loss, damage, or breakage caused by the student. Any deposit which remains without call for a refund for a period of four years from last attendance shall be forfeited.

**Student services fee.** The Student Services Fee is compulsory for all students. The amount charged is $7.50 per semester credit hour for 1-11 credits. Students registered for 12 credits or more are charged a maximum of $90. Students who register for the summer session are charged on the same basis as students registered during the regular academic year. The fee provides funding for extra-curricular activities and events designed to augment student life at U. T. Permian Basin and reservation privileges to the Gymnasium/Pool Complex.

Part-time students desiring the same privileges and additional benefits may pay the full Student Services Fee. Students registered in absentia are not eligible to participate in student services and programs unless the regular fees are paid. The Student Handbook publishes the available programs, activities and services that the fee provides. This handbook is available at registration or from the Office of Student Life.

Refund of the Student Services Fee to students withdrawing is made on the same basis as refund of the registration and tuition fees.

**Add/Drop Fee.** A student adding or dropping a course or courses will be assessed a $5 per transaction fee.

**Computer use fee.** Any student using the university computer services will be assessed a $20 non-refundable fee each semester.

# Tuition, Fees And Deposits

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**General fees.** An assessment for a general fee is made on the basis of $6 per semester credit hour to all students registered for resident credit. Refund of general fees to students withdrawing is made on the same basis as refund of the registration and tuition fees.

**Geology field course fee.** A $650 fee will be charged for the regularly scheduled summer geology field course.

**Library fee.** A fee of twenty-five cents (.25) an hour will be charged for over-due reserve books and one dollar ($1) per day on over-due materials obtained through the inter-library loan services. Fees for use of inter-library loan services will be $1.50 for computer charge plus handling costs. The charge for lost books will be the actual replacement cost.

**Parking permit fees.** Students will register their cars in a single payment for the entire school year or the balance of the school year in which they register, whichever is applicable. The school year is September 1 through August 31. The following fees will be charged: passenger vehicles and trucks: $10.00 per year; $7.50 January 1 through August 31; $5.00 June 1 through August 31. Two-wheel vehicles (motorcycles, motorscooters, motorbikes): $5.00 per year; $3.00 January 1 through August 31; $1.00 June 1 through August 31. *Contigent on Board of Regents approval this rate may be increased.

The replacement fee is $3.00. Temporary (monthly) permits may be issued for $1 or any portion of a month in excess of 14 calendar days.

**Laboratory fees.** For each laboratory course a fee is charged in an amount to cover, in general, the cost of laboratory materials and supplies used by a student; however, such charge per student shall be not less than $2 nor more than $8 for each laboratory course in any one semester or summer term. The course schedule will indicate the amount of the laboratory fee for each course.

**Student Teaching Fee.** Students enrolled in Student Teaching are assessed a fee of $50 to defray the costs of providing cooperating teacher for supervision of student teachers.

**Teacher Certification Credentials Fee.** A $10 fee will be charged to cover costs of evaluating student credentials for state teacher certification.

**Supplementary fees for selected courses.** Students taking selected courses (e.g., studio art, lifetime sports, physical education, or applied music) may be required to pay supplementary fees each semester.
Supplementary fees, in the case of students withdrawing or dropping a course, are refunded according to the schedule provided for refunding of registration

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# Tuition, Fees And Deposits

and tuition fees. Exception: A student who officially drops a course with a supplementary fee and at the same time officially adds another such course will receive a refund of the full supplementary fee paid on the course dropped and will pay the corresponding fee required for the course added.

**Special charge for late registration.** Any student who, with proper permission, registers after the scheduled registration in that semester, will be required to pay a special charge of $5.

**Bad checks.** A service charge of $10 will be assessed for each returned check.

**Graduation fee.** A graduation fee of $12 is charged to graduating students at the beginning of the semester they plan to graduate. Students should notify the PASS Office and the Registrar as soon as they know they will not be graduating in the semester for which they applied. The graduation fee is a non-refundable fee. If the student cancels the graduation application after the 12th class day of the semester (or equivalent date during shorter terms) the fee must be paid again the subsequent term when reapplying for graduation. If the student fails to complete any and all degree requirements by the end of the term in which graduation was planned, the fee must be paid again upon reapplication in a subsequent semester.

**In Absentia fee.** The fee for *in absentia* registration is $25.00. The fee is assessed to those students who need to register in the university for the purpose of having a degree conferred, but not for courses. No refund is made for the cancellation of an *in absentia* registration. For more information regarding the *in absentia* fee, see "Undergraduate and Graduate Degree Requirements."

**Transcript service charge.** There is a transcript charge of $3 for each university transcript ordered.

Sec. 54.007(b) Education Code

**Payment of tuition and fees.** Section 54.007 of the Texas Education Code authorizes the Board of Regents of The University of Texas System to provide for the payment of tuition and fees during the fall and spring semesters through the following alternatives:

1: Full payment of tuition and fees in advance of the beginning of the semester; or

2: One-half payment of tuition and fees in advance of the beginning of the semester, one-quarter payment prior to the start of the sixth class week, and the final one-quarter payment before the beginning of the eleventh class week.

# Tuition, Fees And Deposits

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There will be a $12 incidental fee assessed if this option is used and a $10 late fee plus 10 percent interest per annum on the unpaid balance for a payment not made before the start of the eighth class week.

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

a) Bar against readmission at the institution;
b) Withholding of grades, degree and official transcript; and
c) All penalties and actions authorized by law.

**Student identification card replacement fee.** All students who need a replacement student identification card will be charged a $3 service fee as approved by The University of Texas System Board of Regents. This is not a purchase fee. The student I.D. card is the property of U. T. Permian Basin and return may be required upon the student's withdrawal from the university, when it has been put to fraudulent use, or at other times determined appropriate by administrative officers of the university.

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# Academic Regulations

The Director of Admissions determines a student's eligibility for admission to U. T. Permian Basin. After admission to U. T. Permian Basin, the student is assigned a faculty advisor who will assist in curriculum planning, as well as other matters related to the degree to be earned. The Office of Admissions has forms to effect a change of major if students desire to do so. Faculty advisors are assigned by the Office of Admissions.

The advisor in the discipline in which a student expects to study evaluates all previous coursework. A determination is made as to which of these courses apply toward the degree to be earned and the student is advised accordingly. Any questions about courses and degrees should be addressed to the advisor or Division Director.

Students are encouraged to visit their faculty advisors and instructors whenever the need arises. Instructors have posted office hours and students may make appointments if they wish. The student is responsible for insuring that each course to be applied toward a degree program has the prior approval of the faculty advisor.

## Dropping & Adding Courses

Dropping courses should not be confused with withdrawing from all courses. In courses taught on a conventional basis, a student may drop the course any time up to the last day of classes before the scheduled final examination period. A course may be dropped without permission during the first 10 class days (4 class days in summer). Students must obtain the signature of the instructor whose course they are dropping if they drop the course between the 10th class day (4th class day in summer) and the last day to drop classes as given on the academic calendar. No credit will be awarded if the course is dropped.

Once a student has registered and paid tuition and fees for a course section, he/she is considered enrolled in that class until the class is officially dropped by the student at the Registrar's Office. **This must be a written request signed by the student. Neither faculty, relatives nor friends may drop or add courses for a student. Add/drop forms must be completed at the Registrar's Office prior to the end of the last class day. Failure to drop a class, even if not attended, will result in a failing grade on the academic record.** When dropping a course after the end of the 10th week (4th week in 6 week and 7th week in 11 week summer terms) a performance indicator (Pass/Fail) will be assigned with the drop grade. A "drop failing" grade will calculate in the Grade Point Average as an **F**. To determine the last day to drop with or without pass-fail indicators, see "University Calendar." For refund dates, see "Refund Policy."

Courses taught on a conventional basis may not be added after the 10th day of classes. Students enrolling late in a course should not expect special make-up assistance from the instructor. Partially self-paced courses are administered on the same basis as regular courses. The registration, drop-add, withdrawal, course completion and grading are administered as all other regular classes.

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# Academic Regulations

In the case of courses taught on a self-paced instruction (SPI) basis, students are encouraged to enroll during the semester registration time. However, courses taught on a SPI basis may be added up to four weeks prior to the end of the fall or spring semesters. An equivalent date will be established for the summer term as announced in the summer class schedule. After the late registration period, these courses may be added only with the permission of the instructor and the Division Director in which the course is taught. Students not completing an SPI course by the end of the semester must reregister and pay all applicable fees to continue the course in the next semester in which it is offered. Students may drop an SPI course at any time up to the last day of classes prior to the scheduled final examination week by completing the necessary forms. All regulations regarding grading and dropping or withdrawing from regular courses also apply to SPI courses.

## Withdrawing From The University

Withdrawing from the university should not be confused with dropping a course(s) while remaining enrolled in others. Students desiring to drop every course in which they are enrolled are considered withdrawals. Students should secure a withdrawal petition from the Registrar's Office, complete it and obtain the signature of the Business Office, the library and the Financial Aid Office. In cases of illness, students may have someone notify the Registrar who will arrange for withdrawal.

A completed withdrawal form must be submitted to the Registrar's Office prior to the final exam period. Failure to do so, even if no classes have been attended, may result in failing grades on the academic record. Withdrawals become effective the date the completed and signed form is received from the student by the Registrar's Office. When withdrawing from all courses after the end of the 10th week (4th week in 6 week and 7th week in 11 week summer term) a performance indicator (Pass/Fail) will be assigned with the withdrawal grade. A "withdraw failing" grade will calculate in the Grade Point Average as an **F**. To determine the last day to withdraw with or without pass-fail indicators, see "University Calendar." For refund dates, see "Refund Policy."

Students who have withdrawn from the university need not apply for readmission unless they have been absent from the university for more than 2 semesters. See "Admissions."

## Credit By Examination

A portion of the lower division requirements may be completed through the College Level Examination Program (CLEP) offered by the Educational Testing Service of Princeton, NJ. CLEP exams may be taken at several junior colleges, senior colleges and universities in the state, but not at U. T. Permian Basin. Students wishing to complete a portion of the lower division requirements through CLEP must enroll in a college that offers them and sit for them there. If credits for CLEP examinations appear on the transcript of the college where students were enrolled, U. T. Permian Basin will accept credits earned through CLEP on the same basis as any other credits transferred from another institution.

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# Academic Regulations

U. T. Permian Basin does not award college credit for study through the United States Armed Forces Institute, noncredit military studies and non-accredited institutions; however, if an accredited college or university has awarded credit for such study, U. T. Permian Basin will accept those credits on the same basis as coursework completed at that institution.

**Second Bachelor's Degree**

An individual who already holds a bachelor's degree must complete a minimum of 30 additional credits to receive a second bachelor's degree and, in the process, meet all requirements for the second degree. No minor is required for a second bachelor's degree. A student desiring to complete two bachelor's degrees concurrently must complete all requirements of each degree program including a minimum of 30 credits more than required in one of the degree programs. In some instances, a student lacking lower level courses which U. T. Permian Basin does not offer, will be required to complete these deficiencies at one of the area community colleges, in addition to the 30 or more credits which must be completed at U. T. Permian Basin.

**Double Major**

Students electing to major in 2 fields must meet the specified requirements for each major and no one course can be counted in the semester hours credit in more than one major. In certain cases this may require completion of additional coursework. In addition, each major division must certify that the student has satisfied all major, as well as division requirements. No minor is required when completing two majors. Only one major and one degree will be shown on the diploma and only one diploma will be issued. Both majors will appear on the transcript.

**Correspondence Credits**

Up to 15 semester credits of correspondence study normally will be accepted from accredited colleges or universities if appropriate to the curriculum. Only by petition to the Division Director and on written approval of such a petition by the Director may additional credits be considered for evaluation and acceptance.

**Class Schedules**

Classes taught on a conventional basis usually meet 1 to 3 times per week. Courses taught on a self-paced basis may or may not meet formally.

**Class Attendance**

It is assumed that by the time students enroll at the university they are able to organize their time according to the demands of their studies. Class attendance is not required in most cases, but students are encouraged to attend classes regularly. In some courses, class participation constitutes a part of the student's grade. It is the responsibility of the student to determine whether class attendance is required in each course and to see that all of the course requirements are met. In this regard, veterans and international students are encouraged to check with the Admissions Office and the Registrar's Office for specific regulations governing their class attendance.

# Academic Regulations

## Course Load

Each semester credit hour at U. T. Permian Basin represents a commitment on an average of three hours of "out of class" preparation and one hour of class attendance (or its equivalent) per week. For example, enrolling in a three-hour class commits the student to a total of twelve hours of work per week. Students who are employed or who have family responsibilities are especially encouraged to bear this commitment in mind and to seek guidance from their advisors in determining a suitable academic schedule.

For undergraduate students without substantial family or work responsibilities, the normal course load during the regular semester is 15 semester credits. Students making satisfactory academic progress may take 18 credits without permission of the Division Director; more than this requires permission of the Division Director. Only in rare cases will students be permitted to enroll for more than 21 credits in a semester and then only with the written approval of their Division Director.

Maximum class loads during the summer sessions will be noted in the summer class schedule.

The foregoing applies to conventionally taught courses. In courses offered on a self-paced instruction basis, additional credits may be taken, particularly when courses are involved for which a portion of the work has already been completed at the time of registration. This is subject to approval by the student's faculty advisor and the Division Director.

All international students must enroll as full-time students during the fall and spring semesters (12 hours minimum for undergraduates and 9 hours minimum for graduates). The student is not required to enroll in any courses during the summer terms. The international student may not drop or withdraw from courses at any time if such action would result in less than a full-time course load in the fall and spring semesters.

## Religious Holy Days

U. T. Permian Basin shall allow a student who is absent from classes for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence if, not later than the 15th day after the first day of the semester, the student notified the instructor of each class the student has scheduled on that date that the student would be absent for a religious holy day. The notification referred to above shall be in writing and shall be delivered by the student personally to the instructor of each class, with receipt of the notification acknowledged and dated by the instructor or by certified mail, return receipt requested, addressed to the instructor of each class. A student who is excused under this policy may not be penalized for the absence, but the instructor may appropriately respond if the student fails to satisfactorily complete the assignment or examination.

Under-Graduate Studies

# Academic Regulations

## Satisfactory Scholastic Progress

Students are considered to be making satisfactory scholastic progress when they are carrying an approved schedule of classes, are not on probation, are not failing a course, and have a grade point average (GPA) of at least 2.0 or **C** in both the current semester and in their overall average to date. Students receiving financial aid should refer to "satisfactory academic progress" in the Financial Aid section of the catalogue for information specific to academic progress requirements for financial aid students.

## Grading

Grades at U. T. Permian Basin distinguish between levels of student achievement. They represent, in abbreviated form, the instructor's judgment of the student's academic progress. In addition, they provide a basis for certifying completion of all degree requirements. They may serve as predictors of future performance in graduate and professional study.

Under-Graduate Studies

# Grading Policies

The grades approved for use at U. T. Permian Basin are as follows:

A = Superior achievement
B = High achievement
C = Average achievement
D = Minimal achievement
F = Failure to achieve minimal standard
\+ = High grade
\- = Low grade
S = Satisfactory
U = Unsatisfactory
I = Incomplete
Z = Acceptable progress: (SPI)
PR = Work in Progress (masters thesis/project)
W = Dropped class or withdrawal from university
WP = Dropped class passing or withdrawal from university passing
WF = Dropped class failing or withdrawal from university failing
NG = No grade (ENCORE)

Only grades of **A, B, C, D, U, WF and F** are included in computing grade point average (GPA): **A** = 4; **B** = 3; **C** =2; **D** = 1; **F** = 0. Pluses and minuses are awarded at the instructor's discretion but are not computed in GPA. The grades of **I, W, WP, S, Z, PR and NG** are not computed in GPA. The grades of **U,** and **WF** are all calculated as an **F** grade.

Grades of **Q, QP, and QF** were used to denote courses dropped, dropped/passing, and dropped/failing from 1973 through Summer semester 1985. The grades of **Q and QP** were not computed in the GPA. The grade of **QF** calculated as an **F** grade.

A grade of **I** or **Z** is reported when students have not met all requirements of a course by the end of the semester and the instructor considers the allowance of additional time to complete course requirements justified. When reporting an **I** grade, the instructor must complete an 'Incomplete Report' specifying: (1) the deficiency or the additional work to be done, (2) the length of time allowed to complete the work (no later than the last class day of the subsequent semester, summer excluded), and (3) the grade that would have been earned at the time the course ended. If the **I** grade is not removed, the **I** becomes a permanent **I** unless the instructor has indicated a grade that had been earned at the end of the course in which case the **I** grade automatically is converted to that grade. Students who register for a class and then fail to attend any class meetings or take any test, and who neither withdraw nor formally drop the course, will be assigned the grade of **F**.

Any course dropped after the **10th day** of the student's enrollment in the course requires the instructor's signature on the drop form. A grade of **W** will be assigned for the final grade in courses dropped after the 12th class day (4th class day in the summer).

Under-Graduate Studies

# Grading Policies

Beginning with the 11th week of classes, or its equivalent during the summer terms, (as announced in the summer class schedule) the student will be permitted to drop or withdraw from classes but a performance indicator will be assigned as part of the grade. These are:

**WP** = Dropped or withdrew passing
**WF** = Dropped or withdrew failing

The grade of **WP** does not enter into the calculation of GPA. The grade of **WF** will enter into the calculation of GPA as a failing grade. Not the grade, but the effect of the grade can be removed by repeating the course. This applies to **F, WF,** or any other low grade. The **F or WF** will remain permanently on the record. Under this policy, only the most recent grade will count on the GPA, not the highest of two or more grades in the same course.

In self-paced instruction courses (SPI) in which a student makes satisfactory progress, but does not complete all requirements by the end of the semester in which first registered, the instructor may report a **Z** grade. Students desiring to complete the course must reregister in the semester when the course is next offered and complete all remaining requirements for the course during the semester. The grade of **F** may be awarded for unsatisfactory progress in self-paced courses.

While the **Z** grade carries no penalty, a high number may reflect poor schedule management. **Z** grades remain part of the permanent student record.

The grades of **S** and **U** are final grades used for student teaching, certain seminars, courses for demonstration of proficiency in writing and conversation, certain nondegree courses, and in a limited number of other courses which, upon petition, may be approved by the Division Director; otherwise, normal grading procedures apply.

## Grade Reports

The student grade report is a record of all coursework for the semester taken at U. T. Permian Basin. Grade reports are mailed, or grades may be picked up at the Registrar's Office approximately two weeks after the close of the fall and spring semesters and the second summer term.

## Dean's Honor Roll

## President's Honor Roll

Each semester students who have exhibited outstanding academic achievement will be honored. Students who have a semester grade point average of 3.50 to 3.99 will be listed on the Dean's Honor Roll. Those students who have achieved a semester grade point average of 4.00 will be included on the President's Honor Roll. This honor will be publicized and noted on the student's academic record.

In addition to the grade point average requirement, candidates for the Dean's Honor Roll and the President's Honor Roll must meet the following criteria:

1. They must be seeking a first bachelor's degree only.

Under-Graduate Studies

# Grading Policies

2. They must have earned a minimum of 12 semester hours at U.T. Permian Basin.

The last 12 hours of work for part-time students is the basis for calculating this GPA. If the last 12 hours must include a previous semester load only partially, then that entire semester's courses will be used in the calculation.

Repeat Policy

All courses taken at U. T. Permian Basin, whether passed or failed, remain a permanent part of the student's record. If a course is repeated, the last grade earned, not necessarily the highest grade, will be the grade used to compute the cumulative grade point average (GPA) for all purposes. Repeated courses will be counted only once for credit.

Academic Progress, Probation & Dismissal

Students with 12 or more hours of credit and a cumulative grade point average (GPA) of less than 2.0 and/or the equivalent of one semester of full-time enrollment with a resulting semester GPA below 2.0 (**C**) will be placed on academic probation. In cases of extenuating circumstances, students may appeal their probation to the Division Director.

Students on academic probation will have 2 semesters or 12 credits (whichever occurs first) to raise their GPA to 2.0. A full summer session will be treated as a regular semester. Failure to raise the GPA to 2.0 after 2 semesters on academic probation will result in dismissal from the university. In cases of extenuating circumstances, students may appeal their dismissal to the Division Director.

The first academic dismissal is for one semester not including summer sessions. A second academic dismissal is for 12 months. A third academic dismissal is for 36 months. To be readmitted after a dismissal, students must address a letter to the appropriate Division Director presenting evidence that they are likely to succeed in an academic program. Readmission must be approved by the Director. Students readmitted after dismissal will be on academic probation for the initial semester.

The grades **S, Z, I, PR, W, WP** and **NG** will not be included in the determination of probation but students should avoid accumulating grades of **I, Z** or **W**, as they become a permanent part of the grade report.

Students admitted to the university on a conditional basis are considered to be on academic probation until they have successfully completed at least 12 credit hours with a GPA of 2.00 or better. After this, the student will be removed from probation. Students not obtaining a GPA of 2.00 or better, after 12 semester credits attempted, will be dismissed from the university under the same restriction as other academic dismissals.

Under-Graduate Studies

# Grading Policies

## Student Academic Appeal Procedures

The intent of the faculty and administration at U. T. Permian Basin is to ensure that every student receives fair treatment in the academic process.

In attempting to resolve any student grievance regarding grades or evaluations, it is the obligation of the student first to make a serious effort to resolve the matter with the faculty member with whom the grievance originated. Individual faculty members retain primary responsibility for assigning grades and evaluations. The faculty member's judgement is final unless compelling evidence shows discrimination, differential treatment, or factual mistake. If evidence warrants appeal, the student may pursue the matter further by directing a letter to the Division Director. The letter should state the problem, state why the student concludes fair treatment was not received and provide a description of any evidence that would substantiate their claim. The President's Office shall constitute the final step in the appeal process.

Under-Graduate Studies

# Teaching Emphasis

Self-Paced Instruction (SPI)

Self-paced instruction (SPI) is designed to permit students to complete courses as rapidly as they are capable, or to take more time if needed to master them. SPI usually requires no formal class meetings, although in many courses the instructor meets once a week with a group of students desiring additional help. Most student-instructor contact in SPI is on an individual basis. Students enrolled in an SPI course are expected to interact with the professor either individually or in a group situation, at least once each week or as often as a given course requires.

Self-paced courses are offered in many fields or degree programs. Students in SPI courses are provided with a course outline including instructions for study, activities to complete, sources of information and other necessary instructions. Students may visit the instructor as often as needed to discuss and clarify questions. When students believe they have mastered a unit within a SPI course, they may take the appropriate test. If students pass at the prescribed level, they proceed to the next unit. In some courses, if students do not pass the unit, they may restudy it until they pass the test. Each unit must be passed in sequential order, so when all units and tests are successfully completed, students should have mastered the course material.

Since students may not need to attend class in SPI courses, they may begin such courses at any time up to four weeks prior to the end of the semester. Established deadlines for adding or dropping courses refer to courses taught only on a conventional basis and not to courses taught on an SPI basis. SPI courses may not be dropped during final examination week. Although students have the option of continuing an SPI course into a succeeding semester, they are encouraged to complete it during the same semester for which they register. Students not completing the course may receive a grade of Z (satisfactory work in progress) and must reregister during a subsequent semester when the course is offered and pay tuition for the course if completion is desired.

Contract Study

Several types of independent study are available at U. T. Permian Basin. These are referred to as contract study since, before students can register for the course, plans for the study showing the objectives, procedures to be used, means of evaluation, and other plans must be written and approved by the appropriate instructor, and by the Division Director.

Contract study includes what other institutions may call independent study, readings, special problems, library research and certain other learning activities. Contract studies are not intended to substitute, by content, for courses listed in the catalog. Enrollment in these courses must be completed only during the registration period or only through the 10th class day.

Under-Graduate Studies

# Teaching Emphasis

## Experiential Learning

Unless they have had appropriate work experience, candidates for the bachelor's degree are encouraged to complete a planned program of experiential learning. Experiential learning, referred to in various divisions as "Authentic Involvement" or "Practicum," normally occurs during the senior year, usually in the final semester, and provides students an opportunity to apply their academic learning in a work situation under the supervision of a faculty member and the direction of a supervisor in the work situation. Experiential learning requires a preplanned and written program of the experiences for the student and a procedure for evaluating these experiences. Typically, students enroll in experiential learning for 2-3 credits, which requires 5-10 hours of work per week for one semester or the equivalent.

# Bachelor's Degree Program

Under-Graduate Studies

The degree programs are administered by the five academic components of the university as outlined below. Special degree requirements for the programs as designated by the division are given and these apply to all degrees offered by that division.

Please note on page 33 the new General Education requirements for the university that go into effect in 1993.

Under-Graduate Studies

# Divisional Requirements

Behavioral Science & Kinesiology

**Division of Behavioral Science & Kinesiology**
Dr. James N. Olson, Director

| | |
|---|---|
| **BA** | **Anthropology** |
| **BA** | **Criminology** |
| **BA** | **Kinesiology** |
| **BA** | **Political Science** |
| **BA** | **Psychology** |
| **BA** | **Sociology** |

The goal of the Division is to provide each student with an educational program best suited to the interests, abilities and professional goals of the individual. Students work closely with faculty advisors to develop individualized plans of study which include the core courses necessary to meet basic requirements of the respective disciplines. The programs of the Division are reviewed regularly and modified to keep them current with developments in the respective fields.

In addition to the general university requirements for the Bachelor of Arts degree listed in the academic policy section of this catalog, students must complete the division's degree requirements.

A minimum of 120 semester credit hours is required for these degrees of which at least 54 must be at the upper level. A minimum of 30 semester credits of coursework is required in each major field (36 credits in Psychology and 36 in Kinesiology) of which at least 18-24 credits, depending on the major, must be at the upper level. No single course may be counted in more than one major.

A minor consisting of a minimum of 18 semester credits is required except as noted for teacher certification. Students seeking secondary teaching certification must complete a minimum of 24 credits in each of two teaching fields, one of which will serve as a minor.

**Following is a list of required and recommended courses for students who plan to transfer to the university and pursue the Bachelor of Arts degree in the Division of Behavioral Science and Kinesiology.**

Under-Graduate Studies

# Divisional Requirements

| Subject | (Semester Credits) Required | Recommended |
|---|---|---|
| English Composition | 6 | 6 |
| Literature[2] | 6 | 6 |
| Government, American and State[1,2] | 6 | 6 |
| History, American[1,2] | 6 | 6 |
| College Algebra or higher math | 3 | 6 |
| Science (with lab) | 6-8 | 12 |
| Speech | 3 | 3 |
| Fine Arts | - | 3 |
| Foreign Language | - | 6 |
| Psychology | - | 3 |
| Sociology or Anthropology | - | 3 |
| Philosophy | - | 3 |
| Economics | - | 3 |

[1]Required by state statute.
[2]May be taken at either lower level or at U. T. Permian Basin.

If some lower level requirements have not been completed upon transfer to U. T. Permian Basin, the student may complete those courses at an area community college. Occasionally, upper level courses may be substituted with courses offered at U. T. Permian Basin.

These requirements will be replaced by new University General Education requirements, September 1, 1993.

Under-Graduate Studies

# Divisional Requirements

Business Administration

**Division of Business Administration**
Dr. Corbett F. Gaulden, Jr., Director

| | |
|---|---|
| **BBA** | **Accountancy & Information Systems** |
| **BA** | **Economics** |
| **BBA** | **Finance** |
| **BBA** | **Land Management** |
| **BBA** | **Management** |
| **BBA** | **Marketing** |

Degree Requirements

A minimum of 123 semester credit hours is required for the BBA in Finance, Management, Marketing, and 126 semester credit hours in Accountancy & Information Systems. The BBA in Land Management requires a minimum of 125 semester credit hours. The Bachelor of Arts in Economics requires a minimum of 120 credit hours. All degree programs in this Division require that at least 57 of the total degree credits must be upper level course work except the BA in Economics, which requires that at least 54 of the total credit hours must be upper level course work.

Grade Policy

The Division of Business has adopted a Grade Policy which includes the following:

1. Transfer grades of "D" or better are accepted for admission and degree credit in non-business lower division courses when accepted by the Office of Admissions.
2. The Division of Business requires a grade of "C" or better in lower division courses which are business related and/or serve as prerequisites to the business core. These courses currently include Accounting, Business Law, Computer Programming, Economics, Introduction to Statistics, and Mathematical Analysis.
3. Students in the Division of Business must achieve a minimum cumulative grade point average of 2.0 on all business core and business elective courses to meet degree requirements.
4. Students in the Division of Business must receive a minimum cumulative grade point average of "C" or better in all Major Courses. This includes major area electives and any courses substituted into the major area program but does not include general business or free electives.

Lower Division Preparation

**Lower Division or Community College Preparation**

The transfer curricula for public junior colleges in Texas established by the Texas Higher Education Coordinating Board, will be accepted in its entirety and applied toward appropriate degrees.

# Divisional Requirements

Under-Graduate Studies

**Lower level plans of study for degrees in Accounting, Economics, Finance, Land Management, Management and Marketing should include:**

| Subject | Semester Hours |
|---|---|
| **Expected** | |
| Accounting[3,4] | 6 |
| Business Law[2,3,4] | 3 |
| Computer Programming[2,3] | 3 |
| Economics[3] | 6 |
| English Composition or Composition and Rhetoric | 6 |
| Introduction to Statistics[2,3] | 3 |
| Kinesiology[2] | 2 |
| Laboratory Science[2] | 4 |
| Literature[2] | 3 |
| Mathematical Analysis[3,5] | 6 |
| Political Science, Federal and State[1,2] | 6 |
| Psychology | 3 |
| Sociology | 3 |
| Speech[2] | 3 |
| U.S. History (one may be Texas History)[1,2] | 6 |

[1]Required by state statute.
[2]May be taken at the lower level or at U. T. Permian Basin.
[3]A grade of **D** will not apply toward degree.
[4]Is not a prerequisite for the BA in Economics.
[5]A six-nine hour Calculus sequence may substitute for these courses in a BA in Economics.

NOTE: Expected courses are those courses normally required for the bachelor's degree that should be completed prior to entrance into U. T. Permian Basin. Applicants with variant preparation are encouraged to coordinate with the Division Director. Applicants who hold sufficient hours for entrance but who lack some of these courses may complete most of the above required courses at U. T. Permian Basin.

Students who have completed accounting courses other than two courses in principles of accounting at a community college may receive credit for those courses toward the Accountancy and Information Systems major at U. T. Permian Basin only after satisfactory performance on the final examination which U. T. Permian Basin students would have taken for the course in question.

The Division of Business Administration does not offer courses by correspondence. A student may apply appropriate correspondence credit earned from a regionally or state accredited college or university toward a bachelor's degree subject to the following limitations:

Under-Graduate Studies

# Divisional Requirements

1. No upper level business core courses may be taken by correspondence.
2. A correspondence course may not be taken on a pass-fail basis, and no grade lower than a C will be accepted for correspondence credit.
3. A correspondence course cannot be used for graduation when completed during the student's final semester or summer term.

Upper Level Requirements

**Upper Level Requirements**

All candidates for BBA degrees must complete a basic business administration core of 30 credits. Students working on the BA degree should consult respective sections on Economics. The basic business administration core provides students with a common body of knowledge in business administration. Students' programs include instruction dealing with the following areas:

1. Concepts, processes and institutions in marketing and distribution, production and financing functions of business enterprise.
2. Economic and legal environment of business enterprises along with consideration and financing functions of business enterprise.
3. Concepts and methods of accounting, quantitative methods and information systems.
4. Organization theory, interpersonal relationships, control and motivation systems and communications.
5. Administrative processes under conditions of uncertainty including integrating analysis and policy determination at the overall management level.
6. The business administration core consists of the following courses: ACCT 300 and 333; DSCI 302; ECON 300/400 elective course; FIN 320; MNGT 310, 311, 340 and 366; and MRKT 300.

# Divisional Requirements

Under-Graduate Studies



**Division of Education**
Dr. G. Peter Ienatsch, Director

**Teacher Certification** ..... **Elementary education**
**Teacher Certification** ..... **Secondary education**
**Teacher Certification** ..... **All-level**

Students enrolled in teacher education will receive their bachelor's degree in one of the arts, humanities or sciences fields, while completing Texas Education Agency requirements for certification to teach. Elementary education students complete a major in their chosen discipline as well as a minor in an academic area. Most students preparing for secondary teacher certification must complete coursework in two teaching fields, one of which serves as a minor.

The teacher education program under the 1987 Standards for the Teaching Profession includes provisional certification for classroom teaching in the following subject areas:

**Elementary** (Option II, Grades one-eight)

Art
Biology
Computer Information Systems
Earth Science (Geology)
English
Government
History
Mathematics
Kinesiology
Spanish

**Secondary** (Option II, Grades six-twelve except as indicated)

Art (Option I only, Grades six-twelve)
Biology
Chemistry
Computer Information Systems
Earth Science (Geology)
Economics
English
Government
History
Journalism
Mathematics (Option I and II, Grades six-twelve)
Kinesiology
Psychology
Sociology
Spanish

**All-Level** (Options I and II, Grades one-twelve)

Art (Option I)
Kinesiology (Option II)

Under-Graduate Studies

# Divisional Requirements

U. T. Permian Basin students will be offered every opportunity to be as fully prepared for teaching as students who take a bachelor's degree in education at other universities, but their degrees will be awarded in a field of teaching interest. Thus, one preparing to teach mathematics in high school would receive the BS in Mathematics, plus complete all coursework required for a second teaching field and a secondary level teaching certificate.

During their first semester, students must make application for admission to teacher education. The following documentation must be presented in support of the application:

1. Document Junior status at U. T. Permian Basin
2. Obtain signed Degree Plan from faculty advisor
3. Submit approved Teacher Certification Plan
4. Perform satisfactorily on the Texas Academic Skills Program (TASP). No more than six hours of professional education courses may be taken until students pass all three sections of the TASP.

This documentation must be submitted to the Teacher Education Office. The date of admission will be determined by satisfactory completion of the TASP.

State Board of Education rules require an individual seeking a certificate to be free of felony or misdemeanor convictions for any crime directly related to the duties and responsibilities of the teaching profession. Any student with a conviction must contact the Certification Officer or Division Head.

To qualify for student teaching, U. T. Permian Basin students must have an overall grade point average (GPA) of 2.50 and a GPA of 2.75 for both course work in their teaching fields and education course work that has been completed at U. T. Permian Basin. Students not meeting these requirements may be admitted to student teaching on a conditional basis with the approval of both advisors (Academic and Education) and the Teacher Education Council. The GPA levels must be achieved, however, before certification will be recommended.

In each teacher certification program, it will be required that certain courses must be completed prior to student teaching. This means that students in elementary education, for example, must have all but six hours of their academic major completed as well as Psych 341 and The Methods Sequence, Educ 420, 421, 422, 423, 424 and 425. Psych 341 should be taken before Educ 424 and 425. Educ 424 and 425 should be taken the semester immediately before the student teaching semester. Educ 420, 421, 422 and 423 will be "blocked" with student teaching. The first six weeks of the semester the student will take Educ 420, 421, 422 and 423. During the last ten weeks the student will student teach.

Under-Graduate Studies

# Divisional Requirements

For Secondary Education, all but six hours must be completed in each of the two required teaching fields prior to student teaching. Psych 342 should be completed prior to enrollment in the methods sequence of Educ 430 and the two 431 courses. The methods sequence must be completed the semester prior to the student teaching semester.

For all-level certification, all but six hours must be completed in the teaching field prior to student teaching. In addition, Psych 342 and 342 should be taken before Educ courses 420, 430 and the two Educ 431 courses. The latter four courses must be completed the semester prior to student teaching.

All students will be required to attend a seminar during the student teaching semester.

Under-Graduate Studies

# Divisional Requirements

Humanities & Fine Arts

**Humanities & Fine Arts**
Pamela J. Price, MFA, Acting Director

| | |
|---|---|
| **BA** | **Art** |
| **BA** | **English** |
| **BA** | **History** |
| **BA** | **Humanities** |
| **BA** | **Mass Communications (Journalism & Radio-Television)** |
| **BA** | **Music** |
| **BA** | **Spanish** |
| **BA** | **Speech** |

The goal of the Division is to provide each student with an educational program best suited to the interests, abilities and professional goals of the individual. Students work closely with faculty advisors to develop plans of study which include the core courses necessary to meet basic requirements of the respective disciplines. The programs of the Division are reviewed regularly and modified to keep them current with developments in the respective fields.

Degree Requirements

The Bachelor of Arts degree in the Division of the Humanities and Fine Arts requires a minimum of 120 semester credits.

A minor consisting of a minimum of 18 semester credits is required except as noted. A minor is not required for a BA degree in Humanities and in the 49-credit program in Art.

For example, except for majors in Spanish, the study of a foreign language is not required for the Bachelor of Arts degree although it is recommended for most majors. Because of special interest or career plans, some students would be well advised to complete four semesters of one foreign language prior to enrolling at U. T. Permian Basin.

# Divisional Requirements

Under-Graduate Studies

**Following is a list of required and recommended courses for students who plan to transfer to the university and pursue the Bachelor of Arts degree in the Division of Humanities and Fine Arts.**

| Subject | (Semester Credits) Required | Recommended |
|---|---|---|
| English Composition | 6 | 6 |
| Literature[2] | 6 | 6 |
| Government, American and State[1,2] | 6 | 6 |
| History, American[1,2] | 6 | 6 |
| Mathematics(College Algebra or above) | 3 | 6 |
| Science | 6 | 12 |
| Fine Arts | - | 3 |
| Foreign Language | - | 6 |
| Psychology | - | 3 |
| Sociology or Anthropology | - | 3 |
| Speech | - | 3 |
| Philosophy | - | 3 |
| Economics | - | 3 |

[1]Required by state statute.
[2]May be taken at either lower level or at U. T. Permian Basin.

The student must achieve a 2.0 average for courses offered to satisfy these lower lever requirements.

If some lower level requirements have not been completed before transfer to U. T. Permian Basin, the student may complete those courses at an area community college. Occasionally, upper level courses may be substituted by electing them at U. T. Permian Basin.

Under-Graduate Studies

# Divisional Requirements

Science & Engineering

**Division of Science and Engineering**
Dr. Douglas F. Hale, Director

| | |
|---|---|
| **BS** | **Chemistry** |
| **BS** | **Computer Science** |
| **BS** | **Control Engineering** |
| **BS** | **Earth Sciences** |
| **BS** | **Geology** |
| **BS** | **Life Science** |
| **BS** | **Mathematics** |

The goal of the Division is to provide each student with an educational program best suited to the interests, abilities and professional goals of the individual. Each degree program has been carefully designed to offer opportunities for the development of competencies necessary for successful pursuit of the individual's career goals. Students work closely with faculty advisors to develop individualized plans of study, which will include the core courses necessary to meet basic requirements of the respective disciplines. The programs of the Division are reviewed regularly and modified to keep them current with developments in the respective fields.

To realize its goal, the Division makes available a wide variety of learning activities. Among these are small group instruction, case studies, seminars, experiential activities, off campus field trips, field study courses, self initiated research, integrated laboratory activities, and contract or independent study. While not all these options are available in every discipline, degree plans will generally include some of these varied activities, resulting in a program which is interesting and which offers opportunities to build professional competence.

Degree Requirements

In addition to general university requirements for the Bachelor of Science degree specified in the academic policy section of this catalog, students must complete the degree requirements listed under the respective degree programs. All of the programs require a minimum of 54 semester credit hours of upper level course work and some degree plans will include more. Some programs and/or degree plans will require more than the minimum university requirement of 120 semester credit hours.

Students who seek teaching certification are subject to further requirements. For secondary certification, a second field of at least 24 semester credit hours must be completed, the specific content of which should be worked out with the appropriate discipline. This second teaching field serves as the minor. Faculty in the Division of Education should be consulted for specific course and testing requirements for certification.

Prospective students are encouraged to contact U. T. Permian Basin faculty members in the appropriate discipline for assistance in planning lower level programs or for more specific information about upper level work. At least 18

# Divisional Requirements

Under-Graduate Studies

semester credit hours in the major and 12 in the minor must be completed at the upper level, though some disciplines may require more.

**Lower Division or Community College Preparation**

Lower Level Preparation

The appropriate transfer curricula for public junior colleges in Texas established by the Texas Higher Education Coordinating Board will be accepted in their entirety and applied to appropriate degree programs. The student should note, however, that most programs in the Division require more mathematics and basic science than are usually listed in those transfer curricula.

Certain courses in some U. T. Permian Basin degree programs require preparatory courses which are not included in the transfer curricula. For specific requirements and prerequisites, the applicant should meet with a faculty member in his or her prospective discipline. Lower level preparation for most programs in the Division will include 60 to 66 semester credit hours of work.

General Education Core Curriculum

All students enrolling in a Science and Engineering degree program for the first time during or after the Fall, 1993 term will complete the university general education core curriculum. Degree programs in Science and Engineering for students enrolling for the first time during or after the Fall, 1991 term have in common the following requirements:

1) Differential and integral calculus of a single variable should be elected (6 hours, lower level).

2) A one year sequence of laboratory science outside the major discipline should be elected (8 hours, lower level).

3) A high level, structured programming language such as FORTRAN 90, Ada, or Pascal should be elected (3 hours, lower level or U.T. Permian Basin).

5) A course in the history and philosophy of science should be elected (3 hours, SCEN 411 or SCEN 412, U.T. Permian Basin).

4) A course in environmental science should be elected (3 hours, SCEN 401, U.T. Permian Basin).

The total number of semester credit hours in the degree plan must be at least 120, of which at least 54 semester credit hours must be upper level. No more than 45 semester credit hours in any one discipline may be applied to the 120 hour total.

All degree programs have additional or more specific requirements. These are listed in the appropriate section of the catalog.

Under-Graduate Studies

# Accountancy And Information Systems

Bachelor Of Business Administration

Administered by the Division of Business Administration. Please refer to that section for general degree requirements.

Accounting is a discipline involving quantitative and qualitative information essential to the decision-making functions required in every type of organization. Information systems courses deal with techniques of processing, analyzing and utilizing financial and other data for decision making; the emphasis is on effective application and utilization of computers.

The major in Accountancy and Information Systems is intended to prepare students for careers in public, managerial, governmental, and social accounting. Individuals who have earned their BBA degree with a major in Accountancy and Information Systems are encouraged to seek appropriate professional certifications such as CPA (Certified Public Accountant), CMA (Certified Management Accountant), CIA (Certified Internal Auditor), CCA (Certified Cost Analyst), and CFP (Certified Financial Planner).

**Education and Experience for CPA:**

Individuals wishing to qualify to sit for the CPA (Certified Public Accountant) exam in Texas generally will be required to complete at least 30 semester hours of accounting and an additonal 20 semester hours of related courses in other areas of business administration. The requirements to sit for the exam and to receive the CPA certificate are specified in the Public Accountancy Act of 1979 (as amended) and are interpreted and administered by the Texas State Board of Public Accountancy.

**Education and Experience for CMA:**

Individuals wishing to qualify to sit for the CMA (Certified Management Accountant) exam generally will be required to hold at least a baccalaureate degree or to have a CPA certificate. The CMA program and designation was developed and is administered by the Institute of Certified Management Accountants. U. T. Permian Basin is a designated testing site for the CMA examination.

**Education and Experience for Other Designations:**

Individuals wishing to qualify for CIA, CCA, CFP or other professional designations will be encouraged and aided in their preparation for those areas of specialization.

# Accountancy And Information Systems

Under-Graduate Studies

## Degree Requirements

**The 3rd- and 4th-year degree requirements consist essentially of two parts:**

| | |
|---|---|
| Basic Business Administration Core (outlined under Divisional Requirements) | 30 credits |
| Accountancy and Information Systems courses | 27 credits |
| Approved Business Administration Electives | 6 credits |

Requirements for a major in Accountancy and Information Systems are ACCT 301, 302, 303, 304, 400, 405, 406, 411, and one approved accounting elective (3 credits) plus two approved electives in business administration.

## Sample Degree Plan

**Sample Degree Plan Accountancy and Information Systems***

### Junior Year

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| ACCT 300 | 3 | ACCT 302 | 3 |
| ACCT 301 | 3 | ACCT 303 | 3 |
| DSCI 302[1] | 3 | ACCT 333 | 3 |
| MNGT 310 | 3 | MNGT 340[2] | 3 |
| MNGT 311 | 3 | MRKT 300 | 3 |
| | 15 | | 15 |

### Senior Year

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| ACCT 304 | 3 | ACCT 400 | 3 |
| ACCT 405 | 3 | ACCT Elective | 3 |
| ACCT 406 | 3 | Approved Business Electives | 6 |
| FIN 320 | 3 | MNGT 366 | 3 |
| ECON 300/400 | 3 | | |
| | 18 | | 18 |

*Degree plans vary depending upon a student's goals and preparation prior to enrolling at U. T. Permian Basin. Students should consult with their faculty advisors for specific degree planning.

[1]DSCI 302 must be completed during the first semester at U. T. Permian Basin.

[2]MNGT 340 must be completed during the second semester at U. T. Permian Basin.

Under-Graduate Studies

# Accountancy And Information Systems

Course Listing

**ACCT 300 Accounting Analysis Applications (3)**
Accounting in planning and control of business enterprises, emphasis on management and decision making uses of accounting information. Prerequisite: Two courses in Principles of Accounting, including study of both Financial and Managerial accounting principles.

**ACCT 301 Intermediate Accounting I (3)**
In-depth study of accounting theory and techniques involved in recording, summarizing, and reporting financial data for business organizations.
Prerequisite: Accounting Principles I and II.

**ACCT 302 Intermediate Accounting II (3)**
Continuation of the in-depth study of accounting principles and techniques that was started in Accounting 301. Prerequisite: ACCT 301.

**ACCT 303 Cost Accounting Principles (3)**
Cost analysis of manufacturing, marketing and administrative functions of business organizations primarily for purposes of control and decision-making.
Prerequisite: Accounting Principles I and II.

**ACCT 304 Special Problems (3)**
Study of accounting theory and applications related to reporting and analyzing cash flow, price level changes, accounting changes and errors, segment reporting, not-for-profit sector operations, and other topics.
Prerequisite: ACCT 302.

**ACCT 333 Information System Fundamentals (3)**
Basic framework for developing and analyzing systems-oriented information flows in profit and nonprofit organizations. Prerequisite: CPSC 300, 301 or 302, or equivalent; MNGT 310.

**ACCT 400 Advanced Accounting (3)**
Special accounting problems for partnerships; branches; corporate mergers and acquisitions, and multinational business organizations.
Prerequisite: ACCT 304.

**ACCT 401 Accounting Theory (3)**
Historical development of accounting theory; criteria for choices among income-determination and asset-valuation rules in context of public reporting.
Prerequisite: ACCT 304.

**ACCT 405 Federal Income Tax (3)**
Provisions and procedures of federal income tax laws and requirements affecting individuals and business organizations, including management problems of tax planning and compliance. Prerequisite: ACCT 301.

# Accountancy And Information Systems

Under-Graduate Studies

**ACCT 406 Auditing Theory and Practice (3)**
Audition standards and supporting philosophy. Techniques available to independent public accountants. Prerequisites: ACCT 302, 333, DSCI 301.

**ACCT 410 Oil and Gas Accounting (3)**
Accounting principles and procedures for the petroleum industry. Includes exploration, leasing, drilling and production problems.
Prerequisite: ACCT 304.

**ACCT 411 Information Systems Theory and Analysis (3)**
Introduction to the information systems approach and appropriate computer applications for varied types of organizations.
Prerequisite: ACCT 302; ACCT 333.

**ACCT 413 Cost Analysis and Profit Planning (3)**
Budgeting and use of standard cost systems and in-depth study of cost and profit analysis. Prerequisites: ACCT 303, MNGT 340.

**ACCT 415 Advanced Income Tax (3)**
Federal Income Tax laws, rules and regulations relating to partnerships, corporations, estates and trusts. Prerequisite: ACCT 405.

**ACCT 416 System Audits (3)**
Auditing of EDP systems and basic approaches to auditing other types of business/organization systems. Prerequisite: ACCT 406.

**ACCT 418 Advanced Financial Accounting Applications (3)**
Preparation and analysis of financial reports and statements with a special emphasis on the preparation of general ledger and spreadsheet solutions. Prerequisite: CPSC 300; ACCT 302.

**ACCT 420 Contemporary Professional Topics (3)**
Comprehensive overview of financial and managerial accounting theory, procedures, and technique to assist in the integration of major areas for final professional preparation. Prerequisite: at least 30 hours of accounting course work.

**ACCT 425 Oil and Gas Taxation (3)**
A survey of federal tax law affecting the oil and gas industry. Exploration, development, drilling, leasing, depletion, amortization and windfall profits tax.
Prerequisite: ACCT 405.

Under-Graduate Studies

# Anthropology

Bachelor Of Arts

Administered by the Division of Behavioral Science and Kinesiology. Please see that section for general degree requirements.

The Bachelor of Arts degree program in Anthropology is intended to provide a broad preparation in social and cultural anthropology. A major in Anthropology serves students with at least three orientations. The first orientation includes students who are pursuing a liberal arts education but desire more than an elementary understanding of anthropology. The second includes students wanting to enter careers in primary or secondary education, law, government service, business, management, law enforcement, medicine, social services or other fields in which an understanding of social behavior and organization is advantageous. The third includes students planning to pursue graduate studies in preparation for becoming professionals in any of the subfields of anthropology. Most students majoring in Anthropology minor in sociology, psychology, education, life science or related disciplines.

**The major of Anthropology consists of the following:**

One course from each of the following groups:
- Social and Cultural Anthropology: ANTH 301
- Physical Anthropology: ANTH 315
- Archaeology: ANTH 401, 416, 417, 418

Two courses from each of the following groups:
- Area studies: ANTH 361, 385, 447, 485
- Topical studies: ANTH 333, 427

The minor in Anthropology consists of 18 semester credits, of which 12 must be upper level, with a minimum of one course from each group above.

Sample Degree Plan
Junior Year

**Sample Degree Plan Anthropology***

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| ANTH 301, or 311 | 3 | ANTH 333 | 3 |
| ANTH 315 | 3 | ANTH 361 or 385 | 3 |
| Courses in Minor | 6 | ANTH 401 | 3 |
| Electives | 3 | Courses in Minor | 6 |
| | 15 | | 15 |

Under-Graduate Studies

# Anthropology

Senior Year

| First Semester | | Second Semester | |
|---|---|---|---|
| ANTH 416 | 3 | ANTH 427 | 3 |
| ANTH 437 | 3 | ANTH 447 or 485 | 3 |
| Courses in Minor | 6 | ANTH 418 | 3 |
| Elective | 3 | Elective | 6 |
| | 15 | | 15 |

*Degree plans vary depending upon a student's goals and preparation prior to enrolling at U. T. Permian Basin. Students should consult with their faculty advisors for specific degree planning.

Course Listing

**ANTH 301 Cultural Anthropology (3)**
Interrelationship of environment, society, thought and action expressed within our own and different cultures.

**ANTH 315 Physical Anthropology (3)**
Survey of fossil man and study of processes that led to Homo sapiens.

**ANTH 333 Myth, Symbol and Religion (3)**
How man identifies himself through symbol systems expressed in ritual practices and religious beliefs, and the impact of religion upon society.

**ANTH 361 Indians of the Southwest (3)**
Pueblo, Apache, Hopi and Navajo Indians. Social structure, economic organization and history, and Indian relationships to non-Indian ethnic groups.

**ANTH 385 Indians of North America (3)**
Developing a variety of native cultures north of Mexico. Different culture areas focusing on representative tribes and issues.

**ANTH 401 Archaeological Analytic Methods (3)**
Recording and cataloging of artifacts, their preservation and care, museum display, and statistical sampling in the field. Prerequisite to any archaeological field course.

**ANTH 416 Archaeology of Meso-America (3)**
Evolution of Mexican and Mayan civilizations from the early hunters through the Post-Classic Period. Reconstruction of prehistoric civilizations from archaeological evidence.

**ANTH 417 Archaeology of the Southwest (3)**
Development and characteristics of prehistoric Indian societies, particularly the Mogollon, Hohokam, Anasazi and Casa Grande areas, and their relation to other historic societies.

Under-Graduate Studies

# Anthropology

**ANTH 418 Archaeology of North America (3)**
Growth of cultures in America north of the Rio Grande River and their relationship to historically known societies.

**ANTH 427 Historical Trends in Anthropology (3)**
Classical, theoretical contributions in anthropology including major trends of thought in the development of anthropology.

**ANTH 433 People and Races (3)**
The study of the physical and genetic differences in human beings and the study of human races according to historic and contemporary developments.

**ANTH 437 Urban Anthropology (3)**
Spatial structure, symbolic structure and social processes within cities of the world. Effects of these upon minority cultures in Midland and Odessa.

**ANTH 447 South American Civilizations (3)**
Contemporary Quechuas and Aymaras, tribes of the Amazon Basin, and African derived cultures of the Caribbean, the Guianas and Brazil. Impact of westernization on these civilizations.

**ANTH 485 Peoples and Cultures of Africa (3)**
Peoples and cultures of Africa south of the Sahara. Prehistory, culture area and linguistic classifications of selected cultures and contemporary society.

Under-Graduate Studies

# Art

Administered by the Division of Humanities and Fine Arts.

Bachelor Of Arts

The visual arts program at U. T. Permian Basin provides instruction in contemporary modes of expression as well as those of the past. Within the mainstream of modern art, there are infinite possibilities for individual expression, and students are encouraged to seek out those that are best suited to themselves. A student need not have studied art prior to entering a U. T. Permian Basin program but may be expected to make up certain lower level deficiencies by taking courses at a community college. In accordance with the university's broadly based humanities program, non-art majors are encouraged to enroll for courses.

There are three basic concentrations in art; the first is a major in art which meets the minimum standards of the discipline but leaves sufficient electives to permit electing courses in other disciplines; second is a teacher certification program in art; and the third stresses a more comprehensive training of 49 hours that can lead to a career in college teaching or commercial art. Students desiring to take above sixty hours in art (upper and lower level) will require permission of the chairman. All those taking a concentrated major are expected to consult with their advisor at the halfway point in their programs in order to update their degree plans. The art major requirement is 36 credits, 24 of which must be taken at U. T. Permian Basin. For those who successfully complete a 49-credit program, 30 of which are required at U. T. Permian Basin, a senior exhibition in the university gallery is offered. Students in this comprehensive training program can select from the two-dimensional, three-dimensional or commercial art tracks.

For full entry into the program, a student is required to have completed courses in two-dimensional and three-dimensional design. Those who have not met that requirement will be expected to do so at the community college level. It is also strongly recommended that entering students complete a survey course in western world art history as well as drawing and painting. Portfolio review will be the final factor, but in no program will more than 24 credits of lower level art courses be accepted toward the art major.

A minor in art normally consists of 18 hours, 12 of which must be taken at U. T. Permian Basin. Students are expected to have completed a course in two-dimensional design. (A drawing course may be substituted for this requirement.) At the upper level, ART 402 and a drawing course are recommended.

Under-Graduate Studies

# Art

Course Listing
Art History

**ART 382 Women Artists--Part I (3)**
The study of women artists from ancient times to the early 1900s.

**ART 402 Concepts in Modern Art (3)**
In-depth study of the underlying ideas on which today's art is based.

**ART 403 Art Since 1945 (3)**
From Abstract Expressionism to Neo-Expressionism.

**ART 487 Women Artists--Part II (3)**
The study of women artists from the early 1900s to the present.

Drawing

***ART 310 Figure Composition I (3)**
Open to non-art majors. Academic approaches to figure drawing using various black-and-white media.

***ART 311 Figure Composition II (3)**
Figure drawing based on personal response and interpretation of the model with various colored media.

**ART 381 Drawing for Non-Art Majors (3)**
Introduction to drawing for the non-art major using various materials and techniques. No previous experience required; offered pass/fail.

***ART 410 Creative Drawing (3)**
Drawing based on creativity and personal imagery using various media and approaches. Prerequisite: Art 310 and 311 or permission of the instructor.

***ART 411 Individual Advanced Drawing (3)**
Advanced development of personal imagery and individual expression. Prerequisite: Art 310, 311 and 410 or permission of the instructor.

***ART 412 Special Problems in Drawing (3)**
A course designed for special problems in individual expression in drawing. Prerequisite: Art 310, 311, 410 and 411 or permission of the instructor.

***ART 413 Experimental Drawing (3)**
A course in special techniques and experimental concepts of drawing. Prerequisite: Art 310, 311, 410, 411 or permission of the instructor.

Painting

***ART 321 Painting - Watercolor (3)**
Water soluble media including transparent watercolor, gouache, and mixed media.

**Art courses marked with an * may be taken for up to six hours of credit with permission of the instructor.*

Under-Graduate Studies

# Art

***ART 322 Painting - Oil (3)**
Preparation of ground and support for a painting, color and paint handling (including various paint modifiers), the chemistry of paint and pigments.

***ART 420 Painting Techniques (3)**
Development of personal imagery in painting, (Media open) Prerequisite: Art 321 or Art 322 or permission of the instructor.

***ART 421 Advanced Painting (3)**
Advanced problems in painting. (Media open) Prerequisite: Art 321 or Art 322, 420 or permission of the instructor.

***Art 422 Special Problems in Painting (3)**
A course designed for special problems in personal expression in painting. (Media open) Prerequisite: Art 321 or 322, 420, 421 or permission of the instructor.

Sculpture

***ART 331 Principles of Sculpture (3)**
Interaction between materials and form. Processes including direct and indirect building of form, wood carving, stone carving and welding.

***ART 430 Metal Sculpture (3)**
Welding, brazing and foundry skills to develop individual expression.

***ART 431 Human Figure Modeling (3)**
Modeling the figure in clay. Alternative sculptural formats are acceptable. Prerequisites: ART 331, 430, or equivalent.

***ART 432 Personal Expression Through Sculpture (3)**
Emphasis is on individual expression. For the advanced student. Prerequisite, Art 331, 430 or the equivalent.

Ceramics

***ART 335 Ceramics Handbuilding I (3)**
Basic techniques in handbuilding use of coil and slab methods.

***ART 336 Ceramics Wheelthrowing I (3)**
Basic wheelthrowing techniques.

***ART 435 Ceramics Handbuilding II (3)**
Techniques in handbuilding use of coil and slab methods.

***ART 436 Ceramics Wheelthrowing II (3)**
Wheelthrowing techniques.

**Art courses marked with an * may be taken for up to six hours of credit with permission of the instructor.*

Under-Graduate Studies

# Art

***ART 437 Advanced Ceramic Techniques (3)**
Advanced wheelthrowing or handbuilding with emphasis on sculptural form.

***ART 438 Ceramic Form (3)**
Emphasis on individual expression in either handbuilding or wheelthrowing.

Printmaking

***ART 341 Silkscreen (3)**
Processes include building and preparing the silkscreen, cut-paper frisket, glue and tusche, film stencils and special problems.

***ART 440 Intaglio (3)**
A course consisting of plate preparation, grounds and acids, use of the press and printing processes including drypoint, etching, aquatint, soft ground and color printing.

***ART 441 Lithography (3)**
Processes include drawing with various lithographic media, etching and printing the stone and special problems.

***ART 442 Printmaking Techniques (3)**
Development of personal imagery in printmaking, media open. Prerequisite: Art 341 or Art 440 or Art 441 or permission of the instructor.

***ART 443 Advanced Problems in Printmaking (3)**
Advanced problems in printmaking, media open. Prerequisite: Art 341 or Art 440 or Art 441, Art 442 or permission of the instructor.

Photography and Crafts

**ART 305 Stained Glass (3)**
Basic skills in stained glass and leaded glass. Emphasis on design and construction of two dimensional panels.

***ART 326 Photography (3)**
Shooting, processing and printing technically good photographs of interest and visual value suitable for publications. Same as MCOM 326.

**ART 380 Papermaking (3)**
Creating handmade paper using various materials and techniques. Open to non-art majors.

**ART 405 Advanced Stained Glass (3)**
Work under the "Tiffany" technique of glasscraft. Construction of two and three dimensional work. Prerequisite: ART 305.

**Art courses marked with an * may be taken for up to six hours of credit with permission of the instructor.*

Under-Graduate Studies

# Art

**ART 450 Advanced Photography I (3)**
A continuation of technical development with considerable attention to aesthetics. Attention also given to expanding vision. Prerequisite: ART 326 or equivalent.

**ART 451 Advanced Photography II (3)**
A continuation of technical development with considerable attention to aesthetics. Attention also given to expanding vision and to development of new techniques. Prerequisite: ART 326 or equivalent. Same as MCOM 451.

**ART 452 Metal Jewelry (3)**
Basic metal jewelry processes with emphasis on design.

**ART 453 Problems in Art Metal (3)**
Metal jewelry processes with emphasis on design.

**ART 454 Weaving Fiber (3)**
Designs covering modern tapestry and woven art forms, developing techniques including plain weave, rya, soumak, wrapping, and single and double woven warps.

**ART 455 Advanced Problems in Weaving (3)**
Advanced problems in weaving. Prerequisite: at least one previous course in weaving.

Art Appreciation

**ART 370 Art Appreciation (3)**
Introduction to art of western civilization. Students will have the opportunity to become familiar with how art has changed from the time of the ancient Greeks to the present. Students will have the opportunity to attend art exhibitions.

Culminating Experiences

**ART 399 Senior Exhibition (1)**
An exhibition selected and hung by the student consisting of the student's best work at the university. Restricted to those taking a concentrated major in art (49 hours).

**ART 488 Special Problems (3)**
Special projects designed by the student in consultation with the instructor. May or may not be studio-related.

**Art courses marked with an * may be taken for up to six hours of credit with permission of the instructor.*

Under-Graduate Studies

# Chemistry

Bachelor Of Science

Administered by the Division of Science and Engineering. Please refer to that section for general degree requirements.

Chemistry is a central science that provides a basic understanding needed to deal with many of society's needs. It is a critical field for man's attempt to feed and clothe the world population, to tap new sources of energy, to improve health, and to protect our environment. All life processes are manifestations of chemical change. So, understanding chemical reactivity is necessary for our understanding of life and the world around us. Modern chemical instrument techniques furnish a crucial dimension. They account for the recent acceleration of progress that now promises especially high return from the investment of additional resources in the field of chemistry. The chemical industry of the U.S. employs over a million people. There is no basic science that offers greater opportunity for investment in the future than chemistry.

The Chemistry program at U. T. Permian Basin follows the guidelines of the American Chemical Society for a Bachelor of Science in Chemistry. This degree is appropriate for a student who wishes to pursue a professional career in chemistry or biochemistry. It is equally appropriate for one who desires a strong background in this central science as preparation for medical, dental, and veterinary schools, pharmacy, medical technology, technical sales, technical patent law, and teaching.

The secondary school chemistry teacher plays a pivotal role in the public's understanding of chemistry, transcending that of any other agent or group. For most citizens, high school chemistry is the first and only opportunity for systematic exposure to the science. Consequently, the teaching of chemistry to secondary school students is an awesome responsibility. Not only must the teacher be proficient in the art and science of teaching, but must also have the knowledge and ability to communicate selected details of chemistry with both simplicity and accuracy. Therefore, students seeking certification in Chemistry as a second teaching field must satisfy the American Chemical Society's guidelines. These require a minimum of 32 SCH in Chemistry with at least 48 SCH in science courses. Certification in Chemistry as a primary teaching field requires completion of a major in Chemistry.

Requirements are:

| | Major: | Minor: | Second Teach Field |
|---|---|---|---|
| General CHEM | 8 SCH | 8 SCH | 8 SCH |
| Organic CHEM | 8-10 | 8-10 | 8 |
| Analytical CHEM | 5 | 5 | 5 |
| CHEM Research | 1 | - | 1 |
| Seminar | 1 | 1 | 1 |
| Physical CHEM | 8 | 4 | 4 |
| Advance CHEM courses | 12 | - | 5 |
| Total | 43 SCH | 26 SCH | 32 SCH |

Under-Graduate Studies

# Chemistry

Upper level hours in Chemistry must total 27 SCH for the major, 12 of which must be from U. T. Permian Basin. The Chemistry minor must contain 12 upper level SCH. Other specific degree requirements for Chemistry plans are: 9 SCH of Calculus, 8 SCH of Physics (preferably calculus based), and a computer science language (either FORTRAN, Pascal, or Structured BASIC).

University, Division of Science & Engineering, and Chemistry requirements are summarized in the following **sample** degree plan for a major in Chemistry U. T. Permian Basin. Courses are shown in the semester in which usually offered.

Sample Degree Plan

| Community College: | Fall | | Spring | |
|---|---|---|---|---|
| 1st Year | EnglComp+ | 3 | EnglComp+ | 3 |
| | Amer Hist | 3 | Amer Hist | 3 |
| | Chem I+ | 4 | Chem II+ | 4 |
| | Cal I+ | 3 | Cal II+ | 3 |
| | F & S Govt | 3 | F & S Govt | 3 |
| | | 16 | | 16 |
| 2nd Year | Cal III+ | 3 | CPSC | 3 |
| | Phys I+ | 4 | Phys II+ | 4 |
| | Org Chem I | 4 | Org Chem II | 4 |
| | Minor+ | 4 | Minor+ | 4 |
| | | 15 | | 15 |
| U. T. Permian Basin: | | | | |
| 3rd Year | P.Chem I | 4 | P. Chem II | 4 |
| | An. Chem I | 5 | Med Chem | 3 |
| | Minor | 4 | Minor | 4 |
| | Lit | 3 | Speech | 3 |
| | | | Research | 1 |
| | | 16 | | 15 |
| 4th Year | Biochem* | 4 | Inorg Chem | 4 |
| | Minor | 4 | Fine Arts | 3 |
| | Env Sci | 3 | Seminar | 1 |
| | Elect # | 3 | H & P Sci | 3 |
| | Research | 1 | Elect # | 3 |
| | | 15 | | 14 |

* Currently offered as LFSC 320 & 321 but may count for advanced Chemistry credit.

\# These are electives from the social and behavioral sciences, fine arts, and humanities.

Under-Graduate Studies

# Chemistry

+ Students must take these courses at the lower level within the first two years, since there is no upper level equivalent at U. T. Permian. For example, students seeking the equivalent of a minor in Engineering must take Statics and Dynamics at the lower level.

Research awards and laboratory assistant positions are usually available to assist students financially.

**It is recommended that all majors in Chemistry complete the following courses prior to enrolling at U. T. Permian Basin:**

| Subject | Semester Hours |
|---|---|
| English Composition | 6 |
| Literature or Equivalent | 6 |
| American History | 6 |
| American and State Government | 6 |
| Inorganic Chemistry | 8 |
| Calculus (Plan A) | 6 |
| Physics | 8 |

Course Listing

**CHEM 311 Organic Chemistry I (3)** **FA**
Organic functional groups. Emphasizes synthesis and mechanisms. For chemistry, pre-professional and other science majors.
Corequisite: CHEM 313.

**CHEM 312 Organic Chemistry II (3)** **SP**
Continuation of CHEM 311 including an introduction to naturally occurring and biologically important compounds. Prerequisite: CHEM 311.
Corequisite:CHEM 314.

**CHEM 313 Experimental Organic I (2)** **FA**
Techniques of separation, purification, synthesis and an introduction to instrumental identification of organic compounds of general and consumer interest. Corequisite: CHEM 311.

**CHEM 314 Experimental Organic II (2)** **SP**
Continuation of CHEM 313; stronger emphasis on organic synthesis, spectral interpretation, (IR, NMR, MS) and instrument usage and qualitative analysis.
Prerequisites: CHEM 311, 313.
Corequisite: CHEM 312.

**CHEM 324 Analytical Chemistry I (3)** **FA**
Analytical techniques and methods (emphasis on instrumentation) common to all areas of chemistry, medicine and the life sciences.
Corequisite: CHEM 325.

Under-Graduate Studies

# Chemistry

**CHEM 325 Analytical Chemistry Lab I (2)** **FA**
Laboratory experience with instruments and methods presented in CHEM 324. Corequisite: CHEM 324.

**CHEM 395 Research (1, 2, or 3)**
Laboratory work on some aspect of a chemical research problem. Prerequisite: consultation with chemistry coordinator and permission of research sponsor. May be repeated for credit.

**CHEM 398 Seminar (1)**
Reports on recent chemistry developments in various areas by students, faculty and others in the chemical community. Prerequisite: permission of chemistry coordinator.

**CHEM 401 Physical Chemistry I (3)** **FA**
Kinetic molecular theory, molecular thermodynamics and an introduction to molecular energies. Prerequisites: one year of physics and one year of calculus. Corequisite: CHEM 403.

**CHEM 402 Physical Chemistry II (3)** **SP**
Kinetics, quantum mechanics, bonding and molecular spectroscopy. Prerequisite: CHEM 401 and one year of calculus.

**CHEM 403 Experimental Physical Chemistry I (1)** **FA**
Thermodynamic, kinetic and spectroscopic measurements. High-vacuum techniques and the use of sophisticated equipment in measuring molecular parameters. Corequisite: CHEM 401.

**CHEM 404 Experimental Physical Chemistry II (1)** **SP**
Continuation of CHEM 403. Prerequisite: CHEM 403. Corequisite or prerequisite: CHEM 402.

**CHEM 440 Medicinal Chemistry (3)** **SP**
A brief historical development of medicinal chemistry and pharmacognosy will be followed by a detailed look at most drug classes. Emphasis will be on relating chemical structure with bioactivity. Commonly used methods of drug design are interspersed. Prerequisite: CHEM 312.

**CHEM 451 Biochemistry (3)**
Biochemistry from a molecular viewpoint. Emphasis on structure and functions of biomolecules, energy-yielding and requiring processes. Prerequisites: CHEM 312, 314.

Under-Graduate Studies

# Chemistry

**CHEM 472 Organic Structure Determination (3)**
A problem solving course that integrates chemical reaction and spectroscopic (IR, UV-VIS, H1 and C13 NMR, MS) information to identify organic compounds. Prerequisite: CHEM 314.

**CHEM 474 Inorganic Chemistry (3)** **SP**
Modern bonding theories at level appropriate to understanding structure and chemical properties. Periodic relationships applied to families of elements. CHEM 401 and 402 are desirable.

**CHEM 475 Experimental Inorganic Chemistry (1)** **SP**
Experiments which illustrate the descriptive nature of chemistry as well as techniques in the synthesis and identification of inorganic compounds.

Under-Graduate Studies

# Computer Science

Bachelor Of Science

Administered by the Division of Science and Engineering. Please refer to that section for general degree requirements.

Computer science studies are designed for students interested in computers and their applications, and in the design and analysis of software and hardware systems for use in scientific and/or business environments.

All plans of study in computer science include a common core of courses that should be taken in the junior year. The core consists of

| | | |
|---|---|---|
| CPSC | 310 | Digital Computer Organization |
| CPSC | 312 | Discrete Mathematics I |
| CPSC | 315 | Information Systems Design |
| CPSC | 320 | Data Structures |

In addition to the common core of computer science courses, the student majoring in computer science must demonstrate competency in at least two structured, general purpose high level programming languages. This competency can be demonstrated through the successful completion of courses in approved languages or through projects specified by the department. Four computer science courses beyond the core are also required for the major. These additional courses will be determined through counseling with the major professor and may not include introductory programming language courses. Students majoring in computer science are required to complete at least nine semester credit hours of calculus (including calculus of several variables) and at least two additional mathematics courses selected from MATH 301, 310, 313, 315, 330 and 401. If the calculus sequence has not been completed at the time of admission, the student should concurrently enroll in calculus at one of the local community colleges until the sequence is completed. (Calculus courses are not offered at U. T. Permian Basin.)

There are two orientations of computer science studies offered at U. T. Permian Basin, each leading to the Bachelor of Science degree. The business plan is geared toward the specification, design and construction of management information systems. The scientific plan addresses the inner workings of computer systems, programming languages, and applications of the computer to scientific problems. Both plans can be adapted to meet certification requirements for public school teachers. All certification students must consult with an advisor in education concerning additional requirements for certification.

Students at U. T. Permian Basin majoring in computer science are required to have a minor of at least 18 semester credit hours, 12 of which must be at the upper level. The choice of minor is up to the student, but should be selected to further the student's educational objectives.

It is possible to orient particular degree plans to individual student needs and interests. This is accomplished by careful selection of upper division computer science courses and the choice of a minor field of study. For example, the

# Computer Science

student wishing to work with typical supercomputer applications might minor in mathematics or chemistry and would probably elect CPSC 425 (Programming Algorithms) and CPSC 410, 411 (Applications of Numerical Methods I, II). On the other hand, those interested in information systems might minor in business or accounting and elect CPSC 415 (Database Systems) and ACCT 411 (Information Systems Theory and Analysis).

When computer science is taken as a minor to satisfy requirements of other degree programs, the normal choice to satisfy the 12 hour upper division requirement will be the core courses required of the major. This will enable the student to continue with more advanced courses. Teacher certification in computer science requires 24 semester credit hours, 12 in the upper division. Any certification plan will include the languages BASIC and Pascal and the four core courses required for the major. Additional hours to a total of 24 may be elected with the advice of an advisor from the department. The program for certification does not meet the requirements for a major in computer science.

**In addition to the computer science and mathematics requirements outlined above, computer science majors must complete the following general educational requirements:**

| | |
|---|---|
| Laboratory Science (engineering physics recommended) | 8 hours |
| English | 6 hours |
| Literature | 6 hours |
| Government | 6 hours |
| U.S. History | 6 hours |

For those intending to minor in one of the sciences, additional science courses are generally required. The faculty of the minor department should be consulted regarding preparatory requirements. Students who minor in accounting or management must complete courses in the principles of accounting (two semesters) and principles of economics (two semesters).

A typical junior year for students who have completed the general education courses and calculus sequence is as follows:

Sample Degree Plan
**Junior Year**

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| CPSC 310 | 3 | CPSC 315 | 3 |
| CPSC 312 | 3 | CPSC 320 | 4 |
| MATH 310 | 3 | MATH 401 | 3 |
| Course in Minor | 3 | Course in Minor | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 16 |

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# Computer Science

The senior year will then reflect the emphasis of the student. Typical programs are as follows:

Senior Year
Business Option

| First Semester | | Second Semester | |
|---|---|---|---|
| CPSC 415 | 3 | CPSC 430 | 3 |
| CPSC elective* | 3 | CPSC elective* | 3 |
| Minor course | 3 | Minor course | 3 |
| Elective | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

*Recommend CPSC 313, 425, 450, 470, 480.

Senior Year
Scientific Option

| First Semester | | Second Semester | |
|---|---|---|---|
| CPSC 480 | 3 | CPSC 410 | 3 |
| CPSC elective* | 3 | CPSC elective* | 3 |
| Minor course | 3 | Minor course | 3 |
| MATH 330 | 3 | Sr. Seminar | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

*Recommend CPSC 313, 340, 350, 411, 425, 430, 440, 450, 470, 490.

Note all courses with four semester hours credit have a significant programming component. All courses have a College Algebra prerequisite. All courses except CPSC 300, 303, and 312 assume the completion of at least one previous course in computer science

Course Listing

**CPSC 300 BASIC Programming for Business (3)**
Problem analysis and design of algorithms for business applications using the interactive language BASIC.

**CPSC 303 Pascal Programming (3)**
Problem analysis, algorithm design and programming of business and scientific problems using Pascal. (Satisfies the major requirement for a scientific language, but cannot be counted in the twenty-four hours required for a major.)

**CPSC 310 Digital Computer Organization (3)** **FA**
Design of arithmetic, control and memory units, binary data representation, error-detecting and error-correcting codes.

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# Computer Science

**CPSC 312 Discrete Mathematics I (3)** **FA**
Same as MATH 312.

**CPSC 313 Discrete Mathematics II (3)**
Same as MATH 313.

**CPSC 315 Information Systems Design (3)** **SP**
Computer systems and relationships between hardware and software components. Emphasis on business system design and analysis.

**CPSC 320 Data Structures (4)** **SP**
Design and programming of data handling structures such as linear lists, linked lists, stacks, queues, graphs, trees and strings. (Prerequisites: CPSC 312, knowledge of a programming language.)

**CPSC 340 Assembly Language Programming (4)**
Programming of arithmetic, logic, control, input and output statements and development of macros at the assembly language level. (Prerequisite: CPSC 310.)

**CPSC 410 Applications of Numerical Methods I (4)**
Same as MATH 410.

**CPSC 411 Applications of Numerical Methods II (4)**
Same as MATH 411.

**CPSC 415 Database Systems (4)**
Survey of network, hierarchical and relational database systems, their design and operation. (Prerequisites: CPSC 310, 320.)

**CPSC 425 Programming Algorithms (4)**
Investigation of programming strategies, and the analysis of algorithms to optimize them from memory and time constraints. (Prerequisite: CPSC 320.)

**CPSC 430 Operating Systems (3)**
Resource allocation including processors, main memory, I/O subsystems, and software resources. (Prerequisites: CPSC 310, 320.)

**CPSC 440 Minicomputers and Microprocessors (3)**
Hardware and software design of minicomputers and microprocessor systems. Available systems, assembly language, machine language and microprogramming techniques. (Prerequisite: CPSC 310.)

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# Computer Science

**CPSC 450 Artificial Intelligence and Heuristic Programming (4)**
Analysis of information content by statistical, syntactic, semantic and heuristic methods and systems which answer questions, play games, prove theorems and recognize patterns. (Prerequisites: CPSC 310, 320.)

**CPSC 470 Data Communications (3)**
Design and development of computer networks, network types, protocols; transmission rates and data integrity. (Prerequisites: CPSC 310 and permission of the instructor.)

**CPSC 480 Programming Languages (4)**
Fundamental concepts and general principles underlying the structure of high level programming languages in current use. (Prerequisites: CPSC 320, knowledge of two high level programming languages. CPSC 310 is recommended.)

**CPSC 490 Theory of Computation (3)**
Turing machines, Church's thesis, recursive functions, computability, and computational complexity. (Prerequisite: CPSC 312 or MATH 315.)

Under-Graduate Studies

# Control Engineering

Bachelor Of Science

Administered by the Division of Science and Engineering. Please refer to that section for general degree requirements.

The curriculum in Control Engineering is a professional engineering program designed to educate students in the fundamentals of engineering and then to prepare them to apply computer control and automation to industrial processes. Control systems are widely used because they provide convenience, high productivity, ability to minimize cost and maximize performance, and improve safety and reliability. As an example, many new automobiles utilize computer control of almost all engine and transmission functions. The level of fuel economy they achieve would not be possible without automatic controls. Robotics and computerized information handling also are an important means of achieving better efficiency and productivity required to make U.S. industry more competitive in the international market place.

Prospective students are encouraged to contact U. T. Permian Basin Engineering faculty members with questions regarding career opportunities, degree requirements, and other aspects of the study and practice of control engineering.

The Control Engineering degree program begins in the lower division with studies in calculus, physics and chemistry. It continues in the upper division with engineering sciences, design and technical specialty courses. Not only must control engineers know basic engineering; they must also be familiar with computer hardware and software required for implementing automatic controls.

The Bachelor of Science degree in Control Engineering requires completion of the Junior College transfer curriculum in engineering developed by the Texas Higher Education Coordinating Board. In addition, the transfer student should have completed 3 semester credit hours in each of the following areas: calculus of several variables (Calculus III), differential equations, dynamics, and the prerequisites for these courses.

Students studying Control Engineering at U. T. Permian Basin must earn a **C** or better grade in **all** engineering courses and those mathematics and science courses specifically required for an engineering degree. These courses include differential and integral calculus and the calculus of several variables; differential equations; applied mathematics for engineers; engineering physics (minimum of 8 SCH's or equivalent, 12 SCH's recommended); general (inorganic), and where required organic, and physical chemistry; and where required physical, historical, structural, wellsite and petroleum geology; minerals and rocks; and stratigraphy. Any lower division engineering course or any required basic science or mathematics course taken at the lower division level in which a **D** was obtained must be repeated at either a community or 4-year college or university, or at U. T. Permian Basin if offered. Upper division

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# Control Engineering

engineering, mathematics or science courses required for an engineering degree, in which a **D** was made must be repeated and a grade of **C** or better obtained in the course.

At graduation, all students must have completed the minimum ABET (Accreditation Board for Engineering and Technology) requirements. This means that, in addition to the above, each student must complete at least 6 semester credit hours of humanities courses beyond the 12 hours of history and political science/government already taken. Courses in sociology, anthropology, literature, psychology, philosophy, or other approved subjects related to human culture satisfy these humanities requirements, but it is strongly recommended that three of these be taken in American or British literature. These may be taken at the lower division level prior to entering U. T. Permian Basin, or at U. T. Permian Basin.

Those students who are interested in the application of control engineering to chemical processes should take organic chemistry with laboratory (8-10 semester credit hours) in addition to the other lower division courses. Those whose interests lie in the application of control engineering to geophysics and petroleum production should take physical and historical geology in addition to other courses.

**The upper division Control Engineering curriculum requires the following core courses, plus enough technical electives to total at least 71 semester credit hours of engineering and/or supporting math, computer science, and science subjects. A minimum of 141 semester credit hours is required to complete the degree.**

Core Curriculum

**Freshman Year**

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| Analytical Geometry | 3 | Calculus I | 3 |
| Chemistry I | 4 | Chemistry II | 4 |
| English I | 3 | English II | 3 |
| History/Gov U.S. | 3 | Engr. Physics I | 4 |
| Engr. Drawing | 3 | History/Gov U.S. | 3 |
| PE | ½ | PE | ½ |
| | 16½ | | 17½ |

**Sophomore Year**

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| Calculus II | 3 | Calculus III | 3 |
| Sci. Computer Prog. | 3 | Differential Eq. | 3 |
| Engr. Physics II | 4 | Engr. Physics III | 4 |
| History/Gov | 3 | History/Gov | 3 |
| Statics | 3 | Dynamics | 3 |
| PE | ½ | PE | ½ |
| | 16½ | | 16½ |

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# Control Engineering

## Junior Year

| First Semester | | Second Semester | |
|---|---|---|---|
| ENGR 315 | 3 | ENGR 312 | 3 |
| ENGR 323 | 4 | ENGR 316 | 3 |
| ENGR 333 | 3 | ENGR 340 | 3 |
| ENGR 385 | 3 | ENGR 350 | 3 |
| MATH 331 | 4 | ENGR 380 | 4 |
| | | Technical Elective | 3 |
| | 17 | | 19 |

## Senior Year

| First Semester | | Second Semester | |
|---|---|---|---|
| ENGR 403 | 3 | ENGR 482 | 3 |
| ENGR 435 | 3 | ENGR 484 | 4 |
| ENGR 441 | 3 | ENGR 492 | 3 |
| ENGR 483 | 4 | Humanities Elective | 3 |
| Technical Elective | 3 | Technical Elective | 6 |
| Technical Elective | 3 | | |
| | 19 | | 19 |

To round out a student's knowledge and ability to apply control engineering to industrial problems, some technical electives may be chosen from among the non-required engineering courses, CHEM 401, 402, 403, and 404; GEOL 305, 308, 314, 427, and 454; CPSC 440 and 450 and MATH 435 and 445. ENGR 492 (Senior Project) is a special engineering project course in which students complete a design and implementation program for an engineering system. Completion of this course demonstrates the competence of the graduating senior engineer. ENGR 483 is prerequisite and ENGR 484 is co-requisite to this senior project course.

*Except as noted, all junior and senior courses require as a minimum mathematics through three semesters of calculus and differential equations, one year each of chemistry and physics, and one semester each of engineering mechanics-statics, engineering mechanics-dynamics and scientific programming* (FORTRAN). *Specific prerequisites beyond these are indicated in the course descriptions.*

## Course Listing

**ENGR 312 Fluid Mechanics (3)**
Principles of fluid mechanics applied to typical engineering fluid problems, emphasizing steady and unsteady measurement and control of fluid flow. Prerequisite: ENGR 333.

**ENGR 315 Mechanics of Materials (3)**
Methods of determining stresses present in structural members under axial, torsional, bending and shear loading. Analysis of plane stress and strain, combined stresses, deflection of beams, column design, and design using failure theories. Prerequisite: Statics.

**ENGR 316 Materials Science (3)**
Introduction to engineering materials and their properties and behavior under stress, compression, working and temperature changes.

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# Control Engineering

**ENGR 323 Electrical Circuit Analysis (4)**
Electrical devices, DC and AC circuit theory including Kirchoff's laws and network theorems. Introductory electrical power systems, magnetic circuits, transformers, rotating machines and transducers. Includes laboratory emphasizing the fundamentals of electrical circuits measurements. Prerequisite: Differential equations.

**ENGR 333 Thermodynamics I (3)**
Steady and unsteady materials and energy balances for typical engineering systems. Properties, charts, tables and equations of state for single component substances. Elementary cycle analysis.

**ENGR 340 Engineering Systems Analysis I (3)**
Modeling processes, response analyses and characteristics of systems. Includes differential and difference equations, transfer functions, Z-transforms, and state variable models and computer analysis of systems. Prerequisites: ENGR 315, 323, 333; MATH 331. Prerequisite or corequisite: ENGR 312.

**ENGR 350 Systems Simulation (3)**
Simulation of linear and nonlinear continuous and discrete systems using analog and digital computers. Use of personal computers in simulating engineering systems. Elementary identification methods. Prerequisite: MATH 331. Prerequisite or corequisite: ENGR 340.

**ENGR 380 Electronic Systems (4)**
Introductory analysis and design of analog and digital electronic systems and instrumentation including transistor models and circuits, operational amplifiers, digital circuits and other integrated circuit components. Includes laboratory on electrical devices. Prerequisites: ENGR 323.

**ENGR 385 Engineering Economy and Management (3)**
Methods of evaluating the economic feasibility of engineering projects. Time value of money, interest factors, evaluation criteria. Management of engineering projects.

**ENGR 403 Fundamentals of Engineering Design (3)**
Application of engineering science to design. Design philosophy, specifications, use of design aids and software. Solution of two- and three-week design problems. Prerequisites: ENGR 312, 315, 316, 323, 340, 380.

**ENGR 424 Production Engineering (3)**
Topics covered include: pumping units, artificial lift and down hole pumps, nodal analysis, tubing and tubing design, oil and gas separation, oil and water separation, lease facilities and transmission of products.

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# Control Engineering

**ENGR 434 Chemical Reactor Operations (3)**
Rate processes for transformation of matter by chemical reaction, emphasizing equipment operation and control. Prerequisite: CHEM 401, 402, 403; ENGR 312, 313.

**ENGR 435 Heat Transfer (3)**
Laws of conduction, convection and radiation heat transfer. Emphasizes steady and unsteady heat transfer situations appropriate to measurement and control of temperature. Prerequisite: ENGR 312, 333; MATH 331.

**ENGR 437 Oil and Gas Production (3)**
Design and operation of pumping units and gas-lift and down-hole pumps. Tubing and string design. Surface oil/gas separation equipment, oil/water separation techniques, and lease facilities. Prerequisites: ENGR 312, 315, 333. Prerequisite or corequisite: ENGR 435.

**ENGR 438 Drilling and Completion (3)**
Rotary drilling hydraulics, drilling rigs, prime movers, drill bits, casing design, cementing, perforating and completion methods. Laboratory includes preparation and testing of rotary drilling fluids and work with chemical additives used in drilling fluids.
Prerequisites: ENGR 312, 315, 333.

**ENGR 441 Measurement and Instrumentation (3)**
Principles of mechanical, fluidic, and electrical measurements. Major control instruments (end devices) covered. Laboratory experimentation and demonstration included. Prerequisites: ENGR 312, 340, 403.

**ENGR 443 Reservoir Engineering I (3)**
Production performance analysis using decline curve and material balance techniques. Natural water drive reservoirs and gas cap drive predictions. Steady and unsteady flow systems. Gas and gas condensate reservoir analysis. Prerequisites: ENGR 312, 333; GEOL 305.

**ENGR 444 Reservoir Engineering II (3)**
Secondary and tertiary recovery performance analysis. Frontal drive concepts, pattern efficiency and pilot projects. Introduction to reservoir modeling. Prerequisite: ENGR 443.

**ENGR 451 Mechanical Design (3)**
Stress and deflection analysis, strain energy methods, statistical considerations, failure theories, fasteners, bearings and shafts, clutches, brakes and couplings and use of CAD systems. Prerequisites: ENGR 315, 316.

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# Control Engineering

**ENGR 452 Robotics (3)**
Introduction to the kinematics, dynamics, and control of industrial robots. Homogenous transformations, Lagrangian dynamics, robot programming and simulation.

**ENGR 455 Formation Evaluation (3)**
Theory of well log interpretation. Electrical and resistivity measurements in reservoir rocks. Sonic and density logging and other methods employed in subsurface search for petroleum. Prerequisites: GEOL 305.

**ENGR 461 Environmental Control (3)**
Theory of environmental control: air conditioning, refrigeration and heating systems, heat pumps, heating and cooling, passive solar design and active solar heating. Prerequisites: ENGR 435. Corequisite: ENGR 463.

**ENGR 463 Environmental Control Laboratory (1)**
Introduction to environmental control equipment, with experiments in air conditioning, refrigeration, heat pumps, solar collectors and dynamics of passive heat flow, ducting and fans. Prerequisites: ENGR 435. Corequisite: ENGR 461.

**ENGR 465 Air and Space Craft Control (3)**
Control systems utilized in aircraft and spacecraft. Topics include Aerodynamics (structures and forms), automatic and autopilot control systems, and principles of flight.

**ENGR 470 Introduction to Signal Processing for Control Systems (3)**
Introduction to signal processing methods. Sampling theory, signal analysis in the time and frequency domains. Elementary applications including data reduction techniques and signal reconstruction from digital data. Prerequisites: ENGR 340, 350, 380; MATH 331.

**ENGR 476 Natural Gas Engineering (3)**
Physical properties of natural gas. Topics covered include: deliverability tests, production methods, recovery of liquids in natural gas, gas transmission, and sales.

**ENGR 477 Transient Pressure Testing (3)**
Topics include: differential equations that describe flow of fluids in porous media, build-up and draw-down analysis, well drainage evaluation, interference, fall off testing, and bounded reservoir analysis.

**ENGR 482 Control System Design Laboratory (3)**
Application of previously acquired competencies to design and test laboratory control systems. Prerequisite: ENGR 483. Prerequisite or corequisite: ENGR 403, 484.

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# Control Engineering

**ENGR 483 Continuous Control Systems (3)**
Classical and modern methods of designing controllers for linear components; continuous control systems. Laboratory involves extensive work with computers and control hardware. Prerequisites: ENGR 340, 350. Prerequisite or corequisite: ENGR 441.

**ENGR 484 Discrete Control Systems (4)**
Analysis and design of linear control systems that include sample-data components. Emphasizes use of small digital computers in direct digital control of single and multivariable systems. Prerequisite: ENGR 483.

**ENGR 487 Nonlinear Control Systems (3)**
Introductory analysis and design of nonlinear control systems and optimal control of systems. Includes continuous and on-off control, time-optimal control and other optimal control strategies. Prerequisite: ENGR 483. Corequisite: ENGR 484.

Under-Graduate Studies

# Criminology

Bachelor Of Arts

Administered by the Division of Behavioral Science and Kinesiology. Please refer to that section for general degree requirements.

Students who major in criminology will obtain a Bachelor of Arts degree. Criminology is an interdisciplinary behavioral science which includes the study of law, causes of criminal behavior and the agencies of social control which society has established to prevent and control crime.

The criminology program at U. T. Permian Basin is committed to the personal, analytical and professional development of its students. Many will choose to continue their education in graduate studies or law school, while others will accept employment in criminal justice agencies such as law enforcement, courts, corrections or other social service organizations. The criminology program is committed to developing the student's sensitivity to the human and social condition, coupled with an understanding and ability to constructively participate in the improvement of both.

Students will take course work in a variety of academic areas at U. T. Permian Basin. The interdisciplinary science of criminology draws its body of knowledge from law, sociology, psychology and political science. The criminology advisor will assist in developing a degree plan which best suits the needs of the individual student while maintaining a high level of program integrity.

There are no prerequisites for entrance into the criminology program. It is, however, recommended that entering students have taken lower division courses in sociology, psychology and criminal justice.

All students must complete nine semester credits of core courses, followed by twenty-one semester credits from a selected list of interdisciplinary behavioral science course work.

Course Listing

**CRIM 350 Criminal Justice Administration (3)**
Administrative problems and their solutions in correctional and law enforcement programs.

**CRIM 360 Municipal Police Administration**
An overview of police supervision and administrative practices with a special emphasis upon innovative patrol, tactical and investigative administrative procedures. Problems and special issues in police administration are also considered and evaluated.

**CRIM 409 Criminal Justice Research Methods (3)**
Elements of scientific perspective. Conceptual frameworks, access to collection of data, research design, analytic techniques and reporting of findings.

**CRIM 410 Criminal Law (3)**
Legislature and criminalization of conduct, limits of criminal sanctions, evolution of substantive criminal law with emphasis on Texas, judiciary and policy formulation, and administration of criminal law.

Under-Graduate Studies

# Criminology

**CRIM 420 Corrections in America (3)**
Overview of social, cultural, behavioral, political, psychological, sociological and economic causative factors of crime. Appraisal of correctional methods involved in prisons, probation, parole, work-release, half-way houses, community-based corrections and other settings.

**CRIM 421 Probation and Parole (3)**
History, philosophy and development of adult and juvenile probation and parole in the United States.

**CRIM 422 Legal Foundations of Corrections (3)**
Historical analysis of constitutional law, appellate and Supreme Court decisions and their impact upon correctional institutions.

**CRIM 432 Theories of Criminal Behavior (3)**
Principal theories of criminality and the application of these theories to research and corrections.

**CRIM 433 Law and Society (3)**
The relationship of law and society is studied through the history, philosophy and evolution of the law and legal institutions. Three major functions of law in modern society: social control, dispute resolution and social engineering are examined.

**CRIM 434 Critical Issues in Criminology (3)**
Survey of major philosophical, moral, and administrative issues in criminology and criminal justice. Specific topics may change as the issues and problems that confront the justice system change.

**CRIM 435 Advanced Criminological Theory**
An in-depth analysis of one or more of the principal theories of criminology and the social policy, ethical and correctional implications of that theoretical approach. Prerequisite: CRIM 432 or consent of instructor.

**CRIM 479 Studies in Criminology (3)**
Reading, research and discussion on selected topics in criminology. Topics will vary according to needs, interests and capability of the instructor and students.

**CRIM 492 Criminal Justice Practicum (3-6)**
A supervised field or academic education in a criminal justice or juvenile justice agency. Students are offered the opportunity to gain the knowledge, methods and skills of the criminal justice agency and will further complete an academic assignment as established by the instructor. Variable credit of 3 or 6 hours depending on the number of hours employed in the internship and the nature of the academic assignment. Prerequisite: 12 upper division hours in criminology and consent of the instructor.

Under-Graduate Studies

# Earth Sciences

Bachelor Of Science

Administered by the Division of Science and Engineering. Please refer to that section for general degree requirements.

A Bachelor of Science degree in Earth Sciences is primarily for those who plan to teach earth sciences at the elementary or secondary school level, who plan on graduate study in earth sciences education, or who desire a knowledge of the earth sciences but do not wish to actively practice the profession of geology.

**For the Bachelor of Science in Earth Sciences the following courses are required:**

| Subject | Semester Hours |
|---|---|
| English | 6 |
| Literature | 6 |
| U.S. History | 6 |
| U.S. and Texas Government | 6 |
| Calculus I and II | 6 |
| College Physics | 8 |
| Inorganic Chemistry | 8 |
| Physical and Historical Geology | 8 |

**To provide a well-rounded background, the following distribution of coursework totaling 34 upper division semester credit hours is required for the degree.**

Group 1. Mineralogy+, optical mineralogy+, petrology+, petrography, carbonate petrology, geochemistry, volcanology: a minimum of 10 hours.

Group 2. Paleontology+, stratigraphy and sedimentation+, sedimentology, paleoecology, micropaleontology, carbonate depositional environments, clastic depositional environments, oceanography: a minimum of 8 hours.

Group 3. Structural geology+, plate tectonics, geophysics: a minimum of 4 hours.

Group 4. Petroleum geology, well-site geology, groundwater hydrology, metallic mineral deposits, nonmetallic mineral deposits, engineering geology.

Twelve additional hours from groups 1-4.

Courses noted (+) are required courses.

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# Earth Sciences

Students seeking teacher certification in Geology or Earth Sciences as a second teaching field must complete a minimum of 24 semester credit hours to include: physical and historical geology, GEOL 307, 308, 314, 323, and 440 plus the requirements set forth by the faculty of education. However, if the degree is to be a Bachelor of Science in Earth Sciences, all the courses required for that degree must be taken.

Students minoring in Geology or Earth Sciences are required to have physical and historical geology as well as GEOL 307, 308, 314, and 440.

In addition to the required geology courses, a minor in mathematics, chemistry, computer sciences, life science, or physics of at least 12 upper level credits is recommended; other subjects may be used.

Under-Graduate Studies

# Economics

Administered by the Division of Business Administration. Please refer to that section for general degree requirements.

The Economics program is designed to prepare economists or to serve other disciplines such as accounting, finance, land management, management, marketing, engineering, government, education, sociology or history. Economics includes two broad areas: microeconomics and macroeconomics.

Microeconomics is an area applicable to any study of human endeavor where scarce resources must be allocated among competing uses. It is the study of man's behavior in producing, exchanging and consuming material goods and services. Macroeconomics includes the study of the performance of the economy as a whole and includes such problems as inflation, unemployment and the rate of economic growth. Both programs at U. T. Permian Basin include forecasting so that individuals, firms and governmental bodies may adjust to anticipated economic conditions.

A basic understanding of economics is essential for a well-informed citizenry since most of today's problems have important economic aspects. It is also a vital discipline for, and is of practical value in, business decision-making. An understanding of the overall operation of the economic system puts businesses in a better position to formulate policies.

In spite of its practical benefits, economics is primarily an academic, not a vocational subject. In economics, problems are examined from a social, rather than an individual, point of view.

The undergraduate major in Economics aims to provide students participation in public affairs, positions in business firms and government service. It offers a strong foundation for pre-law students and for further graduate study leading to teaching and research positions in universities, government and private enterprise.

| | |
|---|---|
| Quantitative Techniques | 6 credits |
| Free Electives | 24 credits |
| Minor Field Outside Economics | 12 credits |
| Concentration in Economics | 18 credits |

**Upper-level requirements consist essentially of the following:**

Sample Degree Plan
**Junior Year**

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| ECON 303 | 3 | ECON 423 | 3 |
| DSCI 301[1] | 3 | Minor Elective | 3 |
| ECON 322 | 3 | MNGT 340[2] | 3 |
| Free Elective | 3 | ECON 415 | 3 |
| Minor Elective | 3 | Free Elective | 3 |
| | 15 | | 15 |

Under-Graduate Studies

# Economics

Senior Year

| First Semester | | Second Semester | |
|---|---|---|---|
| ECON 425 | 3 | ECON 407 | 3 |
| Minor Electives | 3 | Minor Elective | 3 |
| Free Elective | 9 | Free Elective | 9 |
| | 15 | | 15 |

[1]DSCI 301 must be completed by the end of the first semester at U. T. Permian Basin.

[2]MNGT 340 must be completed by the end of the second semester at U. T. Permian Basin.

**NOTE: All economics courses except ECON 407 require completion of principles courses in Microeconomics and Macroeconomics as prerequisites.**

Course Listing

**ECON 303 Intermediate Microeconomics (3)**
Underlying assumptions of rational consumer behavior. Expected actions of profit-motivated firms under perfect and imperfect competitive conditions.

**ECON 320 Labor-Management and Collective Bargaining (3)**
Interpretations of collective bargaining agreements, their negotiation and administration, and methods for settling disputes. Same as MNGT 320.

**ECON 322 Money and Banking (3)**
How banks, the Federal Reserve and U.S. Treasury interact to determine money supplies. Recent and current attempts to control inflation and unemployment.

**ECON 407 Econometrics (3)**
Focus is on applied econometrics in estimating and testing simple, multiple and simultaneous equation models, including problems of multicolinearity, autocorrelation and generalized least squares. Prerequisite: DSCI 301 or equivalent.

**ECON 410 Public Finance (3)**
How government meets its stabilization, distributional and resource allocation functions through taxation and expenditure policies.

**ECON 411 Physical Resource Management (3)**
World resources in terms of how they are created and managed for business, social achievement and cultural process. Same as MNGT 411.

**ECON 415 Government Regulation of Business (3)**
History, institutions and theory of regulated business activity. Problems of public utility regulation. Cases in regulated industry, with emphasis on the petroleum/natural gas industry.

Under-Graduate Studies

# Economics

**ECON 420 International Trade (3)**
An examination of the monetary and real aspects of trade; including foreign exchange rates, balance of payments problems, and the theories concerning the reasons for trade. Prerequisite: FIN 320.

**ECON 423 Intermediate Macroeconomics (3)**
Theory of employment, price level and growth rate. Relationship between accepted theories and actual data in recent years. Issues raised by controls.

**ECON 425 Managerial Economics I (3)**
Uses economic analytical tools including demand forecasting, resource allocation and cost profitability. Prerequisites: DSCI 301; MNGT 340.

**ECON 430 Economics of Industry (3)**
Study of the market processes which direct industry to satisfy societal demands; how these processes may fail, and possible remedies. Prerequisites: ECON 303.

**ECON 435 Regional Economics (3)**
Rural and urban resources, patterns of industry, regional problems of growth with emphasis on the Southwest region.

Under-Graduate Studies

# Education

## Teacher Certification

Student teachers will maintain the daily schedule and calendar required of public school supervising teachers to whom they are assigned. The length of student teaching will be 10 consecutive weeks of full day assignments for Elementary and 16 consecutive weeks for Secondary and All-level, as defined by the Education Division. Each program, whether it be Elementary, Secondary or All-level, requires that the student attend a seminar during the student teaching semester (See pages 68-70).

Deadlines for receipt of student teaching applications are given below. The application is due by the date indicated in the semester **prior** to student teaching. Further details are provided in the catalog and through your Education advisor.

| **Deadline** | **Student Teaching Semester** |
|---|---|
| March 18th | Fall |
| October 15th | Spring |

In order to be recommended for the provisional teacher's certificate, the applicant shall pass exiting competency examinations. This set of tests is referred to as the Texas Educator Initial Certification Test (ExCET). The rules allow certification candidates to take the tests during the last semester of their certification program unless the last semester is during the summer. If the last semester is during the summer, students may take the tests during the previous spring semester. More information about the testing program is available through the Texas Education Agency or the Education Office.

U. T. Permian Basin aims to prepare teachers under a performance-based teacher education plan. This approach is designed to assure that when students finish a teacher education program they are fully qualified to perform as teachers in the classroom. This means they have not only passed their courses, but they have also demonstrated knowledge of the subject matter they will teach and have competence to perform effectively in diverse teaching situations.

Individuals holding a bachelor's degree and desiring to become certified to teach may enroll in the teacher education program as nondegree special students and limit their study only to required courses.

The Texas Education Agency requires college credit or examination credit in educational computing and technology and speech prior to certification. The TASP and other tests are usually required for all post-baccalaureate students. No more than six hours of professional education courses may be taken until all three sections of the TASP are passed. Individual plans are to be written and approved by the Education advisor.

Under-Graduate Studies

# Education

**Professional Development Sequence**
(Schematic by Level)

**Elementary**

| Course No. | Course Title | Semester Hours |
|---|---|---|
| **Professional Development-Non Education Content (3 hrs.) required** | | |
| PSYCHOLOGY 431 | Child Psychology | 3 |
| **Professional Development (18 hrs.) Professional (3 hrs.) required** | | |
| EDUCATION 370 | Foundations of Education | 3 |
| **Elementary Methods (9 hrs.)** | | |
| EDUCATION 420 | Education Lab | 1 |
| EDUCATION 421 | Teach Language Arts, Elementary School | 2 |
| EDUCATION 422 | Teach Math, Elementary School | 2 |
| EDUCATION 423 | Teach Science, Elementary School | 2 |
| EDUCATION 424 | Teach Social Studies, Elementary School | 2 |
| **Student Teaching (6 hrs.) required** | | |
| EDUCATION 480 | Kindergarten | 3 |
| EDUCATION 481 | Elementary I | 3 |
| EDUCATION 482 | Elementary II | 6 |
| EDUCATION 487 | Special Education | 3 |
| EDUCATION 488 | Bilingual | 3 |
| Total Semester Hours | 21 | |

**Secondary**

| Course No. | Course Title | Semester Hours |
|---|---|---|
| **Reading (3 hrs.) required** | | |
| EDUCATION 470 | Reading in Content Area | 3 |
| **Professional Development-Non Education Content (3 hrs.)** | | |
| PSYCHOLOGY 342 | Adolescent Psychology | 3 |
| **Professional Development (18 hrs.) Select One Course (3 hrs.)** | | |
| EDUCATION 451 | Education of the Exceptional Child | 3 |
| SOCIOLOGY 410 | Sociology of Education | 3 |
| EDUCATION 432 | Curriculum in Kinesiology/Phys Ed | 3 |
| **Required (15 hrs.)** | | |
| EDUCATION 370 | Foundations of Educ | 3 |
| EDUCATION 430 | Education Lab | 2 |
| EDUCATION 431 | Theory & Practice of Teaching (First Field) | 2 |

Under-Graduate Studies

# Education

| | | |
|---|---|---|
| EDUCATION 431 | Theory & Practice of Teaching (Second Field) | 2 |
| EDUCATION 484 | Student Teaching: Secondary II | 6 |

Total Semester Hours 24

**All-Level**

| Course No. | Course Title | Semester Hours |
|---|---|---|
| EDUCATION 470 | Reading in Content Area | 3 |
| PSYCHOLOGY 341 | Child Psychology | 3 |
| PSYCHOLOGY 342 | Adolescent Psychology | 3 |

**Professional Development (18 hrs.) required**
**Select One Course (3 hrs.) required**

| | | |
|---|---|---|
| EDUCATION 451 | Education of the Exceptional Child | 3 |
| SOCIOLOGY 410 | Sociology of Education | 3 |
| EDUCATION 432 | Curriculum in Kinesiology/Phys Ed | 3 |

**Required (15 hrs.)**

| | | |
|---|---|---|
| EDUCATION 370 | Foundations of Education | 3 |
| EDUCATION 420 | Education Lab: Elementary | 1 |
| EDUCATION 430 | Education Lab: Secondary | 1 |
| EDUCATION 431 | Theory & Practice of Teaching (Elementary) | 2 |
| EDUCATION 431 | Theory & Practice of Teaching (Secondary) | 2 |
| EDUCATION 485 | Student Teaching: All Level I | 3 |
| EDUCATION 486 | Student Teaching: All Level II | 3 |

Total Semester Hours 27

Students who seek teaching certification are subject to further requirements. For secondary certification, a second 24 semester credit hour field must be completed, the specific content of which should be worked out with the appropriate discipline. This second teaching field serves as the minor. For elementary certification, an 18 semester credit hour minor must be completed in an academic discipline. Faculty in the Division of Education should be consulted for specific course and testing requirements for certification.

Prospective students are encouraged to contact U. T. Permian Basin faculty members in the appropriate discipline for assistance in planning lower level programs or for more specific information about upper level work. At least 18 semester credit hours in the major and 12 in the minor must be completed at the upper level, though some disciplines may require more.

Under-Graduate Studies

# Education

Lower Level Preparation

**Lower Division or Community College Preparation**

The appropriate transfer curricula for public junior colleges in Texas established by the Texas Higher Education Coordinating Board, will be accepted in its entirety and applied to appropriate degree programs. The student should note, however, that most programs require more mathematics and basic science than are usually listed in those transfer curricula.

Certain courses in some U. T. Permian Basin degree programs require preparatory courses which are not included in the transfer curricula. For specific requirements and prerequisites, the applicant should meet with a faculty member in his or her prospective discipline. Lower level preparation for most programs in the Division will include 60 to 66 semester credit hours of work.

Requirements for General Education are provided below.

**Provisional Teacher Certification**
General Education Requirements

**Minimum Requirements**

English
- Composition (6 hrs) required
- Literature (6 hrs) required

Speech (3 hrs) required

American History (6 hrs) required

U.S. Texas Government (6 hrs) required

Natural Science (with lab) (4 hrs) required

Mathematics (content of College Algebra or above) (3 hrs) required

Computing and Information Technology (3 hrs) required

Fine Arts (3 hrs) required

Electives (21 hrs) required

- Social Science
- Natural Science
- Mathematics
- Foreign Languages
- Fine Arts
- Humanities

Total semester hours in General Education 60

Under-Graduate Studies

# Education

Course Listing

Elementary Education

**EDUC 322 Children's Literature (3)**
Literature intended for children. History and criticism of books for children, illustration of these books and recent trends in the use of literature.

**EDUC 420 Educ Lab (1)**
Offers opportunity for field experience in an elementary school. Prior to student teaching, the prospective student teacher will spend a minimum of 45 hours observing and assisting in the elementary classroom(s) where he/she will ultimately be student teaching. To be taken during the same semester as EDUC 421, 422, 423.

**EDUC 421 Teaching Language Arts in the Elementary School (2)**
Offers opportunity for development skills of effective oral and written communication for prekindergarten and elementary teachers. Offers opportunity for development of techniques and implementation of methods and materials in a teaching center. Prerequisite: PSYC 341, EDUC 424 and 425.

**EDUC 422 Teaching Mathematics in the Elementary School (2)**
Offers opportunity to develop mathematics skills needed to teach new as well as traditional activities in prekindergarten and elementary levels. Prerequisite: PSYC 341, EDUC 424 and 425.

**EDUC 423 Teaching Science in the Elementary School (2)**
Offers opportunity to develop science skills needed to teach new as well as traditional activities in prekindergarten and elementary levels. Prerequisite: PSYC 341, EDUC 424 and 425.

**EDUC 424 Teaching Social Studies in the Elementary School (2)**
Social studies materials and methods for those seeking certification in prekindergarten and elementary levels. Prerequisite: PSYC 341

**EDUC 425 Reading in the Elementary School (3)**
Basic methods, trends, recent materials and issues in teaching reading. Prerequisite: PSYC 341

**EDUC 361 Children's Literature for the Bilingual Classroom (3)***
Identification, selection and utilization of library material, both in English and Spanish, from preschool through the upper elementary age.

**EDUC 438 Strategies for Teaching Science, Mathematics and Social Studies in Spanish (3)***
Emphasis on developing plans, materials and teaching demonstrations in Spanish.

* *Denotes ESL/Bilingual Education*

Under-Graduate Studies

# Education

**EDUC 461 Educational Psychology of the Bilingual Child (3)***
Methods, materials, language organization and developmental principles affecting the bilingual child and his learning environment.

**EDUC 462 Teaching the Bilingual Child (3)***
Bilingual programs and orientation to various methods used in establishing bilingual programs.

**EDUC 463 Teaching Reading & Language Arts in Spanish (3)***
A critical analysis of materials in Spanish available for teaching language arts and reading. A survey of strategies for teaching reading and language arts to Spanish speaking.

**EDUC 471 Culture and Learning (3)**
The study of the interrelationship of culture and learning. The major emphasis is upon environmental influences on socialization, cognition and achievement.

Educational Foundations

**EDUC 370 Foundations of Education (3)**
Selected valuational, epistemological and historical considerations related to education as a process of human development, as a social-political institution and as a profession.

Secondary Education

**EDUC 430 Educ Lab (1,2)**
Offers opportunity for field experience in a secondary school. The semester prior to student teaching, the prospective student teacher will spend a minimum of 45 hours observing and assisting in the secondary classroom(s) where he/she will ultimately be student teaching. To be taken during the same semester as EDUC 431. Prerequisite: PSYC 342

**EDUC 431 The Theory and Practice of Teaching (2)**
Field-based course in the discipline in which the student is majoring. Emphasis upon the content, methods and materials characteristic of the discipline.
Prerequisite: PSYC 342

Student Teaching

**EDUC 480 Student Teaching: Kindergarten and Young Child (3)**
Prerequisite: PSYC 341, EDUC 411, 413, 420, 421, 422, 423, 424, 425.
Corequisite: EDUC 412. All but 6 hours of major completed.

**EDUC 481, 482 Student Teaching: Elementary I, II (3, 6)**
Prerequisite: PSYC 341, EDUC 420, 421, 422, 423, 424, 425. All but 6 hours of major completed.

**EDUC 483, 484 Student Teaching: Secondary I, II (3, 6)**
Prerequisite: PSYC 342, EDUC 430, 431. All but 6 hours completed in each teaching field.

**EDUC 485, 486 Student Teaching: All Level I, II (3, 3)**
Prerequisite: PSY 341, PSY 342, EDUC 420, 430, 431. All but 6 hours of major completed.

* *Denotes ESL/Bilingual Education*

Under-Graduate Studies

# Education

**EDUC 487 Student Teaching: Special Education (3)**
Prerequisite: Same as Elementary I or Secondary I, whichever applies.

**EDUC 488 Student Teaching: Bilingual (3)**
Prerequisite: PSYC 341, EDUC 420, 421, 422, 423, 424, 425. All but 6 hours of major completed.

Kindergarten and Young Child

**EDUC 411 Early Childhood Education: Development and Learning (3)**
Literature of early childhood education with emphasis upon environmental factors affecting cognitive growth, socialization and achievement. Prerequisite: PSYC 341

**EDUC 412 Early Childhood Education: Curriculum and Teaching (3)**
Review and development of curriculum, materials and methods used in nursery school and kindergarten, focusing on the goals and purposes of programs. Prerequisite: PSYC 341

**EDUC 413 Language Development in Young Children (3)**
Nature of language and the acquisition of language by the young child. Includes environmental influences and contingent effects on socialization, cognition and achievement. Prerequisite: PSYC 341

**EDUC 414 Cognitive Development in Young Children (3)**
Major theoretical constructs and research findings relevant to the cognitive development of young children. Includes analysis of determinants of differences in cognitive functioning. Same as PSYC 442.

**EDUC 415 Social and Emotional Development of the Child (3)**
Major theories and research relevant to social and emotional development of children. Focuses on innate and environmental influences affecting development in families, schools and societies. Same as PSYC 443.

Special Education

**EDUC 451 Education of Exceptional Children (3)**
Exceptional children and their educational problems. Curriculum development and adaptation of selected methods and materials basic to teaching these exceptional children.

**EDUC 452 Theory and Methods of Exceptional Children (3)**
Theories and methodologies used in teaching and evaluating exceptional students. Prerequisite: EDUC 451 or consent of instructor.

**EDUC 453 Education of Exceptional Children in the Regular Classroom (3)**
Identification and etiology of prevalent handicaps found in classes; curriculum development adaptation; and selected methods and materials for teaching these handicapped children.

**EDUC 454 Theory and Methods in Education of the Mentally Retarded (3)**
Theory, methods and basic curriculum for the educable mentally retarded in primary and intermediate levels. Curriculum content, specific materials and methods of instruction.

Under-Graduate Studies

# Education

**EDUC 455 Observation/Participation in Special Education (1-3)**
Offers opportunity for directed experiences in observation and participation in special education classrooms.

**EDUC 456 Materials and Methods for the Exceptional Child (3)**
Instructional materials and the selection, analysis and use of materials for individualized instruction of the exceptional child.

**EDUC 416 Methods of Teaching English as a Second Language (3)***
An introduction to theoretical and practical aspects of teaching English as a Second Language (written and oral) to non English speaking children.

**EDUC 432 Curriculum in Physical Education(3)**
Current curriculum theory and practice is examined. Factors affecting yearly planning, unit planning and lesson planning are identified.

**EDUC 441 Classroom Management (3)**
Avoiding discipline problems by arranging the classroom environment and course content as well as controlling the consequences for learning. Same as PSYC 460.

**EDUC 467 Advanced Problems in English as a Second Language (3)***
A comparative and contrastive analysis of the interrelationships of language, culture and learning in the classroom setting.

**EDUC 468 Linguistics and Grammar for the English as a Second Language Teacher (3)***
A survey of the structures of English as well as general issues in language such as language variation, non-verbal communication and uses of language.

**EDUC 470 Teaching Reading in the Content Area (3)**
Offers opportunity for skills and knowledge needed to evaluate and increase reading in specific content areas at all grade levels.

**EDUC 428 Linguistics and Grammar for the English as a Second Language Teacher (3)***
A survey of the structures of English as well as general issues in language such as language variation, non-verbal communication and uses of language.

**EDUC 429 Language Development and Acquisition (3)**
Theories of psycholinguistics and sociolinguistics applied to the acquisition of one or more languages in early childhood and school learning.

**EDUC 436 Advanced Problems in English as a Second Language (3)***
A comparative and contrastive analysis of the interrelationships of language, culture and learning in the classroom setting.

** Denotes ESL/Bilingual Education*

Curriculum And Instruction

Under-Graduate Studies

# English

Bachelor Of Arts

Administered by the Division of Humanities and Fine Arts.

The goal of the English program is to enable the student to develop the professional skills of the literary critic, scholar and teacher; to read intelligently and imaginatively; and to write and converse about literature knowledgeably and articulately.

The student who chooses English as a major should select courses according to the following guidelines.

1. Two semesters of Freshman English or composition and language study are a prerequisite for the major in Literature.

2. Thirty semester hours of courses at the sophomore level and above are required for the major, with a minimum of 24 hours at the upper level.

3. The major must include one course from each of these six groups:
   Group I, British Literature to 1800 (3 hours)
   Group II, British Literature since 1800 (3 hours)
   Group III, American Literature to 1865 (3 hours)
   Group IV, American Literature since 1865 (3 hours)
   Group V, Language, Grammar, and Composition (3 hours)
   Group VI, Literary Criticism (3 hours)

At least six hours of those outlined above must be devoted to a broad survey of literature, 3 hours in American and 3 in British. These may be taken as lower division work; if taken at U. T. Permian, select either 301 or 302, and either 321 or 322. Degree plans should also include a variety of genres, with courses in poetry, fiction and drama represented.

An English minor includes 18 semester hours at the sophomore level and above, which should be selected in consultation with an English advisor according to the principle of broad coverage outlined for the major. At least 12 semester hours must be at the upper level.

Students designating English as a second teaching field for secondary certification must satisfy all requirements for the major.

Sample Degree Plan

Junior Year

**Sample Degree Plan-English with Certification***

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| ENG 301 (Group III, survey) | 3 | ENG 402 (Group IV, poetry) | 3 |
| ENG 322 (Group I, survey) | 3 | ENG 471 (Group V) | 3 |
| ENG 362 (Group VI) | 3 | Course in Minor | 3 |

# English

| | | | |
|---|---|---|---|
| Course in Minor | 3 | EDUC | 6 |
| EDUC | 3 | Elective | 3 |
| Elective | 3 | | |
| | 18 | | 18 |

**First Semester**

| | |
|---|---|
| ENG 469 Shakespeare (drama) | 3 |
| ENG 432 (Group II, fiction) | 3 |
| Courses in Minor | 6 |
| EDUC | 6 |
| | 18 |

**Second Semester**

| | |
|---|---|
| ENG 412 | 3 |
| Course in Minor | 3 |
| EDUC | 3 |
| Student Teaching | 6 |
| | 15 |

Senior Year

*Degree plans vary depending upon a student's goals and preparation prior to enrolling at U. T. Permian Basin. Students should consult with their faculty advisors for specific degree planning.

Course Listing

**ENG 301 American Literature to 1865 (3)**
Chronological examination of writers, works and movements in fiction, nonfiction and poetry through 1865. (Group III; satisfies American literature survey requirement)

**ENG 302 American Literature Since 1865 (3)**
Chronological examination of writers, works and movements in fiction, nonfiction and poetry from 1865 to the present. (Group IV; satisfies American literature survey requirement)

**ENG 321 British Literature to 1800 (3)**
Chronological survey of major works in British literature from Beowulf to the literature of the Augustans (about 1800). (Group I; satisfies British literature survey requirement)

**ENG 322 British Literature Since 1800 (3)**
Chronological survey of major works of British literature from the Romantics (about 1800) to the Modern Period. (Group II; satisfies British literature survey requirement)

**ENG 340 Advanced Composition (3)**
Writing a series of papers of varying lengths involving a wide range of rhetorical situations. Emphasis is placed on the entire writing process, including pre-writing, drafting, and re-writing. All papers will be written on a word processor. Prerequisite: 6 hrs. of freshman composition or permission of the instructor. (Group V)

Under-Graduate Studies

# English

**ENG 351 Genre Studies: Short Fiction (3)**
Reading and critical analysis of British, European and American short fiction with emphasis on generic study and textual explication. (Group VI)

**ENG 352 Genre Studies:Poetry (3)**
Close reading and explication of representative poems in the Anglo-American tradition, with emphasis on analysis of poetic language and elements of form. No prerequisites. Recommended for all majors. (Group VI)

**ENG 353 Genre Studies: Drama (3)**
Reading and analysis of representative plays from Aeschylus to the present. Emphasis will be given to the development of dramatic traditions and to the uses later writers make of their predecessors. No prerequisites. (Group VI)

**ENG 371 The English Language (3)**
Survey of topics in modern linguistics as they pertain to English. Includes phonetics, phonology, morphology, theories of grammar, language origin and diversity, and the history of the English language. (Group V)

**ENG 372 English Grammar (3)**
A systematic study of English grammar with attention to both traditional and contemporary approaches to grammatical analysis. (Group V)

**ENG 401 19th Century American Poetry (3)**
Development and influence of indigenous American poetry. Analysis of the theories and practice of major poets. Course stops at 1900. (Group III)

**ENG 402 20th Century American Poetry (3)**
Development and influence of indigenous American poetry. Analysis of the theories and practice of major poets, 1900 to the present. (Group IV)

**ENG 405 American Drama (3)**
Historical development of American drama; types of dramatic literature and masterpieces in American drama. (Group IV)

**ENG 411 19th Century American Fiction (3)**
Masterpieces in American prose fiction, through the late 19th century. (Group III)

**ENG 412 20th Century American Fiction (3)**
Masterpieces in American prose fiction, late 19th century to the present. (Group IV)

**ENG 421 British Poetry to 1800 (3)**
Poetry as a literary genre through major works of British poetry from the Middle Ages to 1800. (Group I)

Under-Graduate Studies

# English

**ENG 422 British Poetry Since 1800 (3)**
Poetry as a literary genre through major works of British poetry from 1800 to the present. (Group II)

**ENG 425 British Drama to 1800 (3)**
Drama as a literary genre through major works of British drama from the Middle Ages to 1800. (Group I)

**ENG 426 British Drama Since 1800 (3)**
Drama as a literary genre through major works of British drama from 1800 to the present. (Group II)

**ENG 431 The Eighteenth-Century British Novel (3)**
The origin and development of the British novel from Defoe to Austen. Prerequisite: LIT 351 or consent of instructor. (Group I)

**ENG 432 The Nineteenth-Century British Novel (3)**
The development of the British novel in the nineteenth and early twentieth centuries. Prerequisite: LIT 351 or consent of instructor. (Group II)

**ENG 433 The Twentieth-Century British Novel (3)**
The development of the British novel in the twentieth century. Prerequisite: ENG 351 or consent of instructor. (Group II)

**ENG 450 The Bible as Literature (3)**
Selected books of both Old and New Testaments studied to develop an understanding of their variety and literary value. Some attention will be given to historical and geographical contexts. (Elective)

**ENG 452 Comparative Fiction Since 1800 (3)**
Novella and novel from 1800 to the present. Authors include major writers from Europe, Asia and Latin America. Works read in translation. (Elective)

**ENG 459 Studies in Literature (3)**
Specific periods, themes, authors or literary types. Contents vary according to the interest, needs and capabilities of the instructor and students. (Group depends on content)

**ENG 461 Literary Criticism (3)**
A study of the history and methods of literary criticism, from Plato to the present, as these are relevant to current theory and practice. (Group VI)

**ENG 469 Studies in a Major Author (3)**
Works of a major author in American, British, or world literature. (Group depends on content)

**ENG 471 The Teaching of Writing (3)**
Study of current theories and methods of teaching writing. Primarily intended for students seeking secondary certification. (Group V)

Under-Graduate Studies

# Finance

Bachelor Of Business Administration

Administered by the Division of Business Administration. Please refer to that section for general degree requirements.

Finance coursework provides an understanding of the financial structure of the U.S. economy. It includes monetary theory and practice, investment management principles (especially those used in operating major financial institutions and pension funds), and finance functions in industrial and commercial firms (with emphasis on portfolio management, insurance and real estate).

**The 3rd- and 4th-year requirements for the BBA in finance are included in the program outlined below:**

**Sample Degree Plan-Finance***

Sample Degree Plan
Junior Year

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| ACCT 300 | 3 | MNGT 310 | 3 |
| DSCI 302[1] | 3 | MNGT 311 | 3 |
| FIN 322 | 3 | ACCT 301 | 3 |
| MRKT 300 | 3 | MNGT 340[2] | 3 |
| FIN 320 | 3 | FIN 321 | 3 |
| | 15 | | 15 |

Senior Year

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| FIN 421 | 3 | MNGT 366 | 3 |
| ACCT 333 | 3 | FIN Electives | 9 |
| FIN Electives | 6 | | |
| Free Elective | 3 | Free Elective | 3 |
| | 15 | | 15 |

[1]DSCI 302 must be completed during the first semester at U. T. Permian Basin.

[2]MNGT 340 must be completed during the second semester at U. T. Permian Basin.

*Degree plans vary depending upon a student's goals and preparation prior to enrolling at U. T. Permian Basin. Students should consult with their faculty advisors for specific degree planning.

Course Listing

**FIN 310 Free Enterprise (3)**
Business and government interactions with emphasis on legislative and free enterprise attitudes and perceptions.

Under-Graduate Studies

# Finance

**FIN 320 Financial Management Principles (3)**
Business organization including corporate securities, financing through securities; expansion and combination including reorganization, receivership and dissolution and working capital and administration of incomes. Prerequisite: ACCT 300; DSCI 301.

**FIN 322 Commercial Banking (3)**
How banks, the Federal Reserve and U.S. Treasury interact to determine money supplies. Recent and current attempts to control inflation and unemployment.

**FIN 323 Financial Management Applications (3)**
Exploration of specific financial management problems such as financial forecasting, cash budgeting, lease versus borrow, bond refunding, and option pricing. Emphasis on structuring problems and solutions using spreadsheet analysis. Prerequisite: FIN 320.

**FIN 326 Financial Theory and Practice For Nonprofit Organizations (3)**
Financial management principles and practices of public, nonprofit organizations. Prerequisite: FIN 320.

**FIN 331 Real Estate (3)**
Real estate administration, financing, estimations, zoning and other environmental considerations.

**FIN 333 Insurance Principles and Practices (3)**
Life, casualty and property insurance. Prerequisite: FIN 320

**FIN 342 Risk Management (3)**
Treatment of risk and liability through retention, reduction and transfer. Prerequisite: FIN 320

**FIN 345 Evaluation and Appraisal of Real Estate (3)**
The theory and practice of property evaluation, cost estimation, investment earnings and forecasts, principles, and technology. Prerequisite: FIN 320, FIN 345

**FIN 420 Intermediate Financial Management (3)**
Topics oriented course for finance majors. Topics include leasing, working capital management, international finance, mergers, and bankruptcy as well as more in depth coverage of topics such as dividend policy, capital structure, leverage, and strategic financial decision making covered in FIN 320. Prerequisite: FIN 320.

Under-Graduate Studies

# Finance

**FIN 421 Investment Management (3)**
Securities analysis, portfolio management and capital budgeting decisions using both qualitative and quantitative economic measures.
Prerequisite: FIN 320.

**FIN 423 Macroeconomics: Financial Forecasting (3)**
Theory of employment, price level and growth rate. Relationship between accepted theories and actual data in recent years. Issues raised by controls.
Prerequisite: FIN 320.

**FIN 424 Financial Institutions (3)**
Funds flow in aggregate financial systems, structure of financial markets, interaction of aggregate financial factors, and policies and operations.
Prerequisite: FIN 320; FIN 322.

**FIN 445 Real Estate Finance and Analysis (3)**
Emphasis on the financial management of real estate assets in an institutional setting with special attention given to evaluation and control of risk and return tradeoffs by the decision maker. Prerequisite: FIN 320; FIN 345.

Under-Graduate Studies

# Geology

Bachelor Of Science

Administered by the Division of Science and Engineering. Please refer to that section for general degree requirements.

Studies in Geology are designed to prepare students for graduate work and for careers in the petroleum and mining industries. Those intending to pursue Geology as a teaching field should see the description of Earth Sciences.

**For the Bachelor of Science in Geology the following courses are required:**

| Subject | Semester Hours |
|---|---|
| English | 6 |
| Literature | 6 |
| U.S. History | 6 |
| U.S. and Texas Government | 6 |
| Calculus I and II | 6 |
| College Physics | 8 |
| Inorganic Chemistry | 8 |
| Physical and Historical Geology | 8 |
| FORTRAN or PASCAL | 3 |

**In addition to the required courses, the following are strongly recommended:**

For those desiring to specialize in paleontology:

| | |
|---|---|
| biology | 8 |

For those desiring to specialize in petroleum geology/organic geochemistry:

| | |
|---|---|
| organic chemistry | 6-8 |

For those desiring to specialize in geophysics or physical geology:

| | |
|---|---|
| 3rd semester physics | 4 |
| 3rd semester calculus | 3 |
| differential equations | 3 |

For those desiring to specialize in geochemistry or chemical geology, including petrology and ore deposits:

| | |
|---|---|
| analytical chemistry | 3-6 |
| differential equations | 3 |

**To provide a well-rounded background, the following distribution of coursework totaling 37 upper division credit hours is required for the degree.***

Group 1. Mineralogy+, petrology+, optical mineralogy+, petrography+, carbonate petrology, geochemistry, volcanology: a minimum of 13 hours.

Under-Graduate Studies

# Geology

Group 2. Paleontology+, stratigraphy and sedimentation+, sedimentology+, paleoecology, micropaleontology, carbonate depositional environments, clastic depositional environments: a minimum of 11 hours.

Group 3. Structural geology+, plate tectonics, geophysics: a minimum of 4 hours.

Group 4. Petroleum geology, well-site geology, groundwater hydrology, metallic mineral deposits+, nonmetallic mineral deposits, engineering geology: a minimum of 3 hours.

Group 5. Summer field geology+: 6 hours.

Noted courses (+) are required courses.

*In addition to the required geology courses, a minor in mathematics, chemistry, computer science, biology/life science or physics of at least 12 upper level credits is required.

*In addition to any specific listed prerequisites, physical and historical geology are prerequisites for all courses except GEOL 314 (Minerals and Rocks) and GEOL 323 (Environmental Geology).*

Course Listing

**GEOL 302 Geomorphology (3)**
Surface features of the globe, their form, nature, origin and development, and the changes they are undergoing.

**GEOL 303 Mineralogy (4)**
Identification, classification, and origin of minerals based on their chemical and physical properties and geologic association. Prerequisites: one year of inorganic chemistry and one year of physics.

**GEOL 304 Petrology (3)**
Study of the characteristics, identification in hand specimen, distribution, and origin of igneous, sedimentary, and metamorphic rocks.
Prerequisite: GEOL 303 or equivalent.

**GEOL 305 Structural Geology (4)**
Principles of structural geology, including theory of rock behavior under stress, and descriptions of major structural features. Prerequisites: one year of calculus and one year of physics.

**GEOL 306 Optical Mineralogy (3)**
Optical crystallography and identification of minerals using the polarizing microscope. Prerequisites: GEOL 303 or equivalent and one year of physics, including optics.

Under-Graduate Studies

# Geology

**GEOL 307 Introduction to Paleontology (4)**
History and evolution of life based on fossil evidence.

**GEOL 308 Stratigraphy and Sedimentation (4)**
Principles of stratigraphy and sedimentation including weathering, transport, deposition, and characteristics of sedimentary rocks and their correlation. Stratigraphic and paleotectonic development of North America and classical areas elsewhere in the world. Prerequisite: GEOL 303 or 314. Strongly recommended: GEOL 305 and 307.

**GEOL 314 Minerals and Rocks (3)**
Rock forming minerals and common igneous, sedimentary, and metamorphic rocks. Includes laboratory. Not for geology majors.

**GEOL 323 Environmental Geology (3)**
Relationships of earth science to human problems and the environment, especially geological problems associated with mass urban growth. Not for geology majors.

**GEOL 400 Field Geology (6)**
Field techniques for systematic geologic mapping utilizing topographic maps. Prerequisites: GEOL 304, 305, 307 and 308.

**GEOL 401 Skeletal Petrography (3)**
Identification of skeletal particles as seen in thin section.
Prerequisites: GEOL 306 and 307.

**GEOL 403 Carbonate Petrology (3)**
Description and classification of carbonate rocks. Recrystallization, diagenesis, and porosity formation. Prerequisite: GEOL 306.

**GEOL 405 Physics of the Earth (3)**
Physical properties of the solid earth. Applications to the plate tectonics theory. Prerequisites: GEOL 304 and 305, one year of calculus, and one year of physics.

**GEOL 406 Exploration Geophysics (3)**
Geophysical techniques employed for exploration work. Includes seismic, gravimetric, magnetic, and electrical methods. Prerequisite: GEOL 405.

**GEOL 408 Geochemistry (4)**
Geological and chemical processes that produced the observed distribution and abundances of the elements. Prerequisite: GEOL 304.

Under-Graduate Studies

# Geology

**GEOL 409 Sedimentology (3)**
Processes of weathering, transportation, and deposition of sediments, including low-temperature geochemistry and diagenesis. Characteristics and attributes of sedimentary rocks including formation of permeability and porosity and interpretation of the sedimentary record.
Prerequisites: GEOL 304, 305, and 308.

**GEOL 410 Micropaleontology (3)**
Microscopic study of fossils and principles underlying their use relative to correlation problems. Emphasizes fossil groups recoverable from well drill cuttings.
Prerequisite: GEOL 307.

**GEOL 412 Carbonate Depositional Environments (3)**
Modern carbonate depositional environments emphasizing their sedimentary and paleontological characteristics. Prerequisites: GEOL 304, 306, 307, 403, and 409.

**GEOL 414 Clastic Depositional Environments (3)**
Physical nature of modern and ancient siliclastic deposits emphasizing use of modern analogs in interpretation of ancient deposits.
Prerequisites: GEOL 304, 306, 307, and 409.

**GEOL 417 Petrography (3)**
Description, classification, and origin of igneous, sedimentary, and metamorphic rocks. Laboratory course utilizing thin sections and the polarizing microscope. Prerequisite: GEOL 304 and 306.

**GEOL 422 Oceanography (3)**
Geological, physical, chemical, and biological aspects of the marine environment, including marine geomorphology and depositional environments.

**GEOL 423 Nonmetallic Mineral Deposits (3)**
Origin, geologic association, and development of nonmetallic mineral deposits. Exploration and environmental factors controlling development and economic trends will be considered. Prerequisite: GEOL 304.

**GEOL 424 Metallic Mineral Deposits (3)**
Origin, characteristics, and migration of ore-bearing solutions; controls of ore deposition; and geologic associations, distribution, exploration for, and exploitation of metalliferous deposits. Prerequisites: GEOL 305 and 417.

**GEOL 425 Groundwater Hydrology (3)**
Theory and engineering concepts of groundwater flow and development; relationship of groundwater and surface water; occurrence of water in rocks; and basin analysis. Prerequisite: GEOL 409.

Under-Graduate Studies

# Geology

**GEOL 426 Engineering Geology (3)**
Application of geology to evaluation of construction problems and site investigations of major engineering projects, including case histories of major projects; characteristics and uses of geologic construction materials. Prerequisite: GEOL 425.

**GEOL 427 Petroleum Geology (3)**
Origin, nature, migration, and accumulation of petroleum; coal and oil shale; exploration for and exploitation of mineral fuel deposits. Prerequisites: GEOL 308 and 454.

**GEOL 431 Paleoecology (3)**
Principles, concepts, and techniques of environmental analysis and interpretation of marine and terrestrial fossil ecosystems. Prerequisite: GEOL 307.

**GEOL 440 Earth Resources and the Energy Crisis (3)**
Geology, origin, and general economics of mineral and fuel deposits, their importance to the national economy, and current problems of supply. Prerequisites: GEOL 303 or 314.

**GEOL 454 Well-Site Geology (3)**
Methods employed in the subsurface search for petroleum. Prerequisite: GEOL 304 and 305.

**GEOL 457 Volcanology (3)**
Volcanoes and volcanic rocks. Prerequisites: GEOL 305 and 417.

**GEOL 493 Research (1-4)**
Variable credit involving field, laboratory and/or library research in geological problem solving.

Under-Graduate Studies

# Health Science

## Pre-Professional

Professional schools in health sciences seek well-trained, versatile students who, in addition to displaying leadership, social maturity and human-relations skills, possess the physical, emotional and intellectual stamina required for a successful career in medicine, dentistry, osteopathy and others. Toward that end, undergraduate students should concentrate their studies in a primary area of interest, realizing that usually the professional school admissions committee is more interested in the quality and scope of the work than in the major field chosen.

Absolute requirements for professional schools are deliberately kept minimal, permitting students wider flexibility in choosing academic programs that best fit their individual interests. These requirements normally include at least one year of English, two years of chemistry and biology, one year of physics and one to two years of mathematics.

Concepts and vocabulary common to the sciences and basic to the study of medicine, are essential. In addition, a thorough understanding of the fundamentals of chemistry, physics, biology and mathematics is essential as most advances in medicine are based on developments in these disciplines.

Specific requirements may vary slightly among professional schools, making it prudent for students to identify early in their academic career the specific requirements established by the professional schools of their choice. Because of the extremely competitive nature of admission to the professional schools, students are strongly advised to pursue an undergraduate degree program that will permit several career alternatives.

Information on the requirements of specific schools, factors involved in the school admission process, finances, the admissions examination and other matters of interest to preprofessional students may be obtained from the Health Professions Advisory Committee of the university. Interested students should contact the Director of the Division of Science and Engineering.

Under-Graduate Studies

# History

Administered by the Division of Humanities and Fine Arts.

Bachelor Of Arts

The study of history represents man's attempt to understand the past, not only what happened but why it happened. It has been said that those who ignore history are doomed to repeat the mistakes of the past. Thus, the study of history leads to an understanding of man's present behavior, customs, and traditions and also provides a basis for understanding future developments.

History is an ideal major for students preferring a broad liberal arts education. It also provides good preparation for a number of careers including government, industry, writing, and other fields. History is a basic major for those preparing to teach history or social studies at all levels.

The history program provides preparation typical of baccalaureate degree programs in history elsewhere, while at the same time allowing flexibility so students may build an emphasis in an area or areas of special interest.

Students who have completed two courses in American history before enrolling at U. T. Permian Basin may include them in the 30 hours of credit in history required for majors.

While there are no specifically required courses for majors, students must complete at least one upper level course (3 semester-credit hours) in each of four fields: American history to 1900; twentieth-century American history; European history; Latin American history. It is desirable that these courses be completed during the first year of residence.

**Courses Satisfying Field Requirements**

1. American History to 1900

| | | |
|---|---|---|
| *HIST | 353 | Southwestern United States |
| *HIST | 371 | American Minorities |
| *HIST | 441 | Early American History |
| *HIST | 451 | History of American Thought, I |
| *HIST | 453 | The Old West |
| *HIST | 455 | The American South |
| *HIST | 456 | Trans-Mississippi West |
| *HIST | 461 | American Foreign Relations to 1920 |
| *HIST | 475 | Women in Early America |
| *HIST | 479 | Studies in American History |

Under-Graduate Studies

# History

2. Twentieth-Century American History

| | | |
|---|---|---|
| *HIST | 351 | Modern Texas |
| *HIST | 447 | Twentieth Century America to 1941 |
| *HIST | 448 | Twentieth Century America Since 1941 |
| *HIST | 452 | History of American Thought, II |
| *HIST | 462 | American Foreign Relations Since 1920 |
| *HIST | 468 | Business in Modern American |
| *HIST | 473 | Urban America |
| *HIST | 476 | Women in Modern America |
| *HIST | 479 | Studies in American History |

3. European History

| | | |
|---|---|---|
| HIST | 311 | Ancient Near East |
| HIST | 325 | Early Modern Europe |
| HIST | 326 | Europe Since 1815 |
| HIST | 331 | Tudor-Stuart England |
| HIST | 332 | Great Britain Since 1714 |
| HIST | 436 | Nazi Germany |
| HIST | 439 | Studies in World History |

4. Latin American History

| | | |
|---|---|---|
| HIST | 314 | Modern Latin America |
| HIST | 411 | Modern Mexico |
| HIST | 439 | Studies in World History |

Students majoring in History also must complete one course of a seminar format, preferably during their second year. Other courses are selected by students and their advisor in the context of background, preparation, interests, needs and professional plans.

A minor in history consists of 18 hours, 12 of which must be at the upper level.

Students declaring history as a second teaching field must fulfill all requirements for the major in history.

Students needing to satisfy Texas state statute requirements may do so by successfully completing any two United States or American history courses marked with a *

Course Listing

**HIST 311 Ancient Near East (3)**
A survey of the ancient civilizations arising from the Mesopotamian and Mediterranean regions, including Egypt, the Hebrews and other small nations, and the Hellenistic world.

Under-Graduate Studies

# History

**HIST 314 Modern Latin America (3)**
Political, social, cultural and economic development of South America and Caribbean from Independence to the present.

**HIST 325 Early Modern Europe (3)**
Major social, economic, political, and cultural developments in Western Europe from the sixteenth through eighteenth centuries.

**HIST 326 Europe Since 1815 (3)**
Major social, economic, political, and intellectual developments in Western Europe from 1815 to the present.

**HIST 331 Tudor-Stuart England (3)**
Political, religious, economic, and social development of England between 1485 and 1714.

**HIST 332 Great Britain Since 1714 (3)**
Political, economic, and social development of Great Britain and its empire from 1714 to the present.

***HIST 351 Modern Texas (3)**
Political, social, economic, and historical development of modern Texas. Includes field work in state and local history.

***HIST 353 Southwestern United States (3)**
Development of analytical and writing skills through use of primary source materials relating to regional history. Training and practice in oral history techniques.

***HIST 371 American Minorities (3)**
Experiences and contributions of minorities in the development of American political and cultural traditions and institutions.

**HIST 411 Modern Mexico (3)**
Political, social, cultural, and economic development of Mexico from Independence to the present.

**HIST 436 Nazi Germany (3)**
Seminar for reading and research about and discussion of the rise and fall of Hitler's Third Reich.

**HIST 439 Studies in World History (3) (title may vary)**
Reading, research and discussion devoted to selected topics in world history.

***HIST 441 Early American History (3)**
Founding and development of the North American colonies through Independence and the administration of John Adams.

Under-Graduate Studies

# History

***HIST 445 America in the 19th Century (3)**
Major political, economic, and social trends to 1901.

***HIST 447 Twentieth Century America to 1941 (3)**
Political, economic and social domestic affairs contributing to the twentieth century development of industrial, urban America through the New Deal.

***HIST 448 Twentieth Century America Since 1941 (3)**
Political, economic, and social affairs contributing to the twentieth century development of industrial, urban America since World War II.

**HIST 451 History of American Thought I (3)**
English antecedents, Puritan theology, the Enlightenment, transcendentalism, and ante bellum thought.

**HIST 452 History of American Thought II (3)**
Naturalism and social Darwinism, pragmatism and experimentalism, and other aspects of 20th-century thought.

**HIST 453 The Old West (3)**
Social, economic, and political development of the early American frontiers as they developed to the Mississippi River.

***HIST 455 The American South (3)**
Social, economic, political, and intellectual trends in the historic and modern South.

***HIST 456 Trans-Mississippi West (3)**
Social, economic, and political development during the nineteenth and twentieth centuries.

***HIST 461 American Foreign Relations to 1920 (3)**
Foreign policy and relations involved in the development of America from the Revolution through World War I.

***HIST 462 American Foreign Relations Since 1920 (3)**
Foreign policy and relations involved in the development of America in the period from 1920 to the present.

**HIST 463 U.S.-Latin America Relations to 1920 (3)**
Historical literature covering major developments and problems in relations between the United States and Latin American nations to 1920.

**HIST 464 U.S.-Latin American Relations Since 1920 (3)**
Historical literature covering major developments and problems in relations between the United States and Latin American nations since 1920.

Under-Graduate Studies

# History

***HIST 468 Business in Modern America (3)**
Modern practice and theory; the role of entrepreneur and government regulation since the Civil War.

***HIST 473 Urban America (3)**
The processes of urbanization in the United States from its origins to the present.

**HIST 474 Historic Preservation (3)**
Examination of the methods, goals, and contributions of the preservation and restoration of the built environment in material culture and public history.

***HIST 475 Women in Early America (3)**
Changing nature of the family and the role of women in America from the seventeenth to the mid-nineteenth century.

***HIST 476 Women in Modern America (3)**
Changing nature of the role of women in America from the late nineteenth century to the present.

***HIST 479 Studies in American History (3)**
Reading, research and discussion devoted to selected topics in history.

***These courses meet the State of Texas requirements for History.**

Under-Graduate Studies

# Humanities

Bachelor Of Arts

Administered by the Division of Humanities and Fine Arts.

The Bachelor of Arts degree program in Humanities is multidisciplinary and is designed for students who desire a liberal education but do not wish to specialize. The program focuses primarily on humanistic studies as they have been traditionally conceived.

The humanities concentration is considered a wise choice for a student who is non-vocationally oriented or who is planning postgraduate study in law, theology, the liberal arts, and certain other fields.

A degree in humanities requires 120 semester credits, including 54 credits in two to four of the following fields: art, foreign language, history, English, (sophomore level and above) music, philosophy and theatre.

At least two-thirds of courses in the humanities concentration must be taken at the upper level. The specific program must be devised by the student in consultation with the advisor to meet the broad requirements outlined above. It should, in addition, demonstrate intellectual coherence and reflect the student's thoughtful consideration of his or her educational background and professional and intellectual goals.

No minor is required in the humanities concentration.

Under-Graduate Studies

# Kinesiology

Bachelor Of Arts

Administered by the Division of Behavioral Science and Kinesiology. Please see that section of the catalog for general degree requirements.

Kinesiology is the study of human movement. The discipline of kinesiology incorporates numerous subdisciplines which assist in developing our understanding of human movement at work and at play. These subdisciplines include exercise physiology, anatomical and mechanical analysis of movement, sport and exercise psychology, sociology of sport, motor control, motor learning, motor development, sport history, and philosophy of sport and physical activity. Students majoring in kinesiology have an opportunity to study human movement from all of these perspectives and thereby develop an understanding of how human movement affects and is affected by variables related to each subdiscipline.

Kinesiology is not a profession, but a body of knowledge applicable to many professions ranging from teaching to therapy. A major in kinesiology is appropriate for students interested in elementary and/or secondary physical education and coaching, adult fitness and wellness, youth sports, physical therapy, sport psychology, athletic training, sports medicine, and graduate study in kinesiology, medicine and allied health. Since coursework beyond the Bachelor of Science degree in Kinesiology is frequently required for each of these interest areas, students are advised to discuss with their advisors their professional aspirations early in their degree programs at The University of Texas of the Permian Basin.

Regardless of students' reasons for pursuing an undergraduate degree in kinesiology, they are required to take a series of major core courses. In addition, all students are expected to demonstrate competence in a number of forms of movement (sport, dance, etc.). Interest in a particular subdiscipline or profession is reflected in the specialization area courses that students take. These specialization areas include (1) Pre-Professional Physical Education, (2) Corporate and Commercial Fitness, and (3) Exercise and Sport Studies. The culminating experience for all students is completion of an independent study and practicum experience. Through this experience, students have the opportunity to gain expertise and practical experience in a specific professional area.

A Bachelor of Science degree with a major in Kinesiology requires a minimum of 120 semester credits. The major requires a minimum of 36 semester credit hours of academic coursework, at least 18 of which must be at the upper level. Students must additionally demonstrate competence in at least 15 forms of movement. A minor consisting of 18 semester credits, of which 12 must be upper level, is required. The choice of a minor should be made to complement the student's interests and professional goals.

**Kinesiology majors must complete the following general education requirements:**

Under-Graduate Studies

# Kinesiology

| Subject | Semester Hours |
|---|---|
| English | 6 |
| Literature | 6 |
| Government, U.S. | 6 |
| U.S. History | 6 |
| Biology | 4 |
| Human Anatomy and Physiology | 8 |
| College Algebra | 3 |
| Speech | 3 |

As part of their general education, students should take as many activity courses (sport, dance, aquatics, etc.) as possible, particularly in areas in which they are least competent. Additional courses in biology and computer science are recommended also.

**Kinesiology majors and those seeking certification in physical education must complete the following core course requirements:**

| | |
|---|---|
| KINE 340 Analysis of Human Movement | 3 |
| KINE 350 Physiology of Exercise | 3 |
| KINE 402 History and Philosophy of Sport and Physical Activity | 3 |
| KINE 440 Sociology of Sport and Physical Activity | 3 |
| KINE 420 Psychology of Sport **or** KINE 450 Psychology of Exercise | 3 |
| KINE 430 Motor Learning and Control **or** KINE 310 Motor Development | 3 |
| KINE 309 Forms of Movement | variable credit |

Required Courses For Specialization Areas

**Kinesiology majors must complete course requirements for one of the following specialization areas:**

1. **Pre-Professional Physical Education:** Students wishing to enter the profession of physical education and/or coaching are required to complete the following courses.

| | | | |
|---|---|---|---|
| * | KINE 310 | Motor Development | 3 |
| | KINE 311 | Exercise, Nutrition and Weight Control | 3 |
| | KINE 330 | Physical Activity for Handicapping Conditions | 3 |
| | KINE 370 | Athletic Training | 3 |
| | KINE 400 | Measurement of Physical Performance and Achievement | 3 |
| * | KINE 430 | Motor Learning and Control | 3 |
| ** | KINE 491 | Independent Study in Kinesiology | 3 |
| ** | KINE 492 | Practicum in Kinesiology | 3 |

* The course not taken to meet the core course requirement must be taken.
** If student teaching has been successfully completed, these two courses

# Kinesiology

may be waived by the major faculty advisor. Students must, however, take one additional three credit elective in the discipline of kinesiology in order to satisfy the 36 credit hour major requirement.

Students desiring to pursue teacher certification in the State of Texas are referred to the section of this catalog titled "Education" and are advised to seek the advice and council of the university's Teacher Certification Officer.

2. **Corporate and Commercial Fitness:** Students desiring to enter the field of commercial and corporate fitness are required to successfully complete the following courses.

| | | |
|---|---|---|
| KINE 311 | Exercise, Nutrition and Weight Control | 3 |
| KINE 370 | Athletic Training | 3 |
| KINE 400 | Measurement of Physical Performance and Achievement | 3 |
| KINE 460 | Exercise for Special Populations | 3 |
| KINE 491 | Independent Study in Kinesiology | 3 |
| KINE 492 | Practicum in Kinesiology | 3 |

3. **Sport and Exercise Studies:** Students wishing to enter other professions related to the discipline of kinesiology, such as sport psychology, sport management, and sport media, are required to successfully complete the following courses.

| | | |
|---|---|---|
| KINE 311 | Exercise, Nutrition and Weight Control | 3 |
| KINE 491 | Independent Study in Kinesiology | 3 |
| KINE 492 | Practicum in Kinesiology | 3 |

Nine additional credit hours in kinesiology or related disciplines are required for this specialization area. Beyond the basic kinesiology degree requirements, students are encouraged to design, with the aid of a faculty advisor, a degree program that will satisfy their personal and professional objectives. Students are urged to consult with their faculty advisor for specific degree planning early in their academic career and as needed throughout their tenure at The University of Texas of the Permian Basin.

Course Listing

**KINE 309 Forms of Movement** **(1)**
The development of performance and knowledge competencies in selected combinations of sports, dance, aquatics, and other forms of movement as set forth in the Forms of Movement Handbook (see Forms of Movement Coordinator).

**KINE 310 Motor Development** **(3)**
An examination of the factors affecting physical growth, those influencing the acquisition of fundamental motor skills, and the effects of aging upon physical performance.

Under-Graduate Studies

# Kinesiology

**KINE 311 Exercise, Nutrition and Weight Control** (3)
Introduction to the basic factors which affect and control the development of total physical fitness, including diet, nutrition and weight control. Students will have the opportunity to learn to evaluate and write their own lifetime cardiovascular fitness, strength, flexibility, diet, nutrition and weight control programs.

**KINE 330 Physical Activity for Handicapping Conditions** (3)
Introduction to various handicapping conditions with particular emphasis on their impact upon an individual's ability to perform sports and other physical activities. The nature of appropriate physical activity programs for handicapped individuals is explored.

**KINE 340 Analysis of Human Movement** (3)
Integration of skeletal and neuromuscular anatomy and physiology with mechanical principles of human movement to structurally and prescriptively analyze movement patterns for performance improvement. Prerequisite: LFSC 350 and 351 (4 credits) or equivalent.

**KINE 350 Physiology of Exercise** (3)
Physiological functioning of the human body during physical stress to include muscle strength, cardiorespiratory endurance, environmental effects and conditioning programs. Laboratory equipment used to collect data. Prerequisite: LFSC 352 and 353 (4 credits) or equivalent.

**KINE 359 Lifetime Sports** (3)
Opportunity to obtain skill and knowledge of a lifetime sport. Sections include bowling, golf, tennis, swimming, racquetball and others.

**KINE 360 Coaching in Sports** (3)
Coaching profession as a multidimensional role in education. Interpersonal relationships, societal implications, philosophy, coaching strategies, principles of training, organization, administration, etc.

**KINE 370 Athletic Training** (3)
Prevention and treatment of athletic injuries, including recognition, techniques of taping, therapeutic modalities, rehabilitation of injuries and athletic training room management. Prerequisite: LFSC 350 and 351 (4 credits) or equivalent.

**KINE 400 Measurement of Performance in Sport and Exercise Sciences** (3)
A comprehensive overview of the statistical techniques, computer applications, and evaluation procedures utilized by kinesiology professions in applied and research settings. Prerequisite: College Algebra.

**KINE 402 History and Philosophy of Sport and Physical Activity** (3)
The history and philosophy of sport and physical activity throughout world history are examined. Special attention is given to the development of a personal philosophy of sport and ethical practices.

Under-Graduate Studies

# Kinesiology

**KINE 420 Psychology of Sport** (3)
Concepts in psychology as applied to an individual's involvement in sport and other forms of competitive physical activity. Emphasis on motivation, stress management, personality theory, performance enhancement, and group dynamics.

**KINE 430 Motor Learning and Control** (3)
Variables influencing the control and learning of movement skills. Emphasis on the neural, physical, and behavioral aspects of motor control and the acquisition of skilled movements as a result of practice.

**KINE 440 Sociology of Sport and Physical Activity** (3)
The role of sport in society is examined. Special attention is given to a critical examination of abuses in modern sport and to social influences which act to modify sport.

**KINE 450 Psychology of Exercise** (3)
Concepts in psychology applied to an individual's involvement in exercise. Emphasis on theoretical models and methods for assessing exercise adherence. Investigation of methods and strategies for behavior intervention and program development to promote adherence to exercise programs.

**KINE 460 Exercise for Special Populations** (3)
Examination of the unique physiological attributes one must consider when prescribing exercise for individuals with specific diseases and specialized health considerations, including rheumatoid arthritis, diabetes, chronic respiratory disorders, cardiovascular disease, hypertension, obesity, and pregnancy.

**KINE 491 Independent Study in Kinesiology** (3)
Design of a research project in the area of kinesiology which includes professional involvement with individuals in an exercise and/or sport setting. A proposal of the research project is to be developed which includes a problem statement, a review of literature and a concise description of the methods used to collect and analyze data. The written proposal is submitted to the faculty of the Department of Kinesiology followed by a brief oral presentation.

**KINE 492 Practicum in Kinesiology** (3)
Using the research project proposal developed in the independent study, conduct the study and collect and analyze data. The research methodology must include professional involvement over time with individuals in an exercise and/or sport setting. The results of the project will be submitted to the faculty of the Department of Kinesiology in a brief oral presentation and in the form of a journal-ready manuscript.

Under-Graduate Studies

# Land Management

Bachelor Of Business Administration

Administered by the Division of Business Administration. Please refer to that section for general degree requirements.

The key to the past, present and future of economic development in the Permian Basin, the United States and, indeed, much of the world is land/resource information. Land managers are those specialists who assemble land information which includes land ownership, taxation, assessment, presence of minerals, soil types, rights-of-way, spatial relationships and economic potential. Land managers gather, organize and apply the knowledge generated by planners, explorers, legislators, engineers, insurers, appraisers, lenders, builders and surveyors to effect transactions between buyers and sellers of land that result in the creation of resources.

Successful transactions dealing with land may employ a range of information to include physics, chemistry or geology of an oil field and such labor intensive activities as searching land titles and assessment data. The background of information applied by land managers may include geodetic and earth-resource satellites, aerial photogrammetry and computers to city, county, state and national land and resource records.

In brief, land management, especially throughout the Permian Basin, makes up a significant part of an economy based on mineral exploration, production and right-of-way. Land management requires skills and technical knowledge in the areas of land acquisition encompassing minerals, royalties, rentals, titles, tax and record maintenance. Individuals who have made land management their career have acquired their expertise through experience, apprenticeship programs or formal education. Most agree that the ideal preparation is a mix of practical experience built upon a formal university program.

With this career goal in mind, the Division of Business Administration offers a Bachelor of Business Administration in Land Management. Although emphasis in the program at U. T. Permian Basin might be placed on petroleum exploration and acquisitions, the concepts, techniques and skills have carry-over applications for other mineral development activities and areas. Importantly, the breadth of knowledge and techniques useful to land managers when combined with a need to meet the requirements for a BBA degree make the program highly structured and leave little room for electives. At U. T. Permian Basin, the program requires 125 semester credit hours.

# Land Management

**Sample Degree Plan-Land Management***

| First Semester | | Second Semester | |
|---|---|---|---|
| MNGT 310 | 3 | MNGT 311 | 3 |
| MRKT 300 | 3 | FIN 320 | 3 |
| MRKT 407 | 3 | BLAW 321 | 3 |
| DSCI 302[1] | 3 | ACCT 300 | 3 |
| GEOL 315 | 6 | MNGT 340[2] | 3 |
| | 18 | | 15 |

| First Semester | | Second Semester | |
|---|---|---|---|
| FIN 345 | 3 | GEOL 308 | 4 |
| ECON 411 | 3 | ENGR 424 | 3 |
| ACCT 333 | 3 | MNGT 366 | 3 |
| ECON 415 | 3 | BLAW 322 | 3 |
| | | MNGT SEMINAR | 3 |
| | 12 | | 16 |

*Must complete both historical geology and physical geology before enrolling in the geology courses listed in degree plan.

[1]DSCI 302 must be completed during first semester at U. T. Permian Basin.

[2]MNGT 340 must be completed during second semester at U. T. Permian Basin.

Sample Degree Plan

Junior Year

Senior Year

Under-Graduate Studies

# Life Science

## Bachelor Of Science

Administered by the Division of Science and Engineering. Please refer to that section for general degree requirements.

Courses in life science apply to the Bachelor of Science degree with a major in Life Science, to a minor in Life Science, and to the first and second teaching fields in education. The courses also may be used as electives in other degree programs. Programs in life science provide preparation for careers in elementary, secondary and college teaching; research in basic and applied biological sciences; medicine; veterinary medicine; dentistry and other health-related fields. Life science is a good supporting field for majors in chemistry, geology, psychology, anthropology, physical education and the behavioral sciences.

**It is recommended that the following courses be completed prior to enrolling at U. T. Permian Basin.**

| Subject | Semester Hours |
|---|---|
| English Composition | 6 |
| Literature (or equivalent) | 6 |
| U.S. History | 6 |
| American and State Government | 6 |
| Inorganic Chemistry | 8 |
| Biology | 8 |
| College Algebra (or equivalent) | 3 |

Preprofessional students in the health sciences should include such other lower level courses as are required for admission to specific professional schools. Students who desire to use Life Science as the minor field of study should complete one year of biology prior to enrolling at U. T. Permian Basin. Students transferring credits to U. T. Permian Basin in clinical courses such as nursing, medical technology and other allied health areas should consult with the Life Science chairman to determine the number of credits that may apply toward a degree. The Life Science faculty will help students design programs of study to satisfy specific career objectives.

## Preprofessional Studies

The Life Science program includes two distinct plans. Plan A is for students planning to enter graduate school or professional school, including medicine, dentistry, veterinary medicine, medical technology and other health professions. This preprofessional degree plan includes a minimum of 36 semester credits in the major with at least 28 credits of upper level courses including LFSC 300, 301, 320, 321, 440, 441, 442, 452, and 453. One year each of physics, inorganic chemistry, organic chemistry and calculus is required; it is **strongly** recommended that these be taken **prior** to enrolling at U. T. Permian Basin.

Under-Graduate Studies

# Life Science

Teacher Certification

Plan B is for students who are in the teacher certification program. A first or second teaching field in Life Science with elementary or secondary teacher certification includes 24 semester credits in life science of which 18 must be upper-level courses. LFSC 303, 343 or 440, 350, 351, 442, and 454-455 or 472-473 or their equivalents are required. Students desiring secondary certification (either first or second teaching field) must include one year of inorganic chemistry with laboratory and one semester of organic chemistry with laboratory. For elementary certification, one year of inorganic chemistry with laboratory is required.

General Studies

Students not following either plan A or B must complete 36 credit hours in the major with at least 24 upper level credits. One semester each of calculus and organic chemistry will normally be required. Students planning a major in Life Science should consult with their faculty advisor to finalize a degree plan no later than the first semester of enrollment.

Minor

A minor in Life Science consists of 18 semester credit hours of which 12 must be upper level. It must include one course in genetics and one in evolution.

*All courses in life science require one year (two semesters) of basic college biology, with laboratory, and college chemistry, with laboratory, except as otherwise noted under the course descriptions.*

**LFSC 300 Microbiology (3)** **SP**
Growth, morphology, metabolism and ecology of microorganisms.

**LFSC 301 Microbiology Laboratory (1)** **SP**
Techniques for study of microorganisms. Corequisite: LFSC 300.

**LFSC 303 Contemporary Human Health (3)**
Biological basis of major health problems related to nutrition, exercise and environment. No prerequisite.

**LFSC 304 Environmental Science (3)**
Man's impact on the physical and biotic structures of the environment. No prerequisite.

**LFSC 307 Parasitology (3)**
Host-parasite relationships and survey of animal parasites of medical and veterinary importance. Offered on demand.

**LFSC 320 Cell Biochemistry (3)** **FA**
Structure, function and integration of cell components. Prerequisite or corequisite: one semester of organic chemistry.

Under-Graduate Studies

# Life Science

**LFSC 321 Cell Biochemistry Laboratory (1)** **FA**
Quantitative experiments and techniques in the study of cellular activities. Prerequisite or corequisite: LFSC 320.

**LFSC 330 Plant Morphology (1)** **SP**
Structure, development, reproduction and relationship of the major plant groups. Prerequisite: one course of lower-division biology.

**LFSC 331 Plant Morphology Laboratory (3)** **SP**
Morphology and taxonomy of the major plant groups.
Corequisite: LFSC 330.

**LFSC 343 Human Genetics (3)** **FA**
Mechanisms of inheritance of human traits. Not for preprofessional life science majors (Plan A).

**LFSC 350 Human Anatomy (3)** **FA**
Human anatomical systems and their functions with special emphasis on the skeletal, muscular, nervous, circulatory and respiratory systems. Primarily for physical education majors and teacher certification. Prerequisite: 4 credits of lower division biology.

**LFSC 351 Human Anatomy Laboratory (1)** **FA**
Anatomy of the human and cat. Corequisite: LFSC 350.

**LFSC 352 Human Physiology (3)** **SP**
The physiology of human cells, tissues, and systems. Primarily for physical education majors and teacher certification. Prerequisites: 4 credits of lower-division biology; one year of general chemistry recommended.

**LFSC 353 Human Physiology Laboratory (1)** **SP**
Physiological studies to illustrate the properties and functions of human cells and systems. Corequisite: LFSC 352.

**LFSC 398 Science Seminar (1)**
Interaction and small group discussions of varied topics in life science.

**LFSC 401 Virology (3)**
Structure, composition, replication and host interactions of animal, plant and bacterial viruses. Prerequisite: LFSC 300 or 320 and 440; one semester of organic chemistry. Offered alternate years.

**LFSC 423 Immunology (3)**
Structure and function of the mammalian immune system.
Prerequisite: LFSC 300, 320, and 440. Offered alternate years.

Under-Graduate Studies

# Life Science

**LFSC 440 Genetics (3)** **FA**
Structures and functions of hereditary material, emphasizing recent developments. Prerequisite: LFSC 300, 320.

**LFSC 441 Laboratory in Genetics (1)** **FA**
Laboratory experiences in manipulation of genetic systems and interpretation of data. Prerequisite: LFSC 301 or equivalent; Corequisite: LFSC 440.

**LFSC 442 Evolution (3)** **SP**
Population variation and mechanism of evolution and speciation. Prerequisite: 8 credits of biology; Prerequisite: one course in genetics.

**LFSC 452 Animal Physiology (3)** **FA**
Development, function and mechanism of action of the major physiological systems in animals. Prerequisite: LFSC 320.

**LFSC 453 Animal Physiology Lab (2)** **FA**
Experiments and demonstrations of physiological phenomena. Corequisite: LFSC 452.

**LFSC 454 Animal Behavior (3)** **SP**
Control and physiological basis of animal behavior. Offered alternate years.

**LFSC 455 Animal Behavior Laboratory (1)** **SP**
Experimental studies to observe and quantify the behavior of animals. Corequisite: LFSC 454. Offered alternate years.

**LFSC 456 Endocrinology (3)**
The endocrine system and control of bodily functions. Prerequisite: LFSC 352 or equivalent.

**LFSC 472 Ecology (3)** **SP**
Analysis of the principles of population and community ecology. Prerequisite: 8 credits in chemistry. Offered alternate years.

**LFSC 473 Ecology Laboratory (1)** **SP**
Experimental studies to illustrate population and community ecology techniques. Corequisite: LFSC 472. Offered alternate years.

**LFSC 475 Field Biology (3-6)**
Field problems in the Permian Basin. Prerequisite: 12 credits of biology. Offered summers only.

Under-Graduate Studies

# Management

Bachelor Of Business Administration

Administered by the Division of Business Administration. Please refer to that section for general degree requirements.

The chief goal of the Management program is to give students an understanding of the nature and capabilities of human and physical resources. An appreciation of management principles and practices is essential for students who intend to enter careers as administrators, executives, production managers, management consultants or entrepreneurs. This degree requires 123 semester credit hours.

Students pursuing a Bachelor of Business Administration in Management receive a broadly based general business education before specializing in an area of professional concentration. Broad preparation assists graduates in preparing to meet the diverse challenges of personal as well as professional life.

Lower level requirements have been outlined in the introductory section to the Division of Business Administration.

**Upper level requirements consist essentially of the following:**

Sample Degree Plan

**Sample Degree Plan-Management***

Junior Year

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| ACCT 300 | 3 | FIN 320 | 3 |
| DSCI 302[1] | 3 | MNGT 340[2] | 3 |
| MNGT 310 | 3 | MNGT 312 | 3 |
| MRKT 300 | 3 | ECON 300-400 | 3 |
| MNGT 311 | 3 | ACCT 333 | 3 |
| | 15 | | 15 |

Senior Year

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| MNGT 370 or 315 | 3 | MNGT 366 | 3 |
| MNGT 320 or 322 | 3 | Business Elective | 6 |
| Free Elective | 3 | Management Elective | 3 |
| Management Elective | 6 | Free Elective | 3 |
| | 15 | | 15 |

[1]DSCI 302 must be completed by the end of the first semester at U. T. Permian Basin.

[2]MNGT 340 must be completed by the end of the second semester at U. T. Permian Basin.

Under-Graduate Studies

# Management

Course Listing

**MNGT 310 Management Concepts and Organizational Theory (3)**
Fundamental concept of management including principles of administration, modern organization theory, goal-setting, leadership and decision-making.

**MNGT 311 Business Communications (3)**
Communication workshop designed to improve the student's ability to communicate. Emphasis on writing memos, letters, reports and resumes with force, clarity and conciseness. Effective public speaking stressed.

**MNGT 312 Personnel Functions (3)**
Principles and practice in personnel relations including topics such as recruiting, training, wage and salary administration, and manpower planning. Prerequisite: MNGT 310.

**MNGT 315 Social and Ethical Issues in Business (3)**
Explores the role of business in contemporary society with respect to economic, social, political and technological problems. Case evaluation and discussion designed to develop policies for socially responsible management. Prerequisite: MNGT 310.

**MNGT 320 Industrial Relations and Collective Bargaining (3)**
Interpretations of collective bargaining agreements, their negotiation and administration, and methods for settling disputes. Same as ECON 320. Prerequisite: MNGT 310.

**MNGT 322 Labor-Management Relations (3)**
Current employment relationships. Compares union-management objectives, functions and structures. Labor history, collective bargaining, industrial conflict and wage problem. Prerequisite: MNGT 310.

**MNGT 324 Labor Legislation (3)**
Legislation in labor and manpower management. Topics from Taft-Hartley Act, anti-injunction statutes, fair employment practices and government contract law. Prerequisite: MNGT 310 and MNGT 320 or 322..

**MNGT 340 Introduction to Management Science (3)**
Mathematical models in manufacturing management. Linear models, financial-decision models, production-planning models, inventory control, and production smoothing. Prerequisite: DSCI 301.

**MNGT 341 Intermediate Operations Research (3)**
Linear and dynamic programming and introduction to stochastic processes in operations management. Prerequisite: MNGT 340.

Under-Graduate Studies

# Management

**MNGT 361 Introduction to Research (3)**
Multidisciplinary introduction to research process. Both library and field research. Emphasis on data gathering, data analysis and interpreting research conclusions. Prerequisite: basic course in student's area of specialization and DSCI 301 or equivalent.

**MNGT 366 Management Strategy/Policy (3)**
Strategy/policy development and implementation in organizations. Integrates and applies knowledge gained from multiple disciplines. Case evaluation and discussion are stressed. Prerequisite: completion of at least 42 upper level hours of business courses including all other business core courses.

**MNGT 370 Public Policies Toward Business (3)**
The effects of government action on business decision-making and private enterprise. Anti-trust legislation, the impact on business of the regulatory agencies and public enterprise. Prerequisites: MNGT 310.

**MNGT 457 Association Management (3)**
Associations in societal and community development emphasizing management planning, directing and managing volunteer labor found in associations and related activities. Prerequisites: MNGT 310, MRKT 300.

**MNGT 460 Problems in Small-Business Management (3)**
Fundamental concepts, theories and practices of small-business management. Supervised projects with local firms are conducted. Prerequisites: MNGT 310, FIN 320 and permission of instructor.

# Marketing

Bachelor Of Business Administration

Administered by the Division of Business Administration. Please refer to that section for general degree requirements.

The Bachelor of Business Administration in Marketing is designed to provide a fundamental knowledge of the nature, structure, institutions and functions of marketing including physical distribution. The program is intended to prepare students for entry into marketing management careers in either profit or non-profit organizations. The program requires a minimum of 123 semester hours and includes:

Sample Degree Plan

Junior Year

| First Semester | | Second Semester | |
|---|---|---|---|
| MRKT 300 | 3 | MRKT 312 | 3 |
| ACCT 300 | 3 | MNGT 340[2] | 3 |
| ECON 300/400 | | FIN 320 | 3 |
| Elective | 3 | MNGT 310 | 3 |
| DSCI 302[1] | 3 | MRKT 315 | 3 |
| ACCT 333 | 3 | | |
| | 15 | | 15 |

Senior Year

| First Semester | | Second Semester | |
|---|---|---|---|
| MNGT 311 | 3 | MNGT 366 | 3 |
| MRKT 414 | 3 | MRKT Electives | 9 |
| MRKT 407 or 408 | 3 | Business Elective | 3 |
| Free Elective | 3 | | |
| | 15 | | 15 |

[1]DSCI 302 must be completed during the first semester at U. T. Permian Basin.

[2]MNGT 340 must be completed during the second semester at U. T. Permian Basin.

Course Listing

**MRKT 300 Principles of Marketing (3)**
Survey of marketing fundamentals with focus upon product, price, promotion and distribution within the context of business decision-making. Prerequisite: 3 semester hours credit in both microeconomics and macroeconomics.

**MRKT 312 Marketing Management (3)**
Emphasis upon strategic furthering, and marketing strategy and tactics within the context of case studies of corporate successes and failures. Prerequisite: MRKT 300.

**MRKT 314 Physical Distribution Management (3)**
Analysis development and management of integrated physical distribution systems. Transportation, warehousing, inventory control, material-handling and industrial location. Prerequisite: MRKT 300.

Under-Graduate Studies

# Marketing

**MRKT 315 Consumer Behavior (3)**
Concepts of consumer behavior. Emphasis on psychological, sociological and economic variables and their effects on purchasing behavior. Prerequisite: MRKT 300.

**MRKT 316 Marketing Channel Systems (3)**
Appraisal and diagnosis, organization and planning, action, and control of commodity and product-service distribution systems, marketing analysis and demand stimulation. Prerequisite: MRKT 300.

**MRKT 407 Sales Management (3)**
Planning, organizing, directing and controlling the sales function as it relates to the marketing mix; also stress is placed upon professional selling techniques. Prerequisite: MRKT 300.

**MRKT 408 Advertising Management (3)**
Planning, organizing, directing and controlling the advertising function as it relates to the marketing mix. The elements of good advertising are also stressed. Prerequisite: MRKT 300.

**MRKT 414 Marketing Research and Information Systems (3)**
Behavioral sciences, research methods, social process and structure influences upon marketing activities and their integration as a total system of marketing action. Prerequisites: MRKT 300 and DSCI 301 or equivalent.

**MRKT 419 Industrial Marketing (3)**
Structure of industrial manufacturing and service firms, their motives and purchasing behavior, and logistical analysis of industrial markets. Prerequisite: MRKT 300.

**MRKT 420 International Marketing (3)**
Enterprise, comparative marketing, transport institutions and systems in selected foreign countries and the United States. Emphasizes ethnic and cultural differences in marketing strategy. Prerequisite: MRKT 300.

**MRKT 421 Oil and Gas Marketing (3)**
Analysis of the physical and organizational structure of oil and gas distribution within both domestic and international channels with emphasis upon both independents and majors. Prerequisite: MRKT 300.

**MRKT 422 Energy Marketing Seminar (3)**
Application of quantitative and behavioral models to demand/supply relationships evolving around the spectrum of energy consumption and the channels of distribution for oil and gas. Prerequisites: MRKT 300, 414, 421.

Under-Graduate Studies

# Marketing

**MRKT 429 Marketing Policy (3)**
Capstone course with emphasis upon the application of quantitative and behavioral concepts to case studies in marketing. Prerequisite: 12 hours of marketing.

**MRKT 439 Marketing Seminar (3)**
Emphasis upon marketing theory within the context of evolving social policies and practices, with particular attention to career paths. Prerequisite: 12 hours of marketing.

Under-Graduate Studies

# Mass Communications

Bachelor Of Arts

(Journalism & Radio Television)

Administered by the Division of Humanities and Fine Arts.

The Bachelor of Arts degree in Mass Communications is designed to prepare students for the wide range of career opportunities in mass communications, to provide basic understanding of concepts and principles common to all aspects of mass communications, and finally to provide specialized preparation in at least one field. This preparation is oriented primarily towards either electronic (radio/TV) or print journalism.

Prior to enrolling at the university, students should have had some introductory coursework in journalism, radio/television, or mass communications. Prior coursework is not, however, required.

The BA degree program in Mass Communications offers the student an opportunity to prepare for careers in newspaper and magazine writing and editing; radio and television reporting; production and management; public relations; advertising and specialized communication professions.

A BA in Mass Communications requires 30 semester credit hours in the major field, 18 of which must be upper level, plus a minor in a supporting field of at least 18 credit hours (12 must be upper level). All students must take MCOM 303, Reporting and MCOM 392, Internship. Majors in Mass Communications are encouraged to minor in subject fields that will better qualify them to work in the Mass Communications industry. Minors in government, management, and history are among the more commonly chosen fields, while students planning to become specialized writers may choose to minor in technical or scientific fields. Students minoring in Mass Communication must take 18 semester credit hours, 12 of which must be upper level. Any 18 hours of Mass Communications will be acceptable.

Students wishing to prepare for teaching in the public schools should complete requirements described in the section under education and must take MCOM 429 and EDUC 460. Students desiring to prepare for careers in advertising should include a substantial amount of course work in business administration.

Course Listing

**MCOM 303 Reporting (3)**
History of the press, libel, journalistic ethics, copy editing, writing news and feature stories. Required of all MCOM majors.

**MCOM 307 Mass Communications Laboratory (1-3)**
Print journalism laboratory includes experience in editing, reporting, photojournalism, writing headlines and making up pages.

# Mass Communications

Under-Graduate Studies

**MCOM 313 Advanced Reporting (3)**
All phases of journalistic writing including governmental agencies, schools, courthouses, public affairs, sports, fine arts, interviews with prominent personalities and speeches.

**MCOM 315 Public Affairs Reporting (3)**
Writing news concerning agencies that deal with local, state and federal government.

**MCOM 318 Editing and Makeup (3)**
Copyreading and headline writing; principles of typography and makeup, with laboratory practice.

**MCOM 326 Photography (3)**
Shooting, processing and printing technically good photographs of interest and visual value suitable for publications. Same as ART 326.

**MCOM 341 Radio/Television Announcing (3)**
Writing, editing and announcing press association and local news copy for radio and television news broadcasts. Laboratory practice in preparing news programs.

**MCOM 342 Radio/Television Production (3)**
Radio and television programming patterns, regulations pertaining to broadcasting and broadcasters' responsibilities.

**MCOM 344 Television Production II (3)**
Planning, staging and presenting television programs.

**MCOM 345 Television Direction (3)**
Directing television programs.

**MCOM 405 Magazine Article Writing (3)**
Writing a magazine article and attempting to sell it to one of the available markets.

**MCOM 410 Advanced Broadcasting Techniques (3)**
Broadcast production including documentaries in sound and short broadcast reports. Taping, editing, mixing, writing broadcast scripts, special effects and interviewing.

**MCOM 412 Audio Interviewing (3)**
Students will produce a full documentary by researching, taping interviews, editing those tapes, dubbing music and sound, writing the script and producing the final product.

Under-Graduate Studies

# Mass Communications

**MCOM 415 Communication Law (3)**
Legal aspects of rights and responsibilities of the press, radio and television including libel, privilege, copyright and access to information.

**MCOM 429 School Publications (3)**
Preparing a school journalism sequence. Producing school newspapers and yearbooks.

**MCOM 451 Advanced Photography II (3)**
Advanced photographic techniques including visual communication with a still camera and two dimensional black and white space articulation. Prerequisite MCOM 326 or equivalent. Same as ART 451.

**MCOM 471 Mass Media and Society (3)**
Principles of behavior modification applied to the media-radio, television, newspaper, magazines, books, etc.

Under-Graduate Studies

# Mathematics

Bachelor Of Science

A Bachelor of Science degree with a major in mathematics requires a minimum of eight courses (at least 24 semester hours) beyond the level of calculus.

Plans of study in mathematics have a common core of courses including:

Calculus I, II, and III
MATH 301 Statistics or MATH 401 Probability and Statistics
MATH 310 Linear Algebra
MATH 315 Algebraic Structures
MATH 360 Intermediate Analysis

The remaining four advanced mathematics courses required to complete the major are selected in consultation with the student's advisor. The choices are made with the student's educational objectives in mind and may, with prior approval of the department, include selected courses in operations research, econometrics, or computer science. Every mathematics major is also required to have the ability to program in a high level computer language such as FORTRAN or Pascal.

Students at U. T. Permian Basin majoring in mathematics are required to complete a minor of at least 18 semester hours, 12 semester hours of which must be upper level. The choice of the minor is up.to the student. It is recommended that the choice be made to facilitate the student's educational objectives.

Mathematics majors seeking teacher certification are required to take MATH 350 (Topics in Geometry) as one of their four advanced mathematics electives.

Those students seeking teacher certification only (that is, those not pursuing a degree in mathematics) must complete at least 24 semester hours, with 12 semester hours at the upper level. The following courses are required:

Calculus I and II
(Calculus III is strongly recommended)
MATH 301 or MATH 401
MATH 310
MATH 315
MATH 350

For certification as an elementary teacher, MATH 300, Foundational Mathematics, is also strongly recommended. Certification requirements are not sufficient to satisfy the major requirements. All certification students must consult with an advisor in education concerning additional requirements for certification.

Under-Graduate Studies

# Mathematics

When mathematics is taken to satisfy the minor requirements of another degree program, the recommended courses are those required for teacher certification, with the possible substitution of MATH 360 for one of the four upper level courses. The minor program must include at least 12 semester hours (four courses) from the upper level. The selection of courses for the minor should provide a foundation for continued study in mathematics while at the same time supporting the student's major program. A variety of options for a mathematics minor can be worked out in consultation with the mathematics department.

**Mathematics majors must complete the following general education requirements:**

| | |
|---|---|
| Laboratory science (engineering physics recommended) | 8 hours |
| English | 6 hours |
| Literature | 6 hours |
| Government, U.S. & State | 6 hours |
| U.S. History | 6 hours |

Courses in accounting, economics and modern languages are recommended. Students should check with the department in which the minor is planned to determine lower preparatory work.

Sample Degree Plan

**Sample Degree Plan-Mathematics***

Junior Year

| First Semester | | Second Semester | |
|---|---|---|---|
| MATH 310 | 3 | MATH 401 | 3 |
| MATH 360 | 3 | MATH 315 | 3 |
| Courses in Minor | 6 | Course in Minor | 3 |
| Elective | 3 | Electives | 6 |
| | 15 | | 15 |

Senior Year

| First Semester | | Second Semester | |
|---|---|---|---|
| MATH electives | 6 | MATH electives | 6 |
| Courses in Minor | 6 | Course in Minor | 3 |
| Elective | 3 | Electives | 6 |
| | 15 | | 15 |

* Degree plans vary depending upon a student's goals and preparation prior to enrolling at U. T. Permian Basin. Students should consult with their faculty advisors for specific degree planning.

Under-Graduate Studies

# Mathematics

Course Listing

**MATH 300 Foundational Mathematics (3)** **FA, SP**
Basic set theory, axiomatic structure of the number system, foundations of arithmetic and informal geometry.

**MATH 301 Statistics (3)**
Basic concepts and applications of probability, descriptive and inferential statistics, and linear regression. Computer laboratory assignments.

**MATH 310 Linear Algebra (3)**
Vectors, vector spaces, matrices; linear transformations, eigenvalues, eigenvectors, canonical forms and their applications.

**MATH 312 Discrete Mathematics I (3)** **FA**
Elementary logic, sets (including mathematical induction), elementary probability, combinatorics, modular arithmetic and permutation groups.

**MATH 313 Discrete Mathematics II (3)**
Continuation of MATH 312. Graph theory, Boolean algebra, and elements of automata theory. Prerequisite: MATH 312.

**MATH 315 Algebraic Structures (3)** **SP**
Sets, groups, rings and fields, with applications to the ring of integers and polynomial rings. Applications to computer science.

**MATH 330 Differential Equations (3)**
Ordinary differential equations including power series, Laplace transform methods and systems of linear differential equations with applications. Prerequisite: multivariable calculus.

**MATH 331 Applied Mathematics (4)** **FA**
Ordinary and partial differential equations, including special functions, transform methods and Fourier series. Prerequisite: MATH 330.

**MATH 350 Topics in Geometry (3)** **SP**
Cross ratio, elementary transformations, Euclidean constructions, introduction to non-Euclidean geometrics, and other topics in modern geometry.

**MATH 360 Intermediate Analysis (3)** **FA**
Limits, continuity, uniform continuity, derivatives, integrals and mean value theorems. Prerequisite: Two semesters of calculus.

**MATH 401 Probability and Statistics (3)**
Fundamentals of probability theory and properties of distribution functions encountered in modeling and hypotheses testing. Prerequisites: calculus and MATH 301.

Under-Graduate Studies

# Mathematics

**MATH 410 Applications of Numerical Methods I (4)**
**MATH 411 Applications of Numerical Methods II (4)**
Introduction to mathematical modeling and the use of numerical methods of solution with an emphasis on error analysis. Algorithm design for parallel computation, use of supercomputer. Prerequisites: MATH 310, 330, and knowledge of a scientific programming language.

**MATH 435 Vector and Tensor Analysis (3)**
Vector and tensor analysis, subdivided into 1) the vector calculus, 2) integral transformations of Green, Gauss and Stokes and 3) tensor calculus. Prerequisites: calculus, MATH 310; MATH 330 recommended.

**MATH 445 Multivariate Statistics (3)**
Operationally oriented study of multivariate regression, analysis of variance and covariance and related topics. Prerequisite: MATH 301 or equivalent.

Under-Graduate Studies

# Music

Administered by the Division of Humanities & Fine Arts.

Bachelor Of Arts

The Faculty of Music offers a wide range of courses oriented toward the major and non-major.

Non-majors are welcome in applied instruction courses, the beginning and intermediate theory classes, music appreciation, and other courses with the permission of the instructor. Non-majors are also encouraged to participate in the University Singers, the Permian Consort, the jazz ensemble, and/or the community band. Auditions are required for these ensembles.

## Lower-level Preparation

Entering students who plan to major in music should have completed four semesters of music theory, at least one semester of music literature or music appreciation, and four semesters of applied instruction in their major instrument (or in voice). Deficiencies may be removed by coursework at area junior colleges, or in some cases by course work at U. T. Permian Basin.

## Requirements For All Music Majors

All music majors will satisfy the following requirements:

A. **Theory** 12 semester credits of music theory with a minimum of a B average. The most recent of these credits must have been earned not more than five years prior to the semester in which the student first enrolls at U. T. Permian Basin. Students with fewer than 12 credits of theory, students who have not achieved the required B average in theory courses, and students whose theory work was completed more than five years prior to their first enrollment at U. T. Permian Basin may fulfill the **music theory** requirement by passing an exam administered by the Music Department. Students may take MUS 327: Intermediate Music Theory to prepare for the exam.

B. **History** MUS 342, MUS 343.

C. **Performance** 9 semester credits at the upper level, to include both applied instruction on major instrument/voice and ensemble.

## Additional Requirements

Every music major will complete additional coursework depending on individual academic and professional goals. The various options and requirements are as follows:

1. **Music Major** (liberal arts, performance, studio, preparation for graduate study in music): Students electing this option will complete 9 upper level credits in music ELECTIVES, to be selected in consultation with a music advisor. This option consists of a minimum of 24 upper level semester credits in music and a total of 36 credits in music.

Under-Graduate Studies

# Music

2. **Music Major** with **Elementary Certification.** Students who wish to be certified to teach music and/or general classroom in the public schools, grades K-6 will complete the following:
    1. One semester of conducting
    2. Elementary Methods
    3. Orchestration, Vocal Diction, or Vocal Pedagogy
    4. Three credits of music elective
    5. Piano proficiency[2]

A music major with elementary certification consists of a minimum of 27 upper level credits and a total of at least 39 semester credits in music.

3. **Music Major** with **Secondary Certification:** Students who wish to be certified to teach music in grades 7-12 will complete the following:
    1. Two semesters of conducting (one semester basic, one semester instrumental or vocal)
    2. Secondary Methods (instrumental or vocal)
    3. Orchestration (for instrumental students) or Vocal Diction or Vocal Pedagogy (for vocal students)
    4. Three credits of music elective
    5. Piano proficiency[2]

The music major with secondary certification thus requires a minimum of 30 upper level credits in music and a total of at least 42 semester credits in music. In addition, students seeking secondary certification must complete a second teaching field of at least 24 credits in an appropriate discipline. Contact the Division of Education for details. (Note: Students electing music as their second teaching field must fulfill the same requirements as those students majoring in music with secondary certification.)

4. **Music Major** with **All-Level Certification (Vocal).** Students who wish to be certified to teach music in grades K-12 with emphasis on voice will complete the following:
    1. Two semesters of conducting (one semester basic, one semester choral)
    2. Elementary Methods
    3. Secondary Choral Methods
    4. Vocal Diction (or Vocal Pedagogy)
    5. Piano proficiency[2]

Under-Graduate Studies

# Music

Students selecting this option will complete a minimum of 30 upper level credits and a total of at least 42 credits in music.

5. **Music Major** with **All-Level Certification (Instrumental):** Students who wish to teach music in grades K-12 with emphasis on instrumental music will complete the following.
    1. Two semesters of conducting (one semester basic, one semester instrumental)
    2. Elementary Methods
    3. Secondary Methods (Instrumental)
    4. Orchestration
    5. Instrumental Practicum
    6. Piano proficiency[2]

Students selecting this option will complete a minimum of 33 upper level credits and a total of at least 45 credits in music.

**Music Minor** A student may minor in music by completing a minimum of 18 semester credits (including a minimum of 12 at the upper level) of music courses. A maximum of 6 credits may be in applied music.

**Notes:**

[1]Students who have completed some or all requirements for the music major at other colleges or universities must nevertheless complete a minimum of 12 credits of music courses (of which no more than 6 may be in applied or ensemble classes) at U. T. Permian Basin to receive a BA in music.

[2]In addition to the specific course requirements listed above, all music majors seeking certification must demonstrate piano proficiency through a combination of course work and juried performance.

Course Listing

**MUS 301 Applied Music I (2)**
Applied instruction in voice, piano, organ, harpsichord, guitar, strings, winds, brass and percussion. Private lessons on major instrument. Open to majors and non-majors. Fee required, $30.00 per credit hour.

**MUS 303 Ensemble: University Singers (1)**
Vocal repertoire with emphasis on serious literature for the chamber choir. Annual madrigal dinners and tours highlight the group's activities. Open to majors and non-majors by audition.

**MUS 305 Ensemble: Permian Consort (1)**
Instrumental repertoire of the Renaissance, Baroque and Classical periods. Emphasis on period instrumentation and historical performance practices. Open to majors and non-majors by audition.

Under-Graduate Studies

# Music

**MUS 321 Comprehensive Musicianship (3)**
Bibliography and musical tools for the music major. Class encompasses notational and bibliographic skills along with basic computer exposure. Required for entering music students.

**MUS 322 Fundamentals of Music Theory (3)**
Mechanics of music notation, harmony, melody and rhythmic structure. Emphasis on the relation of music to the elementary classroom. Fulfills music requirements for elementary degree certification. Open to non-majors only.

**MUS 323 Conducting (2)**
Beginning course in conducting including baton technique, score reading, cues and metric patterns. Open to majors and non-majors.

**MUS 324 Orchestration (3)**
Beginning instruction in instrumental types including range, timbre and blend. Emphasis on scoring for traditional groupings such as string orchestra, brass quintet and others. Open to majors and non-majors with permission of instructor.

**MUS 325 Choral Arranging (2)**
Techniques of composing, editing and arranging choral music for a variety of ensembles. Special emphasis on public school problems in performance. Open to majors and non-majors with permission of instructor.

**MUS 326 Vocal Diction (2)**
Study of diction and grammar problems associated with English, Italian, French, and German texts (languages offered on rotating basis). Open to majors and non-majors with permission of instructor. May be repeated with permission of instructor.

**MUS 327 Intermediate Theory (3)**
Intermediate-level theory course covering diatonic and chromatic harmony, includes some analysis. Oriented toward the major with theory deficiencies or the non-major who has completed MUS 322 and wishes further instruction.

**MUS 328 Advanced Ear Training (1)**
Computer study and private lessons to develop competency in aural skills and dictation. Open to majors and non-majors.

**MUS 340 Music Appreciation (3)**
A single semester course introducing the non-major to listening techniques for musical styles ranging from popular to classical. Fulfills music requirements for elementary education certification. Open to majors and non-majors.

Under-Graduate Studies

# Music

**MUS 342 History of Music I (3)**
A topics oriented course surveying major historical changes in western music from the ancient Greeks to the death of Bach. Prerequisite: MUS 340 or equivalent. Required for majors.

**MUS 343 History of Music II (3)**
A topics oriented course surveying major historical changes in western music from the classical period to the present. Prerequisite: MUS 340 or equivalent. Required for majors.

**MUS 360 Music in Elementary School (3)**
Methods and materials of teaching singing, rhythmic concepts, listening, percussion and melody instruments to children. Practicum in elementary music teaching. Majors only.

**MUS 401 Applied Music II (2)**
Applied instruction in voice, piano, organ, harpsichord, guitar, strings, winds, brass, and percussion. Private lessons on major instrument. Open to majors and non-majors. Fee required.

**MUS 403 Ensemble: University Singers (1)**
Vocal repertoire with emphasis on serious literature for the chamber choir. Open to majors and non-majors by audition.

**MUS 405 Ensemble: Permian Consort (1)**
Instrumental repertoire of the Renaissance, Baroque and Classical periods. Emphasis on period instrumentation and historical performance practices. Open to majors and non-majors by audition.

**MUS 421 Computer Application in Music (3)**
Beginning instruction in compositional and theoretical usages of computer software. Hands-on experience with computer. Knowledge of BASIC useful though not required. Open to majors and non-majors with consent of instructor.

**MUS 423 Advanced Conducting (2)**
Advanced study in the solution of conducting problems and score reading. Rehearsal techniques and organizational skills necessary for developing a successful instrumental or choral program are stressed.
Prerequisite: MUS 323 or consent of instructor.

**MUS 424 Advanced Orchestration (3)**
Advanced exercise in scoring for orchestral textures and full ensembles.
Prerequisite: MUS 324 or consent of instructor.

Under-Graduate Studies

# Music

**MUS 440 Performance Practice (3)**
Performing techniques used prior to 1800. A combined lecture/lab course. Some performance skills required. Open to majors and non-majors with consent of instructor.

**MUS 441 History of Musical Instruments (3)**
Survey of change in instruments design and construction from Biblical times to the present. A combined lecture/lab course. A musical instrument will be constructed during the course of the class. Open to majors and non-majors.

**MUS 442 Musical Theatre (3)**
Historical development of the Broadway musical along with introduction to the techniques involved in selecting, casting and producing a musical. Open to majors and non-majors.

**MUS 443 Choral Literature (3)**
An advanced survey of choral literature focusing on repertoire suitable for church and public school music.

**MUS 444 Keyboard Literature (3)**
Surveys major skills and trends in keyboard repertoire from the 15th century to the present. Some keyboard skills required. Open to majors and non-majors with consent of instructor.

**MUS 462 Choral Music in the Secondary School (3)**
Techniques and materials for teaching choral music in grades 7 through 12. Emphasis on organization and administration of secondary music departments. Majors only.

**MUS 464 Instrumental Music in the Secondary Schools (3)**
Instrumental instruction, organization of the public school music department, rehearsal techniques and related problems. Majors only.

**MUS 466 Piano Pedagogy (3)**
Techniques of piano instruction ranging from masters of the past to the most current trends. Some keyboard skills required. Open to majors and non-majors with consent of instructor.

**MUS 468 Vocal Pedagogy (3)**
Techniques and strategies involved in successful studio voice instruction. Activities include repertoire survey and laboratory situations. Majors only. Required for majors in voice.

Under-Graduate Studies

# Political Science

Administered by the Division of Behavioral Science. Please see that section for general degree requirements.

## Bachelor Of Arts

The Bachelor of Arts degree program in Political Science is oriented primarily toward the study of American Government and politics, and secondarily toward comparative government with supporting study in international relations.

A wide variety of career opportunities are open to students majoring in political science, including the United States Foreign Service, specialized work in foreign countries, the federal government, foundations, private organizations, city management and other types of public administration and public service, as well as others less directly related to government. Pre-law students find the study of political science appropriate preparation for law school. A major in Political Science is suitable for students planning to teach government or social studies.

In addition to lower division requirements of two courses in political science to meet graduation requirements, a major in Political Science **should** include at least one upper level course in comparative government, one in American government, and one in international relations.

Students seeking to satisfy the State of Texas statutory requirement in American Government may take PLSC 313. The state requirement in Texas government may be met by taking either PLSC 311 or 412. If the requirement in Texas government has been met at another college or university, PLSC 311 may not be elected for credit at U. T. Permian Basin.

## Pre-Law

Students desiring to complete pre-law preparation and receive a bachelor's degree may do so through one of several options. The most common is the BA program in political science, however, degrees in several other fields also are appropriate. Those interested in entering law school after completion of the bachelor's degree should consult with the Division of Behavioral Science and Kinesiology Office for referral to an appropriate advisor.

## Course Listing

**PLSC 311 The States and Federalism (3)**
The study of the constitution and functioning of state and local governments within the changing federal system. Includes the study of the Texas and United States constitutions.

**PLSC 313 American Parties and Politics (3)**
Behavior of political parties, politicians and voters in American politics focusing on the history of the American party system since the mid 19th century.

Under-Graduate Studies

# Political Science

**PLSC 315 The Legislative Process (3)**
Analysis of the American Constitution in terms of the organization and procedure of American legislative bodies; analysis of public and private influences upon public policy formation.

**PLSC 317 Local Government (3)**
Cities, counties and special districts are examined in terms of organization, recruitment, services and fiscal problems, with special reference to Texas.

**PLSC 321 Comparative Politics (3)**
A comparative examination of the political systems of selected economically developed nations.

**PLSC 323 The Political Heritage of Southeast Asia (3)**
An examination of the historical development of political institutions, practices and attitudes in the nations of Southeast Asia. Attention will also be given to contemporary problems of economic and political development.

**PLSC 325 The Soviet Union (3)**
An introduction to the political system of the U.S.S.R. from its origins to the present. Historical, social and cultural perspectives will also be presented.

**PLSC 335 Civil Liberties (3)**
Factors and forces that have shaped the scope of civil liberties in the United States. Course includes consideration of leading cases and their historical contexts.

**PLSC 412 Politics in the American States (3)**
An examination of the states as subsystems of the political system of the United States. Topics include federalism socio-economic environments, state political cultures, pressure groups, state political parties and decision-making agencies.

**PLSC 413 Political Behavior (3)**
Contemporary theories of American political behavior. Topics include political socialization, public opinion, leadership recruitment and voting.

**PLSC 423 Governments and Politics of Latin America (3)**
Major institutions and political behaviors which have emerged in selected Latin American countries since Independence, particularly during the 20th century.

**PLSC 425 Soviet Foreign Policy (3)**
An examination of the foreign policy of the Soviet Union since the Revolution, with particular emphasis on contemporary problems.

Under-Graduate Studies

# Political Science

**PLSC 427 International Politics (3)**
An examination of the major variables affecting the political interaction of national states. Various theories, approaches and modes of analysis will be considered.

**PLSC 431 American Political Thought (3)**
Major trends in American political thought, related to the socio-economic and political development of the nation.

**PLSC 435 Constitutional Law (3)**
An examination of trends in American constitutional development since 1789, utilizing leading decisions of the U. S. Supreme Court.

**PLSC 436 Government and Business (3)**
An exploration of the relationship between government and business in American society. Course includes examination of the regulation and the promotion of business by government.

**PLSC 443 American Foreign Policy (3)**
Origin, conduct and application of American foreign policy in world affairs.

**PLSC 447 Public Administration (3)**
A survey of American public administration and the role of the bureaucracy in the formulation and implementation of public policy.

**PLSC 451 Political Theory (3)**
A topical examination of the enduring issues in western political thought. Consideration will be given to the nature of citizenship, the function of the state, the sources and structure of authority in society, the magnitude of states, and the external relations of states.

**PLSC 454 The American Presidency (3)**
An examination of the evolution of the modern presidency in the twentieth century and the duties, powers and problems of that institution today.

**PLSC 459 Seminar in American Public Policy (3)**
Examination of varying topics in public policy of contemporary interest and concern. May be repeated for credit when topics vary.

Under-Graduate Studies

# Psychology

Bachelor Of Arts

Administered by the Division of Behavioral Science. Please refer to that section for general degree requirements.

Psychology is the science of the behavior of living organisms, especially human beings. The study of psychology is an introduction to the empirical and scientific investigation of who and what we are, as well as an introduction to many of the investigators and thinkers who have developed systems of thought about behavior.

Psychology is an extremely broad discipline, and therefore provides students the opportunity to prepare for a wide variety of careers or graduate school. For example, the major in psychology is recommended for students interested in obtaining a liberal arts education and a broadened understanding of psychological functioning as it applies to the study of the behavior of the simplest organisms to the behavior of humans and groups of humans in complicated situations. The major in psychology is also recommended for students preparing for advanced study in business administration, education, law, medicine, neuroscience, and social work. In addition, the major in psychology is recommended for students planning careers in organizational settings (in the public or private domain) focusing on personnel, industrial training, urban planning, information systems, or pure and applied research; or careers in community settings focusing on the juvenile justice system, adult probation and parole, recreation, and educational or clinical services to children, adolescents, the aged and handicapped.

Many students who complete the psychology major desire to enter professional careers in psychology which require advanced study beyond the bachelor's level, such as clinical psychology, counseling psychology, industrial psychology, school psychology, research, and college teaching.

Psychology majors are encouraged to join the Psychology Club and Psi Chi, the U. T. Permian Basin Chapter of the National Honor Society in Psychology. Membership information is available from the faculty advisors.

Psychology is an appropriate minor for students majoring in many other areas as it readily complements many fields of study. A minimum of 18 credit hours is required for the minor.

Courses in Introductory Statistics (PSYC 301), Research Methodology (PSYC 304), and Independent Research in Psychology (PSYC 493) are required of all students majoring in psychology. In addition, each student majoring in psychology is required to take at least one course from each of the following five pairs of courses:

1. PSYC 303, Principles of Learning, and/or
   PSYC 404, Physiological Psychology

# Psychology

2. PSYC 311, Social Psychology, and/or
   PSYC 322, Theories of Personality

3. PSYC 321, Abnormal Psychology, and/or
   PSYC 451, Tests and Measurements

4. PSYC 341, Child Psychology, and/or
   PSYC 342, Adolescent Psychology

5. PSYC 402, History and Systems of Psychology, and/or
   PSYC 471, Motivation

Students majoring in psychology who plan to pursue advanced study in psychology are encouraged to select PSYC 303 and PSYC 404, PSYC 311, PSYC 321, PSYC 341, and PSYC 402 from the five pairs above, as well as to take Advanced Statistics (PSYC 401). Students should consult with their faculty advisers for specific planning of additional elective courses in psychology. A minimum of 36 hours in psychology is required for the major.

**Sample Degree Plan-Psychology***

Sample Degree Plan

**Junior Year**

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| PSYC 301 | 3 | PSYC 304 | 4 |
| PSYC 311 | 3 | PSYC 401 | 3 |
| PSYC 481 | 3 | PSYC 402 | 3 |
| PSYC 321 | 3 | Course in minor | 3 |
| Course in Minor | 3 | Elective | 3 |
| | 15 | | 16 |

**Senior Year**

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| PSYC 303 | 4 | PSYC 404 | 3 |
| PSYC 451 | 3 | PSYC 493 | 3 |
| PSYC 341 | 3 | Course in minor | 3 |
| Course in Minor | 3 | Electives | 6 |
| Elective | 3 | | |
| | 16 | | 15 |

*Degree plans vary depending upon a student's goals and preparation prior to enrolling at U. T. Permian Basin. Students should consult with their faculty advisors for specific degree planning.

Course Listing

**PSYC 301 Introductory Statistics (3)**
Measures of central tendency, variability, correlation and hypothesis testing, with emphasis on the application of statistical methods to research in the behavioral sciences and education. Prerequisite: college algebra.

Under-Graduate Studies

# Psychology

**PSYC 303 Principles of Learning (4)**
Major research results of classical and instrumental conditioning in animals and humans. Verbal learning, concept learning, problem solving and memory in humans will also be reviewed.

**PSYC 304 Research Methodology (4)**
Introduction to the planning and execution of psychological research. Prerequisite: PSYC 301.

**PSYC 311 Social Psychology (3)**
Interrelationships between individuals and their social environment, considering social influences upon motivation, perception, behavior and development, and change of attitudes and opinion.

**PSYC 321 Abnormal Psychology (3)**
Variables involved in the development, maintenance and treatment of a variety of behavior disorders.

**PSYC 322 Theories of Personality (3)**
A survey of the theoretical views of Freud, Jung, Adler and various contemporary writers.

**PSYC 341 Child Psychology (3)**
Developmental aspects of physical, mental, social and emotional growth from birth to adolescence. Same as EDUC 311.

**PSYC 342 Adolescent Psychology (3)**
Developmental aspects of physical, social, emotional and cognitive growth. Emphasis is on the adjustment and behavior patterns of adolescents. Same as EDUC 312.

**PSYC 401 Advanced Statistics (3)**
The application of advanced statistical methods to research in the behavioral sciences and education. Prerequisite: PSYC 301.

**PSYC 402 History and Systems of Psychology (3)**
Major factors affecting the development of psychology as science of behavior, with emphasis upon philosophical roots of major psychological concepts.

**PSYC 404 Physiological Psychology (3)**
Neurophysiology and neuroanatomy. Variables that contribute to behavioral effects in the areas of sensation, perception, motivation and learning.

**PSYC 405 Drugs and Behavior (3)**
Pharmacologic basis of psychotropic drugs and their associated abuses. Theories of cause and treatment of abusers are reviewed.

Under-Graduate Studies

# Psychology

**PSYC 407 Behavioral Medicine (3)**
Examination of the role of behavioral science knowledge and techniques in understanding, assessing, treating and preventing medical-psychological problems.

**PSYC 411 Language and Cognitive Processes (3)**
Research and theories of language development and maintenance, including concept learning, problem solving, memory and attention.

**PSYC 415 Theories of Learning (3)**
Assumptions, constructs and research evidence of the various theories of learning.

**PSYC 441 The Exceptional Child (3)**
Theories and research in fields of biology and psychology concerning exceptional children, emphasizing mentally retarded, emotionally disturbed and mentally gifted. Same as EDUC 451.

**PSYC 442 Cognitive Development in Young Children (3)**
Major theoretical constructs and research findings relevant to the cognitive development of young children. Includes analysis of determinants of differences in cognitive functioning. Same as EDUC 414.

**PSYC 443 Social and Emotional Development in Children (3)**
Major theories and research relevant to social and emotional development of children. Focuses on innate and environmental influences affecting development in families, schools and societies. Same as EDUC 415.

**PSYC 444 Child Psychopathology (3)**
Critical review of the variables involved in the development and maintenance of behavior disorders in children. Emphasis on depression, fears and phobias, autism and hyperactivity.

**PSYC 445 Language Development in Young Children (3)**
Nature of language and the acquisition of language by the young child. Includes environmental influences and contingent effects on socialization, cognition and achievement. Sames as EDUC 413.

**PSYC 451 Tests and Measurements (3)**
Major personality and intelligence tests, emphasis upon their construction, administration, scoring and interpretation. Prerequisite: PSYC 301.

**PSYC 460 Applied Behavior Analysis/Classroom (3)**
Principles of behavior modification and the application of these principles to the school and home. Same as EDUC 460.

Under-Graduate Studies

# Psychology

**PSYC 471 Motivation (3)**
Theories and experimental research concerning drives, needs and preferences as proposed by scientists studying personality, learning and physiology.

**PSYC 481 Psychology of Women (3)**
Survey of critical issues in social relations, mental health, and legal matters involving women. Includes anaylsis of innate and environmental determinants of sex differences.

**PSYC 493 Independent Research in Psychology (3)**
Study of research under supervision of a member of the faculty. Students wishing to enroll should prepare a short plan for this coursework. Prerequisite: Senior standing and PSYC 304.

Under-Graduate Studies

# Sociology

Bachelor Of Arts

Administered by the Division of Behavioral Science. Please refer to that section for general degree requirements.

Sociology, the study of human society, emphasizes the existing variety of cultural forms and the social structures which influence social behavior. Having embarked on the ambitious task of discovering uniformities of human behavior, sociologists and students alike are consistently challenged by the apparent contradictions and the richness of human nature. They enhance their understanding of human society by employing and building social theories at several levels of analysis in relation to institutions, organizations and small groups.

Students majoring in Sociology will have the opportunity to acquire a high quality liberal arts education preparing them to enter various professions. At U. T. Permian Basin, practical applications of sociological knowledge are emphasized through a comprehension of fundamental causes and circumstances leading to social conflict and change. Issues of social inequality such as social class, wealth, ethnicity, sex and age are emphasized as important reference points for sociological inquiry.

Sociology offers the following career fields: secondary social science teaching, social work, public welfare with federal or state agencies, voluntary organizations, private and government foundations, social research, criminal justice, industrial relations and college teaching.

Requirements for a bachelor of arts degree are 30 semester credit hours of which 24 must be at the upper division level ( junior or senior level). Two courses are specifically required for the major: SOC 403 and SOC 427.

Requirements for a minor in Sociology are 18 semester credit hours of which 12 credits must be at the upper level.

**Sample Degree Plan-General Academic Sociology***

Sample Degree Plan
General Academic
Junior Year

| **First Semester** | | **Second Semester** | |
|---|---|---|---|
| SOC 311 | 3 | SOC 403 | 3 |
| SOC 350 | 3 | SOC 415 or 405 | 3 |
| Courses in Minor | 9 | Courses in Minor | 6 |
| | | Elective | 3 |
| | 15 | | 15 |

*Degree plans vary depending upon a student's goals and preparation prior to enrolling at U. T. Permian Basin. Students should consult with their faculty advisor for specific planning.

Under-Graduate Studies

# Sociology

## Senior Year

| First Semester | | Second Semester | |
|---|---|---|---|
| SOC 460 or 465 | 3 | SOC 431 or 433 | 3 |
| SOC 427 | 3 | SOC 444 or 480 | 3 |
| Courses in Minor | 6 | Courses in Minor | 6 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

## Social Worker Certification: Texas

Students wishing to qualify academically for social worker certification by the State of Texas are advised to take the following courses: SOC 380, 382, 385, 420, and 422.

## Course Listing

**SOC 311 Human Behavior and the Social Environment (3)**
How human behavior is shaped by internal, interpersonal, social and environmental contexts. Emphasis is on the effects of attitudes, communication, organizations, communities and cultural factors.

**SOC 350 Social Deviance (3)**
Study of societal definitions and reactions to deviant acts in relationship to ethnicity, social class and legal institutions; relationship of deviant acts to group solidarity and ideological beliefs.

**SOC 355 Juvenile Deliquency (3)**
Theories of causation, distribution and frequency of deliquency in modern society. Methods of correctional treatment and preventive programs.

**SOC 380 Social Work I-Introduction to Social Work (3)**
History of social work and its knowledge base and values; professionalization of social work; social service clientele and issues confronting the profession.

**SOC 382 Social Work II-Social Welfare as a Social Institution (3)**
The welfare system and the function of public and private agencies; the social security act; influencing social policy and legislation; issues in social reform; gaps in social welfare.

**SOC 385 Social Welfare Programs, Policies & Issues (3)**
The development and implementation of service delivery systems and policy analysis. The effects and influence of policy on practice and planning decisions are examined.

**SOC 390 Marriage and Family (3)**
Examine historical, functional, institutional and crosscultural perspectives. Study dating, courtship, mate selection, communication, parenthood, in-laws, divorce and remarriage.

Under-Graduate Studies

# Sociology

**SOC 403 Social Research (3)**
Problems in conducting sociological research; conceptualizing research, developing a research design, and collecting and analyzing data. Prerequisite: at least 2 courses in sociology.

**SOC 404 Qualitative Methods (3)**
Research projects will be designed that take into account natural social settings. Participant observation and other qualitative methods will be used to gather information and generate analysis of people in their natural settings.

**SOC 405 Social Psychology (3)**
The study of individuals in their social context. This includes an examination of socialization, social influence on psychological phenomena, and the interactions between individuals and groups.

**SOC 410 Sociology of Education (3)**
A study of the role of educational institutions in society, as agents of socialization and as sources for social change. Relations with other social institutions and the community will be discussed.

**SOC 415 Sociology of Organizations (3)**
The focus of the course is on the role and evolution of organizations in social life. Among the topics of analysis are the conditions under which organizations are created, grow, establish relations with other aspects of their environments, adopt tactics for survival, and how they fail.

**SOC 418 Demography (3)**
An introduction to the basic components of population change and to historical and contemporary theories of demography. Current research issues affecting fertility, mortality, and migration will be examined.

**SOC 420 Social Work Intervention: Marriage and Family (3)**
Opportunity to learn theory and skills required to implement change in marriages and families. Emphasis is on interactional processes between the social worker and family members.

**SOC 422 Social Work Intervention: The Individual (3)**
Theory and skills required to implement change in an individual. Emphasis is on interactional processes between social worker and client.

**SOC 427 Sociology Theory (3)**
Classical and contemporary theorists: Marx, Weber, Durkheim, Pareto, Homans and Parsons among others. Substantive theories of social organization. Prerequisite: At least 2 courses in sociology.

**SOC 431 Criminology (3)**
Criminal behavior patterns, behavior of police and courts in handling criminal offenders. Social control in confinement and treatment of criminals.

Under-Graduate Studies

# Sociology

**SOC 432 Theories of Criminal Behavior (3)**
Principal theories of criminality and the application of these theories to research and correctional practice are examined.

**SOC 444 Racial and Cultural Minorities (3)**
Emergence of ethnic and racial minorities, comparative ethnic relations, racism and ethnocentrism, and future trends in relations between minorities and the dominant society.

**SOC 460 Social Gerontology (3)**
Social influences on aging individuals. Examination of theories of aging and the life cycle; age status, age-sex roles, health community participation, family relations, work, leisure, retirement, housing and finance.

**SOC 465 Thanatology (3)**
Central issues concerning death and dying. The role of institutions in socializing persons toward death. Changes in attitudes toward death over the life cycle. Examination of the dying process, funeral, bereavement, living will, euthanasia and views on life after death.

**SOC 479 Studies in Sociology (3)**
Particular topics in sociology will be selected for study according to the interests of the students and instructor.

**SOC 480 Urban Studies (3)**
Social and ecological organization of cities. Emphasis on the American city; its settlement patterns, ethnic and racial groups and impact of urbanism on personality.

**SOC 481 Rural Sociology (3)**
The focus is on the historical development of rural settlements, how they exist in urban society, and the evolution of rural populations in structural, environmental and technological contexts.

**SOC 492 Practicum (Variable credit 3-6)**
A supervised field and academic experience in the practice of social work methods, knowledge and skills in a social service or related agency. Variable credit of 3 or 6 hours depending on the number of hours worked and the academic requirements as established by the instructor. Prerequisite: 12 hours upper division credit hours in Sociology and consent of the instructor.

**SOC 493 Independent Research in Sociology (3)**
Study of research under supervision of a member of the faculty. Students wishing to enroll should prepare a short plan for this coursework.

Under-Graduate Studies

# Spanish

Administered by the Division of Humanities and Fine Arts.

Bachelor Of Arts

Because it shares the Hispanic heritage of Texas and lies in close proximity to Latin American countries, U. T. Permian Basin offers the student of Spanish and the potential professional, unique learning and cultural experiences as well as scores of career possibilities and opportunities. Besides offering a living language and a cultural laboratory in which to study and work, the Spanish program provides several specific areas of concentration designed to meet the student's particular academic requirements and career objectives. Some of these areas are interdisciplinary in character; that is, they are tied into academic programs other than Spanish. Thus they afford the potential professional in literature, education, business or science the flexibility to enroll in relevant courses of primary or secondary importance.

Program concentrations in Spanish include:

1. Spanish for elementary school teachers
2. Spanish for secondary school teachers
3. Spanish as a minor
4. Master of Arts in education with concentration in Spanish
5. Master of Arts in English with concentration in Spanish

The first two courses of study lead to the bachelor of arts degree in Spanish. A proficiency test will be administered to each student entering the Spanish program to assess the student's specific academic needs.

A major in Spanish consists of a minimum of 30 credits divided as follows:

1. 6-9 credits of Spanish language or its equivalent at the freshman and sophomore levels.

2. 9 credits of required Spanish language courses at the upper division level as follows: SPAN 301, 302, 431.

3. Minimum of 12 credits of upper level courses, to be identified by an advisor in the Spanish program, according to the specific concentration of the student, that is, elementary bilingual education, secondary education with Spanish as the major subject area, or a major in Hispanic letters.

The minor in Spanish consists of 18 credits, 12 of which must be at the upper level. Students declaring Spanish as a second teaching field must fulfill all requirements for the major in Spanish.

Under-Graduate Studies

# Spanish

Degree plans vary depending upon a student's goals and preparation prior to enrolling at U. T. Permian Basin. Students should consult with their faculty advisor for specific degree planning.

*Graduate course offerings in Spanish are listed under Special Courses in the Graduate section.*

Course Listing

**SPAN 301 Advanced Grammar and Syntax (3)**
Analysis of more technical and advanced points of Spanish grammar and syntax with comparisons made to English. Prerequisites: Minimum requirements in Spanish language for entry in program and replacement test.

**SPAN 302 Advanced Composition and Conversation (3)**
Designed to improve oral and written Spanish. Presentation of topics related to the diverse cultures, peoples, history of Spain and Latin America, especially Mexico. Prerequisite: SPAN 301.

**SPAN 321 Hispanic Civilization (3)**
Currents and characteristics of Spanish culture as expressed through the centuries in literature, art, philosophy and history. Prerequisite: SPAN 302.

**SPAN 331 Spanish Conversation (3)**
Study and practice of oral Spanish, stressing idomatic expressions and providing students with the opportunity to improve their fluency. Pronunciation, comprehension and building vocabulary are also emphasized.

**SPAN 401 Spanish Literature I (3)**
Spanish Peninsular literature from the early period to the 17th century. Prerequisite: SPAN 421 or instructor's approval.

**SPAN 402 Spanish Literature II (3)**
Spanish Peninsular literature from the 18th century to the present. Prerequisite: SPAN 421 or instructor's approval.

**SPAN 411 Spanish-American Literature I (3)**
Spanish-American literature from the Pre-hispanic period through Romanticism. Prerequisite: SPAN 421 or instructor's approval.

**SPAN 412 Spanish-American Literature II (3)**
Spanish-American literature from Modernism to the present. Prerequisite: SPAN 421 or instructor's approval.

**SPAN 421 Literary Forms and Analysis (3)**
Principal literary forms in Hispanic letters and methodology for critical literary analysis. Prerequisite: SPAN 302.

**SPAN 422 Creative Literary Expression in Spanish (3)**
Opportunity to develop skills used in creative writing. Emphasis on developing style and techniques as related to one specific literary form to be announced each time course offered. Prerequisite: SPAN 302.

Under-Graduate Studies

# Spanish

**SPAN 431 Spanish Phonetics and Phonemics (3)**
Spanish phonology with emphasis on oral drills; an introduction to elementary applied linguistics. Prerequisite: SPAN 301.

**SPAN 437 Hispanic Literature and Culture through Travel (3)**
Intensive classroom preparation followed by guided travel to countries and sites of cultural and literary importance.

**SPAN 451 Mexican Literature (3)**
Survey of Mexican literature from pre-Hispanic times to present with emphasis on contemporary literary themes, movements and genres. Prerequisites: SPAN 421 or instructor's approval.

**SPAN 452 Mexican-American Literature (3)**
Mexican-American literature in Spanish and English focusing on native authors, to understand realities and experiences of Mexican-American community. Prerequisite: SPAN 421 or instructor's approval.

**SPAN 459 Special Studies in Spanish and Spanish-American Literature (3)**
Specific periods, themes or literary types. Contents vary according to the interests and needs of the instructors and students. Prerequisite: SPAN 421 or instructor's approval.

**SPAN 469 Studies of a Major Author (3)**
Works of a major author in Peninsular or Spanish-American literature. Prerequisite: SPAN 421 or instructor's approval.

**SPAN 470 Intensive Spanish Grammar for Reading (3)**
This course has been devised for students whose needs are not filled by existing grammar courses and those whose sole interest is to acquire a reading knowledge of Spanish.

**SPAN 471 Spanish for the Professional (3)**
Specialized vocabulary for health, law, education (nonteaching), social and civil services, business and tourism. Given in professional area as demanded. No major credit. Prerequisite: SPAN 301, 311, or 312.

**SPAN 478 Hispanic Children's Literature (3)**
Study of Hispanic children's literature including not only available texts but the oral tradition. Comparative literature orientation, emphasizing parallels with myths, fables and folk literature of other lands.

Under-Graduate Studies

# Speech

Bachelor Of Arts

Administered by the Division of Humanities and Fine Arts.

Speech as an academic field encompasses the theory and practice of oral and written communication. The field has traditionally been oriented toward preparing students as individual oral communicators in public speaking, group discussion processes, and person-to-person communication. However, training in speech communication requires that students be familiar with the theory of communication as it applies to encoding and decoding both oral and written messages. Basic speech communication theory involves the analysis of messages (rhetorical criticism), interpersonal and group communication theory, as well as the principles of attitude and behavior change via persuasion.

Although customarily emphasizing oral communication, the study of speech also includes analysis of argumentative strategies and persuasive devices as present in written forms of communication.

At U. T. Permian Basin, programs in speech and mass communications are associated in the faculty of communication, indicating a close relationship between the approaches of these two fields.

Depending upon the student's interest, studies in speech may be directed toward one of several areas. Students may choose to study speech as a humanistic field, emphasizing such courses as oral interpretation and rhetorical criticism. Students selecting this option would probably choose theatre, English, history, or related fields as a minor. Students may approach speech as a social science, directing particular attention to communication and persuasion theory. Related minor areas of study would include mass communications, psychology, sociology, management, and other fields.

The speech major requires 30 semester hours, 18 of which must be upper level; the minor in speech requires 18 hours, 12 of which must be upper level.

Many students interested in humanities or social sciences select speech as a secondary field or minor area of study. Other students find that one or two elective courses in speech communication may complement their major fields or increase their awareness, confidence, and effectiveness as personal communicators.

**Students majoring in speech should select at least one course in five of the following areas:**

1. **Interpersonal Communication:** communication as it affects the relationships between persons. SPCH 335, 340, 456.
2. **Group Processes:** communication pertaining to decision-making and problem-solving in small task groups. SPCH 315, 335, 340.

Under-Graduate Studies

# Speech

3. **Public Speaking:** strategies for constructing messages and analyzing audiences in the oral communication setting. SPCH 310, 345, 346, 460.
4. **Oral Interpretation:** use of oral techniques to communicate literary meaning. SPCH 346, theatre elective.
5. **Argument:** finding and communicating goal reasons. SPCH 456, 460.
6. **Persuasion:** language and its influence on human attitudes and behavior. SPCH 456, 465.
7. **Communication Theory and Criticism:** underlying principles concerning the process by which sources construct messages for given audiences. SPCH 330, 351.

*Degree plans vary depending upon a student's goals and preparation prior to enrolling at U. T. Permian Basin. Students should consult their faculty advisors for specific degree planning.*

Course Listing

**SPCH 310 Participation in Speech Activities (1)**
Involvement-oriented training in theory and practice of communication activities such as debate, oral interpretation and persuasive speaking.

**SPCH 315 Parliamentary Procedure and Group Leadership (3)**
Opportunity to develop group management skills by which self-governing bodies transact business. Emphasis on both formal parliamentary mechanisms and general problem-solving techniques.

**SPCH 335 Interpersonal Communication Awareness (3)**
Principles of communication underlying the initiating, maintaining and altering of relationships between persons.

**SPCH 340 Dynamics of Small Group Communication (3)**
Communication in group settings. Observing group interaction and engaging in problem solving on a group basis.

**SPCH 345 Improving Public Speaking Skills (3)**
A practice-oriented course in public speaking. Students prepare, present, and analyze reports and speeches.

**SPCH 346 Oral Interpretation of Poetry (3)**
Oral re-creation of literature and its analysis. Principles and practice of group performance in reader's theatre.

**SPCH 406 Reader's Theater (3)**
Group technique practice and study of concepts to transform a literary text into reader's theatre production.

Under-Graduate Studies

# Speech

**SPCH 456 Theory of Argument and Persuasion (3)**
Strategies and principles of argumentation as they apply to influencing human attitudes and behavior.

**SPCH 460 Theory and Practice of Debate (3)**
Principles of argument as a basis for testing the merits of issues in subjects of controversy.

**SPCH 465 Rhetorical Analysis and Criticism (3)**
Principles and standards for the analysis and criticism of communication. Critical concepts applied to selected oral and written messages.

Under-Graduate Studies

# Special Courses

Business Law

**Courses Only**
Business Law courses are offered in support of other programs in the division and for those students interested in pre-law preparation.

**BLAW 320 Legal Environment of Business (3)**
Origin and history of law, its place in and effect upon society; court systems and legal procedures and their effect on businessmen and consumers.

**BLAW 321 Legal Aspects of the Management Process (3)**
Law affecting management decisions regarding creating, regulation and control of business structures. Includes law of agency, principles of personal and real property law. Prerequisite: BLAW 320.

**BLAW 322 Oil and Gas Law (3)**
Legal problems in natural resource areas of oil and gas exploration, development and marketing.

Decision Science

**Courses Only**
Decision Science courses are offered to service other programs throughout the university.

**DSCI 301 Introduction to Statistics (3)**
A study of statistical techniques applied to business and economic data. Topics include descriptive statistics, probability theory, random variables, probability distributions, sampling methods and distributions, statistical estimation and hypothesis testing. Prerequisite: Completion of six semester hours of mathematical analysis including business calculus or its equivalent.

**DSCI 302 Inferential Statistics (3)**
The application of statistical inference to problems in business and economics. Topics include hypothesis testing, analysis of variance, simple and multiple regression and correlation, chi-square analysis, time series, index numbers and nonparametric statistics. Prerequisite: DSCI 301 or its equivalent.

Natural Science

**Courses Only**
These courses are designed to emphasize the contemporary aspects of biology, chemistry, earth sciences and physics while minimizing the distinction between the disciplines. Stressed throughout are:

1. The impact of science on the individual's life.
2. The interaction of science with social, economic and political forces.
3. The strengths and limitations of science.

# Special Courses

4. An understanding of science as a human endeavor.

These courses are designed for nonscience majors, but may be taken with permission as electives for science majors. They also may be used, subject to major departmental approval, to satisfy the physical and biological sciences requirements for graduation as well as the science requirements for teacher certification. These courses are independent of each other and one, two or all three may be taken in any order.

**NTSC 301 Contemporary Natural Science I (3)**
Interaction of populations and life-support systems (energy, air, resources, water); environmental ethics.

**NTSC 302 Contemporary Natural Science II (3)**
Man as part of the environment: food chains, chemicals, radioisotopes and health.

**NTSC 303 Contemporary Natural Science III (3)**
Meteorology; climatology; the hydrological cycle; chemical, physical and biological oceanography; ocean resources; the planets, stars and galaxies; optical and radio astronomy; and remote sensing.

## Philosophy

**Courses Only**
The study of philosophy is concerned with man's values and relationships with other individuals within institutions as well as in the speculative domain. It is also concerned with such matters as ethics, political and legal philosophy, aesthetics, standards of excellence in various pursuits and institutions, metaphysics, philosophy of religion, history, science and linguistics.

The university does not offer a major in philosophy but does offer courses which students may find of interest as a part of their general education.

**PHIL 311 Logic (3)**
Principles of reasoning and the systematic application of human intelligence in problem-solving. Symbolic logic, rule and laws of logical thought.

## Science & Engineering

**Courses Only**
These courses are designed primarily to satisfy the upper level capstone requirement of the various degree programs in Science and Engineering. The courses are open to all suitably prepared students whether or not they are in Science and Engineering major programs. All courses assume a background which includes one year of college level mathematics and one year of college natural science with laboratory.

Under-Graduate Studies

# Special Courses

**SCEN 401 Science and the Environment (3)**
A study of the physical and biotic elements of the earth's environments, including applications of science and technology in understanding, evaluating, and remediating the impact of humankind. Prerequisites: one year of natural science with laboratory, one year of mathematics.

**SCEN 411 History and Philosophy of Science (3)**
History and philosophical development of science from Classical Greece to modern times. Prerequisite: one year of science with laboratory, one year of mathematics.

**SCEN 412 Philosophical Issues in Modern Science (3)**
Philosophical and methodological issues arising from the union of science and technology from the late Renaissance to the present. Prerequisite: one year of science with laboratory, one year of mathematics.

Theatre

**Minor Only**
The university does not offer a major in theatre but does offer courses which students may include in their general education for a minor.

**THEA 361 Shakespearean Production (3)**
Offered in conjunction with the Summer Shakespeare Festival of the Globe of the Great Southwest; introduces students to all phases of Shakespearean production in one of the most authentic settings existent throughout the world.

**THEA 362 Creative Dramatics (3)**
Improvisational drama, focusing upon learning imaginative techniques for dramatizing an idea, feeling or situation. Drama as "play" rather than performance.

**THEA 405 American Drama (3)**
Historical development of American drama; types of dramatic literature and masterpieces in American drama. Same as LIT 405.

**THEA 425 British Drama I (3)**
Drama as a literary genre through major works of British drama from the Middle Ages to 1800.

**THEA 426 British Drama II (3)**
Drama as a literary genre through major works of British drama from 1800 to the present.

**THEA 479 Performance Workshop (3)**
Play production activities including acting, stage managing, scenery, properties, lighting, costumes, publicity and box office.

Under-Graduate Studies

# Division Abbreviations

For purposes of computer processing, each discipline or area of study is assigned a letter abbreviation for identification consisting of either three or four letters, which is to be used in registration and elsewhere when the data is to be processed through the computer. The abbreviations are:

| Discipline | Abbreviation |
|---|---|
| Accounting | ACCT |
| Anthropology | ANTH |
| Art | ART |
| Business Law | BLAW |
| Chemistry | CHEM |
| Computer Science | CPSC |
| Criminology | CRIM |
| Decision Science | DSCI |
| Economics | ECON |
| Education | EDUC |
| Engineering | ENGR |
| English | ENG |
| Finance | FIN |
| Geography | GEOG |
| Geology | GEOL |
| History | HIST |
| Humanities | HUM |
| Kinesiology | KINE |
| Life Science | LFSC |
| Management | MNGT |
| Marketing | MRKT |
| Mass Communications | MCOM |
| Mathematics | MATH |
| Music | MUS |
| Natural Science | NTSC |
| Philosophy | PHIL |
| Physical Education | PHED |
| Physics | PHYS |
| Political Science | PLSC |
| Psychology | PSYC |
| Science and Engineering | SCEN |
| Sociology | SOC |
| Spanish | SPAN |
| Speech | SPCH |
| Theatre | THEA |

# Standard Course Numbers

Under-Graduate Studies

Course Numbering System

| | |
|---|---|
| 300-399 | Junior courses; not eligible for graduate credit. See "Undergraduate Courses for Graduate Credit." |
| 400-499 | Senior courses; under certain conditions may be taken by graduate students for graduate credit. See "Undergraduate Courses for Graduate Credit." |
| 500-599 | Taught at post-baccalaureate level, it does not apply to any degree at U. T. Permian Basin. These are not permitted for transfer to any degree program. |
| 600-699 | Graduate courses; open to graduate students, to students holding a baccalaureate degree and to U. T. Permian Basin seniors within ten hours of completing a baccalaureate program who have applied for and received acceptance to a graduate program. |

**Standard Numbers.** At the university, several numbers are standard among all disciplines or in certain categories of disciplines.

*389 Selected Topics*
Undergraduate courses which will be offered only once or will be offered infrequently or which are being developed before a regular listing in the catalog.

*391 Contract Study*
Students who are pursuing independent study or research as described in the contract study format.

*398 Senior Seminar*
Seminar in the discipline or related disciplines.

*489 Selected Topics*
Same as 389, may be acceptable for graduate credit. (See "Undergraduate Courses for Graduate Credit.")

*491 Contract Study*
Advanced independent study or research. (Same as 391 but equivalent to senior-level course) These courses will not count for graduate credit.

*492 Practicum/Experiential Learning/Authentic Involvement*
The number under which students register to meet the experiential learning requirement set forth in this catalog.

Under-Graduate Studies

# Standard Course Numbers

*498 Senior Seminar*
Seminar in the discipline or related disciplines.

The student must have the approval of the responsible instructor and an approved written contract before registering for courses 391, 392, 491 and 492. In some cases, prior approval is required for other courses and will be so indicated in the course descriptions in this catalog.

# Master's Degree Programs

| | | |
|---|---|---|
| MBA | Business Administration | Division of Business Administration<br>Dr. Corbett Gaulden, Jr. |
| MS | Control Engineering | Division of Science & Engineering<br>Dr. Thomas A. Hyde |
| MA | Education<br>Education Administration<br>Counseling<br>Early Childhood Education<br>Elementary Education<br>Reading<br>Secondary Education<br>Special Education<br>Supervision | Division of Education<br>Dr. Don E. Miller<br>Dr. Patricio Jaramillo<br>Dr. Spencer Thompson<br>Dr. Thomas L. Dynneson<br>Dr. Judith Cochran<br>Dr. Terryl J. Anderson<br><br>Dr. Don E. Miller |
| MA | English | Division of Humanities & Fine Arts<br>Pamela J. Price |
| MS | Geology | Division of Science & Engineering<br>Dr. Emilio Mutis-Duplat |
| MA | History | Division of Humanities & Fine Arts<br>Dr. Roger M. Olien |
| MS | Life Science | Division of Science & Engineering<br>Dr. Donald M. Allen |
| MA | Physical Education | Division of Behavioral Science & Kinesiology<br>Dr. Lois S. Hale |
| MA | Psychology | Division of Behavioral Science & Kinesiology<br>Dr. Spencer Thompson |

The following degree programs also are available through U. T. Permian Basin:

| | | |
|---|---|---|
| MS | Electrical Engineering<br>(U. T. El Paso) | Dr. Thomas A. Hyde |
| MS | Petroleum Engineering<br>(U. T. Austin) | Dr. Thomas A. Hyde |

Graduate Studies

# Admissions

The university's graduate programs are administered by the Director of Graduate Studies under the direction of the Vice President for Academic Affairs. The Graduate Council, composed of one elected member from each of the five divisions and the Director of Graduate Studies, is responsible for developing policies and procedures concerning graduate education. It also advises the university administration on the operation of graduate programs.

## Admission

**Admission to Graduate Study.** Those seeking admission should write to the Office of Admissions for an application form, which must be filled out and returned. In addition, official transcripts of all prior college or university study must be sent directly to the U. T. Permian Basin Admissions Office. Student copies of transcripts are not acceptable. Transcripts must include certification of the bachelor's degree. The application form and transcripts are required of graduates of U. T. Permian Basin as well as of students new to the university. They are required of all postbaccalaureate students whether the student is seeking acceptance to a master's degree program or taking courses for other purposes such as transfer to another university or for teacher certification or career ladder.

**Deadlines for Submission of Application.** The application and all supporting documents should be received by the Admissions Office at least 30 days prior to the registration date.

## International Student Admissions

**International Students Admissions.** See "Undergraduate Admissions," see page 14.

**English Proficiency.** All postbaccalaureate students wishing to enroll at the university to pursue a master's degree or take courses for another purpose, are expected to demonstrate proficiency in the English language. International students must submit a satisfactory Test of English as a Foreign Language (TOEFL) independent-study score (550 or better) in order to be admitted to graduate study. See "International Students," page 14.

**Senior-Graduate Concurrent Study.** U. T. Permian Basin seniors needing fewer than 10 semester credits for graduation and meeting other admission requirements may be admitted to graduate study. They must be registered concurrently for all remaining courses required for the bachelor's degree and obtain written permission from the Director of Graduate Studies to take graduate courses.

# Acceptance

Acceptance

A student who holds a bachelor's degree from an accredited institution of higher education is eligible for acceptance in a master's degree program or as a special status student.

Degree Programs

**Degree Programs**

**Requirements for Acceptance.** There are five basic requirements for acceptance to a graduate program: (1) a bachelor's degree from an accredited institution in the United States or proof of equivalent training at a foreign institution; (2) a **B** average or better in upper level ( junior and senior level) work and in any graduate work already completed or other evidence that one can succeed in graduate study; (3) a satisfactory score on the Graduate Record Examination (or, for the MBA program, the Graduate Management Admission Test); (4) adequate subject preparation for the proposed graduate program; and (5) acceptance by the Graduate Acceptance Committee of the Division in which the student expects to pursue graduate study.

**The Graduate Record Examination General (Aptitude) Test.** The General (Aptitude) Test of the Graduate Record Examination is designed to test preparation and aptitude for graduate study. Students seeking acceptance in a graduate degree program except the MBA must achieve a satisfactory score on the GRE. Students seeking acceptance to the MBA program must achieve a satisfactory score on the GMAT (see below). The GRE is taken at the applicant's own expense and ordinarily is given five times a year, usually in October, December, February, April and June.

**The Graduate Management Admission Test.** The GMAT is an aptitude test designed to measure certain mental capabilities important in the study of management at the graduate level, and it must be completed with a satisfactory score by all students seeking acceptance into the MBA program. The test is taken at the applicant's own expense and ordinarily is given four times a year, usually in October, January, March and June.

**The Graduate Acceptance Committee.** Each Division has established a Graduate Acceptance Committee to evaluate applicants for acceptance to graduate programs within the Division. Upon receipt of all required documents, i.e., application form, official transcripts of all higher education course work, TOEFL scores for foreign students, and GRE/GMAT scores, the Graduate Studies Office transmits each advising file to the Graduate Acceptance Committee in the Division offering the program. Included in the advising file are copies of all documentation plus an acceptance form with the applicant's eligibility status. Upon completion of its deliberations, the Graduate Acceptance Committee returns its decision and any conditions of acceptance to the Director of Graduate Studies, who notifies the student in writing. Acceptance of a student to graduate study is subject to review by the Director of Graduate Studies for consistency with graduate policies and procedures.

# Acceptance

**Acceptance Categories and Requirements.** Students are accepted to a degree program with regular status, provisional status, or conditional status. Students accepted into programs with other than regular status will be assigned special conditions by which they may attain regular status. These conditions include both the number of semester hours to be taken and the minimum grade requirements. If these conditions are not met in their entirety, the student will be denied permission to continue in the graduate program. Only under the most extraordinary and compelling circumstances, and with the approval of the Director of Graduate Studies, will students seeking regular status be allowed to drop courses meeting their assigned special conditions for acceptance.

Individual degree programs may have additional requirements for acceptance to graduate study and advancement to candidacy for the degree.

1. *Regular Status*
   a. A student is eligible for regular status with an earned graduate degree from an accredited college or university and adequate preparation in the discipline;
   **or**
   b. With a grade-point average (GPA) of 3.0 or higher (on a 4.0 scale) in the upper division courses required for the degree and a total Quantitative - Verbal - Analytical Graduate Record Examination (GRE) score of 1500 (1000 if only the Quantitative - Verbal exam is taken) or higher, and adequate preparation in the discipline. In place of these GRE provisions, acceptance to the MBA program requires a satisfactory academic record and Graduate Management Admission Test (GMAT) score. See "Master's Degree Program-Master of Business Administration."
2. *Provisional Status*

   A student whose GPA or GRE/GMAT scores are below the minimum for regular status but whose GPA is not less than 2. 5 and GRE is not less than 1200 for Verbal - Quantitative - Analytical (800 for Verbal - Quantitative) is eligible for provisional acceptance to a graduate program. (Prospective MBA students should consult the MBA section for GMAT acceptance criteria.) All students accepted with provisional status shall be assigned specific requirements in terms of courses and performance, to include a minimum of 9 semester credit hours of graduate credit course work, with a grade of **B** or better in each course taken. Any leveling requirements must be met before the student begins his/her graduate program.
3. *Conditional Status*

   A student who meets the minimum GPA and GRE/GMAT requirements in 1 or 2 above, but has deficiencies in undergraduate preparation in

# Acceptance

the discipline is eligible for conditional acceptance. A student so accepted shall be assigned specific requirements in terms of courses and performance. These requirements must be met satisfactorily before the student may begin the graduate program.

**Special Status**

Special Status

Special status students are college graduates who are not pursuing a degree. Permission to register in graduate courses with special acceptance status does not constitute acceptance to a graduate program.

Special status students are postbaccalaureate students in the following categories:

1. Students who wish to take selected courses for their own intellectual or professional enhancement or to transfer those courses to another university.

   These students may enroll in any graduate course with the approval of the Graduate Acceptance Committee of the Division in which the applicant wishes to study and the Director of Graduate Studies. These students should have no intention to transfer courses to a degree program at The University of Texas of the Permian Basin.

2. Postbaccalaureate students seeking teacher certification, an endorsement to their teaching certificate, or who wish to accrue credit toward the career ladder.

   These students may enroll in graduate or undergraduate education or content-area courses with approval of the Division of Education.

3. Students in their first semester of graduate study who have applied to a graduate degree program and are pending acceptance to a graduate degree program.

   Special status students who wish to request permission to count the course work taken during their first semester on campus toward a graduate degree must complete the acceptance process in the first semester of study. If the student does not complete the acceptance process in the first semester and later wishes to enter a degree program, a maximum of 6 semester credit hours of course work may be applied to the degree program. The application of courses taken as a special status student to a degree program is subject to the approval of the student's graduate committee and the department chair or program coordinator. **No 400-level courses taken as a special status student are eligible for eventual credit toward degree requirements.**

# Financial Aid

Financial Aid

Various forms of financial aid are available to graduate students. Grants, loans and scholarships are listed below. Students should also refer to the Financial Aid section of the undergraduate portion of this catalog to obtain further detail on applications and regulations. The following programs apply to graduate students:

**Student Loans**
Stafford Loans
Supplemental Loans
Teacher Education Loan Program

**University Grants**
Texas Public Education State Student Incentive Grant
Texas Public Education Grant

**Scholarships**
AAUW - Midland Chapter
AAUW - Odessa Chapter
Haley Library Internship
William A. King Art Scholarship
Nojem Libson
Literature
American Petroleum Institute
Permian Historical Society Grad. Fellowship
Permian Honors Graduate Scholarship
W.D. Noel Class A
W.D. Noel Class B
State Society of CPA's Local Chapter

**Other Programs**
College Work-Study
Fee Waivers
Off-Campus Employment
Institutional Part-time Work
Texas Rehabilitation for Students
Veterans Education Benefits
Tuition Installment Program

For additional information see "Financial Aid" pages 21-28 contact the Financial Aid Office.

# Regulations

Graduate Study Regulations

**Student Responsibility.** Students are responsible for knowing degree requirements and for enrolling in courses that apply to their degree program. Knowing university regulations pertinent to the standard of work required for continuation in graduate study is also the student's responsibility.

**Transfer of Credits.** Credit for graduate courses completed at another accredited institution may be applied toward a master's degree at U. T. Permian Basin. A maximum of 6 semester credits may be transferred if appropriate for the student's program and approved by the student's advisor. Three additional credits may be transferred upon approval of the Director of Graduate Studies. No course credit with a grade of **C** or lower may be transferred to U. T. Permian Basin. No undergraduate course work taken at another university, even when taken for graduate credit, may be transferred to U. T. Permian Basin.

All credit transfers must be approved after acceptance to a graduate program and *prior to the student's completion of 12 semester credit hours at U. T. Permian Basin.* It is the student's responsibility to initiate the approval process.

Should the advisor and/or Director of Graduate Studies not approve the transfer of any credits, the student has the right to submit a petition to the Graduate Council, which will make the final decision. When submitted to the Graduate Council, the petition must include the recommendation of the student's advisor, committee, and the Director of Graduate Studies.

To receive more than a total of 9 hours of transfer credit, the student must file a petition with the Director of Graduate Studies. The petition must include the recommendation of the student's advisor and committee. Requests for more than a total of 9 semester hours of transfer credit must go to the Graduate Council for a decision.

To insure acceptance of credit toward the master's degree, the student must obtain prior written approval from the student's advisor for any courses taken at another institution after the student has matriculated at U. T. Permian Basin.

No correspondence study credits apply toward the minimum requirements for the master's degree, and no credit more than 8 years old at the time of graduation may be applied toward requirements for the degree. A maximum of 6 credits of approved extension course work, whether completed through U. T. Permian Basin or at another institution, may be applied toward meeting minimum requirements for the master's degree.

**Courses Counted for Another Degree.** No course counted toward another degree may be counted toward a master's degree, either directly or by substitution.

# Regulations

**Undergraduate Courses.** Students may apply a maximum of 9 credit hours of 400-level courses toward master's degree requirements. In order to be eligible to count toward the degree, these courses must be approved by the master's degree committee and taken **after** acceptance to a degree program.

**Graduate Courses Taken Prior to Acceptance in a Degree Program.** A maximum of 6 credit hours of 600-level course work taken prior to acceptance in a master's degree program may be applied to the degree subject to the approval of the student's graduate committee.

**Contract Study.** Only two contract study courses may be counted toward the degree. Any contract study course applied toward the degree must be 600-level.

**Course Load.** Nine semester credit hours constitute a full-time semester load for graduate students. The maximum course load for graduate students is 15 semester credit hours in a fall or spring semester or 6 semester credit hours in a 6 week summer term. Registration in excess of the maximum course load requires approval of the Director of Graduate Studies and is permitted only under exceptional circumstances. Students employed by U. T. Permian Basin as student or teaching assistants must reduce their course loads accordingly. Part-time students employed full time may take no more than two courses per semester without the approval of the Director of Graduate Studies. The maximum credits for which students may register in a semester or summer term apply to the combined credit for both conventionally taught courses and self-paced courses. If students finish a self-paced course before the end of the semester or summer term, they may register for another self-paced course immediately or at any time during that semester up to 4 weeks prior to the end of the semester.

**Grading Policies and Academic Progress.** Students in graduate programs receive credit only for courses in which a grade of **A, B** or **C** has been earned. No more than two **C** grades may be counted toward the degree. The master's project/thesis will be graded **S** for Satisfactory and **U** for Unsatisfactory. All practicum courses will be graded by **S** and **U.** The **S** does not calculate in the Grade Point Average (GPA). The **U** calculates as a failing grade in the GPA. Degree candidates are required to present an overall average of not less than **B (3.0)** at the end of their program of study. Pluses and minuses do not enter into the GPA calculation.

For project/thesis work in progress, the letters **PR** will be assigned in lieu of a final grade. Upon completion of the master's project/thesis and upon final evaluation by the committee and approval by the Director of Graduate Studies, grades for the most recent enrollments (not to exceed 6 credits for thesis and

# Regulations

3 credits for project) will be converted to **S** or **U.** All grades of **PR** in excess of 6 credit hours for thesis and 3 credit hours for project will be converted to **NG** (No Grade). Neither the **PR** nor the **NG** grade calculates in the GPA at any time.

Continuation in a graduate degree program is dependent on satisfactory progress in resolving any acceptance conditions and maintenance of not less than a **B** average **(3.0 GPA)** in all graduate credit course work taken according to the program plan. Special status students accruing graduate credit course work are bound by the same scholastic standards that apply to regularly enrolled degree seeking students.

Graduate students taking 300- or 400-level courses which are not part of their degree program and students seeking teacher certification, endorsement, or career ladder credits will be held to the same GPA requirements as regular undergraduate students taking the same courses. Teacher certification students must maintain a GPA of at least 2.75.

A student whose GPA falls below the GPA requirements stated above will be placed on probation for one semester or 6 semester credit hours. Failure to bring the cumulative GPA up to 3.0 within that period will result in dismissal. After one semester, a student who has been dismissed may reapply for admission and must present evidence of reasonable expectation to succeed in graduate study. A student dismissed a second time may reapply after one full academic year. No student may reapply after three dismissals for academic deficiencies.

**Readmission.** A former graduate student must notify the Admissions Office of the intention to return to study at U. T. Permian Basin. A student who has not attended U. T. Permian Basin for two or more terms or who wishes to pursue a different major upon returning must report to the Admissions Office and complete a new application. Notification of attendance at other institutions must be provided and transcripts from all other institutions must be submitted.

Any student who is not eligible to return immediately to a former institution is not eligible to enroll at U. T. Permian Basin. A student who is dismissed for disciplinary reasons from another instiution will not be readmitted.

**Advisement.** Upon acceptance into a graduate program, each student will be assigned a faculty advisor by the department chair or coordinator of the program in the student's field of major interest. Prior to completion of one-half of the course credits required for the degree, the advisor and the student will nominate a committee of three or more members of which the initial advisor may or may not be the chair or a member. Each graduate student's committee

# Regulations

will consist of graduate faculty members from the academic department(s) offering the degree, plus one member from outside the department(s) who will represent the graduate faculty. At the time the student's committee is formed, the graduate faculty representative will be appointed by the Director of Graduate Studies, who will also approve the committee and the student's degree plan.

The committee is responsible for developing the student's program of study, for arranging and conducting examinations and for certifying the student's completion of all requirements for the degree. All recommendations by the committee are subject to review and approval by the Director of Graduate Studies.

**Candidacy.** Candidacy for the master's degree is established when, following acceptance into a degree program and completion of all acceptance requirements, the graduate student and the advisor plan a program of study which is approved by the student's committee, the department chair or program coordinator and the Director of Graduate Studies. Filing of the degree plan with the Office of Graduate Studies should be done upon or prior to completion of 12 semester credit hours of degree requirements and must be done prior to completion of 18 semester credit hours toward the degree. Students failing to submit a program or receive approval may be required to complete one-half of the required credits (exclusive of project/thesis) after approval is received. The planned program should list all courses, any special projects and any other educational experiences that are to be a part of the master's program. It is not necessary to include the topic if the project/thesis option is chosen.

**Time Limitations.** The master's degree must be completed within 8 years. The eight year period begins at the date of completion of the first course to be applied toward degree requirements. No course more than 8 years old at the time of graduation may be applied toward requirements for the degree. This includes any transfer credit and project or thesis credit.

**Oral Examination.** Successful completion of all courses and research requirements does not assure receipt of the master's degree. After all requirements have been fulfilled, candidates (except MBA) normally sit for an oral examination by their committee, which includes a representative of the graduate faculty. The examination covers the subject matter of the candidate's field or discipline and research, if a project/thesis is part of the student's program. Candidates must demonstrate an appropriate level of knowledge and understanding of their field and research effort in the oral examination. Two negative votes on a committee of four or more members results in failure. Candidates failing the oral examination may sit for reexamination only twice more within five years of the initial failure. Candidates failing the examination will be given direction for study or rewriting of the project/thesis report in order to improve the chances of passing the examination on a subsequent attempt.

# Regulations

**Master's Thesis/Research Project Report.** The final copies of the master's project/thesis must be prepared according to the regulations presented in the current edition of INSTRUCTIONS FOR PREPARATION OF MASTERS THESES AND RESEARCH PROJECT REPORTS available from the U. T. Permian Basin Bookstore. Binding fees consist of $1.50/copy for the project and $5.00/copy for the thesis. Students must submit not less than an original and 3 copies of the project/thesis.

The Director of Gradute Studies examines each project/thesis to determine whether or not it meets university requirements and format guidelines. In order to reduce the number of last minute corrections, the student is encouraged to consult with the Graduate Office during preparation of the report and to submit the master copy of the final draft of the report for review before having additional required copies prepared. This copy should be submitted for review well in advance of the deadline to allow adequate time for the Graduate Director's examination, time for the student to make necessary corrections, and time to have the final required copies made.

**Continuous Registration.** Each student must register for the number of hours determined by his/her committee for the master's project/thesis. Students must register for 698/699 each semester in which they work under the supervision of their advisor toward the completion of the project/thesis and/or use the resources of the university. Although multiple registrations for these courses are common, a maximum of 3 hours for project or 6 hours of credit for thesis will be granted on the final academic record.

Enrollment for project or thesis is permitted only during the regular and late registration periods. Students away from campus may register by mail, providing arrangements are made with the Registrar's Office at least 30 days prior to the registration period for the semester. Under special circumstances, registration *in absentia* may be permitted if approved by the committee chair and the Director of Graduate Studies.

**Applying for Graduation.** The prospective graduate must complete and file an application for graduation during the registration period of the semester graduation is planned. Students failing to graduate after paying the graduation fee will forfeit that fee and must reapply when they register for each semester in which they intend to graduate. Early in the semester of graduation, a degree check will be initiated for the student. The student must enroll for at least 3 semester credit hours in one of the standard numbered courses during the semester in which graduation actually occurs or, under special circumstances, register *in absentia*.

# Regulations

**In Absentia Registration.** A candidate for a degree who has completed all the requirements for graduation and who needs to register for the purpose of having a degree conferred (not to take courses) must register *in absentia*. This is the only purpose for which a student may register *in absentia*. After registration for credit during a semester or summer session, a change to *in absentia* status must be approved by the Director of Graduate Studies and processed through the add/drop procedure; i.e., a student will drop the courses for which he has registered and add the *in absentia* registration. All fees, less the *in absentia* fee, will be refunded if the change is made during the first twelve class days. After the twelfth class day, no refunds are made and no additional charge will be assessed for the *in absentia* fee. The university ID card and original paid fee receipt must be returned before a refund can be issued. No refund is made for the cancellation of an *in absentia* registration.

# Standard Course Numbers

Several numbers are standard among all disciplines at U. T. Permian Basin. These include:

**689 Selected Topics (1-3)**
Graduate courses which will be offered only once, will be offered infrequently or are being developed before a regular listing in the catalog.

**691 Contract Study (1-3)**
For students who are pursuing independent study or research (as described in the contract study format). Available only in disciplines in which the master's degree is offered. Contract study should not include course work which is offered in regular undergraduate or graduate courses. SPI enrollment would be the preferred mode for individual enrollment in such a course. All 691 enrollment forms will be routed through the Director of Graduate Studies for approval prior to acceptance by the Registrar. A limit of 6 semester credit hours is established for the amount of contract study credit which will be accepted for a master's degree.

**692 Experiential Learning (1-3)**
Referred to as authentic involvement or as practicum depending upon the discipline. Available only in disciplines in which the master's degree is offered.

**695 Seminar (1-3)**
Available only in disciplines in which the master's degree is offered.

**698 Master's Project (1-3)**
Meets the research requirements for the nonthesis option in master's degree programs.

**699 Master's Thesis (1-6)**
Meets the research requirements for the thesis option in master's degree programs.

Students must have the approval of the instructor before registering for courses 691, 692, 698 and 699. In some cases, prior approval is required for other courses and will be so indicated in the schedule of classes.

# Division Abbreviations

For purposes of computer processing, each discipline or area of study is assigned a letter abbreviation for identification consisting of either three or four letters, which is to be used in registration and elsewhere when the data is to be processed through the computer. The abbreviations are:

| Discipline | Abbreviation |
|---|---|
| Accounting | ACCT |
| Anthropology | ANTH |
| Art | ART |
| Business Law | BLAW |
| Chemistry | CHEM |
| Computer Science | CPSC |
| Criminology | CRIM |
| Decision Science | DSCI |
| Economics | ECON |
| Education | EDUC |
| Engineering | ENGR |
| English | ENG |
| Finance | FIN |
| Geography | GEOG |
| Geology | GEOL |
| History | HIST |
| Kinesiology | KINE |
| Life Science | LFSC |
| Management | MNGT |
| Marketing | MRKT |
| Mass Communications | MCOM |
| Mathematics | MATH |
| Music | MUS |
| Natural Science | NTSC |
| Philosophy | PHIL |
| Physical Education | PHED |
| Physics | PHYS |
| Political Science | PLSC |
| Psychology | PSYC |
| Science and Engineering | SCEN |
| Sociology | SOC |
| Spanish | SPAN |
| Speech | SPCH |
| Theatre | THEA |

# Control Engineering

Master Of Science

The Master of Science degree in Control Engineering provides advanced study in control theory, mathematics and the engineering sciences. The program of study assumes a preparation equivalent to the core undergraduate U. T. Permian Basin control engineering curriculum. Students seeking this degree should first review admission and graduate study regulations.

Two general plans of study are available: a 30-hour (minimum) plan (which includes 6 hours credit for the master's thesis) and a 36-hour (minimum) plan (which includes 3 hours credit for the master's project). The decision on which plan to follow is made jointly by the student and faculty advisor.

When students enroll in the program, they will be assigned an advisor from the faculty of Engineering, who will work with them to develop a preliminary program of study. Upon satisfactory completion of at least 9 semester credit hours of course work and a satisfactory score on a qualifying examination, the student will be admitted to candidacy for the MS degree. At that time, a graduate committee will be appointed, ordinarily with the advisor as chairperson. The committee will provide guidance in the student's thesis or project. The student will later defend the thesis or project before the committee.

Students whose undergraduate engineering degrees were not in or closely related to control engineering may be required to take a number of basic control engineering courses for noncredit towards the degree. Non-engineering graduates will be required to complete sufficient undergraduate engineering and science course work to meet the ABET (Accreditation Board for Engineering and Technology) minimum requirements for an undergraduate engineering degree as well as those necessary to provide a background in control theory, system dynamics, mathematics and engineering sciences equivalent to the U. T. Permian Basin BS degree in control engineering.

All students are required to complete at least 12 semester credit hours in advanced control theory, which must include ENGR 680 and 681 or their equivalent. The remainder of the 12 semester credit hours may be chosen from ENGR 620, 623, 624, 671, and 684 as approved by the student's advisor. The additional required course work should be chosen from the student's area of major interest and to support the thesis or project.

Course Listing

**ENGR 620 Linear Systems Analysis (3)**
Linear lumped parameter systems unified through linear graphs and through across variable concepts. State variable formulation of systems and distributed systems.

**ENGR 623 Stochastic Processes (3)**
Methods to extract useful information from signals corrupted with random noise. Includes control of linear systems with random inputs and noise-corrupted measurements.

Graduate Studies

# Control Engineering

**ENGR 624 Optimization Methods (3)**
Engineering techniques for optimizing the performance of deterministic systems. Discrete and continuous system models; performance measures, Kuhn-Tucker conditions; calculus of variations; maximum principle; dynamic programming and quasi linearization; successive approximation methods.

**ENGR 643 Advanced Electric Log Interpretation (3)**
Quantitative analysis of electric logs to determine porosity, saturation, moveable hydrocarbons and lithology.

**ENGR 671 Advanced Signal Processing (3)**
Applications to analysis of data from control systems and seismic exploration.

**ENGR 680 Control Systems Engineering (3)**
Analysis and design of continuous control systems via classical and computer methods.

**ENGR 681 Advanced Computer Control (3)**
Analysis and design of computer control systems including techniques for determining the response and stability of discrete-time systems.

**ENGR 684 Nonlinear and Distributed-Parameter Systems (3)**
Characteristics and techniques of analysis of nonlinear control systems. Quasi-linearization, describing functions, phase-plane methods, stability and simulation. Introduction to analysis and control of distributed-parameter systems.

# Education

Master Of Arts

The Master of Arts degree in Education is offered with options in educational administration, counseling, early childhood education, elementary education, reading, secondary education, special education and supervision.

Graduate students in Education seeking Texas certification should have had teaching experience before enrolling in graduate study. Those who have not had such experience will, except in unusual cases, be expected to gain teaching experience before completion of the MA degree. The Master of Arts degree program in Education is open to students not seeking educational certification. Students without prior professional education may be required to take 6-12 semester hours of leveling courses.

Students receiving the MA degree in Education must complete a minimum of 36 semester credit hours of a prescribed course of study. These 36 semester credit hours must include a minimum of 33 hours of prescribed course work plus the satisfactory completion of a 3-6 hour master's study (research project or thesis) and its oral defense before the student's master's committee. The master's study requires the student to pursue a problem involving an issue in education of special interest to the student which is derived from his/her program of study. This study shall be under the supervision and direction of the student's master's committee and customarily involves the application of research techniques, theories and principles of education relevant to the problem studied. The format for the report of the master's study shall follow the guidelines of The U. T. Permian Basin Graduate Council Manual, Instructions For Preparation of Masters Thesis and Research Project Reports. Format concerns not attended to by The U. T. Permian Basin style manual shall conform to one of the established manuals of style (e.g., APA Publications Manual).

The Master of Arts degree options in early childhood education, elementary education, secondary education and special education may be so planned as to prepare the student primarily for teaching or for supervisory roles. The MA option in reading is designed to prepare reading specialists for teaching, diagnosis and coordination in elementary and secondary schools. The MA option in educational administration is designed for preparation and certification at the mid-management and superintendent levels. The master's option in supervision is designed to prepare general supervisors in program areas. The MA option in counseling is designed primarily to prepare counselors for elementary or secondary school service.

The Master of Arts degree in Education requires at least one-half of the course work in the major area of study or in areas directly related to it. For those pursuing the option in secondary education, the minor may be outside the field of education. For those pursuing the option in elementary education, the minor may be in an academic outside of education, or in a support area within education.

# Education

Students seeking professional certification must meet the following requirements: (1) bachelor's degree; (2) valid Texas teacher certificate; (3) completion of at least 30 semester credit hours of graduate-level courses beyond the bachelor's degree in an approved graduate teacher education program including 12 semester credit hours in the area or areas of specialization to appear on the certificate; (4) three years of teaching experience; (5) submission of an application with appropriate fee (money order or cashier's check) and recommendation from the faculty to the Education Certification Officer; (6) a passing score on the appropriate ExCET exams.

Those pursuing the MA leading to professional certification in elementary or secondary education must include the following in their program: (1) a minimum of 15 semester credit hours in an approved academic area of specialization; (2) a minimum of 15 semester credit hours in the professional development area; (3) 6 semester credit hours in a resource area; (4) thesis or research project.

MA program options for elementary and secondary education may be organized to include endorsements in kindergarten, bilingual education or English as a second language.

Options also are offered leading to certification as reading specialist, mid-management educational administrator (principal or central system administrator) and superintendent.

## Course Listing
## Administration and Supervision

**EDUC 604 Methods of Program Evaluation (3)**
Functions of evaluation, performance and outcome measurement, design, administration and reporting of evaluation programs.

**EDUC 606 Staff and Organization Development (3)**
Readings and applications, with an emphasis on designing training and development strategies for school staff, structure, behavior and programs.

**EDUC 607 Supervision for Instructional Leadership (3)**
Systematic design and analysis of strategies for instructional leadership and supervision of teacher performance with an emphasis on clinical approaches.

**EDUC 608 Supervision of Student Teaching (1-3)**
Supervision of student teachers at secondary or elementary school levels. Techniques and procedures for supervising the effectiveness of instruction, activities and programs.

**EDUC 660 Organizational Theory in Educational Administration (3)**
Nature of organizational life and administrative behavior in the educational enterprise.

# Education

**EDUC 661 Fiscal and Legal Aspects of Education (3)**
Application of principles of public fiscal policy to education. Effects of the law on processes of public school education and its administration.

**EDUC 663 Administration of Special Programs (3-4)**
Administration of special and compensatory education, reading, career education, vocational-technical education and library media education.

**EDUC 666 Administration and Management of Schools (3)**
Major issues and trends in public school administration: centralization, decentralization, allocation of educational resources, organization, policy development, curriculum change and strategic planning.

**EDUC 667 Foundations of Public School Administration (3)**
Theory of administration. Study of setting, function and process of administration.

**EDUC 668 Principalship (3)**
Administrative processes and functions of the elementary and secondary school principal in the context of school district organization and administration.

**EDUC 669 School Human Resources Management (3)**
Personnel management theory and research. Emphasizes skills in recruitment, selection, assignment, staff development, supervision and evaluation.

**EDUC 683 School Finance (3)**
Principles, trends and practices in financing public education, including sources of school revenue, taxation and fiscal policies.

**EDUC 685 Educational Change and Design of Facilities (3)**
Planning a building program: educational plan, determining objectives, specification, selecting the architect, evaluating plant, school standards and equipment.

**EDUC 687 Education and Socioculture Change (3)**
Contemporary social issues and their relationship to instruction and policy formation, including professionalization, race relations and pressure group influences and processes.

**EDUC 688 Contemporary Philosophical Problems in School Administration (3)**
Selected contemporary problems in school administration in terms of basic philosophical concepts such as "value," "freedom" and "authority."

Graduate Studies

# Education

## Curriculum And Instruction

**EDUC 615 Teaching Language Arts and Reading for Spanish Speakers (3)**
A critical analysis of materials in Spanish available for teaching language arts and reading. A survey of strategies for teaching reading and language arts to Spanish speakers.

**EDUC 616 Teaching English as a Second Language (3)**
An introduction to theoretical and practical aspects of teaching English as a second language (written and oral) to non-English-speaking children.

**EDUC 621 Curriculum Foundations of the Elementary School (3)**
Foundations of curriculum of the elementary school. Review of aims, methods and approaches to curriculum, instruction programs and evaluation.

**EDUC 631 New Strategies in Secondary Science (3)**
Organizing and sequencing lessons and units in junior high and senior high science courses. Students videotape and evaluate their own teaching.

**EDUC 632 Current Issues and Trends in Curriculum and Instruction (3)**
Examination of current areas of controversy affecting curriculum and instruction with emphasis on alternative values and positions in a pluralistic culture.

**EDUC 634 Curriculum Foundations of the Secondary School (3)**
Foundations of curriculum of the secondary school. Aims, methods and approaches to curriculum, instruction, programs and evaluations.

**EDUC 636 Advanced Problems in English as a Second Language (3)**
A comparative and contrastive analysis of the interrelationships of language, culture and learning in the classroom setting.

**EDUC 637 Problem Solving in Mathematics Education (3)**
Examines recent findings regarding problem solving in mathematics education and analyzes a variety of models for heuristic application and diagnostic purposes.

**EDUC 638 Strategies for Teaching Science, Mathematics and Social Studies in Spanish (3)**
Primary emphasis will be placed on developing teaching plans, materials and teaching demonstrations using vocabulary appropriate for the discipline and grade level at which material is presented.

**EDUC 639 Innovations in Teaching Elementary School Science (3)**
Similarities and differences between newer elementary science programs and existing approaches; interaction with elementary children using materials and activities from current curricula.

**EDUC 627 Advanced Social Studies Education (3)**
Issues, teaching strategies and curriculum materials are combined to offer knowledge and experience in recent trends in social studies education.

# Education

**EDUC 628 Linguistics and Grammar for the English as a Second Language Teacher (3)**
A survey of structures of English as well as general issues in language such as language variation, non-verbal communication and uses of languages.

**EDUC 630 Theories of Curriculum and Instruction (3)**
An introduction to contemporary conceptions of curriculum and instruction as related to teaching and administration in elementary and secondary schools.

**EDUC 641 The Design of Instructional Systems (3)**
Primary emphasis on designing a course of instruction using systems theory and the programmed instructional process.

**EDUC 642 Individualized Instruction Through Media (3)**
Defining objectives behaviorally; developing sequential learning activities; analyzing pupil readiness; prescribing appropriate strategies for continuous individual progress through selective use of media.

## Counseling And Guidance

**EDUC 670 Introduction of Counseling and Guidance (3)**
Theoretical, experiential and applied overview of counseling and guidance services in the schools and community. Emphasizes functions of counselors in different settings.

**EDUC 671 Group Techniques for Counselors (3)**
Dynamics and theory of group processes as applied to group procedures in counseling and psychotherapy.

**EDUC 672 Career Counseling and Career Development (3)**
Human development perspective of vocational counseling and career planning. Content, processes and strategies, information systems and career guidance services.

**EDUC 673 Guidance Testing (3)**
Group testing; analysis and interpretation of achievement, aptitude, interest and personality tests; synthesizing case data and educational, vocational and general counseling report-writing.

**EDUC 674 Micro-Counseling (3)**
Presentation, demonstration, and practice in the necessary skills to effectively conduct complete counseling interviews. Prerequisite: Permission of the instructor.

**EDUC 676 Counseling Theory and Practice (3)**
A survey of major counseling theories and techniques.

Graduate Studies

# Education

## Special Education

**EDUC 609 Supervision of Special Education (1-3)**
Administrative and supervisory procedures of special education programs for exceptional children.

**EDUC 651 Advanced Problems in Exceptional Children (3)**
Literature and research relating to psychological, sociological and educational problems of exceptional children. Prerequisite: permission of instructor.

**EDUC 652 Assessment of Exceptional Children (3)**
Opportunity to develop knowledge, skills and testing strategies needed to evaluate and diagnose exceptional students. Prerequisite: EDUC 451, 452 or permission of instructor.

**EDUC 656 Advanced Problems in Education of the Mentally Retarded (3)**
Psychological, sociological and educational problems of the mentally retarded.

**EDUC 657 Etiology of the Mentally Retarded (3)**
The mentally retarded child-related problems. Diagnostic, social, psychological and educational problems manifested by the mentally retarded child.

**EDUC 658 Educational Planning for Exceptional Children (3)**
Organizational alternatives and methodologies employed by a school district, school or resource teacher. Prerequisite: permission of instructor.

**EDUC 675 Classroom Management/Regular and Exceptional Students (3)**
Using the principles of behavior modification, the course in classroom management assists teachers of the regular and exceptional student to arrange the learning and behavior environment so that children will learn in the most efficient and effective manner.

## Early Childhood Education

**EDUC 610 Environmental Factors in Early Childhood Education (3)**
Analysis of theory and issues relating environmental factors in early childhood to cognitive competence, socialization and achievement.

**EDUC 611 Early Childhood Education: Curricula, Procedure, and Materials (3)**
Development of curricula, materials and methods for preschool and kindergarten programs systematically derived from diverse theoretical and philosophical positions.

**EDUC 612 Cognitive Education of the Young Child (3)**
Consideration of education programs for young children which focus on enhancing cognitive development, with emphasis on those of Montessori and Piaget.

# Education

**EDUC 613 Early Childhood Education: Theory and Research (3)**
Review of several major research emphases in early childhood education and psychology from an historical and evolving perspective.

**EDUC 614 Issues in Cognitive Development (3)**
Analysis of theory related to development of perceptual and conceptual skills; verbal mediation and other cognitive functions.

**EDUC 629 Language Development and Acquisition (3)**
Theories of psycholinguistics and sociolinguistics applied to the acquisition of one or more languages in early childhood and school learning.

**EDUC 643 Selected Teaching Strategies in Early Childhood Education (3)**
Systematic development of programs for young children based on diverse philosophical-theoretical positions.

Reading

**EDUC 618 Reading Diagnosis (3)**
Testing strategies needed to evaluate and diagnose students with reading difficulties.

**EDUC 619 Materials, Methods and Media in Reading (3)**
Programs and other reading materials. Comparison of methods used in the teaching of reading. Prerequisite: one undergraduate reading course or permission of instructor.

**EDUC 620 Advanced Problems in Reading (3)**
Psychological, cognitive and methodological issues in reading. Prerequisite: EDUC 618 and 619 or permission of instructor.

**EDUC 692 Practicum: Reading (3)**
Supervised practical application of previously studied reading theory. Prerequisite: EDUC 618, 619 and 620.

Educational Foundations

**EDUC 626 Analysis and Selection of Literature (3)**
Literature in the reading program. Emphasizes recent research in literature and related trends in curriculum in the elementary and secondary school.

**EDUC 622 Education of the Disadvantaged Child (3)**
Complex nature of the disadvantaged child from an educational, political and psychosocial point of view. Techniques and activities for classroom use.

**EDUC 644 Advanced Educational Psychology (3)**
Review of theories of behavior, learning and instruction, research on human ontological development, and consideration of applications of such theory and research to classroom practices, including issues related to their measurement and evaluation.

# Education

**EDUC 647 Human Growth and Development: Socialization and Personality Development (3)**
Achievement motivation, aggression, discipline, sex identification, moral development, peer relations, adult-child interaction, social-class and ethnic differences. Prerequisite: Introduction to Psychology or Educational Psychology.

**EDUC 680 Research Design in Education and the Social Sciences (3)**
Research planning, evaluation of research, sampling, surveys, measurement, research tools, experimental and quasi-experimental designs, historical studies, data analysis and reporting research.

**EDUC 681 Data Analysis (3)**
Descriptive and inferential statistics as applied to education, with computer applications.

**EDUC 690 Philosophy of Education (3)**
Analysis of fundamental educational ideas related to teaching and administration in terms of assumptions with respect to the nature of knowledge, value, man and democracy.

Graduate Studies

# Electrical Engineering

Master Of Science

In addition to the Master of Science program in Control Engineering, U. T. Permian Basin students are offered the opportunity to earn a Master of Science in Electrical Engineering from The University of Texas at El Paso. This cooperative effort of the two University of Texas component institutions allows the student to earn the degree from The University of Texas at El Paso while remaining at home in the Permian Basin area.

A typical program will consist of 24 hours of classroom instruction plus a thesis. The program content will be taught by faculty from both institutions. Each student's course of study will be directed by a committee made up of U. T. El Paso graduate faculty. U. T. Permian Basin faculty members may be appointed to the U. T. El Paso graduate faculty and may serve on supervising committees, and, in some instances, may serve as the co-chairman with a U. T. El Paso faculty member. The properly prepared student should be able to complete this program in two and one half calendar years, including thesis work in the summers.

Background requirements are generally the same as those for the degree in Control Engineering. Prospective students must qualify for admission to the Graduate School and the Masters of Science in Electrical Engineering program at U. T. El Paso.

More specific details on background and entrance requirements may be obtained from the Chairman of the Engineering Department at The University of Texas of the Permian Basin.

Graduate Studies

# English

Master Of Arts

The purposes of the Master of Arts program in English are at least fivefold: to train students to work with the materials of literature with scholarly competence and maturity; prepare students to teach English in schools and colleges; provide additional professional training for English teachers currently employed in elementary and secondary schools; prepare students for such nonteaching vocations as publishing, advertising, editing, civil service, and management; and offer sound professional training on the master's level for students who intend to pursue a doctorate in American and British literature or American studies elsewhere.

Requirements for acceptance include a minimum of 24 undergraduate semester credits in English. Students may be required to complete certain undergraduate courses before regular admission to the graduate program.

**Requirements for the MA in English include the following:**

The successful candidate for the MA degree in English will complete a minimum of 37 credits in a combination of course work and Thesis (or Directed Reading) and pass an oral examination.

**Course Work.** A minimum of 31 credits must be earned in course work at the 400 or 600 level, with no more than 9 at the 400 level. A maximum of 6 credits of course work may be taken in a field other than literature with prior written approval of the student's committee. Students will work out the required degree plan in consultation with their advisor. The plan will reflect the following requirements:

a. Research Methods Requirement

Before completing the first 12 credits of graduate study, each student will designate a 600-level course in English as the Research Methods course. In addition to the work normally required for the course, a student meeting the Research Methods requirement will complete a series of assignments designed to prepare him or her for advanced research in literature. That course will be designated as a contract study (ENG 691) and will carry 1 credit.

b. Breadth Requirement

Each student shall complete a minimum of 9 credits in British literature and 9 credits in American literature.

**Thesis/Directed Reading.** A total of 6 credits will be devoted either to ENG 699: Thesis Research, for students electing to complete a thesis, or to ENG 690: Directed Reading, for students electing to sit for a comprehensive written examination.

# English

**Oral Examination.** The candidate for the MA degree in English must also perform successfully in an oral examination. The examiners will be the members of the candidate's committee and a representative of the Graduate Faculty. For students writing a thesis, the examination will include, but not be limited to, a defense of the thesis. For students doing directed reading, the oral examination will cover the entire range of course work, reading, and general knowledge of literary scholarship.

Course Listing

**ENG 601 American Literature to 1800 (3)**
Bradford, Bradstreet, Cotton Mather, Taylor, Edwards, Franklin.

**ENG 603 American Literature, 20th Century (3)**
Frost, Pound, Eliot, Stevens, Williams, Hemingway, Fitzgerald, Faulkner, Steinbeck, O'Neill, Tennessee Williams, Lowell, Bellow and Mailer.

**ENG 621 British Literature to 1660 (3)**
Chaucer, English Rennaissance humanists, the Elizabethan lyric, Spencer, Shakespeare, Jacobean and Caroline drama, classical lyrists, the metaphysicals.

**ENG 622 British Literature, 1600 -1800 (3)**
Milton, Dryden, Restoration literature, 18th-century poetry, fiction, drama, and criticism.

**ENG 623 British Literature, 19th Century (3)**
Major Romantic and Victorian poets, novelists, and essayists.

**ENG 624 British Literature, 20th Century (3)**
Conrad, Joyce, Lawrence, Forster, Woolf, Shaw, O'Casey, and selected poets.

**ENG 643 Literature of the Southwest (3)**
Contribution of the Southwest to the American literary tradition. General prose works and representative poetry and fiction.

**ENG 659 Special Studies in Literature (3)**
Selected works of several authors organized according to historical era, genre or theme. Content varies.

**ENG 661 Literary Criticism (3)**
Theories and practice of criticism; major attention given to modern critical approaches.

**ENG 669 Studies in a Major Author (3)**
Works of a major American or British author.

# English

**ENG 671 The English Language (3)**
Conceptual linguistics and curriculum models applied to the teaching of communication skills in high school and college.

**ENG 690 Directed Reading (3)**
A required reading list and faculty guidance are provided for students electing the comprehensive examination rather than the thesis.

# Geology

Master Of Science

The program for the Master of Science in Geology requires a minimum of 24 semester credit hours of graduate-level course work in geology and supporting or ancillary fields, and 6 semester credit hours of research that result in a master's thesis. A satisfactory score, as determined by the Department of Geology, must be obtained in a qualifying examination such as the advanced geology examination of the Graduate Record Examination, or an equivalent examination given by the Department of Geology.

When students enroll in the program, they will be assigned an advisor from the Department of Geology, who will work with them to develop a preliminary program of study and thesis research. Upon satisfactory completion of at least 9 semester credit hours of course work and obtaining a satisfactory score on the qualifying examination, a student will be admitted to candidacy for the master's degree. At that time, a graduate committee will be appointed, ordinarily with the advisor as chairperson, in accord with current regulations for the conduct of graduate education. After the committee reviews the student's program and proposed thesis research, it will approve a degree plan and thesis topic.

Coursework for the MS in Geology shall include GEOL 605 and 655 and at least one advanced course in petrology and stratigraphy, along with a combination of courses that supports the student's main area of interest and thesis research. Students are expected to have completed a standard undergraduate curriculum that includes the courses required for an undergraduate degree in geology at U. T. Permian Basin, as set forth in this catalog. Students who lack any of these courses are required to complete them in addition to the minimum of 24 semester credit hours of graduate-level course work needed for the degree.

Candidates for the Master of Science degree in Geology must complete an acceptable thesis prepared according to the guidelines used by U. T. Permian Basin, and written in standard geologic style as outlined in the American Geological Institute's "Guide to Geowriting" and the U.S. Geological Survey's "Suggestions to Authors" (5th and 6th editions). The thesis must be defended in an oral examination.

Course Listing*

**GEOL 603 Advanced Geomorphology (3)**
Origin and evolution of relief features of the earth, with particular reference to their application in the interpretation of structure, stratigraphy, and geologic history of an area.

**GEOL 605 Advanced Structural Geology and Tectonics (3)**
Concepts and principles of structural geology and tectonics, with emphasis on physical factors responsible for the deformation of the earth's crust, and the results of the deformation through geologic time.

Graduate Studies

# Geology

**GEOL 606 Topics in Structural Geology (3)**
Critical review of modern developments in structural geology. Topics vary. May be taken for credit more than once.

**GEOL 607 Advanced Stratigraphy (3)**
Concepts and principles of naming and correlating stratigraphic units with emphasis on major elements of local, regional, and North-American stratigraphy.

**GEOL 608 Topics in Paleontology (3)**
Major trends and processes in the evolution of life through geologic time. Interrelationships of biological and physical processes in earth history. Application of paleontology to current problems in geology. Critical review of modern developments in paleontology. Topics vary. May be taken for credit more than once.

**GEOL 611 Carbonate Depositional Systems (3)**
Study of the origin, textures, distribution patterns, and alteration of recent and ancient carbonate sediments. Emphasis on the chemistry of formation and diagenesis of carbonates.

**GEOL 614 Clastic Depositional Systems (3)**
Study of depositional processes, physiographic and environmental characteristics, and facies types and relationships of fluvial, deltaic, barrier-bar-strand-plain, lagoon-bay-estuary, shelf-abyssal, eolian, lacustrine, and alluvial fan depositional systems, and their application to the analysis of past stratigraphic systems.

**GEOL 626 Seismic Data Processing (3)**
Wave propagation theory, information theory, migration algorithm, seismic modeling, and recent technologies used in seismic data acquisition and processing.

**GEOL 627 Exploration Geophysics I - Seismic Principles (3)**
Definitions of elastic constants; types of seismic waves; seismic recorders; reflection and refraction. Electronic data processing. Special seismic procedures.

**GEOL 628 Exploration Geophysics II - Seismic Stratigraphy (3)**
Application of seismic data in stratigraphic interpretation; seismic facies analysis; and hydrocarbon indicators.

* All courses have the following prerequisites: 1) graduate standing and 2) permission of the instructor.

# Geology

**GEOL 629 Exploration Geophysics III - Gravity and Magnetic Methods (3)**
Gravity and magnetic prospecting methods as applied to geophysical investigations of the crust. Physical principles; instrumentation; field techniques and data reduction. Geological interpretation and application of these data to the exploration for mineral resources.

**GEOL 633 Igneous Petrology and Petrography (3)**
Study of the origin of magmas and their evolution with emphasis on tectonic and chemical controls. Textures, structures, and associations of igneous rocks.

**GEOL 634 Sedimentary Petrology and Petrography (3)**
Description, classification, and genesis of sedimentary rocks.

**GEOL 635 Metamorphic Petrology and Petrography (3)**
Physical and chemical processes during metamorphism. Phase diagrams. Metamorphic facies and metamorphic stages.

**GEOL 636 Isotope Geology (3)**
Application of isotopic abundance measurements to the origin of the elements, the solar system, and rock systems. Age-dating procedures.

**GEOL 638 Structural Petrology (3)**
Mechanisms of rock deformation. Field procedures, universal stage methods, and data analysis and interpretation.

**GEOL 639 Advanced Mineralogy (3)**
Optical mineralogy, X-ray, and chemical properties of rock-forming minerals.

**GEOL 640 Mineral Resource Economics (3)**
Economics of mineral resources; supply and demand; international trade; national mineral policy; conservation; environmental concerns and costs; and surveys of individual commodities including oil and natural gas.

**GEOL 644 Advanced Ore Deposits (3)**
Detailed study of the geochemical controls, petrography, and field relationships of selected types of ore deposits.

**GEOL 646 Advanced Groundwater Hydrology (3)**
Principles of occurrence and movement of water beneath the earth's surface, and influence of various geologic situations upon its behavior. Factors applying to estimates of supply. Engineering aspects of ground water.

* All courses have the following prerequisites: 1) graduate standing and 2) permission of the instructor.

Graduate Studies

# Geology

**GEOL 647 Advanced Subsurface Methods (3)**
Systematic and accurate acquisition, evaluation, and interpretation of subsurface data as applied in the search for oil and mineral deposits.

**GEOL 648 Advanced Petroleum Geology (3)**
Advanced studies in petroleum exploration. Porosity and permeability as related to lithology and hydrodynamics of fluid flow. Stratigraphic and structural traps; regional trends and basin analysis; the origin of oil; log interpretation; and geophysical exploration.

**GEOL 655 Thermodynamics of Geologic Processes (3)**
Thermodynamics applied to problems of igneous, sedimentary, and metamorphic petrology.

**GEOL 658 Advanced Geochemistry (3)**
Advanced studies of the geochemistry of igneous, sedimentary, and metamorphic rocks, as well as the distribution of trace elements in diverse environments.

*All courses have the following prerequisites: 1) graduate standing and 2) permission of the instructor.

Graduate Studies

# History

Master Of Arts

The Master of Arts program in history accommodates a wide range of student aspirations, both professional and personal. With strong emphasis on the literature of history, research techniques, and writing skills, graduate study in history will benefit teachers, museum and archives personnel, prospective candidates for PhD degrees in history, and college graduates wishing to pursue the subject for intellectual enrichment.

Within the requirements for the Master of Arts degree in history, considerable individualization of programs is possible. The particular strengths of the curriculum are in Western America, Twentieth Century America, Foreign Relations, American Business History, and Latin American History.

Candidates for the Master of Arts degree in history must complete 36 credits of graduate work. Candidates who have not completed at least 18 undergraduate semester credits in history will be required to enroll in additional courses to complete their preparation for graduate work.

Students may specialize in either United States or Latin American history. They may choose between the thesis option and the non-thesis option, though the thesis option is limited to United States history.

Students who elect to write a thesis will complete: 1) 21 credit hours in United States history, including at least 2 reading courses and 1 research course at the 600-level. 2) At least 6 credits in Latin American history.* 3) 3 additional credits in history or a related discipline. 4) 6 hours upon acceptance of a thesis.

Students who elect the non-thesis option in United States history will complete: 1) 21 credit hours in United States history, including at least 2 reading and 2 research courses at the 600-level. 2) At least 6 credits in Latin American history.* 3) 3 to 9 additional hours in history. 4) A maximum of 6 credits in a related field.

Students who elect the non-thesis option in Latin American history will complete: 1) At least 12 credit hours in Latin American history, including at least 1 reading and 1 research course at the 600-level. 2) At least 15 additional hours in history, including at least 1 reading and 1 research course at the 600-level. 3) A maximum of 9 credits in related fields; Spanish is recommended.

* 6 hours of non-United States history may be considered in the context of individual graduate study programs.

# History

MA degree candidates must pass an oral examination. There is no general foreign language requirement for the master's degree in history. However, when mastery of a language is requisite to purposeful study, the demonstration of language skills may be required. For example, candidates in Latin American history must demonstrate the ability to comprehend written Spanish with reasonable accuracy and speed.

Course Listing

**HIST 611 Modern Mexico (3)**
Historical literature relating to major developments and problems of modern Mexico.

**HIST 614 Latin American (3)**
Historical literature relating to major developments and problems of Latin America, including modern Mexico, modern South America and colonial Latin America.

**HIST 641 Early America (3)**
Historical literature on colonial and revolutionary periods of American history.

**HIST 647 Twentieth Century America (3)**
Examination of historical literature on special topics covering major developments and problems in recent United States history.

**HIST 655 The American South (3)**
Historical literature relating to major developments and problems in some aspect of the American South.

**HIST 656 Western America (3)**
Historical literature relating to major developments and problems in Western history.

**HIST 661 American Foreign Relations (3)**
Examination of historical literature on special topics which cover major developments and problems in United States foreign relations.

**HIST 668 American Business History (3)**
Study of major changes in American business during the twentieth century through analysis of specific industries and case studies.

**HIST 678 Research in American History (3)**
Methodology and tools for historical research and directed research on special topics in American history.

**HIST 679 Studies in American History (3)** *(title may vary)*
Reading, research and discussion on selected topics in American history.

Graduate Studies

# Life Science

Master Of Science

The Master of Science program in Life Science includes microbiology and plant and animal science and emphasizes a unified view of life science. The program may be used by those intending a career in some area of life science and by those desiring a stronger background for teaching. In consultation with faculty, students will prepare a plan of study. The plan of study includes selected courses outside the major to support the program and meet special needs and interests of students.

To be accepted to the program, students must have 16 credits of biology, 8 credits of chemistry and 3 credits of mathematics at the undergraduate level. Depending upon the student's undergraduate program and career goals, the advisory committee may recommend completion of certain undergraduate courses without credit toward the master's degree.

Approximately 15-18 credits of the minimum 30 credits required for the Master of Science degree will be in life science and approximately 9-12 credits will be in supporting areas of study. The remaining 3-6 credits will be in independent study. The thesis must be an original work and must be defended orally before the advisory committee and other appropriate faculty.

Individualized instruction is used extensively in each student's program. This feature should greatly aid students whose commitments do not always permit regular class attendance. Laboratory facilities are ideally suited for individualized instruction, and the faculty of Life Science are committed to such instruction whenever appropriate.

Course Listing

**LFSC 601 Studies in Virology (3)**
Analysis and interpretation of modern studies of viral structure, replication and pathogenesis. Prerequisites: LFSC 320, 440 or equivalent. Offered alternate years.

**LFSC 623 Immunology (3)**
Analysis and interpretations of studies of mammalian mechanisms of defense against infectious diseases and cancer. Prerequisites: LFSC 300, 320, 440, or equivalent. Offered alternate years.

**LFSC 630 Plant Physiology and Biochemistry (3)**
Techniques, principles and analysis of problems in plant biochemistry and physiology. Prerequisite: LFSC 320 or equivalent.

**LFSC 632 Plant Taxonomy (3)**
Advanced studies and collection of a specific taxonomic group to be determined in consultation with the student. Prerequisite: LFSC 330 and 331 or equivalent.

Graduate Studies

# Life Science

**LFSC 640 Molecular Genetics (3)**
Studies of gene transfer, mapping, expression and control mechanisms. Prerequisite: LFSC 300, 301, and 320 or equivalent.

**LFSC 642 Evolutionary Ecology (3)**
The evolution of ecological parameters emphasizing population and community parameters. Prerequisite: LFSC 472 or equivalent.

**LFSC 644 Advanced Studies in Molecular Genetics (3)**
Self-paced course provides opportunity to enhance and expand knowledge of modern DNA techniques. A research problem will be identified and methodologies to study it will be discussed and implemented. Prerequisite: LFSC 640.

**LFSC 650 Advances in Animal Physiology (3)**
Analysis and interpretation of studies in the laboratory and literature. Prerequisites: LFSC 320 and 452 or equivalent.

**LFSC 654 Comparative Endocrinology (3)**
A comparative study of the hormones and endocrine systems among the vertebrates. Prerequisites: LFSC 320, 452, 440 or equivalent.

**LFSC 656 Neuroscience (3)**
An analysis of the physiological bases of behavior, beginning with a study of the functioning of excitable cells and ending with a study of the neuroanatomy of the brain. Prerequisites: LFSC 452 and permission of the instructor.

**LFSC 662 Advanced Microtechnique (3)**
Theoretical and practical aspects of the preparation of cellular tissues for light and electron microscopy. Prerequisite: permission of instructor.

**LFSC 675 Advanced Field Ecology Research Methods (3)**
A study of different research methods for studying organisms in the natural habitat. Prerequisites: LFSC 472, 440, and 442 or equivalent; computer literacy.

# Management

## Master Of Business Administration

The Master in Business Administration (MBA) program is open to all students holding baccalaureate degrees from accredited colleges or universities and who meet the following provisions: satisfactory performance during the last 2 undergraduate years (or other evidence predicting success in graduate study), and a satisfactory score on the Graduate Management Admission Test (GMAT). Application should be directed to the Office of Admissions.

Students without an academic background in business administration must demonstrate their knowledge in the basic fields of business by completing up to 24 semester credits of leveling course work in the foundation disciplines which include accounting, business law, statistics, economics, finance, basic administration, marketing and computer programming.

The MBA program is designed primarily as a professional program rather than a preparation program for doctoral study. Both research and nonresearch options are available in the program. Students planning to pursue doctoral study or having an interest in research should select the research option. Students choosing the nonresearch option must complete a minimum of 36 semester credits of prescribed study, exclusive of the 24 semester credits of leveling course work. Students choosing the research option must complete either 30 semester credits of prescribed study plus a thesis, or 33 semester credits of prescribed study plus a research problem.

The thesis must deal with a topic of generalized concern to the profession, be scholarly in its orientation, demonstrate the student's understanding of and ability to use sophisticated research techniques, and show promise of a contribution to knowledge that could be worthy of publication in a scholarly or professional journal. Students will arrange with their graduate committees to sit for an oral examination of their theses.

The research problem should deal with a practical problem of concern to the student. It should follow recognized research procedures but does not require the level of sophistication of thesis research. The findings do not necessarily need to be of such import as to merit publication.

## Admission

The requirements for admission to the MBA program are the same as the general university admission requirements with the following exceptions:

1. The Graduate Management Admission Test (GMAT) is a nationally recognized test designed specifically for students preparing to pursue the MBA degree. Students preparing to be admitted to the MBA program must take the GMAT test after consultation with the Coordinator of the MBA program.

2. The GMAT score is converted to an entrance status score according to the following formula: GPA x 200 + GMAT = Entrance Status Score.

# Management

3. A student is eligible to be accepted to the MBA program after the GMAT exam is successfully completed. With the prior approval of the Coordinator of the MBA program, the Director of Graduate Studies notifies students of their acceptance status.
4. The GMAT entrance status score will be used to classify the student.

**Regular Standing** - GMAT Entrance Status score at least 1120

**Provisional Standing** - GMAT Entrance Status score at least 1000 but less than 1120

**Conditional Standing** - GMAT See Graduate Study Regulations on page 202.

Students granted provisional status will be granted regular status upon successful completion of a minimum of nine semester credit hours of MBA core course work with a grade of **B** or better in **each** course taken.

**Grades**. MBA students will not be given graduate credit for courses taken when the letter grade earned is less than **C**. In addition, an MBA student may earn no more than two **C** grades. A degree candidate is required to maintain an overall average of **B** throughout his or her program of study.

MBA students may not take any MBA core courses or electives before completing at least the equivalent of eighteen hours of pre-professional courses, and may not take more than six hours of MBA core courses and no electives before completing all pre-professional course requirements.

Prospective MBA students should be aware that each MBA pre-professional course is roughly equivalent in course content to one and one half or two undergraduate core courses.

Students who have not completed the equivalent of six semester hours of undergraduate mathematics including exposure to differential and integral calculus are strongly encouraged to seek advice on mathematics preparation from the MBA program coordinator prior to enrollment in DSCI 600.

MBA Program Pre-Professional 24 Hrs.

| | | | |
|---|---|---|---|
| ACCT | 600 | Accounting Concepts | 3 |
| BLAW | 600 | Business Law | 3 |
| DSCI | 600/MATH 601 | Advanced Statistics for Managers | 3 |
| ECON | 600 | Economic Analysis | 3 |
| FIN | 600 | Concepts of Business Finance | 3 |
| MNGT | 600 | Basic Administration | 3 |
| MRKT | 600 | The Marketing Process | 3 |
| CPSC | 600 | Computers in Management and Science | 3 |

# Management

MBA Core
27 Hours

| | | | |
|---|---|---|---|
| ACCT | 601 | Profit Planning and Control | 3 |
| ACCT | 611 | Information Systems Management | 3 |
| ECON | 602 | Forecasting Business Conditions | 3 |
| FIN | 620 | Financial Management: Theory & Techniques | 3 |
| DSCI | 603 | Analytical Models for Decision Making | 3 |
| MNGT | 660 | Organization Theory (or MNGT 612) | 3 |
| MNGT | 661 | Business Research | 3 |
| MNGT | 666 | Management Policy and Integration | 3 |
| MRKT | 610 | Marketing Strategy and Theory | 3 |

Concentration
9 Hours

Students select 9 elective hours of work in an area of business concentration. Only two 400-level courses may be used in the concentration, and then only with the advance approval of the student's advisor.

Accounting

**ACCT 600 Accounting Concepts (3)**
Concepts and principles in the recording, classifying and summarizing of financial transactions of a business.

**ACCT 601 Profit Planning and Control (3)**
Integrates functional and operational aspects of organizations through the master budget concept. Prerequisite: demonstrate knowledge of managerial and cost accounting.

**ACCT 604 Tax Planning (3)**
Methodology used in tax research and in tax planning using the adversary approach.

**ACCT 611 Information Systems Management (3)**
Methods and problem resolution in developing and managing company-wide information systems.

Business Law

**BLAW 600 Business Law (3)**
General business law, including contracts, sales, commercial paper, secured transaction, agency, corporations and partnerships.

Decision Science

**DSCI 603 Analytical Models for Decision-Making (3)**
Deterministic linear programming, networks and dynamic programming. Emphasizes formation and utilization of programming computer packages.

Economics

**ECON 600 Economic Analysis (3)**
Economic efficiency and the determinants of the major economic aggregates such as growth, employment and gross national product.

**ECON 602 Forecasting Business Conditions (3)**
Elements and evaluation of principle forecasts used by business and government. Cases based on forecasts by the President's Council of Economic Advisors. Prerequisite: ECON 600 or 6 credits of undergraduate economics.

Graduate Studies

# Management

**ECON 610 Free Enterprise and the Public Interest (3)**
Perceptions of business, business response to community, state and national issues, and press reports of business attitudes toward free enterprise.

Finance

**FIN 600 Concepts of Business Finance (3)**
Managerial use and application of concepts and principles of the finance function of a business.

**FIN 610 Free Enterprise and the Public Interest (3)**
Perceptions of business, business response to community, state and national issues, press reports of business and attitudes toward free enterprise.

**FIN 620 Financial Management: Theory and Techniques (3)**
Investment, financing and dividend decisions of firms seeking to maximize shareholder wealth. Analytical techniques, economic and behavioral theories and financial environment. Prerequisite: permission of instructor.

**FIN 621 Business Financial Policy (3)**
Problems of business finance from a decision-making, internal, problem-solving viewpoint.

**FIN 622 Investment Policy and Environment (3)**
Fixed-capital investment decisions under risk. Management of packages of risky assets. Yield and liquidity cash management.

**FIN 623 Financial Analysis (3)**
Analytical applications in financial forecasting, cash budgeting, lease vs. borrow, bond refunding and option pricing using spreadsheet analysis and other common management tools. What-if analysis and statistical applications are added to the applications. Prerequisite: FIN 620.

**FIN 645 Financial Case Analysis (3)**
Evaluation and presentation of complex real-world financial cases. Prerequisite: FIN 620 and knowledge of electronic spreadsheets.

Management

**MNGT 600 Basic Administration (3)**
Synthesis of traditional and behavioral approaches to studying management. Management process, management history and organizational behavior.

**MNGT 610 Organization Dynamics Workshop (3)**
Impact of organization structures and processes on the performance of organizational members. Role playing, simulations and case studies.

**MNGT 612 Human Resource Management (3)**
Manpower planning and development, organizational climate and the provision of personnel services will be investigated.

# Management

**MNGT 615 Organization Development and Change (3)**
Problems in introducing change in organizations, theory and methods of intervention in organization development.

**MNGT 660 Organization Theory (3)**
Internal organization structure and executive roles and functions in the business enterprise and other goal-directed institutions.

**MNGT 661 Management and The Research Process (3)**
The course looks at research in the business environment from its most general case, marketing research. The research process paradigm is thoroughly investigated with a special emphasis on the role of business research in management decision making. Prerequisite: MATH 601, MNGT 600 and MRKT 610.

**MNGT 666 Management Strategy/Policy (3)**
Opportunity for development and implementation of knowledge from multiple disciplines and intergration of viewpoints of different functions of an organization. Case evaluation and discussion are stressed. Prerequisite: student must be within last nine hours of completion of MBA program and have completed all other MBA core courses.

## Marketing

**MRKT 600 The Marketing Process (3)**
Marketing process and its underlying concepts. Information needed and the incorporation of marketing decisions into the management function.

**MRKT 610 Marketing Strategy and Theory (3)**
Macro- and micro-marketing systems and approaches to marketing strategy and theory. Prerequisite: admission to MBA core program.

**MRKT 612 Consumer Decision Processes (3)**
Information flows between buyer and seller, informational properties of demand stimulation strategies from the firm, consumer and society viewpoints. Prerequisite: MRKT 610.

**MRKT 613 Quantitative Analysis for Marketing Decisions (3)**
Analytic quantitative models of aspects of the firm's marketing environment and models of marketing decision problems and their use as decision base. Same as DSCI 613. Prerequisites: MRKT 610, DSCI 603.

**MRKT 614 Seminar in Physical Distribution Management (3)**
Integrates business logistics/physical distribution concepts with fields of production, marketing, accounting and transportation. Involves applied mathematics, organizational behavior, resources and economics. Prerequisite: MRKT 610.

# Management

**MRKT 615 Seminar in Marketing Problems (3)**
Product assortment and development, pricing, packaging, branding and sales forecasting. Coordination of these decisions with other decision areas. Prerequisite: MRKT 610.

**MRKT 621 Oil and Gas Marketing (3)**
Analysis of the physical and organizational structure of oil and gas distribution within the context of case studies of both major and independent oil companies. Prerequisite: MRKT 600.

# Petroleum Engineering

Master Of Science

In addition to the Master of Science program in Control Engineering, and the Master of Science degree in Electrical Engineering from The University of Texas at El Paso, U. T. Permian Basin students are also offered the opportunity to earn a Master of Science in Petroleum Engineering degree from The University of Texas at Austin. This cooperative effort of the two University of Texas component institutions allows the student to earn the petroleum engineering degree from U. T. Austin while remaining at home in the Permian Basin area.

A typical program will consist of 33 hours of classroom instruction plus a report. The program content will be taught by faculty from both institutions. Each student's course of study will be directed by a committee made up of U. T. Austin graduate faculty. U. T. Permian Basin faculty members will be appointed to the U. T. Austin graduate faculty. The properly prepared student should be able to complete this program in two and one half calendar years.

The thesis option is not recommended for students in this program. Candidate background requires adequate preparation in undergraduate petroleum engineering course work. Prospective students must qualify for admission to the U. T. Austin Graduate School.

More specific details on entrance requirements may be obtained from the Chairman of the Engineering Department at The University of the Permian Basin, or the chairman, Petroleum Engineering Department, U. T. Austin.

Graduate Studies

# Physical Education

Master Of Arts

All students studying for the Master of Arts degree in Physical Education will complete the following core of 12 semester credit hours:

| | | | |
|---|---|---|---|
| * | PHED 601 | Strategies for Inquiry in Physical Education | (3) |
| | PHED 602 | History and Philosophy in Physical Education | (3) |
| | PHED 660 | Advanced Exercise Physiology | (3) |
| | PHED 620 | Psycho-Social Analysis of Sport and Physical Activity **or** | |
| | PHED 623 | Advance Psychology of Exercise | (3) |

* Prerequisite - Math 601 Statistics for Researchers

In addition, a student will emphasize one of the following three areas of specialization:

**I. Exercise Physiology -**

| | | |
|---|---|---|
| PHED 660 | Advanced Exercise Physiology | (3) |
| PHED 661 | Exercise Physiology Laboratory Methods-Procedures | (3) |
| PHED 663 | Methods and Procedures for Coronary Heart Disease Risk Detection and Reduction | (3) |
| PHED 665 | Nutrition and Athletic Performance | (3) |

**II. Psychology of Movement -**

| | | |
|---|---|---|
| PHED 620 | Psycho-Social Analysis of Sport and Physical Activity | (3) |
| PHED 621 | Analysis of Motor Skills Acquisition | (3) |
| PHED 622 | Psychology of Coaching | (3) |
| PHED 623 | Advanced Psychology of Exercise | (3) |

**III. Teaching, Coaching, and Administration -**

| | | |
|---|---|---|
| PHED 680 | Analysis of Teaching Behavior | (3) |
| PHED 681 | Curriculum Development in Movement Activities | (3) |
| PHED 682 | Administration of Physical Education and Athletics | (3) |
| PHED 622 | Psychology of Coaching | (3) |

Students who select the thesis option will complete a minimum of 30 semester credit hours of course work plus a 6 semester credit hour thesis. The thesis option requires at least 9 semester credit hours in one of the three areas of specialization. Those who select the non-thesis option will complete a minimum of 33 semester credit hours of course work plus a 3 semester credit hour research project. It is expected that students who desire to study beyond the master's degree will take the thesis option, whereas those who plan to terminate formal study with the master's degree will follow the non-thesis option.

# Physical Education

Students who desire to major in Physical Education for the MA degree should possess a bachelor's degree with a major or minor in physical education. Provision is made for the non-physical education major (or minor) who has a bachelor's degree in another field to enter the graduate program in Physical Education upon the completion of the following prerequisite (leveling) courses or their equivalents: Physiology of Exercise (KINE 350), Analysis of Human Movement (KINE 340), Measurement of Physical Performance and Achievement (KINE 400), and either Motor Learning and Control (KINE 430), Psychology of Sport (KINE 420), or Sociology of Sport and Physical Activity (KINE 440).

Those who major in Physical Education for the MA degree may include a maximum of 6 semester credit hours of 400-level courses. Students may not include leveling credits in their graduate degree program.

## Course Listing

**PHED 601 Strategies for Inquiry in Physical Education (3)**
Research techniques and inferential statistical procedures appropriate to the research process in physical education. Prerequisite: MATH 601 or equivalent.

**PHED 602 History and Philosophy of Physical Education (3)**
The history of physical education from ancient Greece to the present with particular emphasis on the development of Physical Education in America from 1861 to the present.

**PHED 620 Psychosocial Analysis of Sport and Physical Activity (3)**
Concepts and research methodology in social psychological study of sport and physical activity. Selected theories of sport involvement applied to sport and physical activity analysis.

**PHED 621 Analysis of Motor Skills Acquisition (3)**
Concepts and research methodology in human motor performances. Selected learning theories are used in analyzing both skill acquisition and instructional processes.

**PHED 622 Psychology of Coaching (3)**
Identification and analysis of psychological techniques and strategies which may be used by the coach/athlete to improve performance and increase enjoyment of participation in physical activity.

**PHED 623 Advanced Psychology of Exercise (3)**
Theoretical models and research related to the determinates of exercise initiation and adherence are studied. Research studies investigating the effects of exercise on mental health are also reviewed. Addidional topics selected by students are covered.

Graduate Studies

# Physical Education

**PHED 660 Advanced Exercise Physiology (3)**
Functioning of the human body and responses and adaptations of the different systems as a result of physical exercise. Topics include muscle physiology, the cardiorespiratory system, neural control of human movement, nutrition, athletic performance, physiological applications of physical training and preventive health care. Laboratory experiences included.

**PHED 661 Exercise Physiology Laboratory Methods-Procedures (3)**
Practical applications of the different principles that govern the responses and adaptations of the human body to physical exercise. Laboratory equipment used to collect data and analyze results.

**PHED 663 Methods and Procedures for Coronary Heart Disease Risk Detection and Reduction (3)**
A study of the leading risk factors which contribute to the development of coronary artery heart disease. Laboratory methods and procedures used in assessing the different risk factors including 12-lead, EKG-graded exercise stress testing. Implementation of programs aimed at risk reduction and prevention of heart disease.

**PHED 665 Nutrition and Athletic Performance (3)**
An in-depth examination of the effects of nutrition on athletic performance. Topics include substrate utilization, vitamin and mineral supplementation, ergogenic aids, and fluid replacement.

**PHED 680 Analysis of Teaching and Coaching Behavior (3)**
Observation, description, coding and analysis of teaching behavior in physical education and coaching.

**PHED 681 Curriculum Development in Movement Activities (3)**
Theoretical assumptions and principles of curriculum development applied to construction of curriculum project in physical education.

**PHED 682 Administration of Physical Education and Athletics (3)**
An examination of administrative theories and practices in physical education, intramural and athletic programs.

# Psychology

Master Of Arts

The Master of Arts program in Psychology offers advanced training in clinical psychology, counseling skills, human development, program evaluation, and research methodology. This program is designed to prepare students to work in mental health centers, juvenile detention camps, drug abuse centers, child service agencies, specialized school services, residential treatment facilities, and family counseling agencies. In addition, the program is designed to fulfill the academic requirements to become eligible to take the State examinations for certification as a Psychological Associate (45 hours) or Licensed Professional Counselor (51 hours). Students may also use this degree to prepare for a PhD program at another university.

The MA in Psychology is a minimum 45-hour program (51 hours if one desires licensure as a Professional Counselor) with specializations in clinical psychology and applied human development. The clinical psychology specialization is aimed at training students in the assessment and treatment of emotional disorders, self-injurious behaviors, and intellectual deficits. The applied human development specialization is aimed at training students in theory, research and problem solving methods to optimize individual competence and behavior within the family, peer group, school and community. Students desiring to become Psychological Associates may choose to concentrate in either of the two specialization areas, whereas students desiring to become Licensed Professional Counselors should specialize in clinical psychology.

All students take nine hours of "foundation" courses, 24 hours in one of the areas of specialization, and 12-18 hours of designated elective courses relevant to the student's needs and certification/licensure objectives:

A. **Required "Foundation" Courses (9) hours:**

| | | |
|---|---|---|
| PSYC | 602, | Research Methodology |
| PSYC | 604, | Advanced Statistics (undergraduate statistics is prerequisite) |
| PSYC | 624, | Ethics and Professional Issues (or Education 670 with permission of advisor) |

B. Areas of Concentration

1. **Clinical Psychology Concentration (24 hours):**

| | | |
|---|---|---|
| PSYC | 605, | Behavior Therapy |
| PSYC | 621, | Sources of Abnormal Behavior |
| PSYC | 622, | Current Psychotherapies |
| PSYC | 650, | Intelligence Testing (PSYC 601 prerequisite or permission of instructor) |
| PSYC | 651, | Personality Assessment (PSYC 601 prerequisite or permission of instructor) |
| PSYC | 692, | Practicum (in Clinical/Counseling Psychology, 6 hours) |
| PSYC | 699, | Master's Thesis |

# Psychology

**2. Applied Human Development Concentration (24 hours):**

| | | |
|---|---|---|
| PSYC | 606, | Behavior Therapy with Children |
| PSYC | 615, | Psychology of Learning |
| PSYC | 641, | Child Psychology I: Cognitive Processes |
| PSYC | 642, | Child Psychology II: Personality and Social Development |
| PSYC | 643, | Family Dynamics |
| PSYC | 692, | Practicum (in Applied Human Development, 6 hours) |
| PSYC | 699, | Master's Thesis |

C. Elective Psychology Courses (12-18 hours, selected with consultation)

All students must complete 450 clock hours in a practicum setting selected to correspond to the area of specialization and certification/licensure objectives. In addition, all students must complete a master's thesis which consists of research in the application of principles and theories of behavior to some problem of interest. Problems are investigated under the supervision and direction of the student's graduate committee comprised of faculty, where ordinarily the student's advisor serves as chairperson. The student will later defend the thesis before the committee.

ADMISSION AND PREREQUISITES

Three courses (nine semester hours minimum) of undergraduate psychology courses are required for admission to the graduate program in psychology. These three courses must include one course in statistics (i.e., PSYC 301) and one course in experimental psychology or research methods in psychology (i.e., PSYC 304) and one course in physiological bases of behavior. Students with deficiencies in these prerequisites must take the appropriate courses and earn a minimum grade of **B** during the first two semesters the student is enrolled provisionally in the graduate program. Students may enroll in the necessary undergraduate courses (PSYC 301, Statistics; and/or PSYC 304, Research Methodology; and/or PSYC 404, Physiological) and in selected graduate courses concurrently. No undergraduate credits will be counted toward the minimum 45 graduate hours needed for the degree without prior approval of the graduate advisor. In addition, applicants must provide 3 letters of reference and must have taken the Graduate Record Examination general aptitude test (GRE) and meet at least the minimum university requirements. Note: Meeting the minimum requirements does not guarantee admission to the program.

Course Listing

**PSYC 601, Tests and Measurements (3)**
Survey of major personality, intelligence and achievement tests with emphasis on their construction, reliability and validity. Prerequisite: Introductory Statistics. (Same as EDUC 680).

# Psychology

**PSYC 602, Research Methodology (3)**
Foundations of research planning, methodology, analytic techniques, interpretation and reporting of psychological research. Prerequisite: Introductory Statistics. (Same as EDUC 680).

**PSYC 604, Advanced Statistics (3)**
Application of statistical methods in the design and analysis of psychological research. Topics include analysis of variance models, correlation and regression, and multivariate techniques. Prerequisite: Introductory Statistics.

**PSYC 605, Behavior Therapy (3)**
A survey of learning principles and methods in the modification of human problem behaviors.

**PSYC 606, Behavior Therapy with Children (3)**
Overview of recent developments in the design and implementation of behavioral programs to modify child problems with emphasis on behavior modification in family, education and rehabilitation settings.

**PSYC 612, Group Psychotherapy (3)**
A survey of theories of group therapy including the application and evaluation of basic group techniques. (Same as EDUC 671)

**PSYC 615, Psychology of Learning (3)**
A critical analysis of contemporary methodological and theoretical developments in the field of learning.

**PSYC 621, Sources of Abnormal Behavior (3)**
A descriptive and theoretical survey of the variables involved in the etiology, incidence and treatment of the major forms of psychopathology. Topics include recent research into classification systems and developmental patterns.

**PSYC 622, Current Psychotherapies (3)**
A critical analysis of various psychotherapeutic systems. (Same as EDUC 676)

**PSYC 623, Individual Psychotherapy Skills (3)**
A survey of the major theories and methods of psychotherapy including experience in the application and evaluation of basic techniques. Prerequisite: permission of the instructor. (Same as EDUC 674)

**PSYC 624, Ethics and Professional Issues (3)**
Seminar concerning the field of psychology as it relates to current ethical, social, legal and medical issues. Emphasis is placed on the role of the psychologist in psychotherapeutic relationships and in applied settings.

# Psychology

**PSYC 641, Child Psychology I: Cognitive Processes (3)**
An analysis of various theoretical interpretations of cognitive functions such as concept formation, problem solving, language, memory and attention. The determinants of differences in cognitive functioning will also be discussed. (Same as EDUC 614)

**PSYC 642, Child Psychology II: Personality and Social Development (3)**
Study of various theoretical interpretations and determinants of differences in social and emotional development. Topics include achievement motivation, aggression, moral development, peer relations, adult-child interactions. (Same as EDUC 647)

**PSYC 643, Family Dynamics (3)**
A survey of the history, current trends, and theories of family structure and processes in relation to the behavior of the individual.

**PSYC 650, Intelligence Testing (3)**
An examination of the principles and methods of assessing achievement and intelligence. Prerequisite: PSYC 601 and permission of instructor.

**PSYC 651, Personality Assessment (3)**
An examination of the principals and methods of assessing personality. Prerequisite: PSYC 601 and permission of instructor.

**PSYC 660, Behavioral Medicine (3)**
A survey of behavioral explanations of the etiology and maintenance of medical ailments/disfunctions which are psychologically related, with emphasis on behavioral approaches to the treatment of such disorders.

**PSYC 692, Practicum (3 or 6)**
Three semester hours (225 clock hours) or six semester hours (450 clock hours) of supervised practical experience in an appropriate setting using psychological methodologies. Prerequisite: 24 hrs. toward graduate degree, permission of practicum supervisor eight weeks before enrolling; proof of liability insurance, generally through A.P.A or A.P.S.

# Special Courses

A limited number of graduate courses are available in disciplines that do not offer a master's degree. These courses provide support for other degree programs. The courses are taught on demand and are usually in a self-paced and individualized format.

## Chemistry

**CHEM 610 Topics in Organic Chemistry (3)**
Topics vary and may include synthesis, heterocycles, medicinal chemistry and biochemistry. May be taken for credit more than once.

**CHEM 620 Topics in Analytical Chemistry (3)**
Topics vary but may include different types of analytical instruments and techniques. May be taken for credit more than once.

**CHEM 630 Research Techniques (1-4)**
Advanced techniques taught on a tutorial basis. May be taken for credit more than once.

**CHEM 640 Topics in Physical and Inorganic Chemistry (3)**
Topics vary to meet individual needs of student. May be taken for credit more than once.

## Computer Science

**CPSC 600 Computers in Management and Science (3)**
Fundamental use and evaluation of word processors, spread sheets and data base programs with an introduction to programming microprocessors in BASIC.

**CPSC 610 Computer Architecture (3)**
Survey of computer architectures, concentrating on high performance systems. Topics include pipelining, vector processing, massive parallelism and networks. Prerequisites: CPSC 310, CPSC 320 or equivalent.

**CPSC 630 Software Systems (3)**
The management of software systems. Addresses problems in computer design and configuration testing, error recovery and security testing.

## Mathematics

**MATH 601 Statistics for Researchers (3)**
Statistical concepts emphasizing simple and multiple regression, hypothesis testing and analysis of variance.

**MATH 602 Multivariate Methods (3)**
Regression and correlation, analysis of variance for fixed and random factors, and methods for identifying factor levels that do not satisfy the hypothesis.

# Special Courses

## Mass Communications

**MCOM 600 Advanced Public Affairs Reporting (3)**
Investigative and interpretive reporting techniques covering federal, state, and local governments and paragovernmental institutions.

## Sociology

**SOC 627 Advanced Sociological Theory (3)**
A discussion of structure of sociological theory using a number of classical and modern sociological writings as vehicles for the illustration of theoretical problems. The course provides a systematic classification of the debates in theoretical sociology and compares and contrasts the assumptions, issues and problems underlying competing theories.

**SOC 632 Advanced Seminar in the Sociology of Deviance (3)**
An overview of the major theoretical perspectives and related issues in the study of social deviance, to include the study of societal definitions and reactions to deviance as they relate to ethnicity, social class and legal/social institutions.

**SOC 679A Sociology of Law (3)**
This course examines the origins and development of law, the problems caused by criminalization and decriminalization and possible alternatives to the use of law to settle disputes.

**SOC 679B Sociology of Social Control (3)**
This course examines the relationships between social structure and social character. The course covers classical and contemporary theories of socialization with special emphasis on the adequacy of the agencies and institutions of social control and the control of deviant behavior.

**SOC 679C Limits of Criminal Sanction (3)**
Consideration is given to the meaning and justification for punishment. The issues of culpability and excuse for conduct are examined. The process of criminal punishment is introduced and models of the process of punishment are considered and evaluated. The problem of limits, morals, discretion and abuse of discretion are also explored.

**SOC 679D Police in American Society (3)**
The role of police and policing in American Society is examined. General problems and practices relating to the police role are discussed: community policing and police work with special populations such as the mentally ill, drug abusers and street gangs. Particular emphasis is on police community relations and community policing.

# Special Courses

**SOC 679E Issues in Minority Relations (3)**
This course examines the principles and processes which shape the patterns of relations between racial and ethnic groups in society. Race and ethnic intergroup relations are explored in both the United States and other multiethnic societies around the world. Topics of discussion include: attitudes and beliefs of the individual concerning intergroup relations; concepts of prejudice and institutional discrimination; labeling theory as a means of understanding race and ethnic relations; and models of intergroup relations that emphasize either assimilation, cultural pluralism or amalgamation.

## Spanish

**SPAN 631 Novelists of Post-War Spain (3)**
Historical and political background, social and literary development in the Peninsula after the Spanish Civil War of 1936-39, emphasizing novelists who appear from the 1940's onward: Cela, Laforet, Quiroga, Delibes, Matute, (Juan) Goytisola, Sanchez Ferlosio, Martin Santos and others.

**SPAN 633 The Contemporary Spanish-American Novel in Translation (3)**
A study of the most important Spanish-American novelists. Five or six novels are usually read in this course.

**SPAN 637 Contemporary Hispanic Cultures (3)**
A study of different aspects of contemporary culture in Spain, Spanish America and among Spanish-speaking minorities, including areas as varied as religion, economics, literature and politics.

# Faculty

**Steven J. Alcinena,** Assistant Professor of Kinesiology.
BA, University of California at Davis; MA, Idaho State University; EdD, (1988) University of Northern Colorado.

**Donald M. Allen,** Professor and Chair of Life Science.
BA, MA, PhD (1970), University of Oregon.

**Terryl J. Anderson,** Professor of Education and Director of Graduate Studies.
BS, University of Colorado; MBA, EdD (1967), Indiana University.

**David Barnett,** Assistant Professor of Kinesiology.
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**William K. Buchanan,** Instructor of Finance.
BS, University of Northern Colorado; MBA (1985), University of Texas-Permian Basin.

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**Thomas L. Dynneson,** Professor of Education.
BS, MEd, Macalester College; PhD (1972), University of Colorado.

**David M. Eggleston,** Professor of Control Engineering (Professional Engineer).
BS, MS, PhD (1963), Mechanical Engineering, University of California-Berkeley.

**Seyfollah Ehdaie,** Associate Professor of Control Engineering.
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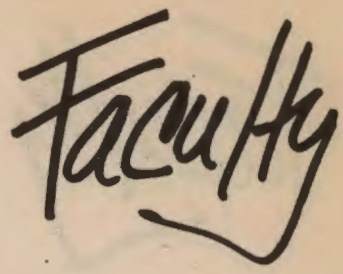
BS, MS, EdD (1991), Montana State University.




# Faculty

**H. Warren Gardner,** Associate Professor of History and Vice President of Academic Affairs.
BA, Sterling College; MA, Emporia State University; PhD (1969), University of Kansas.

**Corbett Gaulden,** Associate Professor of Marketing and Director of the Division of Business Administration.
BS, Southeastern Louisiana University; MBA, Northeast Louisana University; PhD (1980), Louisiana State University.

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**Douglas F. Hale,** Professor of Mathematics and Computer Science and Director of the Division of Science and Engineering.
BS, MS, PhD (1969), Ohio State University.

**Lois S. Hale,** Associate Professor and Chair of Kinesiology
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**Paul E. Hodges,** Professor of Economics.
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**John E. Hurn,** Associate Professor of Education.
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# Faculty

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**Susan M. Lara,** Assistant Professor of Education.
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**Duane M. Leach,** Professor of History and Political Science and President.
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**Stanley E. Marcus,** Professor and Chair of Art.
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**Roger M. Olien,** J. Conrad Dunagan Professor of History.
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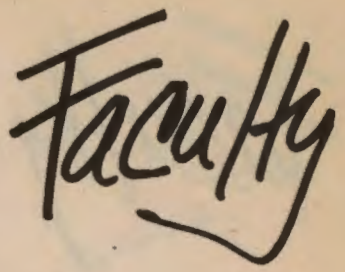


# Faculty

**James N. Olson,** Professor of Psychology and Director of the Division of Behavioral Science and Kinesiology.
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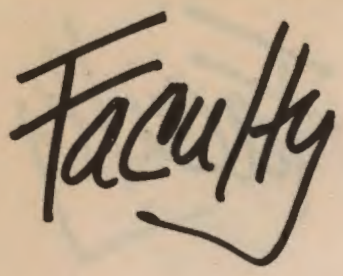
**Thomas E. Schaefer,** Professor of Management.
BA, Santa Clara University; MA, Loyola University of Chicago; MBA, University of San Francisco; PhD (1963), Georgetown University.



# Faculty

**R. Douglas Spence,** Assistant Professor of Life Science.
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**Spencer K. Thompson,** Associate Professor of Psychology and Education. Chair of Psychology.
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**Terry Jack Tinney,** Associate Professor of Business.
BBA, UT Arlington; MBA, Southern Methodist University; PhD, (1972), North Texas State University.

**Sarah Shawn Watson,** Assistant Professor of English.
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**William A. Watts,** Professor of Finance.
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**John R. Wiley,** Associate Professor of Chemistry and Director of Laboratories.
BS, University of Houston; PhD (1974), Purdue University.

**Daniel Robert Womochel,** Associate Professor of Geology.
BS, Michigan State University; MS, PhD (1977), Texas Tech University.

**Raymond A. Zimmerman,** Business Instructor.
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## Emeritus Faculty

**Joel Greenspoon,** Professor of Psychology, Emeritus, 1973 - 1987.

**Edwin Kurtz,** Professor of Life Science, Emeritus, 1972 - 1989.

Faculty

# Part Time Faculty

**Bob S. Lewis,** Lecturer in Mass Communications.
BA, Baylor University; MA (1966), University of Missouri.

**Linda George,** Lecturer in Sociology.
BA, MSW, University of Oklahoma.

**Kelly McMahan,** Lecturer in Health & Physical Education.
BA, Lock Haven University; MA, Frostburg State University.

**Diana Ollen,** Senior Lecturer in History.
BA, Swarthmore College; MA, PhD (1969), Yale University.

**Diana Younger,** Lecturer in Psychology.
BA, Tulane University; MA, University of Texas-Permian Basin.

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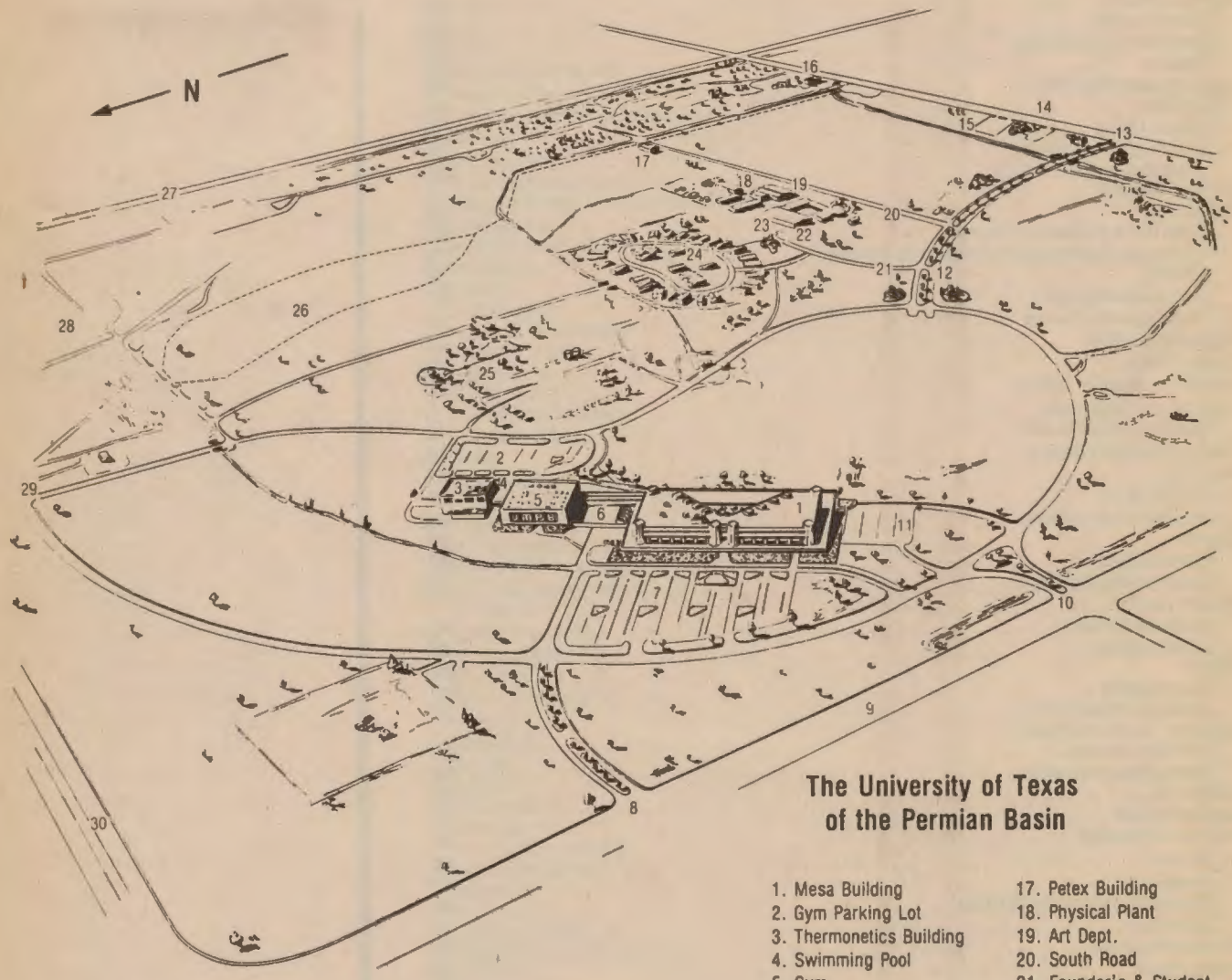


**The University of Texas of the Permian Basin**

1. Mesa Building
2. Gym Parking Lot
3. Thermonetics Building
4. Swimming Pool
5. Gym
6. Tennis Courts
7. Main Parking Lot
8. President's Entrance
9. Parkway Blvd.
10. Maple Entrance
11. Devonian Parking Lot
12. Main St.
13. University Entrance
14. University Blvd.
15. Art Institute
16. Fire Dept
17. Petex Building
18. Physical Plant
19. Art Dept.
20. South Road
21. Founder's & Student Housing Entrance
22. Founders Building
23. Music Dept.
24. Student Housing
25. Duckpond
26. Running Trail
27. Loop 338
28. U.T. Permian Basin Park
29. 42nd Entrance
30. 42nd ST.

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