

2012-2014 UNDERGRADUATE AND GRADUATE CATALOG

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

THE UNIVERSITY OF TEXAS AT TYLER
www.uttyler.edu

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The University of Texas at Tyler is a four-year university providing appropriate educational services at the undergraduate and graduate level.

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THE UNIVERSITY

History

The University of Texas at Tyler was created as Tyler State College by the Texas Legislature in 1971 and was renamed Texas Eastern University four years later. The University became a campus of The University of Texas System in 1979, as a result of action by the 66th Texas Legislature. Originally established as an upper-level university, UT Tyler's mission was expanded in 1997 when the 75th Texas Legislature passed House Bill 1795 authorizing it to offer classes for freshman and sophomore students. Governor George W. Bush signed the bill into law on May 26, 1997.

Regional Accreditation

The University of Texas at Tyler is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award bachelors, master's, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of the University of Texas at Tyler.

The University of Texas System

As a member institution of The University of Texas System, UT Tyler is subject to the *Rules and Regulations* of the Board of Regents of The University of Texas System.

Mission

The University of Texas at Tyler is a comprehensive institution of higher education offering undergraduate and graduate degree programs as an institution of the renowned University of Texas System. The University of Texas at Tyler's vision is to be nationally recognized for its high quality education in the professions and in the humanities, arts and sciences, and for its distinctive core curriculum. Guided by an outstanding and supportive faculty, its graduates will understand and appreciate human diversity and the global nature of the new millennium. They will think critically, act with honesty and integrity, and demonstrate proficiency in leadership, communication skills, and the use of technology.

The University is committed to providing a setting for free inquiry and expects excellence in the teaching, research, artistic performances and professional public service provided by its faculty, staff and students. As a community of scholars, the University develops the individual's critical thinking skills, appreciation of the arts, humanities and sciences, international understanding for participation in the global society, professional knowledge and skills to enhance economic productivity, and commitment to lifelong learning.

Within an environment of academic freedom, students learn from faculty scholars who have nationally recognized expertise in the arts and sciences, and in such professions as engineering, public administration, education, business, health sciences, and technology. The faculty engages 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 other creative efforts are made available to students in the classroom and to the general public through publication, technology transfer, and public service activities. The institution also seeks to serve individuals who desire to enhance their professional development, broaden their perspectives, or enrich their lives.

Location

The University of Texas at Tyler is the only public degree-granting university located in the East Texas Planning Region, an area of approximately 750,000 population, which includes the greater

Tyler/Longview metropolitan area. The natural beauty of this dynamic region is exemplified by UT Tyler's distinctive campus with its scenic lakes and wooded, rolling hills.

Off-Campus Locations

The University of Texas offers selected courses and degree programs at the Longview University Center and on the UT Tyler Palestine campus. Courses are taught on both campuses using face-to-face instruction as well as interactive television.

Longview University Center

Located in northwest Longview on Highway 259, the Longview University Center (LUC) offers the people of East Texas an alternative to relocation or commuting long distances to obtain a degree. The LUC's programs and courses reflect those offered on the main UT Tyler campus with significant offerings in the field of business, nursing, education, and technology. Courses offered at LUC can be delivered face-to-face, via interactive television, web-based, or a combination of these formats. Upper-division undergraduate and graduate courses are offered leading to a variety of baccalaureate and masters degrees. Freshman and sophomore courses are provided at LUC by Kilgore College.

Palestine

The University of Texas at Tyler, Palestine Campus is located at the corner of Loop 256 and Hwy 19 North in Palestine, Texas. The facility includes a small on-site library, a computer lab with online access to the Muntz Library, a nursing skills learning laboratory, student break area, and interactive television classrooms. Courses are brought to Palestine through a combination of interactive television and on-site faculty. The full BSN degree and MBA are available at the Palestine site. Also available are MSN courses as well as courses in history, anthropology, public administration, and criminal justice.

Faculty and Course Information

In an effort to provide as much information to students, parents, and the general public regarding courses and faculty, UT Tyler makes available on its website syllabi for current courses (<http://www.uttyler.edu/catalog/syllabi.php>), vitae for instructors of record, (<http://www.uttyler.edu/facultystaff/faculty-search.php>), and end-of-course evaluations for all courses (<http://www2.uttyler.edu/courseevals/homepage.aspx>).

Statement on Protection of Social Security Numbers

It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. Employees who have access to confidential information may only use that information as is necessary and appropriate in the performance of their official duties and in compliance with applicable laws, regulations, and policies.

Statement on Equal Opportunity

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, age, national origin, religion, sex, veteran status, or disability.

This policy applies to all University administrators, faculty, staff, students, visitors and applicants for employment or admission.

Academic Organization

The University of Texas at Tyler is organized into five academic colleges:

- College of Arts and Sciences
- College of Business and Technology
- College of Education and Psychology
- College of Engineering and Computer Science
- College of Nursing and Health Sciences

Bachelor's Degrees

The University of Texas at Tyler offers a wide variety of educational opportunities. The university offers bachelor's degrees with majors in the following areas:

Program	Degree
Accounting	B.B.A.
Applied Arts and Sciences	B.A.A.S.
Art	B.A./B.F.A.
Biology	B.S.
Chemistry	B.S.
Civil Engineering	B.S.
Computer Information Systems	B.S.
Computer Science	B.S.
Construction Management	B.S.
Criminal Justice	B.S.
Economics	B.A./B.S.
Electrical Engineering	B.S.
English	B.A.
Finance	B.B.A.
General Studies	B.G.S.
Health & Kinesiology	B.A.
Health Professions	B.S.
History	B.A./B.S.
Human Resource Development	B.S.
Industrial Technology	B.S.
Interdisciplinary Studies	B.S.
Journalism	B.A./B.S.
Kinesiology	B.S.
Management	B.B.A.
Marketing	B.B.A.
Mathematics	B.S.
Mechanical Engineering	B.S.
Music	B.M./B.A.
Nursing	B.S.N.
Political Science	B.A./B.S.
Psychology	B.A./B.S.
Religion Studies	B.A./B.S.
Social Sciences	B.A./B.S.
Spanish	B.A.
Speech Communication	B.A./B.S.
Technology	B.S.

Master's Degrees

The University of Texas at Tyler offers master's degrees in the following areas:

Program	Degree
Accountancy	M.Acc.
Art (Studio)	M.F.A.
Art (Art History)	M.A.
Biology	M.S.
Business Administration	M.B.A.
Civil Engineering	M.S.C.E.

Clinical Psychology	M.S.
Communication	M.A.
Computer Science	M.S.
Counseling Psychology	M.A.
Criminal Justice	M.S.
Curriculum and Instruction	M.Ed.
Educational Leadership	M.Ed.
Electrical Engineering	M.E.E.
English	M.A.
Health and Kinesiology	M.Ed.
Health Sciences	M.S.
History	M.A.
Human Resource Development	M.S.
Industrial Management	M.S.
Interdisciplinary Studies	M.A./M.S.
Kinesiology	M.S.
Mathematics	M.S.
Mechanical Engineering	M.M.E.
Nursing	M.S.N.
Political Science	M.A.
Public Administration	M.P.A.
Reading	M.A./M.Ed.
School Counseling	M.A.
Special Education	M.A./M.Ed.

Doctoral Degrees

The University of Texas at Tyler offers doctoral degrees in the following areas:

Program	Degree
Human Resource Development	Ph.D.
Nursing	Ph.D.

Accreditation and Memberships

Accredited by the following:

- The Association to Advance Collegiate Schools of Business (AACSB)
- Engineering Accrediting Commission (ABET)
- Association of Technology, Management, and Applied Engineering (ATMAE)
- American Chemical Society
- Board of Nurse Examiners for the State of Texas
- Southern Association of Colleges and Schools, Commission on Colleges (SACS-COC)
- Commission on Collegiate Nursing Education
- Teacher Education Accrediting Council (TEAC)
- Texas Education Agency

Membership in the following:

- Alliance for Higher Education
- American Association of Colleges of Nursing
- American Association of Colleges of Teacher Education
- American Association of Collegiate Registrars and Admissions Officers
- American Association of Hispanics in Higher Education, Inc.
- American Association of Higher Education
- American Association of State Colleges and Universities
- American Association of University Women
- American Council on Education
- American Society for Engineering Education
- Association of Texas Colleges and Universities
- Conference of Southern Graduate Schools
- Council for Advancement and Support of Education
- Council for Higher Education Accreditation
- Council of Public University Presidents and Chancellors of Texas
- Forest Trails Consortium
- Institute of International Education

THE UNIVERSITY

International Association of University Presidents
National Association of Industrial Technology
National Association of Student Personnel Administrators
National League for Nursing Council of Baccalaureate and Higher Degree Programs
Southern Association of Collegiate Registrars and Admissions Officers
Southern Council on Collegiate Education for Nursing
Southern Regional Education Board
Teacher Education Accreditation Council
Texas Association of College and University Auditors
Texas Association of Collegiate Registrars and Admissions Officers
Texas Society of Allied Health Professionals

Recognized by the following:

Texas Higher Education Coordinating Board
Commission on Law Enforcement Officer Standards and Education
Immigration and Naturalization Service, United States Department of Justice
Veterans Administration

TUITION, CHARGES, AND FEES

Tuition charges at Texas state universities are established by state law. The 78th Texas Legislature (2003) allowed the Board of Regents of The University of Texas System to set designated tuition rates. The Texas Legislature does not set the specific amount for any particular student fee. Student fees assessed are authorized by state statute; however, the specific fee amounts and the determination to increase fees are made by the University administration and The University of Texas System Board of Regents.

Other expenses at The University of Texas at Tyler are fixed within statutory limitations by the Board of Regents. The cost to attend UT Tyler varies with the individual student. Information relating to the cost of attendance and financial aid opportunities can be found online at <http://www.uttyler.edu/admissions/costs/>. The university reserves the right to change tuition and fees in keeping with acts of the Texas Legislature and/or policies of the Board of Regents.

Payment of Fees

Students are expected to pay all fees at the time of registration, have an approved financial aid program arranged by the Student Financial Aid Office prior to registration, or pay by installments as outlined below. Payment may be made by cash, check, credit card, or money order. Checks, money order, and credit card (VISA, Master Card, Discover, American Express) payments will be accepted subject to final collection by the university's bank. All tuition and fee payments by third parties, i.e. employers of students, clubs, service organizations and relatives of students, must be arranged by the Student Financial Aid Office prior to registration.

Option to Pay Tuition and Fees by Installments

Students of UT Tyler may make payment of tuition and fees for the fall and spring semesters through one of the following installment plan options:

- 3 payment installment plan with an installment fee of \$25.00
- 4 payment installment plan with an installment fee of \$35.00
- 5 payment installment plan with an installment fee of \$45.00

A late payment fee of \$25 will be assessed for each late payment.

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

- a. Bar from registration/deny readmission;
- b. Withholding of grades, degree and official transcript;
- c. Denial of course credit for work done that semester;
- d. Apply appropriate penalties as established by law;
- e. Referral of debt to collection agency.

Residents of States other than Texas

RESIDENCY CLASSIFICATIONS

All students must, upon application to the University, complete a certification of residency form.

While State requirements for establishing residency are complex and should be referred to in each particular circumstance, they generally require that an independent individual (18 years of age or older) establish a domicile in Texas and reside in Texas for a period of 12 months prior to the census date of the academic term in which the person is enrolled.

For minors and dependents, the parents or court-appointed legal guardian must have established a domicile and meet the above residency requirements. The minor or dependent must be eligible to be claimed by the parent or court-appointed legal guardian on their federal income tax. An individual may also be classified as a Texas resident if the individual (1) graduated from a public or private high school or received the equivalent of

a high school diploma in Texas; (2) resided in Texas for at least three years as of the date the person graduated from high school or received the equivalent of a high school diploma; and (3) continuously resided in Texas for one year prior to the census date of the academic term in which the person is enrolled. Texas Education Code, 54.052.

Persons who are unable to meet the requirements above are classified as nonresidents.

The Office of Admissions is guided by the Texas Education Code, the *Rules and Regulations of the Board of Regents* and the *Rules and Regulations for Determining Residence Status* of the Texas Higher Education Coordinating Board in determining the resident status of students. The law governing residence for tuition purposes is not the same as the law governing residence for voting, vehicle registration, etc. Various circumstances can affect a student's residence status for tuition purposes: i.e. death or divorce of parents, custody of minor by court order, and active military duty of student or student's parents. A nonresident student classification is presumed correct as long as the individual continues as a student. However, the nonresident presumption is not conclusive, and it is possible that a nonresident student may be reclassified to resident student status after residing in Texas for at least 12 months and evidencing unequivocal intent to remain in the state.

Responsibility for Residency Classification

The responsibility for registering under the proper residence is placed upon the student. It is the student's duty, at or before registration, if there is any possible question of the right to legal residence in Texas under the state law and the university rules, to raise the question with the Office of Admissions and have such questions settled prior to registration. Copies of *Rules and Regulations for Determining Residence Status* prepared by the Texas Higher Education Coordinating Board are available in the Office of Admissions. There can be no change of resident status except upon express authorization by the Director of Admissions. Attempts on the part of a nonresident student to evade the nonresident fee are a serious matter and may lead to disciplinary action, including expulsion and/or penalty as set forth in the law.

Special Tuition Classifications for Nonresidents

Listed below are some exceptions which permit nonresidents to pay resident tuition rates. All special tuition exceptions must be approved through the Office of Student Financial Aid prior to the census date each term.

- A. A nonresident or foreign student employed at least half-time in a program-related position such as teaching assistant or a research assistant is entitled to pay the same tuition as a resident of Texas. The student's spouse and children may also be enrolled under this classification.
- B. A nonresident or foreign student holding a competitive academic scholarship of at least \$1,000 for the academic year in which he/she enrolled is entitled to pay the tuition required of Texas residents provided he/she competes with other students including Texas residents for the scholarship and the scholarship is awarded by a scholarship committee recognized by UT Tyler and approved by the Coordinating Board.
- C. Usually, a member of the United States military forces is entitled to pay the resident tuition fee for self or dependents. The student must submit appropriate evidence including a statement from his/her commanding officer stating that the member is currently on permanent active duty assignment within the state of Texas.

TUITION, CHARGES, AND FEES

- D. Students who reside in Arkansas, Louisiana, and Oklahoma may be charged the statutory rate for Texas residents, plus \$30.00 per semester credit hour. Students must demonstrate residency by providing a current driver's license or copies of their state tax returns for the current year. This must be presented each semester prior to payment of tuition and fees.

The *Texas Education Code*, §54.058 *et seq.* includes other exceptions not reprinted in the catalog. For more information consult the cited statutes, the Office of Student Financial Aid, or refer to the Coordinating Board's website, <http://www.collegefortexans.com>.

Tuition and Fee Exemptions

Certain students are exempt from paying tuition and some of the required fees by state law. Specific eligibility requirements under these provisions can be obtained from the Student Financial Aid Office. Applications for exemptions must be completed prior to the census date for the semester. Exempt classifications include the following:

- A. Residents of the State of Texas who were classified as Prisoners of War on or after January 1, 1999 and were Texas residents at the time they entered the armed services are exempt from tuition, required fees and other expenses related to attending the university.
- B. Residents of the State of Texas who are children of Prisoners of War or Persons Missing in Action are exempt from paying all tuition and required fees.
- C. Blind and/or deaf students eligible for the rehabilitation services of the State Commission for the Blind and/or the Division of Vocational Rehabilitation of the Texas Education Agency are exempt from all tuition and fees.
- D. Minor children and surviving spouses of firemen; peace officers, municipal, county or state peace officer or game warden disabled or killed-on-duty may be exempt from paying tuition and fees, and other expenses related to attending the university.
- E. Hazlewood Act benefits:
1. Veterans (and dependents of veterans who died in active service) of World War II, Korean War, the Cold War, and certain other qualified veterans who have no remaining veterans' administration educational benefits may be eligible for Hazlewood Act benefits for up to 150 credit hours if they were a resident of Texas at the time they entered the armed forces, currently reside in Texas, entered the service at a location in Texas, and received an honorable discharge from the service.
 2. Children or the spouse of members of the US armed forces, Texas National Guard and the Texas Air National Guard killed since January 1, 1946, while on active duty either in the service of their state or the United States may also be eligible under this provision. In order to qualify for benefits under the Hazlewood Act, the veteran must file with the Office of Student Financial Aid prior to registration each semester.
 3. Children or the spouse of members of the armed forces, the Texas National Guard, or the Texas Air National Guard who became totally disabled as a result of a service-related injury.
- F. Residents of the State of Texas who are 65 years of age or older may audit courses without paying the regular audit fees, providing class space is available.
- G. Residents of the State of Texas who are 65 years of age or older may enroll in the fall, spring, and summer semesters and receive an exemption for the cost of tuition for up to six hours each semester.
- H. Individuals who were in foster care or other residential care under the conservatorship of the Department of Protective and Regulatory Services should contact Office of Student Financial Aid to determine if they qualify for tuition and fees exemption.
- I. Police officers who are Texas residents and have become permanently disabled as a result of an injury suffered during the performance of a duty as a peace officer of this state or a political subdivision of this state, and are unable to continue employment as a peace officer because of the disability may be eligible for exemption of tuition for undergraduate courses and required fees.

- J. Certain members of the Texas National Guard may be exempt from tuition and mandatory fee for up to 12 semester credit hours.
- K. A student who has a voucher(s) from the Veterans Commission in \$25 increments for having played "taps" at military honors funerals.
- L. A registered nurse serving as a clinical preceptor for undergraduates in a professional nursing program may be eligible for a \$500 tuition exemption. The exemption may also apply to the nurse's children.
- M. The highest ranking high school graduate is exempt from tuition for the first two semesters following graduation.
- N. Adopted children who were formerly in foster or other residential care are exempt from tuition and fees.
- O. Children of certain faculty or staff members employed by the university's nursing program are exempt from tuition.
- P. Certain students who completed high school early or with at least 30 college credit hours may be eligible for tuition and fee exemptions ranging from \$500 to \$2000.

Tuition Rebate for Qualified Students

A qualified student is eligible to apply for a rebate of a portion of the undergraduate tuition the student has paid, in accordance with Section 54.0065 of the Texas Education Code. The 1997 Texas Legislature approved a tuition rebate plan for students receiving their first baccalaureate degree. For a student to be eligible for a rebate of a portion of the undergraduate tuition the student has paid: they must be Texas residents having enrolled for the first time in an institution of higher education in the fall of 1997 or later; attempted all work at a Texas public institution of higher education and been entitled to pay resident tuition at all times while pursuing the degree and must not have attempted more than three hours in excess of the minimum required for the degree, including transfer credits and course credit earned exclusively by examination. Only the number of semester credit hours earned exclusively by examination in excess of nine semester credit hours is treated as hours attempted.

Rebate Application forms are available through Enrollment Services. Eligible students must apply for this rebate prior to graduation.

Schedule of Refunds

If a student formally drops one or more courses through Enrollment Services, the university will refund applicable tuition and fees collected for courses from which a student drops within the first 12 days of a fall or spring semester, within the first four days of a summer term, or within the first day of a mini session, provided the student remains enrolled at the institution for that semester or term. Refunds for courses dropped by a student who later in the semester or term withdraws from the institution will be calculated according to the following schedule:

Regular semester, Long Summer

prior to first class day	100%
during first five class days	80%
during second five class days	70%
during third five class days	50%
during fourth five class days	25%
after fourth five class day	no refund

Summer I and II semester

prior to first class day	100%
during the first, second, or third class day	80%
during fourth, fifth, or sixth class day	50%
seventh class day and thereafter	no refund

For refunds, the effective date of withdrawal will be the date when the withdrawal is officially completed and recorded by Enrollment Services. If a scheduled course of instruction is cancelled by the university, all fees will be refunded. No refunds will be made unless applied for in the same school year as withdrawal. Immediate refund will not be made to students who withdraw during the refund period. Normally, refunds will be disbursed according to the refund preference indicated through the P2 Card within 30 days from the last day of scheduled refunds.

All policies regarding the payment or refunding of tuition, fees, and charges comply with applicable statutes and are approved by the Board of

Regents of The University of Texas System. 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 Office of Business Affairs at UT Tyler should be contacted.

Refunding for Students in Title IV Programs

As an institution participating in programs under Title IV of the Higher Education Act of 1965 as amended ("Act"), The University of Texas at Tyler is required to refund unearned tuition, fees, room and board, and other charges to certain students attending the institution for the first time who have received a grant, a loan, or work assistance under Title IV of the Act, or whose parents have received a loan on their behalf under 20 U.S.C. Section 1087-2. The refund is required if the student does not register for, withdraws from, or otherwise fails to complete the period of enrollment for which the financial assistance was intended. No refund is required if the student withdraws after a point in time that is sixty percent of the period of enrollment for which the charges were assessed. A student who withdraws prior to that time is entitled to a refund of tuition, fees, room and board, and other charges that is the larger of the amount provided for in Section 54.006, Texas Education Code, or a pro rata refund calculated pursuant to Section 484B of the Act, reduced by the amount of any unpaid charges and a reasonable administrative fee not to exceed the lesser of five percent of the tuition, fees, room and board, and other charges that were assessed for the enrollment period, or \$100. If the student charges were paid by Title IV funds, a portion or all of the refund will be returned to these programs.

Tuition and Mandatory Fees

Students pay a statutory tuition rate of \$50 per semester credit hour for Texas Residents (*See below*, Excess Hours) and \$363 per semester credit hour for Non-Texas Residents. Students also pay a designated tuition of \$123 per undergraduate credit hour or \$196 per graduate semester credit hour; and \$240 per doctoral semester credit hour.

Students will be given notice on their tuition bill, tuition receipt or an email in connection with tuition charges, of the amount of his/her tuition payment that is required to be set aside to provide financial assistance for students enrolled at the institution per the *Texas Education Code*, Section 56.014.

Tuition and fees are subject to change by legislative or regental action and become effective on the date enacted. The Texas Legislature does not set the specific amount for any particular student fee. The student fees assessed above are authorized by state statute; however, the specific fee amounts and the determination to increase fees are made by the university administration and The University of Texas System Board of Regents. Tuition and fee updates can be found at <http://www.uttyler.edu/catalog/tuition/>.

In addition all students are required to pay a set of mandatory fees, as set out below.

Automated Service Fee	\$30/semester
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To defray costs of the automated student information system, software provided for student use, and library services.

Basic Computer Access Fee	\$125/semester
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To defray costs of providing campus computing services in support of academic programs.

Student Service Fee	\$11/credit hour up to \$150/semester
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To provide a well-rounded program of activities and services for students of the university. Refunds of these fees are on the same basis as tuition as described under schedule of refunds.

Fine and Performing Arts Fee	\$30/regular sem.; \$15/summer
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To offset the maintenance and operation of the R. Don Cowan Fine and Performing Arts Center.

Intercollegiate Athletics Fee	\$12/credit hour (min. \$72max. \$180)
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To maintain the intercollegiate athletics programs. Maximum \$180 per semester.

Recreational Facility Fee	\$40/regular sem.; \$30/12 week session or longer; \$15/6 week session or more but less than 12 weeks; \$10/5 week or less session
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To operate and maintain student recreational facilities or programs.

International Education Fee	\$1/semester
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To support various international study and travel programs.

Medical Services Fee	\$35/regular sem. and long summer; \$15/summer I and II
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To help operate and maintain the student health clinic.

Records Fee	\$5/semester
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To defray cost of providing UT Tyler transcripts and enrollment certifications. There is a limit of five transcripts per day at no charge and a maximum of fifty transcripts at no charge.

Student Union Fee	\$100/regular sem. and long summer; \$50 /summer I and II
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Provides revenue for financing, constructing, operating, maintaining, renovating, improving, or equipping a student union building.

Other Fees and Charges

For a complete list of other fees and charges, including individual course fees, please visit the Student Business Services website at <http://www2.uttyler.edu/catalog/tuition/tuitioninfo.php>

Tuition and Fees for Excess Hours

As authorized by state law, a student who pays resident tuition rates and who attempts hours that exceed a designated limit will be charged nonresident tuition rates. The designated limit for a student who initially enrolled in an institution of higher education in Fall 1999 through Summer 2006 is 45 credit hours beyond the required hours for the student's declared degree program. The designated limit for a student who initially enrolled in an institution of higher education in Fall 2006 or later is 30 credit hours beyond the hours required for completion of the student's degree program.

The following semester credit hours are not included in the calculation:

1. semester credit hours earned by the student 10 or more years before the date the student begins the new degree program under the Academic Fresh Start Program of the Texas Education Code, § 51.931;
2. hours earned by the student before receiving a baccalaureate degree that has previously been awarded to the student;
3. hours earned by the student by examination or similar method without registering for a course
4. hours from remedial and developmental courses, workforce education courses, or other courses that would not generate academic credit that could be applied to a degree at the institution if the course work is within the 27-hour limit at two-year colleges and the 18-hour limit at general academic institutions;
5. hours earned by the student at a private institution or an out-of-state institution; and
6. hours not eligible for formula funding.

For more information contact the Enrollment Services Center.

Doctoral Excess Hours (99-hour Rule)

A resident doctoral student who has a total of 100 or more semester credit hours of doctoral work at an institution of higher education is required to pay nonresident doctoral tuition rates. Contact the Enrollment Services Center for more information.

UNDERGRADUATE ADMISSIONS AND GRADUATION

The University of Texas at Tyler offers baccalaureate and master's degree programs and strives to meet the educational needs of high school graduates, transfer students from community colleges and other universities, and students seeking graduate degrees. Admission requirements for graduate programs are defined in the Graduate Policies and Programs section of this catalog.

Undergraduate Admission Requirements

- A. All applicants must complete an Application for Admission on-line by visiting: <http://www.uttyler.edu/admissions> or by going to <http://www.applytexas.org> by the posted deadline for the intended semester of enrollment.
- B. Applicants must submit an official updated transcript from each college or university attended, and a \$40 application fee for domestic students, or a \$75 application fee for international students.
- C. Applicants will not be subject to discrimination on any basis prohibited by law including but not limited to race, color, age, national origin, religion, gender, veteran status, or disability.
- D. Automatic admission is available to any applicant who meets any minimum requirements established by the institution and is a child of certain public servants who were killed or sustained a fatal injury in the line of duty.

Freshman Admission

Eligibility for admission as a freshman is determined primarily on the basis of three predictors of academic success: high school preparation, rank in high school class, and SAT (ACT) score. Additional consideration for admission will be based on an evaluation of the additional criteria as described below.

Students enrolling with ACT/SAT scores and high school rankings below UT Tyler's published admission criteria, and/or students enrolling as 'liable' or 'not satisfied' according to published state standards for TSI compliance, will be required to participate in the PASSages (Patriot Academic Success Services) Program during their first semester of enrollment.

High School Preparation

To be eligible for admission to the university as a freshman an applicant must be a high school graduate or equivalent. A high school record that demonstrates achievement in the most challenging academic course work available is the best single predictor of academic success. Beginning freshmen must submit an official high school transcript before classes begin in order to verify graduation and completion of required courses.

The minimum high school units required for admission include:

- A. Language Arts
Required: Four units of English
- B. Science
Required: Four units of science to include at least one unit of Chemistry or Physics
- C. Foreign Language
Required: Two units in a single language effective fall semester 2001.
- D. Mathematics
Required: Four units at the level of Algebra I or higher, e.g., algebra, geometry, elementary analysis, probability and statistics, solid geometry, calculus with analytical geometry. Informal geometry and pre-algebra will not fulfill this requirement.

Strongly recommended: Students planning to enter scientific, engineering and similar technical fields are advised to take at least four units of math in preparation for entering the first university calculus course in their first semester at the university.

- E. Social Studies
Required: Four units
- F. Electives
Required: Additional courses in the areas above and/or in fine arts and/or computer science to satisfy high school graduation requirements

High School Rank in Class and SAT (ACT) Score

- A. An applicant who graduates from an accredited high school in one of the two years preceding the academic year for which the applicant is applying for admission and who has a grade point average in the top 10 percent of the applicant's high school graduating class will be admitted automatically (subject to applicable enrollment limit). SAT (ACT) scores must be submitted.
- B. An applicant who does not qualify for admission under item A but meets the following criteria also qualifies for regular admission:

High School Rank in Class	Minimum Total SAT	Minimum Total SAT w/ writing sect.	Minimum Total ACT
Top 25%	950	1410	20
Second 25%	1000	1500	21
Third 25%	1050	1530	22
Fourth 25%	1080	1590	23

Additional Criteria

In addition to the current university requirements for admission, applicants must also have either: successfully completed the curriculum requirements for the recommended or advanced high school program or its equivalent; or satisfied ACT's College Readiness Benchmarks on the ACT assessment application to the applicant, or earned on the SAT assessment a score of at least 1500 out of 2400 or the equivalent.

The above requirement may be satisfied if the applicants official high school transcript or diploma states that the applicant completed the portion of the recommended or advanced curriculum or its equivalent that was available to the applicant, but was unable to complete the remainder of the curriculum solely because courses necessary to complete the remainder were unavailable to the applicant at the appropriate times in the applicant's high school career as a result of course scheduling, lack of enrollment capacity, or another cause not within the applicant's control.

An applicant may be given additional consideration based upon an evaluation of the individuals' involvement and level of responsibility in extracurricular activities; involvement in responsible non-academic affairs while attending high school, including employment and family responsibilities; status as a first general college student; English not first language; and socioeconomic background.

Transfer Students

Transfer students having fewer than 30 semester credit hours must meet the freshmen admission requirements as specified above.

Transfer students having successfully completed 30 semester hours or more at a regionally accredited institution must have earned a minimum grade point average of 2.0 (on a 4.00 scale) on all college/university coursework attempted.

Students seeking special certification courses may be admitted to complete the required certification courses based on the program requirements.

Transfer students who do not meet the minimal admission requirements, or who have special ability, experience, or other circumstances to demonstrate readiness for college level work may petition for admission by submitting an application for appeal form to the Enrollment Services Center, ADM 230. Consideration will be given to the individual's involvement and level of responsibility in extracurricular activities and involvement in responsible, non-academic affairs including employment and family responsibilities; status as a first generation college student; English not first language; socioeconomic background, and other extenuating circumstances. Petitions for special admission to the university must receive approval from the Appeals Committee prior to registration.

UT Tyler strives to provide guidance for prospective transfer students by outreach through community college visits, individual counseling, transfer credit evaluations, on-campus recruitment events, and orientation. UT Tyler offers transfer students incentives such as scholarship opportunities to those who qualify, and application fee waivers for those who apply during a Mobile Go Center event. Transfer scholarship awards are renewable for two years and have the effect of waiving out-of-state tuition. Additional information regarding admission requirements, scholarship information, recommended degree plans, housing, student life, and athletics are all included on the UT Tyler web site: www.uttyler.edu.

Readmission

If a student has not attended UT Tyler during the past academic year, the student will need to submit a completed application, official transcripts from any institution attended since leaving UT Tyler, and a \$40 application fee for domestic students, or a \$75 application fee for international students. Readmitted students come under the catalog in effect at the time of readmission. Students who withdraw from the university to perform active military service (not including Texas National Guard training exercises) will not have to reapply for admission but will be readmitted upon a request made within one year of being released from active military services and may be eligible for the same financial assistance provided before the student's withdrawal. See *Texas Education Code*, Section 51.9242.

Transient Admission

Undergraduate students pursuing degrees at other colleges and universities who wish to take courses at the University may be admitted as transient students. The transient student application and approval form are available in the Enrollment Services Center, ADM 230, or the website at <http://www.uttyler.edu/admissions>.

A transient student who later wishes to be admitted to the University on a regular basis must apply for admission as a transfer student.

Students who attend the University as transient students and then are admitted on a regular basis are immediately subject to the University's academic regulations. Specifically, students will be placed on academic probation upon enrollment if their grade point average for work undertaken at the University as a transient student is below a 2.00.

International Admissions

In addition to the undergraduate admission requirements stated previously, applicants that are F-1 nonimmigrant visa holders from countries other than the U.S. are subject to the following:

- A. An official transcript evaluation from an approved agency of the International Office of all international transcripts must be included.
- B. Results of the Test of English as a Foreign Language (TOEFL) must be submitted.

A minimum score for admission for the undergraduate student is 70 (paper test) or 213 (internet test). Information concerning the TOEFL may be obtained by writing to TOEFL, P.O. Box 615, Princeton, New Jersey 08540 U.S.A. and at www.ets.org/toefl.

- C. An affidavit of support is required indicating the source of funds being made available to the student. The affidavit of support must indicate the amount of money being provided in U.S. Dollars and the length of time the funds will be made available.
- D. Holders of student (F-1) visas must be classified as full-time students. For international students, a full-time load is 12 semester credit hours for undergraduates.
- E. Filing deadlines for applications and the required documents to be received in the Office of Admissions are as follows: June 1 for the fall semester, November 1 for the spring semester, and March 1 for the summer terms.
- F. Before registration the Office of Admissions must have a copy of a current passport. After admission, students must submit a copy of their visa, I-94, and stamped I-20s. In addition, accepted students who will be transferring in from another US school will need to submit a SEVIS transfer form completed by the transferring institution.
- G. International students holding non-immigrant visas are required to maintain approved comprehensive health insurance or coverage while enrolled at UT Tyler. A health insurance fee will be assessed at the time of enrollment. The health insurance fee will be in the amount of the premium approved for the University of Texas System Student Health Insurance Plan for the actual cost of the insurance and may not be paid through a university funded short-term loan or an installment plan. This policy applies unless the student provides evidence of coverage under an alternative plan as approved by the UT Board of Regents prior to enrollment.
- H. Submit the International Application Fee. A nonrefundable application fee of U.S. \$75.00, payable by cashier's check or money order, is required of all international students applying for admission to The University of Texas at Tyler.

Transient Admission at other Institutions

After the student is admitted to UT Tyler, he or she should not register for any course(s) at any other institution until approval is granted. Approval by the student's Advisor, Department Chair, Dean and the University Registrar is required to assure that the courses taken at another institution will count toward the student's degree. A student should not register at another institution until the request for undergraduate transient admission form has been completed and approved. Forms for this purpose are available at <http://www.uttyler.edu/registrar/forms/index.php> or at the Enrollment Services Center.

Academic Fresh Start

An applicant for admission who is a Texas resident may seek to enter this institution pursuant to the "academic fresh start" statute, Texas Education Code, §51.931 by requesting an Academic Fresh Start Program Acknowledgement form from the Director of Admissions, and submitting the form to the Enrollment Services Center, ADM 230. The University will not consider academic course credits or grades earned by the applicant 10 or more years prior to the starting date of the semester in which the applicant seeks to enroll. An applicant who makes the election to apply under this statute may not receive any course credit for courses taken 10 or more years prior to enrollment under academic fresh start.

Texas Success Initiative (TSI)

The Texas Higher Education Assessment (THEA) test is designed to determine whether students possess the basic skills in reading, writing, and mathematics, necessary for university courses. In accordance with Texas Education Code, Section 51.3062, all students must take the THEA test (or an approved alternative assessment test) prior to enrolling at the University.

With approval, students not meeting TSI requirements may be granted a one-semester TSI waiver. Future enrollment may be denied if the TSI standards have not been satisfied at the conclusion of the waived term.

The following students are exempt from taking the test:

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- For a period of five (5) years from the date of testing, a student who is tested and performs at or above the following standards: (A) ACT: composite score of 23 with a minimum of 19 on both the English and the mathematics tests; (B) Scholastic Assessment Test (SAT): a combined verbal and mathematics score of 1070 with a minimum of 500 on both the verbal and the mathematics tests; or
- For a period of three (3) years from the date of testing, a student with a TAKS math score of at least 2200 is exempt from the math requirement. A student with a TAKS English/Language Arts score of at least 2200 and an essay score of at least 3 is exempt from the reading and writing requirements.
- A student who has graduated with an associate or baccalaureate degree from an institution of higher education.
- A student who transfers to an institution from a private or independent institution of higher education or an accredited out-of-state institution of higher education and who has satisfactorily completed college-level coursework as determined by the receiving institution.
- A student who has previously attended any institution and has been determined to have met readiness standards by that institution.
- A student who is enrolled in a certificate program of one year or less (Level-One certificates, 42 or fewer semester credit hours or the equivalent) at a public junior college, a public technical institute, or a public state college.
- A student who is serving on active duty as a member of the armed forces of the United States, the Texas National Guard, or as a member of a reserve component of the armed forces of the United States and has been serving for at least three years preceding enrollment.
- A student who on or after August 1, 1990, was honorably discharged, retired, or released from active duty as a member of the armed forces of the United States or the Texas National Guard or service as a member of a reserve component of the armed forces of the United States.
- A non-degree-seeking or non-certificate-seeking student.

Registering for Beginning Mathematics Courses

Students needing to take mathematics are placed into the appropriate courses through the use of test scores (THEA, ACT, SAT), departmental tests, or successful completion of certain courses. The chart below gives the minimum requirements to enroll in the required mathematics courses.

Test/Course	College Algebra or Equivalent	Calculus I
	MATH 1314, 1324, 1332*	MATH 2413**
	Min. Score/grade	Min. Score/grade
THEA Math	270	
SAT Math	500-674	675
ACT Math	21	27
MATH 0303	"C"	
MATH 1316 or MATH 2312or Trigonometry Test		"C" "pass with 70%"

*Students who do not have THEA, SAT or ACT math scores will be required to take the pre-algebra test administered by the Mathematics Department. Students who fail the test will be required to enroll developmental math courses elsewhere

**Students enrolling in Calculus I must have the minimum SAT or ACT math scores noted above or one of the following: "C" or better in MATH 1316 or MATH 2312, or pass the departmental trigonometry test. It is assumed that all students enrolling in Calculus I are proficient in algebra. Students who are not proficient in algebra are advised to enroll in MATH 1314: College Algebra and MATH 1316: Trigonometry prior to enrolling in Calculus I.

Immunization Requirements

- In accordance with Texas Education Code 51.9192, Subchapter Z, all first-time students at UT Tyler, including transfer and graduate students, and all students who have previously attended UT Tyler

prior to January 1, 2012, and who are enrolling at UT Tyler following a break in enrollment of at least one fall or spring semester are required to provide proof of vaccination against bacterial meningitis at least 10 days prior to the beginning of the semester. All documentation should be submitted to the Enrollment Services Center (ESC), in ADM 230. Exemptions for this requirement are as follows:

- The student is 30 years of age or older.
 - The student is enrolled in online-only programs. If the student attends any on-campus classes, they must submit proof of vaccination.
 - The student submits an affidavit or a certificate signed by a physician who is duly registered and licensed to practice in the United States, stating, in the physician's opinion, the vaccination required would be injurious to the student's health and well-being.
 - The student submits a signed affidavit stating the student declines the vaccination for bacterial meningitis for reasons of conscience, including a religious belief. A conscientious exemption form from the Texas department of State Health Services must be used. This form is located at <http://webds.dshs.state.tx.us/immco/affidavit.shtm>
- In accordance with State law, the following immunizations are required for all students enrolled in health related courses which will involve direct patient contact in medical or dental care facilities or who come in contact with human or animal biological fluids or tissue.* Students for whom these immunizations are not required are strongly urged to obtain these immunizations for their own protection.

Measles: proof of two doses of measles vaccine administered on or after the first birthday and at least 30 days apart or proof of immunity.

Mumps: proof of one dose of mumps vaccine administered on or after the first birthday or proof of immunity.

Rubella: proof of one dose administered on or after the first birthday or proof of immunity.

Tetanus/diphtheria: proof of one "booster" dose of tetanus/diphtheria (within 10 years).

Hepatitis B virus (HBV): proof of serologic immunity to HBV or certification of immunization with a complete series of Hepatitis B vaccine. Students will be required to present a letter or other suitable written certification.

Influenza: proof of influenza vaccination required every fall semester

*Note: Certain exemptions are allowed from the immunization requirement

Students enrolled at University of Texas institutions will assume the full cost of the immunizations.

Students may obtain information regarding the consequences of not being current on immunization for certain diseases; the age groups most vulnerable to these vaccine preventable diseases; and local providers of immunization services from the University Health Clinic.

Transfer Credit

Credit earned at other regionally accredited colleges or universities may be transferred by students presenting official transcripts describing such credit. Courses are acceptable for transfer at the level at which these courses were classified by the institution granting the credit.

Only courses in which a student has earned a grade equivalent of "C" or better will be acceptable for transfer. The only exception will be if a student transfers to UT Tyler core complete from another college or university, and the transferring institution recognized a "D" as satisfying its Core Curriculum requirements.

After enrolling at UT Tyler, students who wish to enroll in courses at another university or college must have prior approval. For specific procedures review the Undergraduate Transient Admission section of this catalog.

Military Service Credit

U.S. Military Veterans who meet the eligibility requirements below may elect to receive up to 12 undergraduate credit hours of physical education towards elective course requirements for their undergraduate degree.

The Military Service Credit option is available to Veterans who have met the following requirements:

1. Graduated from a public or private high school, accredited by a generally recognized accrediting organization or from a high school operated by the United States Department of Defense.
2. Honorably discharged former member of the armed forces of the United States
3. Completed a minimum of two years of service in the armed services or was discharged because of a disability.

To have the credit awarded, students must provide proof of eligibility (i.e., DD214 or disability discharge documentation, and military transcripts). Once processed (and approved), the appropriate amount of elective credit will be added to the student's official academic record; effective the date of approval.

The awarding of credit is irrevocable (i.e., cannot be removed from transcript once awarded). Therefore, in deciding whether to claim this credit, students should consider, in consultation with a veterans affairs advisor, the impact of the credit on their eligibility for a tuition rebate, the possibility that they will be charged additional tuition if they have excess credit, and the possibility that they will be ineligible for Texas BOnTime loan forgiveness if they have excess credit.

Texas Common Course Numbering System

The Texas Common Course Numbering System (TCCNS) is designed to aid students in the transfer of freshman and sophomore academic credit courses from colleges and universities throughout Texas. The University of Texas at Tyler has joined this consortium approved by the Texas Association of Collegiate Registrars and Admissions Officers and the Texas Higher Education Coordinating Board. The system ensures that if the student takes courses that the receiving institution designates as common, then the courses will be accepted in transfer at other Texas public colleges and universities.

College Credit By Examination

Credit by examination may be established through testing programs such as the Advanced Placement Program (AP), the College Level Examination Program (CLEP), and International Baccalaureate. Guidelines for credit by CLEP, AP, and IB examinations are available at the Enrollment Services Center. CLEP, AP, and IB credit received from a prior college/university will transfer as credit was awarded.

Transfer Disputes for Lower-Division Courses from Texas Institutions

The following procedures shall be followed by public institutions of higher education in the resolution of credit transfer disputes involving lower-division courses:

- A. The receiving institution shall give written notice to the student and to the sending institution that transfer of the course credit is denied
- B. Institutional representatives and the student shall attempt to resolve the transfer of the course credit in accordance with the Texas Higher Education Coordinating Board rules and/or guidelines
- C. If the transfer dispute is not resolved to the satisfaction of the student or the sending institution within 45 days after the date the student receives written notice of denial, the institution that denies the transfer shall notify the Commissioner of Higher Education of the denial and the reason for the denial

The Commissioner or the Commissioner's designee shall make the final determination concerning the dispute of the transfer of course credit and will give written notice of the determination to the student and each institution.

Correspondence Credit

A student may not apply more than six semester hours of upper-division correspondence credit toward a degree. Prior approval to include these hours in a degree plan must be secured from the student's academic advisor, department chair, and dean. To secure this approval, follow the procedures outlined in the undergraduate transient approval section of this catalog. To transfer, courses must be awarded a letter grade of A, B, or C. Courses taken for CR must be approved prior to enrollment.

Classification

Students are assigned a classification at the beginning of each semester based on the total number of semester hours accumulated, including transfer credits and degrees earned.

A student who has been admitted to a degree program is said to be a regular or a matriculated student. A student holding a baccalaureate or higher degree is classified as a post-baccalaureate student. All other students are classified as undergraduate students.

Student classifications and the basis for each are as follows:

Classification	Criterion
Freshman	0-29 semester hours
Sophomore	30-59 semester hours
Junior	60-89 semester hours
Senior	90 or more semester hours
Post-baccalaureate	Holding a bachelor's (or higher) degree
Graduate	Holding a bachelor's (or higher) degree and being admitted to a graduate program

Visiting UT System Students Program

The Visiting U.T. System Students Program is designed to allow upper-level and graduate or professional students enrolled in an institution of the UT System to take courses or engage in research at another institution within the UT System during a regular semester or summer session. Each campus must appoint an individual designated to coordinate the visiting student program at both the home and host institution. Every campus has the responsibility to determine the academic qualifications necessary for their students to participate in the visiting program. Approval of a student's proposed visitation will be contingent on space and desired courses being readily available in the proposed visitation program and, for participation in a research laboratory, on approval of the director of the laboratory (*Rules and Regulations* of the Board of Regents, Rule 50701).

University Honors Program

The University Honors Program provides intellectually enriching opportunities for academically talented and motivated freshmen at UT Tyler. The emphasis is on small classes, enriched coursework, independent learning, speaking and writing, research within the discipline, sharing ideas, and discovering new worlds beyond the campus.

Eligibility

The Honors Program is open to all majors. Freshmen should have attained a high school gpa of at least 3.5 and an ACT composite score of at least 28 or an SAT composite score of at least 1860.

Students enter the Honors Program in the fall semester of their first year. Applications must be on file by May 1 for entrance the following fall; late applications are considered on a space-available basis. The application for admission to the Honors Program is separate from the application for admission to the university, and must be submitted separately to the Honors Program Office. Contact Dr. Paul Streufert, Director of the University Honors Program, at 903-565-5823 or e-mail: pstreufert@uttyler.edu

Honors Endowed Scholarship

Students who meet the entrance requirements for the University Honors Program as first-semester freshmen are eligible to receive an Honors Endowed Scholarship. Honors students will receive an additional

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scholarship of \$1,000- \$7,000 per year for four years as long as they remain in good standing in the Honors Program.

The application to the Honors Program serves as application for the Honors Endowed Scholarship. No additional scholarship application is required.

Honors Curriculum

The curriculum of the UT Tyler Honors Program consists of 12 hours of honors courses for the university's core curriculum, 6 hours of honors in the major, and an honors thesis. To be eligible for special Honors designation at graduation, you must complete the 24-hour Honors Program and attend all Honors Colloquia, as described below.

Honors Colloquium

One of the hallmarks of the Honors Program is the Honors Colloquium, which is an opportunity for students to meet and talk with scholars, as well as local, regional, and national leaders about topics that relate to each semester's courses. The Colloquium may also include museum trips, service projects, productions, and other leadership and learning activities

Honors in the Core (12 hrs.)

Honors students must enroll in one Honors Seminar (HNRS) in each of the student's first 4 semesters. These 12 hours of Honors Seminars will replace 12 hours of standard Core Curriculum. Students will be required to meet the remaining 32 hours of the Core Curriculum as determined by the Honors director.

Honors in the Major (6 hrs.)

Each semester of the junior year, students will enroll in a contract course in their major in which they will complete an additional research project. Contract courses will be chosen in consultation with the Honors director.

Honors Thesis (6 hrs.)

In the senior year, students will complete an honors thesis in the major. The thesis will be written under the guidance of a faculty member in the student's discipline with the approval of the Honors director.

Articulation Agreements

Articulation Agreements, which are designed to offer students continuity when transferring from a community college to a baccalaureate degree, have been signed between UT Tyler and several regional community colleges. Please contact the Academic Advising Center for further information.

General Baccalaureate Degree Requirements

Each candidate for the baccalaureate degree must fulfill the following requirements:

- Consult with the appropriate academic advisor(s) and complete all requirements outlined in the Patriot Advising Report (PAR).
- Complete Core Curriculum requirements with a grade of "C" or better in each course.
- Complete a minimum of 42 upper-division semester credit hours (Refer to your major for any specific additional requirements.)
- Complete at least 25% of the hours required for the degree at UT Tyler
- Complete at least 24 of the last 30 upper-division credit hours in residence at UT Tyler.
- Complete a minimum of 6 upper-division hours in the major field of study at U.T. Tyler. (colleges or departments may establish more stringent requirements).
- Complete a minimum of 120 hours.
- Maintain a 2.0 overall grade point average.
- File for graduation on or before the Final Filing Deadline for the semester of graduation. See Graduation Guidelines below.

Core Curriculum Requirements

Core curriculum and field of study requirements are normally completed at the freshmen/sophomore level. All courses used to complete the core curriculum requirements at UT Tyler must be completed with a grade of "C" or better. Please check with your advisor before registering for core curriculum courses to ensure that you are registered for the correct classes. (Additional acceptable core courses may be added; check the web version of the catalog for the most current list.)

Core curriculum requirements are normally completed at the freshman/sophomore level. All courses used to complete the core curriculum requirements at UT Tyler must be completed with a grade of "C" or better.

Area	Credit Hrs.	Accepted Courses
Communication	6	ENGL 1301, 1302
Mathematics*	6	MATH 1316, 1324, 1325, 1332, 1333, 1342, 1343, 1350, 1351, 2312, 2413, 2414 (please refer to course section of catalog for prerequisites, conditions, and restrictions)
Natural Sciences	8	BIOL 1306/1106, 1307/1107; CHEM 1305/1105, 1307/1107; CHEM 1311/1111, 1312/1112; PHYS 1301/1101, 1302/1102; PHYS 2325/2125, 2326/2126
Humanities		
World or European Literature	3	ENGL 2322, 2323, 2362, 2363
Humanities	3	PHIL 1301, 2303**, 2306; ENGL 2310, 2350; SPCM 1315
Visual and Performing Arts	3	MUSI 1306, 2301, 2308; THTR 1301, 1356; ART 1301, 2303, 2304
History	6	HIST 1301, 1302
Political Science	6	POLS 2305, 2306
Social and Behavioral Science	3	ANTH 2346; ECON 1301, 2301, 2302; GEOG 1313; HIST 2321, 2322; MCOM 2307; PSYC 1301; SOCI 1301, 1306
TOTAL HOURS	44	

*Core curriculum requirements in mathematics can be met by taking one of the following pairs of courses:

- MATH 2413 Calculus I and MATH 2414 Calculus II
- MATH 2312 Pre-Calculus or MATH 1316 Trigonometry followed by one of MATH 2413 Calculus I, MATH 1325 Mathematics for Business and Economics II, or MATH 1333 Contemporary Math II
- MATH 1350 Concepts of Modern Mathematics I and MATH 1351 Concepts of Modern Mathematics II for Interdisciplinary Studies majors
- Any Tier I course followed by a Tier II course subject to fulfillment of prerequisites

Tier I
MATH 1332: Contemporary Math
MATH 1324: Mathematics for Business
MATH 1342: Statistics

Tier II
MATH 1333: Contemporary Math II
MATH 1325: Mathematics for Business and Economics II
MATH 1343: Statistics II
MATH 1316: Trigonometry
MATH 2312: Pre-Calculus

MATH 2413: Calculus I

**A student may not receive credit in the Core for both PHIL 2303 and PSYC 1349 (formerly required in the Core).

Core Curriculum Transfer and Transient Enrollment

If a student, upon initial transfer or subsequent readmission after one full year or more of non-attendance at UT Tyler, is considered core curriculum complete by another Texas public institution of higher education as noted on the student's official transcript from that institution, they are considered core curriculum complete by UT Tyler.

In both scenarios academic credit will be awarded for all courses the previous institution has specifically listed on the student's official transcript as applying toward that institution's core curriculum, even if those courses do not otherwise meet standard transfer credit requirements. For example, this allows for core curriculum courses with a grade of 'D', which are typically rejected, to be accepted.

Any student concurrently enrolled at more than one institution of higher education must follow the core curriculum of the institution in which they are classified as a degree-seeking student. Accordingly, all degree-seeking students at UT Tyler must meet the core curriculum requirements set forth by UT Tyler to be considered core complete. Students who complete the core curriculum of another institution while enrolled at UT Tyler as a degree-seeking student are, regardless of their status with the other institution, only considered core complete if their coursework satisfies all core curriculum requirements at UT Tyler.

Students wishing to complete coursework toward the core curriculum at another institution while enrolled as a degree-seeking student at UT Tyler must file an Undergraduate Transient Form.

Pre-Professional Programs

For information on pre-law, pre-theology, pre-med, pre-veterinary or pre-dental programs, see the College of Arts and Sciences section of this catalog.

Double Major

Students at UT Tyler may earn a degree with a double major by completing all requirements set forth by each major. No fewer than 12 semester credit hours in each major field of study must be completed in residence at UT Tyler. Students in pursuit of a double major must meet with an advisor for each major. Both advisors must be made aware the student is in pursuit of a double major so a combined degree plan may be created to satisfy all requirements for both majors.

To qualify as a double major, both majors must end with the same degree type (B.A., B.S., B.B.A., etc.) and be awarded in the same semester. If the two majors end in different degree types, the two majors do not constitute a double major; two majors that do not share a common degree type constitute a double degree (see double degree requirements). If a student in pursuit of a double major chooses to graduate with one major before completing both, then the second major will become a second baccalaureate degree (see second baccalaureate requirements).

Students earning a degree with a double major will receive a single diploma stating their degree (ex. Bachelor of Arts, Bachelor of Science, etc.) and listing both majors. The transcript will show a single degree posting which lists both majors.

Double Degree

To qualify for a double degree, a student must complete all requirements for both degrees as stated in the catalog. A minimum of 30 hours of upper-division courses, in addition to the requirements for the degree with the greater hour requirements, must also be completed. For a standard degree at UT Tyler requiring 42 upper-division hours and 120 hours total, this means a student must complete a minimum of 72 upper-division hours and 150 total hours to earn a double degree. Students seeking a double degree should consult with advisors for each degree, as total hour requirements will vary dependent upon the requirements for the degrees being pursued.

Students earning a double degree will receive a diploma for each degree. The transcript will show separate degree postings for each degree earned.

Second Baccalaureate Degree

To earn a second baccalaureate degree, the student must complete the requirements for the second major; six hours of U.S. History, three hours of Texas Government and three hours of U.S. Government (if not taken as part of the first degree); and satisfy any lower-level requirements for the second degree. A second baccalaureate degree requires the completion of a minimum of 30 hours of resident credit in addition to the hours required for the first degree.

Graduation Guidelines and Procedures

Catalog of Graduation

In order to graduate, a student must fulfill catalog requirements in effect at matriculation or any subsequent catalog during the enrollment. A catalog over six years old may be used to determine requirements for a degree only if the student has been enrolled continuously in fall and spring semesters. If a student has not enrolled at UT Tyler in the past year, the student is required to complete a readmission application. Students who complete a readmission application are admitted under the catalog in effect at the time of readmission.

Filing for Graduation

All students at UT Tyler must formally apply for graduation by completing the following guidelines:

- A. Pay the non-refundable graduation fee in the Cashier's Office.
- B. Exchange the receipt of payment for an Application for Graduation form at the Enrollment Services Center.
- C. Complete the Application for Graduation form and return it to the Enrollment Services Center.

In order to facilitate a timely pre-graduation review of their graduation eligibility, all students are highly encouraged to apply prior to the Priority Filing Date for their term of graduation, as listed below.

Priority Filing Dates:

Fall graduation	June 15
Spring graduation	October 15
Summer graduation*	March 15

Students must file for graduation no later than the Final Filing Deadline, as listed below, for the term in which they wish to graduate. All Final Filing Deadlines will be extended to the next available business day in the event they fall on a weekend or holiday. The Final Filing Deadlines for Fall and Spring terms are also the deadline for inclusion in the commencement program. Late applications will be automatically deferred to the next available term.

Final Filing Deadlines:

Fall graduation	November 01
Spring graduation	April 01
Summer graduation*	July 15

*Summer graduates must participate in the following Fall commencement ceremony, and are automatically included in the program. Early participation in the preceding Spring ceremony is not permitted.

Students will receive updates on the status of their Application for Graduation from the department of their major field of study. Updates about the commencement ceremonies will be distributed by the Office of the Registrar.

Graduation with Honors

Candidates for the Baccalaureate degree may graduate with academic honors if they complete a minimum of 45 semester hours of undergraduate credit at UT Tyler. Only semester hours which earn grade point credit may be used to satisfy the 45-semester hour requirement. Second Baccalaureate

UNDERGRADUATE ADMISSIONS AND GRADUATION

degree candidates are eligible for academic honors if they complete a minimum of 45 semester credit hours of resident credit in addition to the hours required for the first degree. No duplication of hours from a previous degree can be used toward the 45 hour requirement. Second Baccalaureate degree candidates are eligible for academic honors if they complete a minimum of 45 semester credit hours of resident credit in addition to the hours required for the first degree. No duplication of hours from a previous degree can be used toward the 45 hour requirement. Honors will be awarded to the following final grade point averages:

<i>Summa Cum Laude</i>	3.90 to 4.00
<i>Magna Cum Laude</i>	3.70 to 3.89
<i>Cum Laude</i>	3.50 to 3.69

This recognition will be noted on the student's transcript and diploma after official verification of final grades. Honor Cords will be presented at the Commencement Ceremony based on the students' semester credit hours and grade point average as-of the semester prior to graduation; this may differ from honors earned after official verification of final grades.

Verification of Degree

A degree will not be granted until all requirements have been verified. Incomplete grades listed on the graduation form, required transcripts from other institutions, and other evidence of outstanding requirements must be verified within 30 days following the commencement ceremony. If the requirements have not been verified by this date, the student will be denied graduation and must re-file for graduation subject to the filing for graduation guidelines.

UNDERGRADUATE ACADEMIC POLICIES

Student Scholastic Load

The minimum credit hour load to be considered a full-time undergraduate student is 12 semester hours during a fall or spring semester or six semester hours during a regular summer session. The maximum credit hour load permitted is 18 hours during a fall or spring semester, six hours during a regular summer session and six hours during long summer (Texas Administrative Code, Title 19, Part 1, Chapter 4, Subchapter A, Rule § 4.6). Students wishing to exceed the maximum credit hour load must obtain permission from the Dean of the College of their major.

Course Numbering System

The course numbering system consists of a four-letter discipline abbreviation followed by a four-digit number. The first digit represents the level of the course: freshman level courses are 1000 series, sophomore level courses are 2000 series, junior level courses are 3000 series, and senior level courses are 4000 series. The second digit indicates the semester credit hour value of the course. The last two digits are the distinguishing numbers of the course within the department.

Registration Procedures

UT Tyler encourages students to participate in the online registration periods for which scheduled dates and times are published in a brochure each semester. Online registration is made available via the *myUTTyler* system. Students may add and drop during the period beginning the first day of online registration and ending on the Census Date. Students desiring to add and drop during this period of time may do so through the registration process at the Enrollment Services Center. Some enrollments may require additional permissions.

Course Enrollments

The university reserves the right to cancel a scheduled course upon evidence of inadequate enrollment. Normally a minimum of ten students is required in an undergraduate course.

Course Syllabi

Links to course syllabi for courses taught in the current semester may be found at <http://www.uttyler.edu/catalog/syllabi.php>. Course syllabi are posted at least 2 weeks before the beginning of each semester.

Visitation Policy

Permission to visit a class must receive prior approval from the instructor. Campus facilities are not open for general public use.

Auditing

A student may not audit a course offered on an individual instruction basis or a course requiring the use of laboratories, computers, or studios. A student who audits a course will not receive credit for the course, nor be eligible for advanced standing examination. Participation in class activities is at the discretion of the instructor.

A student may audit a course by taking the following steps:

1. Obtain an audit application at the Enrollment Services Center (ADM 230) if you are not currently an active student.
2. Obtain an audit form at the Enrollment Services Center (ADM 230)

3. Between the first day of classes and the Census Date secure consent of the instructor and department chair or dean.
4. Return the completed form to the Enrollment Services Center to complete the registration process.
5. Pay the \$50 audit fee in the Cashier's Office (ADM 125C) or online. Residents of the State of Texas who are 65 years of age or older are exempt from this charge. Please contact the Enrollment Services Center (ADM 230) to secure this exemption.

Declaration/Change of Major

Students are encouraged to declare a major at the time of application to the University. All students must declare a major no later than the end of the semester in which they will complete 60 semester credit hours. Students with more than 60 semester credit hours who have not declared a major may have a hold placed on their registration. The declaration of major form can be completed at the Enrollment Services Center. If a student decides to change majors, the student should consult with both the advisor in the current major and in the new major.

Students who change majors must meet the specific requirements for the new major as stated in the catalog in effect at the time of the change of major.

Degree Plan/Patriot Advisement Report (PAR)

Actively enrolled students can access their official degree plan, the Patriot Advisement Report (PAR), through the *myUTTyler* system. Any exceptions to the PAR must be approved by an academic advisor.

Required Academic Proficiency Assessment

Effective Fall 2010, all junior level students are required to complete the ETS Proficiency Profile assessment test after completion of 60 semester hours and before completion of 90 semester hours. Students who have not completed the assessment before registering for their 90th hour will have a hold placed on their registration.

Completing the assessment is a graduation requirement although student scores are not used by the University as a graduation requirement. There is no student fee for the assessment. Students pursuing a second baccalaureate degree are exempt from the assessment test.

The Proficiency Profile is offered on all three campuses of the University. Students must register to take the test at least 48 hours in advance. The schedule for the Tyler campus is posted at <http://www.uttyler.edu/aie/>. Students who wish to take the test at the Tyler campus must register by emailing ProfileRegistration@uttyler.edu with their student name, ID number and the test date of choice.

Students who wish to take the assessment at the Longview University Center should contact the Support Services Analyst at 903-663-8114. Students who wish to take the assessment at the Palestine Campus should contact the Computer User Services Analyst at 903-727-2317.

Students who qualify for special accommodations should contact the Office of Assessment and Institutional Effectiveness at 903-565-5945 or at ProfileRegistration@uttyler.edu to make arrangements.

Grading System

At the end of each regular semester and summer session, grades are available to the student through the student information system by web access.

Grades, levels of performance, and grade points awarded for undergraduate coursework at UT Tyler are as follows:

Grade	Level of Performance	Grade Points
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UNDERGRADUATE ACADEMIC POLICIES

A	excellent	4
B	good	3
C	fair	2
D	poor	1
F	failing	0

Designations and other symbols that do not earn grade points and are not used for calculation of grade point averages are as follows:

symbol

P/F	pass/fail -- passing work is anything "D" or above. (See Pass/Fail policy below)
CR	credit with semester credit hours awarded (See Credit/No-credit option policy.)
NC	no-credit with no semester credit hours awarded (See Credit/No-credit option policy.)
I	incomplete coursework (See Incomplete policy)
W	withdrawal (See Withdrawal policies)
AU	audit
IP	indicates In Progress; grade is changed only when coursework sequence is completed

There is a one-year time limit for grade changes and only the original instructor of the course may change a grade. CR, P, W, and AU designations may not be changed to letter grades. An "I" must be resolved within one year. Grades of "I" not resolved within one year will automatically lapse to grades of "F". See specific sections that elaborate on the institutional policies concerning the designations CR/NC, I, IP, Pass/Fail and W.

Calculation of Grade Point Average

Grades A, B, C, D, and F and the associated semester credit hours will be used to calculate grade point averages. The designations I, W, CR, NC, and AU and the associated semester credit hours will not be used.

If a student repeats a course and requests grade forgiveness, only the last grade earned and the last semester credit hours attempted are used to compute the grade point average. If grade forgiveness is not requested, then both grades will be calculated and used to compute the grade point average (See Repeating Courses and Grade Forgiveness Policy). If the student receives a W or I in the repeated course, then the previous grade continues to be used to compute the grade point average.

Hours and grade points earned at other institutions are not used in computing the grade point average.

Credit/No-Credit Option

Students may elect to enroll in some courses on a credit/no-credit basis. Certain courses in the curriculum may be taken only on a credit/no-credit basis. The following provisions apply to courses taken on a credit/no-credit basis:

- Special form requiring the signature of the student's advisor.
- The designation CR will not be changed to a grade of A, B, C, or D.
- The designation of CR and NC will not be used in calculating the grade point average.
- The designation CR will be counted toward the total number of hours passed.

NOTE: Students intending to apply to law school should not take courses using the CR/NC option as most law schools interpret a CR as a "C" and an NC as an "F."

Incomplete Policy

If a student, because of extenuating circumstances, is unable to complete all of the requirements for a course by the end of the semester, then the instructor may recommend an incomplete (I) for the course. The student and the instructor must submit an Incomplete Form detailing the work required and the time by which the work must be completed to their respective department chair or college dean for approval. The time limit established must not exceed one year. Should the student fail to complete all

of the work for the course within the time limit, then the instructor may assign zeros to the unfinished work, compute the course average for the student, and assign the appropriate grade. If a grade has not been assigned within one year, then the incomplete will be changed to an F. The semester credit hours for an incomplete will not be used to calculate the grade point average for a student.

IP Grade

The IP "in progress" grade is used for pre-defined courses such as internship or supervised practice in a public school setting that normally extend past the grading period deadline. It may also be used for a sequence of courses such as thesis and dissertation where a final grade is not recorded until the sequence is completed.

Courses that use the "IP" grade are designated as such during the course approval process or grandfathered in on approval of the Office of Academic Affairs. The "IP" grade can only be applied to such courses and does not substitute for the "I" grade. An IP grade remains on the transcript until the final grade is changed via the Change of Grade Form.

Courses graded IP are not used in calculating a student's grade point average until graduation. At that time, courses still on the record as IP will be treated as courses attempted, but the IP will remain.

Pass/Fail Policy

To register for a class on a Pass/Fail basis, a student must have the signatures of his/her advisor and the instructor for the course.

- Students may take only one course per semester for P/F credit. Students may take only three courses on a P/F basis during their undergraduate career at UT Tyler.
- The P/F option is not permitted to be used in the Core Curriculum.
- The P/F option may not be used for any course that fulfills a student's major or minor requirements, including those courses which are required by, but offered outside of, the major or minor department.
- Students on academic probation may not enroll in a course on a P/F basis.
- A course cannot be changed from a P/F basis to letter grade or vice versa after the first five class days.
- A final grade of P will not be changed to a grade of A, B, C, or D.
- A final grade of P will be counted in the total number of hours passed.
- To be eligible for the President's or Dean's List, a student must take a minimum of 12 semester hours of graded credit; thus 9 graded credits and 3 P/F credits do not qualify for consideration. A student who earns an "F" in a pass/fail course is not eligible for President's or Dean's List in the term in which the grade is assigned, regardless of the number of credits taken or gpa earned.

NOTE: Students intending to apply to law school should not take courses using the P/F option as most law schools interpret a "P" (passing) as a "D" or "C."

Repeating Courses

A student may repeat any undergraduate course previously taken at UT Tyler if the last grade received in the course was a D or F. Repeated courses may not be taken on a CR/NC or P/F basis. Students repeating a single course more than two times may be billed at a higher tuition rate. All grades will appear on the student's official transcript. Once the baccalaureate degree has been awarded by UT Tyler, a student may repeat a course taken prior to graduation, but the repeated course will not be used to recalculate the grade point average.

Grade Forgiveness

A student will receive grade forgiveness (grade replacement) only for three course repeats during his/her undergraduate career at UT Tyler. Grade forgiveness means that only the last grade earned is used to compute the grade point average. However, all grades will appear on the student's official transcript.

A student must file a Grade Replacement Contract with the Enrollment Services Center by the Census Date (see Schedule of Classes for date) of the semester in which the course will be repeated. Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate overall grade point average.

If a student attempts to repeat a course but withdraws and receives an automatic "W," the attempt counts against the grade forgiveness limit and the original grade remains.

A student may not exercise grade forgiveness for courses taken at UT Tyler and repeated at another college or university, nor may grade forgiveness be used when a course taken elsewhere is repeated at UT Tyler. The grade forgiveness option may not be exercised to remove a grade awarded in a case of academic dishonesty.

Once the baccalaureate degree has been awarded by UT Tyler, grade forgiveness may not be used to replace a grade taken before graduation.

Implementation

The policy affects all students repeating courses Fall 2006 and thereafter, no matter when the course being repeated was originally taken. The grade forgiveness limit is not applicable to courses repeated before Fall 2006.

6-Drop Rule

Any student who began college for the first time as a freshman in Fall 2007 or thereafter may not drop more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the published Census Date (See Academic Calendar located at <http://www.uttyler.edu/calendar/> for the date).

Exceptions to the 6-drop rule include, but are not limited to, the following:

1. totally withdrawing from the university;
2. being administratively dropped from a course by an instructor or the university;
3. dropping a course for a provable illness or disability, for care for a sick or injured person, or for a death in the immediate family;
4. dropping a course for documented change of work schedule;
5. dropping a course for active duty service with the U.S. armed forces or Texas National Guard;
6. dropping a course that does not carry college-level credit such as a developmental course or a zero-credit course; or
7. dropping courses taken as required co-requisites such as a lecture class with a required laboratory. In such cases the lecture and lab are counted as one drop when dropped at the same time.

Petitions for exemptions must be submitted to the Enrollment Services Center and accompanied by documentation of the extenuating circumstances beyond performance in the course. Please contact the Enrollment Services Center if you have any questions.

A designation will appear on transcripts of any student who has dropped a course where an exemption or exception was granted. All Texas institutions are required to honor the exemptions and exceptions granted by a transferring institution. Procedures for implementing the law vary among institutions. Therefore, students have an obligation to keep track of the number of non-exempted dropped courses across all institutions to ensure that they do not exceed the six dropped courses limit.

How to Withdraw

All students should meet with their advisor and instructor prior to withdrawing from a course. In addition, students should review the Academic Calendar located on the University home page for "W" withdrawal dates. Students are eligible to withdraw from class(es) through the 60 percent period, the final day of which is noted as the "last day to withdraw from one or more course" on the Calendar, of each semester. For more information regarding refunds, please see the Schedule of Refunds in this catalog.

Students withdrawing from a course after the 60 percent period will automatically receive an "F" in the course. Appeals to have the "F" changed to a "W" must be submitted in writing to the Enrollment Services Center and include documentation of non-academic circumstances (e.g., family emergency, work transfer, etc.) that prevented timely withdrawal from the course.

The drop form must be signed by the course instructor, the department chair, or the major college Dean. All drops at this time should be for urgent, serious, and compelling reasons. Proper documentation is required. The drop process is not complete until the signed drop form is returned to the Enrollment Services Center. Students are encouraged to keep a copy of their drop form.

Dropping or withdrawing from classes may affect financial aid eligibility, veteran's benefits, athletic eligibility or international student status. Students should consult with those departments prior to dropping or withdrawing.

Withdrawal for Active Military Service

If a student withdraws because of a call to active military service, the university, at the student's option, shall:

1. refund the tuition and fees paid by the student for the semester in which the student withdraws;
2. grant a student, who is eligible under the institution's guidelines, an incomplete grade in all courses by designating "withdrawn-military" on the student's transcript; or
3. as determined by the instructor, assign an appropriate final grade or credit to a student who has satisfactorily completed a substantial amount of coursework and who has demonstrated sufficient mastery of the course material. (See Excused Absences for Active Military Service)

Class Attendance/Excused Absences

Class attendance is the responsibility of the student. When a student has a legitimate absence, the instructor may permit the student to complete missed assignments. In many cases, class participation is a significant measure of performance, and non-attendance may adversely affect a student's grade. When a student's absences become excessive, the instructor may recommend that the student initiate a withdrawal.

Excused Absence for University Events or Activities

When it is necessary for students to miss one or more regularly scheduled classes in order to participate in an official university event or activity, faculty sponsors and program directors will assist students to assure they have the opportunity to make up missed work. In doing so they are requested to observe the following procedures:

1. At least one month prior to the date(s)* on which students will be absent from class, the faculty sponsor or program director shall send a memorandum to the Chief Student Affairs Officer. This memorandum shall include information concerning the nature of the event or activity, the dates(s) on which students will be absent from class, and the names of the students involved. The Chief Student Affairs Officer approves the requested student absence by initialing the memorandum and returning it to the faculty sponsor or program director.
2. The faculty sponsor or program director provides copies of the memorandum to the students.
3. Each student delivers a copy of the memorandum to the instructors, in person, at least two weeks* prior to the date of the planned absence. At that time the instructor will set a date and time with the student when the make-up assignment or equivalent work will be completed. Make-up work will be mutually arranged; however, availability of the instructor will be given priority in setting the arrangements.
4. It is expected that students will not abuse the privilege of being absent from class for authorized university events or activities.

**Events scheduled within the first month of an academic term may require a shortened lead time.*

UNDERGRADUATE ACADEMIC POLICIES

Excused Absence for Religious Holy Days

An institution of higher education shall excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

Any student seeking to be excused for religious observance, must provide written notification to the instructors at least two weeks* prior to the date of the planned absence. At that time the instructor will set a date and time with the student when any make-up assignment or equivalent work will be completed. Make-up work will be mutually arranged; however, availability of the instructor will be given priority in setting the arrangements.

It is expected that students will not abuse the privilege of being absent from class for religious observance.

***Events scheduled within the first month of an academic term may require a shortened lead time.*

Excused Absence for Active Military Service

Any student who has been called up for military service after a semester begins should immediately provide the Enrollment Services Center and course instructors a copy of the military orders. Such students are excused from attending classes, turning in assignments, taking examinations or participating in any other required activity **if the absence is for no more than 25% of the total number of class meetings** (excluding final examination period). If the absence is for more than 25% of the class meetings, please refer to the policy on Withdrawal for Military Service.

Within 5 days of the student returning to UT Tyler from active service, he or she shall notify the Enrollment Services Center and course instructors. The student will be allowed to complete all assignments and examinations within a reasonable time as agreed upon by the course instructors and under the same requirements in effect when the student enrolled in the course.

Should any dispute arise as to the student's inability to complete assignments or examinations within a reasonable time after the absence, the student should first seek informal resolution with the faculty member, the department chair and then the dean of the college in which the course or courses are located. If an informal process is not successful, the student may institute a grade grievance process after the final course grade is recorded.

Final Examinations

Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule.

Academic Honors

President's Honor Roll

In order to qualify for the President's Honor Roll, a student must have completed, in one semester, 12 or more semester hours of undergraduate college-level credit with a grade of A in all courses. To be considered for such recognition in any semester, a student must qualify as a matriculated student pursuing a first bachelor's degree. The President's Honor Roll is awarded in Fall and Spring semesters only.

Dean's List

In order to qualify for the Dean's List, a student must have completed 12 or more semester hours of undergraduate college-level credit in the awarding semester with a grade point average of at least 3.75. Students named to the President's Honor Roll are not named to the Dean's List. To be considered for such recognition in any semester, a student must qualify as a

matriculated student pursuing a first bachelor's degree. The Dean's List is awarded in Fall and Spring semesters only.

Academic Probation/Suspension

Probation

A student who has a cumulative grade point average of less than a 2.0 will be placed on academic probation. For the purposes of determining academic probation, the summer terms combined are treated as one semester.

Students on academic probation who fail to earn a semester grade point average of at least 2.0 will be placed on academic suspension.

A student on academic probation should not register for more than 12 semester hours and must obtain the advisor's or department chair's approval to register.

Hours and grade points earned at other institutions are not used in computing the grade point average.

Students who leave the university while on academic probation will retain probationary status on their return.

Suspension

Students on academic probation who do not earn a semester grade point average of 2.0 or above in the next semester of enrollment will be placed on academic suspension. Students on academic suspension will not be eligible to enroll for classes at UT Tyler for the period listed below. Readmission after the first or second suspended term will require the permission of the student's advisor or department chair, and the dean of the college of their major.

First Academic Suspension--one regular semester or one full summer (Long Summer, Summer I and II)

Second Academic Suspension--12 months

Third Academic Suspension--Permanent Dismissal.

Petitions for readmission to the university following the first and second suspensions may be obtained from the Enrollment Services Center. It is recommended that the petition be submitted, with appropriate permissions, six weeks prior to the beginning of the semester in which the student wishes to enroll.

A student admitted to the university after having been suspended will be subject to the same restrictions as students on academic probation upon their return.

Academic Probation/Suspension for First-time Freshmen

Probationary or suspended students who are first-time freshmen will be required to participate in academic support programs such as Mentoring and Advising Patriots for Success (MAPS). Failure to participate in the required program(s) may result in additional registration and enrollment restrictions. First-time freshmen will need to consult with their freshman advisor to plan an appropriate support program and to determine the steps necessary for compliance.

Academic Grievances

Academic related grievances, such as disputes regarding grades, must be initiated within sixty (60) days from the date of receiving the final course grade by filing a Grade Appeal Form with the instructor who assigned the grade. If the student is not satisfied with the decision, the student may appeal in writing to the appropriate Chairperson of the department from which the grade was issued. Grievances may then be appealed to the Academic Dean and the Provost and Executive Vice President for Academic Affairs. Grade Appeal Forms are available in each academic dean's office.

Student Records

Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. §1232g, and the Texas Public Information Act, Texas Government Code §552.001 et seq., are respectively a federal and state law that mandate the review and disclosure of student educational records. In accordance with these laws, the University has adopted the following policy. Individuals are informed of their rights under these laws through this policy, which is included in the University Handbook of Operating Procedures (HOP) and Catalog. The Catalog is available on the UT Tyler website and the HOP is available in the University Library, administrative offices, and on the UT Tyler website.

The University will not permit access to or the release of personally identifiable information contained in student education records without the written consent of the student to any party, except as follows:

1. to appropriate university officials who require access to educational records in order to perform their legitimate educational duties;
2. to officials of other schools in which the student seeks or intends to enroll, upon request of these officials, and upon the condition that the student be notified and receive a copy of the record if desired;
3. to federal, state, or local officials or agencies authorized by law;
4. in connection with a student's application for, or receipt of, financial aid;
5. to accrediting organizations or organizations conducting educational studies, provided that these organizations do not release personally identifiable data and destroy such data when it is no longer needed for the purpose it was obtained;
6. to the parents of a dependent student as defined in section 152 of the Internal Revenue Code of 1954, provided a reasonable effort is made to notify the student in advance;
7. in compliance with a judicial order or subpoena, provided a reasonable effort is made to notify the student in advance unless such subpoena specifically directs the institution not to disclose the existence of a subpoena;
8. in an emergency situation if the information is necessary to protect the health or safety of the students of other persons; or
9. to an alleged victim of any crime of violence, the results of the alleged perpetrator's disciplinary proceeding may be released.
10. research papers and theses authored by the student will be available to interested members of the public.

The University will release information in student education records to appropriate University officials as indicated in (1) above when such records are needed by administrators, faculty, or staff in furtherance of the educational or business purposes of the student or University.

A record of requests for disclosure and such disclosure of personally identifiable information from student education records shall be maintained in the Office of the Registrar for each student and will also be made available for inspection pursuant to this policy. If the institution discovers that a third party who has received student records from the institution has released or failed to destroy such records in violation of this policy, it will prohibit access to educational records for five (5) years. Respective records no longer subject to audit nor presently under request for access may be purged according to regular schedules.

Directory Information

At its discretion, the University may release Directory Information, which shall include:

1. name, address, telephone number
2. major field of study at UT Tyler
3. dates of attendance
4. most recent previous educational institution attended
5. classification
6. degrees, certificates and awards received

7. date of graduation
8. e-mail address
9. photographs
10. participation in officially recognized activities and sports
11. weight and height of members of athletic teams
12. enrollment status (e.g., undergraduate or graduate; full-time or part-time)

Students may have all Directory Information withheld by notifying the Enrollment Services Center in writing by the Census Date of each semester. If the student restricts the release of Directory Information, a notation is placed in the student record system and no information can be released on that student. Request for non-disclosure will be honored by the institution until the student notifies the Enrollment Services Center in writing that Directory Information may be released.

All other information may not be released without written consent of the student. Grades, student identification numbers, ethnic background, and student schedules may not be released to anyone other than the student.

Access to File

Upon written request, the University shall provide a student with access to his or her educational records. The Executive Vice President for Business Affairs has been designated by the institution to coordinate the inspection and review procedures for student education records, which include admissions files, academic files, and financial files. Students wishing to review their education records must make written requests to the Executive Vice President for Business Affairs listing the item or items of interest. Education records covered by the Act will be made available within 45 days of the request.

Educational records do not include:

1. financial records of the student's parents or guardian;
2. confidential letters of recommendation which were placed in the educational records of a student prior to January 1, 1975;
3. records of instructional, administrative, and educational personnel which are kept in sole possession of the maker and are not accessible or revealed to any other individual except a temporary substitute for the maker;
4. records of law enforcement units;
5. employment records related exclusively to an individual's employment capacity;
6. medical and psychological records;
7. thesis or research paper; or
8. records that only contain information about an individual after the individual is no longer a student at the institution.

Challenge to Record

Students may challenge the accuracy of their educational records. Students who believe that their education records contain information that is inaccurate or misleading, or is otherwise in violation of their privacy may discuss their problems informally with the Registrar. If agreement is reached with respect to the student's request, the appropriate records will be amended. If not, the student will be notified within a reasonable period of time that the records will not be amended, and they will be informed by the Registrar of their right to a formal hearing.

Student requests for a formal hearing must be made in writing to the Registrar who, within a reasonable period of time after receiving such requests, will inform students of the date, place and the time of the hearing. Students may present evidence relevant to the issues raised and may be assisted or represented at the hearings by one or more persons of their choice, including attorneys, at the student's expense. The hearing officer that will adjudicate such challenges will be appointed by the Executive Vice President for Academic Affairs.

Decisions of the hearing officer will be final, will be based solely on the evidence presented at the hearing, will consist of the written statements summarizing the evidence and stating the reasons for the decisions, and will be delivered to all parties concerned.

UNDERGRADUATE ACADEMIC POLICIES

The education records will be corrected or amended in accordance with the decision of the hearing officer, if the decision is in favor of the student. If the decision is unsatisfactory to the student, the student may place with the education records statements commenting on the information in the records or statements setting forth any reasons for disagreeing with the decision of the hearing officer, or both.

The statements will be placed in the education records, maintained as part of the student's records, and released whenever the records in question are disclosed.

Students who believe that the adjudications of their challenges were unfair or not in keeping with the provisions of the Act may appeal in writing to the President of the institution.

Copies

Students may have copies of their educational records upon requests. These copies will be made at the student's expense at rates authorized in the Texas Public Information Act, except for transcripts and other records which may be subject to specific fees pursuant to other legislative enactments. Official copies of academic records or transcripts will not be released for students who have a delinquent financial obligation or a valid "hold" at UT Tyler.

Complaints

Complaints regarding alleged failures to comply with the provisions of the FERPA may be submitted in writing to the Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue SW, Washington, D.C. 20202-4605. Additional FERPA information can be found at <http://www2.uttyler.edu/registrar/ferpa/index.php> and in the UT Tyler Student Handbook.

STUDENT AFFAIRS

The Division of Student Affairs is designed to enhance and support the academic mission of the institution and to offer each student an opportunity to achieve educational goals while providing a variety of enriching experiences.

Academic Advising

The mission of the Academic Advising Center is to provide excellence in advising while building relationships with students and supporting them in achieving their academic goals. To that end, we are committed to creating a supportive and student-friendly atmosphere; to encouraging students to set academic and career goals; to empowering students to reach their goals; and to providing individual academic support through quality advisement and confidentiality while maintaining and honoring the dignity and potential of each student. For additional information, contact the Academic Advising Center at 903-565-5718 or visit us on-line at <http://www.uttyler.edu/advising>.

Academic Support

The mission of the Academic Support Office and Patriot Academic Success Services (P.A.S.S.) is to provide support programs for students that will improve individual performance and academic achievement through a variety of peer tutoring programs as well as communities of learners who are grouped together by major of interests. These programs exist primarily to provide academic support and social integration to undergraduate students in core curriculum courses. Supported courses are identified in the course schedule each semester and study sessions are led by faculty-identified students who have previously completed the courses successfully and are trained to facilitate the sessions. Course content along with effective study skills and test preparation strategies are emphasized within the regularly scheduled study sessions.

For more information or session schedules, please visit our website at <http://www.uttyler.edu/si> or call 903-565-5718.

Alumni Association

The University of Texas at Tyler Alumni Association supports a variety of programs for former students and friends of the university. The association promotes scholarship support, sponsors special events, reunions, and receptions. All former students of the university may become members of the association upon making a nominal gift to the University. For more information, contact the Alumni Office at (903) 566-7316, alumni@uttyler.edu, or visit our website at www.uttyler.edu/alumni <http://www.uttyler.edu/alumni>.

Campus Activities

The campus activities program at UT Tyler provides students with opportunities to become engaged, to enhance their interpersonal relationships and to develop leadership skills. Campus Activities is dedicated to promoting involvement among the members of our campus community. UT Tyler Patriots have numerous opportunities to become involved in several University traditions facilitated by Campus Activities which include Patriot Palooza-Welcome Week events, Homecoming, and Patriot Days. Students may also play an active role in developing campus life through the Campus Activities Board (CAB) student organization. CAB plans and hosts various campus events including concerts, comedians, and movies. For more information, contact Campus Activities at (903) 565-5645 or visit the website at <http://www.uttyler.edu/sll/campusactivities/>.

Career Services

Office of Career Services provides guidance, support and resources to students and alumni as they navigate the career development process.

Career Services promotes faculty involvement in the career development process through collaborative relationships and classroom presentations. This accomplished by

- providing assistance in various initiatives such as self awareness, career exploration, job search, resume writing and interview preparation
- developing collaborative partnerships with business, government, education, and community services
- promotion an understanding of the relationship of education to work

For more information, please contact the Office of Career Services at (903)565-5862 or careersvc@uttyler.edu. Please visit our website at <http://www.uttyler.edu/careerservices>.

Community Service

UT Tyler is committed to serving our local community. The Office of Community Relations connects UT Tyler students to service opportunities on campus and in the surrounding community. The Office of Community Relations offers twice-yearly Volunteer Fairs and hosts an annual Alternative Spring Break service project in March. For more information, please visit our website: <http://www.uttyler.edu/community>.

Complaints and Grievances Process

Throughout this chapter and others there are references to policies and procedures for bringing complaints against departments, units, faculty or staff for various issues that may arise. The following chart is provided to give students a "quick guide" to how to start a complaint process and where to get assistance or the correct forms.

Complaint	Resolve Informally	File formal appeal	Formal Appeal Contact	Locate Policy in Catalog
Sexual Harassment	NO	YES	Chief Student Affairs Officer	Student Affairs Nondiscrimination and Sexual Harassment Policy
Discrimination: race, age, gender	NO	YES	Chief Student Affairs Officer	Student Affairs Nondiscrimination and Sexual Harassment Policy
Disability Discrimination	YES	YES	Disability Services Case Manager	Student Affairs Nondiscrimination and Sexual Harassment Policy
Academic Grievance	YES	YES	Dept. Chair	Academic Policies Academic Grievances
All other Complaints	YES	YES	V.P. of area where issue occurred	Student Affairs Non-Academic Student Grievance Policy

Disability Services

The mission of the Student Accessibility and Resources Office is to provide equal access to all educational, social and recreational programs through coordination of services and reasonable accommodations, consultation and advocacy. The Student Accessibility and Resources Office strives to provide services that will encourage students to become as independent and self-reliant as possible. Students requesting disability services should contact the Student Accessibility and Resources Office (903-566-7079) at least thirty (30) days prior to the beginning of each semester. The student seeking services is responsible for providing appropriate verification material to support requested accommodations. The student should provide diagnostic, prognostic, and prescriptive information from an approved professional in order to receive services. Appropriate accommodations may include program modifications, adjustments to testing situations and/or auxiliary aids and services. Disability services are provided in a private, confidential setting.

Emergency Response, Fire Safety, and Security

The Emergency number for the University is 903-566-7300. Specific information on what to do in case of a fire, medical or weather emergency, or a bomb threat can be found on the website for the Office of Environmental Health and Safety (<http://www.uttyler.edu/safety>).

Emergency Response: In the event of an emergency or natural disaster the campus community will be notified immediately through several means of communication. This includes Campus Alert E-mail, the University's website, campus and local media, text-messaging, Fire Alarm Systems, Indoor Warning System and Outdoor Warning System.

Fire Safety: The entire U.T. Tyler campus fire alarm system is monitored by the University Police and the Tyler Fire Department. For policies and procedures please visit <http://www.uttyler.edu/safety>.

Missing Student Notification: The purpose of the UT Tyler Missing Persons Policy is to establish procedures for the University's response to reports of missing students as required by the Higher Education Opportunity Act of 2008. This policy applies to students who reside in on-campus housing. For purposes of this policy, a student may be considered a "missing person" when he or she is absent from the University for more than 24 hours without any known reason. A student may also be deemed missing when his/her absence is contrary to his/her usual pattern of behavior and/or unusual circumstances may have caused the absence. Such circumstances could include, but not be limited to, a report or suspicion that the missing person may be the victim of foul play, has expressed suicidal thoughts, is drug dependent, or has been with persons who may endanger the student's welfare.

All residential students will have the opportunity to designate a confidential contact to be notified by the University no more than 24 hours after the student is determined missing. Instructions will be provided on how to register that person's contact information. Residential students' contact information will be registered confidentially, will be accessible only to authorized UT Tyler officials, and may not be disclosed except to law enforcement personnel in furtherance of a missing person investigation.

All reports of missing students must be directed to the UT Tyler Police Department, which shall investigate each report and make a determination about whether the student is missing. In addition, no later than 24 hours after a student is determined missing, UT Tyler will notify the Tyler Police Department, unless the Tyler Police Department was the entity that determined the student to be missing. At that time, if the missing student is under the age of 18 and not emancipated, UT Tyler will also notify the student's custodial parent or guardian.

The current policies and procedures for Environmental Health and Safety as well as additional policies, plans, information, and programs dealing with health and safety can be found at <http://www.uttyler.edu/safety>.

Gang-Free Campus

The University of Texas at Tyler is a gang-free zone. Penalties for organized criminal activity such as gang-related crimes are enhanced to the next highest category of offense if they are committed on university property. (See Texas Penal Code, Sect. 71.028)

Greek Life

Becoming a member of a fraternity or sorority provides opportunities to develop lifelong friendships, a supportive environment, and career networking opportunities. The Office of Greek Life promotes excellence in leadership, scholarship, and service. Greek Life strives to enhance the collegiate experience of fraternity men and women through their involvement in the Greek Community. UT Tyler has an active Greek Community and is home to two National Panhellenic Conference sororities: Alpha Chi Omega and Delta Gamma; three North American Interfraternity Conference fraternities: Kappa Sigma, Pi Kappa Phi and Sigma Alpha Epsilon; and one National Pan-Hellenic Council organization: Delta Sigma Theta Sorority, Inc. To learn more about Greek Life, visit <http://www.uttyler.edu/greeklife> or call (903) 565-5645.

Health Clinic

The University Health Clinic at Tyler is a partnership between University of Texas Health Science Center at Tyler (UTHSCT) and The University of Texas at Tyler. The University Health Clinic at Tyler is dedicated to the highest quality treatment and care of the students. Staffed by UTHSCT healthcare professionals, a variety of primary care services are provided. The clinic is located at the west entrance of the University at the corner of Patriot Drive and University Boulevard. More information on the University Health Clinic hours and services can be found at <http://www.uttyler.edu/clinic>.

Intercollegiate Athletics

The University of Texas at Tyler is an active member of the NCAA Division III, the American Southwest Conference, and offers 15 varsity sports: (M&W) basketball, baseball, (M&W) cross country, (M&W) golf, softball, (M&W) soccer, volleyball, (M&W) tennis and (M&W) track and field. The Louise Herrington Patriot Center is a state-of-the-art multipurpose facility with three basketball courts, a comprehensive fitness center, aerobics room, racquetball courts, indoor jogging track, swimming pool, classrooms, laboratories, offices, locker rooms, and a training room. Additional athletic facilities include the Al and Nancy Jones Auxiliary Gymnasium, Irwin Field for baseball, the UT Tyler Softball Field, Citizens 1st Bank-Perkins Soccer Complex, Summers Tennis Center, and the UT Tyler Golf practice facility. Prospective student-athletes should contact the Athletics Office at 903-566-7105 or visit <http://www.uttylerpatriots.com> for more information and upcoming athletic events.

Medical Emergency

Call 911 in case of emergency. If an accident or emergency occurring on campus requires first aid or hospital emergency room treatment, a member of the University Police Department is available for assistance. The University Police Department cannot transport persons in need of medical attention. The student will bear the cost of any professional service, transportation, or emergency treatment. Also, the cost of hospitalization or treatment in the emergency room or as an outpatient is the responsibility of the student.

New Student Programs

The Office of New Student Programs is dedicated to introducing incoming students and their families to the numerous resources, programs and opportunities available at UT Tyler. New Student Programs assists new students and their families as they transition to our community by hosting Freshmen Orientation each summer and Transfer Orientation prior to the

beginning of the fall and spring semesters. Future Patriots learn about the rich UT Tyler traditions while obtaining valuable information about campus resources, meeting faculty and staff and making new friends. For more information about New Student Programs or to register for orientation, visit the office online at <http://www.uttyler.edu/sll/NewStudentPrograms> or by calling (903) 565-5645.

Non-Academic Student Grievances

In an effort to resolve grievances or complaints other than those that are academic in nature or involve discrimination or sexual harassment, a student must first make every effort to resolve the matter informally by discussing his or her concerns with the employee, supervisor or department against whom the complaint is initiated within 30 calendar days of the time of the incident. The person to whom the complaint is presented must respond orally or in writing within 10 business days after receipt of the complaint.

If the matter is not resolved to the student's satisfaction by the employee, supervisor, or department head, the student may submit a final formal appeal to the Vice President supervising the department where the complaint originated. The form for filing the appeal is available in the Office of Student Affairs or can be printed from the Student Affairs web site: <http://www.uttyler.edu/studentaffairs/>

The student must submit this appeal within 10 business days after the student receives the response from the department head. The Vice President and/or designee will provide a written response to the student within 10 business days of the receipt of the student's appeal. Decisions at the vice presidential level will be final.

Non-Discrimination and Sexual Harassment Policy and Complaint Procedure

It is the policy (Sections 2.4.1 and 2.4.2 of the *Handbook of Operating Procedures*) of The University of Texas at Tyler to provide an educational and working environment that provides equal opportunity to all members of the University community. In accordance with federal and state law, the University prohibits unlawful discrimination on the basis of disability, sex, age, race, color, national origin, religion, citizenship, veteran status and sexual orientation. This policy applies to all University administrators, faculty, staff, students, visitors, and applicants for employment or admission. This policy is the principal prohibition of all forms of discrimination on campus, except as follows:

- Additional controlling laws, policies and procedures relating to sexual harassment and sexual misconduct can be found in the following:
- Title VI of the Civil Rights Act of 1964, 42 U.S.C. §2000d et seq., and its implementing regulation at, 34 C.F.R. Part 100, which prohibit discrimination on the basis of race, color or natural origin;
- Title IX of the Education Amendments of 1972, 20 U.S.C. §1618 et seq., and its implementing regulation at, 34 C.F.R. Part 106, which prohibit discrimination on the basis of sex;
- Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. §794 (amended 1992), and its implementing regulation at, 34 C.F.F. Part 104, which prohibit discrimination on the basis of disability;
- Title II of the Americans with Disabilities Act of 1990, 42 U.S.C. §12132, and its implementing regulation at, 28 C.F.R. Part 35, which prohibit discrimination on the basis of disability; and
- The Age Discrimination Act of 1975, 42 U.S.C. §6101 et seq., and its implementing regulation at, 34 C.F.R. Part 110, which prohibit discrimination on the basis of age.

Title IX/ADA/504 Coordinators

Federal law prohibits discrimination on the basis of race, gender (Title IX of the Education Amendments of 1972) age, and disability (Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990). The University of Texas at Tyler has designated the following persons as coordinators to monitor compliance with these

statutes as they related to students and to resolve complaints of discrimination based on race, gender, age or disability.

For race, gender or age discrimination: Ona Tolliver, Chief Student Affairs Officer, 3900 University Blvd., UC 3326, Tyler, Texas 75799, 903-565-5651, e-mail: otolliver@uttyler.edu.

For disability discrimination: ADA Coordinator: Cindy Lowery Staples, Disability Services Case Manager, University Center, 903-566-7064, e-mail: cstaples@uttyler.edu.

For more information or to file a complaint, please contact: Ona Tolliver, Chief Student Affairs Officer, phone: 903-565-5651, e-mail: otolliver@uttyler.edu.

On-Campus Solicitation

Campus facilities are not open for general public use. Solicitation on the campus of The University of Texas at Tyler is prohibited except for certain activities conducted by authorized groups that are exempt from this prohibition. No solicitation shall be conducted on any property, street, or sidewalk or in any building, structure or facility owned or controlled by The University of Texas at Tyler unless permitted by the Regents' Rules.

- For the purpose of this policy, the following defines "solicitation:"
- the sale, lease, rental, or offer for sale, lease, rental of any property, product merchandise, publication, or service, whether for immediate or future delivery.
- an oral statement or the distribution or display of printed material, merchandise, or products that is designed to encourage the purchase, use or rental of any property, product, merchandise, publication or service;
- the receipt of or request for any gift or contribution; or
- the request to support or oppose or to vote for or against a candidate, issue, or proposition appearing on the ballot at any election held pursuant to State or Federal law or local ordinances. All permissible solicitation must be conducted in compliance with Chapter 6, Subsection 6-205 of Student Affairs Manual of Policies and Procedures. Direct inquiries to the Office of Student Life and Leadership.

Parent Resources

The Parent Resource Center connects parents and families to university information and events through the Patriot Parent Association, newsletters, a website, and monthly e-letters. Our Patriot Parent Association provides opportunities to serve and volunteer at Move-In Day, Parents' Weekend at Homecoming, and other campus activities. The Patriot Parent Connection newsletter showcases student opportunities and departmental programs available here at UT Tyler. Monthly e-letters provide updates and news. To register for the Patriot Parent Association and to sign up for the newsletters and e-letters, please go to <http://www.uttyler.edu/parentcenter> or call (903) 566-7050 or (903) 565-5645.

Parking

The University of Texas at Tyler enforces all Texas vehicle inspection codes (Texas Education Code, Sec. 51.207). All vehicles that park on the campus premises must have current inspection stickers and a current student parking permit properly displayed. For complete information on Traffic, Parking, and Safety Regulations, please visit the University Police website at <http://www.uttyler.edu/police/traffic.php>.

Recreation Sports

UT Tyler's Recreation Sports program includes Intramurals, Fitness, Club Sports, Wellness Education and Outdoor Adventures. Recreation Sports is housed in the Herrington Patriot Center, which includes an aquatic center, fitness room, dance studio, racquetball courts, indoor running track, eight lighted tennis courts, three court multi-purpose gymnasium, and intramural field. Recreation Sports also maintains over 5 miles of on-campus wellness trails and an 18-hole disc golf course as well as

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the Al and Nancy Jones Auxiliary Gymnasium located in the PHE building. These facilities are open to all current UT Tyler students, staff and faculty.

The Intramural Sports program provides structured competitive and non-competitive activities open to all skill and fitness levels. The Fitness program features a well equipped fitness and strength room, personal training, and over 30 fitness classes per week. The heated outdoor pool is open year round and features fitness classes and summer swim lessons. Club Sports offers students the opportunity to compete against other schools outside of the intercollegiate sports program. Wellness Education presents workshops on various topics including nutrition. Finally, Outdoor Adventures gives students a chance to experience the great outdoors through activities such as mountain biking, kayaking, hiking and camping.

For more information, contact the HPC at 903 566-7466.

Residence Life

Several housing options are available for students seeking the benefits of on-campus living. Patriot Village is a student apartment community on campus. The Mr. and Mrs. Joseph Z. Ornelas Hall is a residence hall community on campus. Patriot Village and Ornelas Hall are both operated by UT Tyler. University Pines is a privately-managed student apartment community on campus. Students interested in living on campus are encouraged to apply early.

Students who have completed fewer than 30 credit hours at any junior college or university, including UT Tyler, are required to live on campus at Patriot Village, Ornelas Hall or University Pines if facilities are available. For more information on the residency requirement visit <http://www.uttyler.edu/housing/residencypolicy.php>.

Pursuant to HB 4189, all incoming residents of UT Tyler Housing are required to show confirmation from a doctor or other health practitioner that they have received a meningitis vaccination no less than 10 days before they will be permitted to move in to on-campus housing. This will affect all incoming residents of Patriot Village, Ornelas Hall, and University Pines.

University Pines may be contacted at 903-566-3565. Those interested in information about housing managed by UT Tyler (Patriot Village or Ornelas Hall) should call (903)566-7008. Information can also be found at the Residence Life Office or on the Residence Life website at <http://www.uttyler.edu/housing>.

Student Counseling Center

The mission of the Student Counseling Center is to help students resolve their personal concerns and acquire the skills, attitudes, abilities, and insight that will enable them to meet the challenges of student life. The Student Counseling Center offers individual therapeutic counseling in a private, confidential setting to assist students in achieving personal and educational goals. The Student Counseling Center is staffed by Licensed Professional Counselors with in-depth training and experience, and a varied background in counseling, testing, and teaching. Some common issues that students may deal with in counseling are: choosing a major, test anxiety, decision-making, procrastination, communication difficulties, self-esteem, interpersonal conflicts, stress management, personal relationships, physical/emotional/sexual abuse, sexual assault, anxiety, depression, and many others. Students are encouraged to schedule an appointment by calling (903)566-7254.

Student Government Association

The Student Government Association (SGA), comprised of all enrolled students, has as its primary purpose to serve as a recognized forum for student opinion. Activities of the SGA include assisting the university in identifying the interests, programs and goals of the majority of students. Officers and representatives are elected annually by the student body. For more information, visit the SGA website at <http://uttyler.edu/sga> or call 903-566-7083.

Student Insurance

An illness and accident insurance program underwritten by United Healthcare is available for students and their dependents. All international students holding non-immigrant visas are eligible and are required to purchase health insurance, prior to registration.

Students who participate in the University's intercollegiate program must provide proof of accident and illness insurance coverage or purchase such coverage through the University. The University carries catastrophic insurance on all student-athletes.

For more information, visit the Student Services Office website at <http://www.uttyler.edu/wellness/studenthealthinsurance.php>, or call (903)566-7079 or the insurance company's website at <http://www.uhcsr.com/UTSystem>.

Student Learning Communities

Student Learning Communities (SLCs) are available in the fall semester for first-time freshmen and are composed of small groups of students with a common major or interest who take classes and a Freshman Year Experience class together. The supportive environment created in these learning communities brings students, faculty, staff, and peer mentors together to promote academic and social success. Freshmen may register for learning communities while registering for fall classes with Academic Advising.

For more information about Student Learning Communities, please visit <http://www.uttyler.edu/slc> or call (903) 565-5676.

Student Life and Leadership

Office of Student Life and Leadership provides opportunities for students to become engaged in the UT Tyler experience through numerous campus events and service projects, a thriving Greek community and more than 80 registered student organizations. Programs and activities are designed to build community as well as to meet the needs of a diverse student population.

Office activities enhance the educational experience of students by engaging students in programs that promote learning, involvement, free inquiry, leadership, and service. This is accomplished by partnering with students, faculty, staff, and alumni as we prepare citizens for leadership in a global society. The Office of Student Life and Leadership is comprised of Campus Activities, Community Relations, Greek Life, Leadership Programs, New Student Programs, Parent Resource Center, Student Organizations and the University Center. You may visit the website at www.uttyler.edu/sll/ or call (903) 565-5645 for more information.

Student Organizations

UT Tyler is home to over 80 student organizations. The diverse interests and makeup of the UT Tyler student body are represented in the variety of groups, ranging from academic honor societies to religious organizations to specific interest groups. Participating in a campus organization enriches students' educational experiences by fostering personal development and growth outside of the classroom. Although there are many groups to choose from, students may start new organizations if they do not find ones that fit their unique interests or needs. The Office of Student Life and Leadership also assists student organizations with leadership development and serves as a resource as they plan events and activities that promote campus life.

A complete listing of student organizations and their contact information can be found on the Office of Student Life and Leadership website at <http://www.uttyler.edu/sll/> or by calling 903-565-5645.

Student Responsibilities

All students at The University of Texas at Tyler are subject to all Rules and Regulations of the Board of Regents of The University of Texas System and institutional rules and regulations. Rules regarding student conduct and discipline are included in Series 50101 of the Rules and Regulations of the Board of Regents and in The University of Texas at Tyler Manual of Policies and Procedures for Student Affairs <http://www.uttyler.edu/mopp>.

Failure to read and comply with policies, regulations and procedures will not exempt a student from whatever penalties the student may incur.

Student Conduct and Discipline

The University of Texas System and The University of Texas at Tyler have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities.

The University of Texas at Tyler administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations* of the Board of Regents of The University of Texas System (<http://www.utsystem.edu/bor/rules>) and in the Manual of Policies and Procedures for Student Affairs (<http://www.uttyler.edu/mopp>). Information on the discipline process can also be found on the Judicial Affairs website (<http://www.uttyler.edu/JudicialAffairs>). Copies of these rules and regulations are available to students in the Office Student Affairs and the Director of Residence Life and Judicial Affairs' office where staff are available to assist students in interpreting the rules and regulations.

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating its standards of conduct whether such conduct takes place on or off campus or whether civil or criminal penalties are also imposed for such conduct.

If you have questions about the student discipline process, please contact the Director of Residence Life and Judicial Affairs at 903-566-7008.

Academic Dishonesty

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrates a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment of the award of a degree, and/or the submission, as one's own work of material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Copyright Infringement

Unauthorized distribution of copyrighted material may subject students to civil and criminal penalties under the Federal Copyright law, (See, <http://www.copyright.gov/title17/circ92.pdf>) Material subject to federal law includes, but is not limited to, printed materials, choreographic works, pantomimes, pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work. It also includes computer software, computer programs, musical works, sound recordings, and videos and other audiovisual work. It is also a violation of federal copyright law for any of the above to be electronically distributed through peer to peer sharing.

Students found in violation of the Federal Copyright law may also be subject to student disciplinary proceedings as described above.

For more information on what constitutes copyright infringement and penalties see The UT System's copyright information website at <http://www.utsystem.edu/ogc/intellectualproperty/copyrighthome.htm>.

Hazing

Hazing, submission to hazing, or failure to report first-hand knowledge of hazing incidents is prohibited by state law and, in addition to disciplinary actions, is punishable by fines up to \$10,000 and confinement in county jail for up to two years. Hazing is defined by state law 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." Any person with

knowledge that a specific hazing incident has occurred on or off campus must report the incident to the Chief Student Affairs Officer.

In an effort to encourage reporting of hazing incidents, the law grants immunity from civil or criminal liability to any person who reports a specific hazing event in good faith and without malice to the dean of students or other appropriate official of the institution and immunizes that person for participation in any judicial proceeding resulting from that report. Additionally, a doctor or other medical practitioner who treats a student who may have been subjected to hazing may make a good faith report of the suspected hazing activities to police or other law enforcement officials and is immune from civil or other liability that might otherwise be imposed or incurred as a result of the report. The penalty for failure to report is a fine of up to \$1,000, up to 180 days in jail, or both. Penalties for other hazing offenses vary according to the severity of the injury which result, and include fines from \$500 to \$10,000 and/or confinement for up to two years.

Student Right-To-Know and Campus Security Act

In compliance with the Student Right-to-Know and the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (the Act), UT Tyler collects specified information on campus crime statistics, campus security policies, and institutional completion or graduation rates.

Pursuant to the federal law, alleged victims of violent crime are entitled to know the results of campus student disciplinary proceedings concerning the alleged perpetrators.

UT Tyler makes timely reports to the campus community on crimes considered to be a threat to students and employees and reported to the campus police or local police agencies. These alerts are distributed by a variety of means including campus bulletin boards, e-mail, and website.

UT Tyler publishes and distributes an annual report of campus security policies and crime statistics to all current students and employees; provide copies of the report to applicants for enrollment or employment upon request; and submit a copy of the report to the Department of Education. The annual campus crime statistics report references crimes that occur on property owned or controlled by UT Tyler. The report is located on the department website at <http://www.uttyler.edu/police>. Hard copies of the report are available at the University Police Department upon request.

UT Tyler publishes in the annual security report its policy regarding sex-related offenses, including sexual assault prevention programs, education programs to promote awareness of sex offenses, administrative disciplinary procedures and sanctions for offenders, and counseling and student services for victims. Any law enforcement information provided by state law enforcement agencies concerning registered sex offenders may be obtained from the UT Tyler Police Department at 903-566-7060.

UT Tyler calculates and discloses institutional completion or graduation rates to all prospective and current students annually. Prior to the offer of athletics-related student aid to a potential student athlete, UT Tyler will provide information on graduation rates specified by the Act to the prospective student and to the student's parents and coach.

Student Travel Policy

These guidelines apply to all student travel if the activity or event meets all of the following criteria and is undertaken by one or more currently enrolled students to reach an activity or event.

1. The activity or event is sponsored, organized and funded by UT Tyler.
2. The activity or event is located more than twenty-five (25) miles from UT Tyler.
3. The activity or event is either:
 - a. undertaken, using a vehicle owned, leased or rented by the institution; or
 - b. attendance at the activity or event is required by a registered student organization and approved in writing by the Chief Student Affairs Officer.

STUDENT AFFAIRS

For a complete set of guidelines and forms, please view the Manual of Policies and Procedures for Student Affairs at <http://www.uttyler.edu/mopp>.

NOTE: For purposes of this document, the staff adviser, coordinator, director, coach or other paid professional overseeing the off-campus activity shall be identified as the Responsible University Official (RUO).

1. At least one RUO must accompany students on any off-campus activity. RUO's are responsible for knowing the University Code of Conduct and its policies and are trained annually regarding this policy, the sexual harassment policy, and ADA guidelines. The consequences of noncompliance must be made clear to participants and the RUO must take appropriate action when aware that participants are in violation.
2. A pre-trip orientation meeting must be conducted for participants prior to the date of departure. Participants should be informed of as much detail about the trip and its circumstances as reasonably possible, including all known risks. Participants should also be informed of emergency response measures.
3. The RUO should complete and submit to the Office of Student Affairs the group travel authorization request form for approval *at least* two weeks prior to departure for domestic travel.
4. If the trip is approved, the RUO must submit the required completed and signed forms to the Office of Student Affairs at least one week prior to departure. The RUO must also maintain a copy of these records throughout the trip in a manner that ensures immediate access to the information for **each participant** in case of an accident or health-related emergency. A copy of Appendix A, B and G will be forwarded by the RUO to the UT Tyler Police Department.
5. Students traveling on a University-sponsored *overnight* trip must have medical insurance. Student health insurance is available at minimal cost. Contact the Student Services Office at 903-566-7079.
6. Use or possession of weapons, alcohol or illegal drugs is forbidden while traveling on a University-sponsored trip.
7. All travel subject to this policy must be undertaken in vehicles owned, leased or rented by The University or with common carriers. No personal vehicles are permitted for use in travel that is subject to this policy. Approval includes the driver being a University employee, having a valid operator's license with a Motor Vehicle Record of 2 or less, and participating in instruction and hands-on training (15-passenger vans only). Drivers of motor vehicles shall comply with all laws, regulations, and posted signs regarding speed and traffic control, or additional directives stipulated by UT Tyler or the UT System. If University-owned vehicles are available, they should be used for trips within a 60-mile radius of UT Tyler. All other trips must be booked through the UT Tyler contracted rental company or a charter bus company. All forms must be completed and all guidelines followed whether travel is in University-owned vehicles, rental vehicles, chartered bus, or other common carrier. The RUO shall take reasonable steps to assure that all travel is undertaken in conformance with University approved policies.
8. The distance to the destination and/or the number of participants needing transportation determines the type of transportation to be used. Each vehicle using University employees as drivers should attempt to have two certified drivers. However, when a trip exceeds three hundred miles one way two certified drivers per vehicle are **required**. On long trips, drivers should rotate every three hours*, and no more than eight hours of driving should be completed during any one day. No more than nine (9) people plus gear, luggage or other items may be loaded in any one van. Passengers should be seated toward the front of the van in recognized seating with gear, luggage and other items distributed evenly in the rear behind the last seat. On trips where the number of participants and available drivers preclude the use of 15-passenger vans, a chartered bus or mini-bus should be used. When a trip exceeds 350 miles one way and/or trips greater than 250 miles that require driving after 11:00 p.m., professional drivers must be contracted. **NOTE:** All vehicles must have access to a cellular phone and the number must be indicated on the group travel authorization request form.
9. The total number of passengers in any vehicle may not exceed the manufacturer's recommended capacity or the number specified in applicable federal or state law or regulations whichever is lower.
10. Occupants of motor vehicles (except charter busses) must use seat belts or other approved safety restraint devices at all times when the vehicle is in operation.
11. Drivers of all motor vehicles must check to ensure that the vehicle has a current proof of liability insurance card, State inspection certification, be equipped with all safety devices or equipment required by law or regulation and comply with all other applicable requirements of federal or State law or regulations before departing from campus.
12. Each vehicle owned or leased by UT Tyler must be subject to scheduled periodic maintenance by qualified persons and comply with all applicable requirements of The University of Texas System Business Procurement Memoranda.
13. When any incident occurs, i.e. accident, mechanical failure, medical emergency, code of conduct violation, etc., the RUO must call his/her supervisor as soon as is feasibly possible. The supervisor will notify the Chief Student Affairs Officer. A meeting must be called as soon as feasibly possible after returning from the trip to investigate the incident. The Office of Student Affairs will contact the Environmental Health and Safety Officer and UT Tyler Police when appropriate.
14. Non-University business side trips, such as a trip for entertainment purposes, must be planned and approved in advance. Trips to known high-risk areas will not be approved and must not be undertaken. Spontaneous activities, while on the primary trip, such as going to a local movie or special restaurant, shall be at the discretion of the RUO. Students traveling on University funded trips must arrive at and depart the site at the same time as the advisers. The RUO's immediate supervisor and the Chief Student Affairs Officer must approve any exceptions to this policy.

Testing Services

The mission of Testing Services is to provide students with proctoring services of approved examinations through the administration of correspondence examinations, the College-Level Examination Program (CLEP) examinations, and standardized testing. Examinations are administered to ensure the security of the examination and with each student's particular needs in mind.

Current standardized examinations offered through testing include the Miller Analogy Test (MAT), Accuplacer, the College Level Exam Program (CLEP), the Scholastic Aptitude Test (SAT), the Quick THEA, The Examination for Certification of Educators in Texas (TExES/ExCET), and the Texas Examination for Master Teachers. Other national and state tests are administered as determined by university needs. Application information for the TExES/ExCET is available through the College of Education and Psychology; application information and administration dates for other tests are available in the Student Services Office.

Textbooks and Supplies

It is a responsibility of each student to provide his/her own textbooks and supplies. The University Bookstore is the on-site vendor of course required materials and supplies. However, a student is not under any obligation to purchase a textbook from the university-affiliated bookstore. The same textbook may also be purchased from an independent retailer, including an online retailer.

Students may log into MyUTTyler and see textbook information (title, author, publisher, ISBN, cost, etc.) for all courses for which the student wishes to register.

University Center

University Center serves as the place for dining, socializing and hosting campus events for The University of Texas at Tyler's students, faculty, staff and guests. As the community gathering place for the campus, the

University Center strives to be an inviting and inclusive environment where ideas are exchanged, relationships are built, and memories are made. Whether you are meeting friends in the Patriot Zone, grabbing a bite to eat in the Met, Subway, Blends & Brews, Chick-fil-A, C-Store or the Sports Cafe, or attending an event in the Ballroom, rest assured you can get it done at the University Center. Contact the Office of Student Life and Leadership at (903) 565-5645 or visit our website at <http://www.uttyler.edu/uc>.

Wellness and Prevention Education

The mission of Wellness and Prevention Education is to provide various services and programming opportunities that encourage healthy decision-making among students. Wellness and Prevention education coordinates health-related programs that comply with federal and state mandates such as the Drug Free Schools and Communities Act Amendments of 1989 and provides personal counseling coordinated through the Student Counseling Center. Programming and information through this office covers areas such as alcohol, tobacco, and other drug abuse, sexual assault and partner violence, sexual responsibility, student health insurance information, and other health-related topics.

Wellness and Prevention Education works with various specially trained student groups who are interested in impacting other students to encourage a change in behavior or improvement in knowledge about various student issues. These organizations are open to any currently enrolled student at The University of Texas at Tyler. For more information on programs offered through Wellness and Prevention Education call (903) 566-7067 or visit <http://www.uttyler.edu/wellness>.

AIDS, HIV and Hepatitis B Infection

The University of Texas at Tyler recognizes Acquired Immune Deficiency Syndrome (AIDS), Human Immunodeficiency Virus (HIV), and Hepatitis B Virus (HBV) as serious public health threats and is committed to encouraging an informed and educated response to issues and questions concerning AIDS, HIV, and HBV. In furtherance of its commitment UT Tyler has adopted a policy and procedural steps to protect both the rights and well-being of those students, employees, and patients who may be infected with HIV or HBV as well as to prevent the spread of infection. No individual with HIV or HBV infection will be discriminated against in employment, admission to academic programs, health benefits, or access to facilities. Students with HIV or HBV infection may attend all classes without restriction, as long as they are physically and mentally able to participate and perform assigned work and pose no health risks to others. All information regarding the medical status of UT Tyler faculty, staff, and students is confidential.

A complete copy of the AIDS, HIV and Hepatitis B Infection policy can be found in the *Handbook of Operating Procedures*, Chapter 2, Sec. 2.9.1. This policy is applicable to all students of UT Tyler as they pursue their academic (and clinical) endeavors. A brochure is available to all students on request by phoning UT Tyler at (903) 566-7079.

Bacterial Meningitis

Bacterial Meningitis is a serious, potentially deadly disease that can progress extremely fast. It is an inflammation of the membranes that surround the brain and spinal cord. Bacterial Meningitis strikes about 3,000 Americans each year, including 100-125 on college campuses. This disease is transmitted when people exchange saliva (such as by kissing, or by sharing drinking containers, utensils, cigarettes, toothbrushes, etc.) or come in contact with respiratory or throat secretions. Symptoms includes high fever, rash or purple patches on skin, light sensitivity, confusion and sleepiness, lethargy, severe headache, vomiting, stiff neck, nausea, and seizures. The more symptoms, the higher the risk, so when these symptoms appear seek immediate medical attention. Early diagnosis and treatment can greatly improve the likelihood of recovery.

In accordance with Texas Education Code 51.9192, Subchapter Z, all first-time students at UT Tyler, including transfer and graduate students, and all students who have previously attended UT Tyler prior to January 1, 2012 and who are enrolling at UT Tyler following a break in enrollment of

at least one fall or spring semester are required to provide proof of vaccination against bacterial meningitis at least 10 days prior to the beginning of the semester. All documentation should be submitted to the Enrollment Services Center (ESC) in ADM 230. Exemptions for this requirement are as follows:

- The student is 30 years of age or older.
- The student is enrolled in online-only programs. If the student attends any on-campus classes, they must submit proof of vaccination.
- The student submits an affidavit or a certificate signed by a physician who is duly registered and licensed to practice in the United States, stating, in the physician's opinion, the vaccination required would be injurious to the student's health and well-being.
- The student submits a signed affidavit stating the student declines the vaccination for bacterial meningitis for reasons of conscience, including a religious belief. A conscientious exemption form from the Texas Department of State Health Services must be used. This form is located at:
<http://webds.dshs.state.tx.us/immco/affidavit.shtm>.

Pursuant to HB 4189, all incoming residents of UT Tyler Housing are required to show confirmation from a doctor that they have received a meningitis vaccination no less than 10 days before they will be permitted to move in to on-campus housing. This will affect all incoming residents of Patriot Village, Ornelas Hall, and University Pines.

For more information, contact the Texas Department of Health office at (903)595-3585 or (903)533-3373. Informational web sites: <http://www.cdc.gov/ncidod/dbmd/diseaseinfo> or <http://www.acha.org>.

FINANCIAL AID, SCHOLARSHIPS AND VETERANS AFFAIRS

Texas B-on-Time Loan

Employment Programs

Federal Work Study
Texas Work Study
Working to Success

Students should visit the Career Services Office or <http://www.uttyler.edu/careerservices/index.php> for on-campus student employment, job searching tips, interview skills, resume writing, and etc. Students should also enroll in PatriotJobs for additional employment assistance and appointments (a username and password is required).

Tuition Exemptions and Waivers

For a complete listing of all exemptions and waivers offered by the Texas Higher Education Coordinating Board, please refer to www.collegeforalltexas.com

Hazlewood Tuition Exemption
Texas Commission for the Deaf Exemption
Texas Commission for the Blind Exemption
Early High School Graduation Award
Competitive Scholarship Waiver
Teaching/Research Assistant Waiver
Teacher/Professor Tuition Waiver
Concurrent Enrollment Exemption
Bordering State Resident Waiver
Valedictorian of Texas High Schools Exemption
Educational Aide Exemption
Senior Citizens Exemption
U.S. Military Stationed in Texas
Adopted Students Formerly in Foster or Residential Care
Children of Professional Nurse Faculty and Staff
Clinical Preceptors and their children
TANF Exemption
Children of Disabled Firefighters and Peace Officers

Scholarships

Scholarships offered at The University of Texas at Tyler are designed to attract and retain outstanding degree seeking students. To be considered, students must be accepted for admission to UT Tyler and if required, submit an application for scholarship on-line at <http://www.uttyler.edu/financialaid/scholarships/> for the appropriate academic year.

It is recommended that all scholarship applicants complete the Free Application for Federal Student Aid (FAFSA). Awarding of academic scholarships is based primarily on predictors of academic success, such as high school class rank, standardized test scores, and prior college grades.

Top 10% Scholarship Program

The 80th Texas Legislature created the Top 10 Percent Scholarship to encourage students who graduate in the top 10 percent of their high school class to attend a Texas public institution of higher education. Qualifying students who submit the Free Application for Federal Student Aid (FAFSA) or Texas Application for State Financial Aid (TASFA) by March 1, and have financial need may be eligible to receive up to \$2,000 if they enroll full-time in a Texas public college or university in the fall semester immediately following graduation from high school. Students enrolled in subjects determined to be in high demand in Texas are eligible for a total of up to \$4,000. Students who submit their FAFSA after the published deadline will be awarded on a first-come, first-served basis until available funds have been spent. Please see

Veterans Affairs

Veterans services are provided through the Enrollment Services Center. These services include counseling regarding V.A. regulations as they pertain to the university, assistance in the preparation of certification forms for the veteran, and a variety of resources for the veteran's benefit.

Financial Aid and Scholarships

The university offers financial aid to students on the basis of need, and Institutional Scholarship on the basis of merit. Financial aid consists of grants, employment, and loans. Students may receive one or more awards and must apply each year for all types of funding.

Financial Aid

The primary purpose of the financial aid program is to assist students who would otherwise be unable to attend college. An applicant's need for financial aid is analyzed on an individual basis and need is determined by subtracting the expected family contribution from the estimated educational costs. Applications for financial aid are accepted and considered without discrimination on any basis prohibited by law, including, but not limited to, race, color, age, national origin, sex, veteran status, religion, or disability.

Students subject to selective service registration will be required to file a statement that the student has registered or is exempt from selective service registration in order to be eligible to apply for federal or state financial aid.

Applying for Financial Aid

The student is responsible for proper completion and submission of all required documents. Students applying for most federal and state financial aid programs must demonstrate financial need.

Applicants must:

- complete the Free Application for Federal Student Aid (FAFSA), available online at www.fafsa.ed.gov;
- be admitted to the University and enroll in a degree-seeking program;
- maintain satisfactory academic progress (qualitative and quantitative);
- meet all federal and state program requirements.

Priority filing deadline for early award offers and supplemental funding is April 1.

Award offers are contingent upon continued funding for each federal, state, and institutional program.

Financial Aid Programs

Students will find a wide range of grant, loan, employment, and tuition exemption and waiver programs available at UT Tyler.

Grant Programs

Federal Pell Grants
Federal Supplemental Educational Opportunity Grants
Texas Public Educational Grants
TEXAS Grant
Education Affordability Grant

Loan Programs

William D. Ford Federal Loan (Stafford, Unsubsidized Stafford, PLUS)

<http://www.collegefortexans.com/apps/financialaid/tofa2.cfm?ID=385> for eligibility and renewal requirements.

LEARNING RESOURCES

Robert R. Muntz Library

Jeanne R. Standley, Director

Mission Statement

The University of Texas at Tyler Libraries supports the University's goals of excellence in teaching, research, and public service. As an essential academic unit, the Libraries will serve as a center of discovery, exchange, and advancement of ideas.

The Robert R. Muntz Library provides access to thousands of digital books and a wide variety of electronic databases and periodicals. Students, faculty and staff, regardless of location, have access to online library resources and services. There are also onsite resources available at both the Longview and Palestine campuses.

The Library houses an array of online and print materials to support the various degree programs offered by the University of Texas at Tyler. Holdings include numerous materials, videos, CD's, and other audiovisual materials. The Library's Interlibrary Services provides the University community with access to a great many academic and public library collections worldwide.

The skillful, services-oriented library staff provides assistance to our users with their research and information needs. Librarians strive to select, acquire, organize, preserve and share the information resources necessary to meet the current and future needs of library users.

The library provides an environment conducive to study and collaboration. Access to PatriotAir, the campus wireless network, is available for personal laptops. The Library also maintains individual study carrels and group study rooms.

The ultimate goal of library functions is to meet the needs of the individual while preserving equal access for the entire University community.

Education Technology Services

Kyle Stewart, Manager

Educational Technology Services (ETS) provides the logistical, technical, and professional support for faculty, staff, and students in the use of educational technology. ETS supports the educational technology goals and mission of The University of Texas Tyler through the design and development of educational technology plans, equipment recommendations, and ongoing support.

Production and support services are offered in these major areas: classroom technology, university sponsored events, video production, and video conferencing. A fee is charged to the individual or department for cost of materials consumed or for support personnel after normal operating hours.

Distribution of educational technology equipment for on-campus presentations is also provided at no charge for University-sponsored events. Non-University sponsored events may be assessed a fee for time and materials. Because of the frequency of equipment use, a reservation is required at least two days in advance.

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

Dr. James Nelson, Dean

In support of the University's mission, the College of Engineering and Computer Science offers six bachelor of science degree programs and four master's degree programs, supports education of university students in the area of technological literacy and the engineering design process, and provides non-credit continuing education courses in computer information technology and engineering through the resources of four departments – Department of Computer Science, Department of Civil Engineering, Department of Electrical Engineering, and Department of Mechanical Engineering.

The Department of Computer Science offers the Bachelor of Science in Computer Science, the Bachelor of Science in Computer Information Systems, the Master of Science in Computer Science, and supports secondary teacher certification in computer science and technology applications. The Department of Civil Engineering offers the Bachelor of Science in Civil Engineering, the Bachelor of Science in Construction Management, and the Master of Science in Civil Engineering. The Department of Electrical Engineering offers the Bachelor of Science in Electrical Engineering and the Master of Science in Electrical Engineering. The Department of Mechanical Engineering offers the Bachelor of Science in Mechanical Engineering and the Master of Science in Mechanical Engineering.

Mission Statement

The mission of The University of Texas at Tyler College of Engineering and Computer Science is to provide high quality undergraduate and graduate engineering, computer science, and construction management education relevant to a rapidly changing technological world and to service the developing needs of the region, state, and nation, recognizing our international scope and influence in the global society.

Primary Goals

The primary goals of The University of Texas at Tyler College of Engineering and Computer Science are

1. High quality, relevant undergraduate construction management, computer science, and engineering education
 - an integrated-systems, applications-oriented approach
 - broad general education, science, and ethics components
 - critical thinking, problem solving, design, computer, oral and written communication, teamwork, and leadership skills threaded throughout the curricula and increasing in complexity from the freshman year through the senior year
2. High quality, relevant graduate computer science and engineering education serving both full-time and part-time master's degree students
 - depth in and focus on advanced computer science or engineering topics or
 - multidisciplinary programs of advanced studies
3. Close working relationships between the university and business and industry
 - advisory boards of executives and practitioners
 - faculty working with industry in R&D and as consultants and summer employees
 - students working for industry in co-op and paid internship programs
 - real-world senior design projects described by and supported by business and industry
 - speakers and mentors and field trips for students from business and industry

- graduates working for and providing leadership for business and industry
- education leading to degrees for current employees
- continuing education seminars, short courses, workshops for current employees
- new product / new business development center partnerships between university and business and industry

The Civil Engineering, Electrical Engineering, and Mechanical Engineering programs are accredited by the Engineering Accreditation Commission of ABET, 111 Market place, Suite 1050, Baltimore, MD 21202-4012; (410) 347-7700.

Department of Computer Science

Dr. Arun Kulkarni, Interim Chair

The Department of Computer Science offers the Bachelor of Science in Computer Science and Bachelor of Science in Computer Information Systems, supports secondary teacher certifications in computer science, and is authorized to award CNSS 4011 and 4012 computer security certifications.

The degree programs prepare students for work in a wide variety of computing environments. Both the Bachelor of Science in Computer Science and Bachelor of Science in Computer Information Systems curricula incorporate exposure to specific computer science content, the design and implementation of reliable and secure computer systems, computer programming, development of logical reasoning, utilization of problem-solving, and encouragement of the creative process via design projects and independent research.

Mission Statement

The Department of Computer Science aspires to innovative leadership in preparing men and women for meaningful work, lifelong learning, and responsible participation in a new and dynamic information age. To accomplish this, the Department offers a broad spectrum of educational programs with corporate partners from the local and global community.

The Department fulfills a unique role. It provides professional education in the computing disciplines, supporting education for programs in the other colleges, and general education for all students. Because continuing change characterizes information technology, computer science programs are built upon a strong foundation in the arts and sciences and emphasize competency in the theory and methodology of the computing disciplines. At the same time, degree programs are responsive to the rapid pace of technological development.

The Department is characterized by its core values:

- excellent teaching that is informed by scholarship, professional practice, and community service;
- integration of theory and practice in teaching and scholarly activities;
- currency in new technology and its applications;
- creative programs and partnerships with the local and global community;
- attentiveness to professional ethics and social responsibility;
- research leadership in exploring new directions and new developments in computing and its applications.

Both significant individual and team-oriented design experiences, as well as the development of students' oral and written communication skills, are stressed. Design experiences are integrated throughout the curriculum. Additionally, students are provided the opportunity to interface with the profession through avenues such as co-operative education, professional

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

society activities, student internships, project assignments, class-oriented documented deliverables, and professional speakers.

The Department values diversity and welcomes qualified students of various experiences and origins, whether regional, national, or international. It provides excellent service to students both within and outside the classroom. It uses the power of technology to offer broad opportunity to students and to enable them to achieve excellence. Throughout its programs and services, the Department of Computer Science consistently recognizes that information technologies are tools for the empowerment of people.

Bachelor of Science in Computer Science Objectives

Program Educational Objectives:

Educational objectives of the computer science program are the knowledge, skills and experiences that enable graduates to:

1. model, simulate, and solve computational problems using appropriate theoretical and experimental methods, producing reliable and secure systems;
2. think critically and creatively, communicate clearly, work effectively with others, and develop leadership skills;
3. integrate computational principles with social, business, and ethical issues in modern society in the process of decision making;
4. be professionally engaged in serving the needs of business, industry, government, and academic organizations;
5. grow professionally through activities such as graduate study, continuing education, professional certifications, and participation in professional organizations.

Program Outcomes:

Computer Science students at the time of graduation are expected to:

1. possess knowledge of the fundamentals of mathematics, science, and technology;
2. be able to use modern computational tools and techniques in the practice of computer science;
3. be able to develop logically sound and efficient algorithms;
4. be prepared to implement algorithms in multiple programming languages, on multiple hardware platforms, and in multiple operating system environments;
5. be able to perform analysis, design, implementation, testing, and maintenance of computer-based systems, stressing software engineering principles;
6. be prepared to seek continuing professional development, graduate studies, or professional certifications related to computer science;
7. possess a knowledge of computer security and computer security management;
8. demonstrate effective written, visual, and oral communication skills;
9. possess an educational background to understand the global context in which computer science is practiced, including:
 - a. knowledge of contemporary issues related to computer science;
 - b. the impact of computers on society;
 - c. the role of ethics in the practice of computer science;
10. be able to contribute effectively as members of a project development team;
11. recognize the need to pursue continued learning throughout their professional careers.

Graduation Requirements

Upon a student's admission to the Computer Science major, a faculty member will serve as the student's academic advisor to work with the student in planning a program to complete the degree requirements. Students are encouraged to meet with their academic advisor throughout the semester and are required to meet with their advisor prior to registering for the next semester.

Before enrolling in upper-division (junior and senior level) courses, students must have earned a grade of "C" or better in each of the following:

Programming Fundamentals	3 or 4 semester hours
Object-Oriented Programming	3 or 4 semester hours
Data Structures and Algorithms	3 semester hours
Computer Organization	3 semester hours
Calculus I and II	6 to 8 semester hours
University Physics I and II	8 semester hours

Preparation should be started for upper-division work in supporting areas such as business, mathematics, engineering, or physical science.

To graduate with a degree in Computer Science, the student must meet the following specific requirements in addition to the general baccalaureate degree requirements:

- A. 2.0 grade point average in all upper-division computer science courses attempted and a grade of "C" or better in all courses listed in C.1, C.2, C.3, and D. below.
- B. Thirty-three semester hours of upper-division computer science courses, with at least 18 hours completed at UT Tyler.
- C. Forty-seven hours of computer science courses
 1. Required courses are as follows:
 - COSC 1436: Programming Fundamentals
 - COSC 1437: The Object-Oriented Paradigm
 - COSC 2315: Computer Organization
 - COSC 2336: Data Structures and Algorithms
 - COSC 3325: Algorithm Design and Analysis
 - COSC 3215: Social and Professional Issues in Computing
 - COSC 3355: Operating Systems
 - COSC 3445: Computer Architecture
 - COSC 4385: Database Management Concepts
 - COSC 4360: Net-Centric Computing
 - COSC 4315: Information Knowledge and Management
 - COSC 4336: Software Development
 - COSC 4395: Capstone Project
 2. Six semester hours of approved upper-division COSC electives.
 3. Three semester hours in an approved technical elective.
- D. Thirty-four semester hours of specified support courses:
 - MATH 2413: Calculus I
 - MATH 2414: Calculus II
 - MATH 2330: Discrete Structures
 - MATH 3351: Probability and Statistics for Engineers
 - MATH 3203: Matrix Methods in Science and Engineering
 - MANA 3370: Information and Communication Techniques
 - PHYS 2325: University Physics I
 - PHYS 2125: University Physics I Lab
 - PHYS 2326: University Physics II
 - PHYS 2126: University Physics II LabThree-hour approved elective in science or mathematics.
Additional four-hour physical science and lab elective.
- E. Six hours of approved electives in supporting disciplines. At least three hours must be upper-division.

Bachelor of Science in Computer Science Requirements

Total Semester Credit Hours= 120

Freshman Year

First Semester (14 hrs.)

COSC 1436:: Programming Fund.

HIST 1301: United States History I
 MATH 2413: Calculus I
 ENGL 1301: Grammar and Composition I

Second Semester (17 hrs.)

COSC 1437: Object-Oriented Paradigm
 HIST 1302: United States History II
 MATH 2414: Calculus II
 ENGL 1302: Grammar and Composition II
 MATH 2330: Discrete Structures

Sophomore Year

First Semester (15 hrs.)

COSC 2336: Data Structures and Algorithms
 MATH 3203: Matrix Methods
 POLS 2305: Introductory American Government
 PHYS 2325 : University Physics I
 PHYS 2125: University Physics Lab I
 Visual/Performing Arts

Second Semester (16 hrs.)

COSC 2315: Computer Organization
 ENGL 23xx: World/ European Literature
 POLS 2306: Introductory Texas Politics
 PHYS 2326: University Physics II
 PHYS 2126: University Physics Lab II
 Humanities

Junior Year

First Semester (15 hrs.)

COSC 3325: Algorithm Design
 COSC 3215: Social and Professional Issues
 COSC 3445:: Computer Architecture
 Approved Lower/Upper-Division Elective
 COSC 4385: Database Management Concepts

Second Semester (16 hrs.)

COSC 3355: Operating Systems
 COSC 4336: Software Development
 MANA 3370: Information and Communication Techniques
 Physical Science Elective III
 Physical Science Elective III Lab
 Social Sciences

Senior Year

First Semester (15 hrs.)

COSC Upper-Division Elective I
 COSC 4360: Net-Centric Computing
 COSC 4315: Information and Knowledge Management.
 MATH 3351: Probability and Statistics for Engineers
 Approved Math/Science Elective

Second Semester (12 hrs.)

COSC 4395: Capstone Project
 Approved Technical Elective
 COSC Upper-Division Elective II
 Approved Upper-Division Elective

Bachelor of Science in Computer Information Systems Objectives

Program Educational Objectives:

Educational objectives of the computer information systems program are the knowledge, skills, and experiences that enable graduates to:

- investigate and analyze business problems, providing reliable and secure computerized solutions;
- grow professionally through activities such as graduate study, continuing education, professional certifications, and participation in professional organizations;
- think critically and creatively, communicate clearly, work effectively with others, and develop leadership skills;
- demonstrate an understanding of social and ethical issues in the computer profession;

- understand the organizational impact of computer-based information systems.

Program Outcomes:

Computer Information Systems students at the time of graduation are expected to:

- be prepared to contribute immediately as information systems professionals;
- be able to design and implement information systems that satisfy user requirements;
- possess a knowledge of computer security and computer security management;
- demonstrate effective written, visual, and oral communication skills;
- understand the global context in which computer information systems are practiced, including:
 - contemporary issues related to business and technology;
 - the impact of computers on society;
 - the role of ethics in the practice of information systems profession;
- be able to contribute effectively as members of systems development teams;
- recognize the need to pursue continued learning throughout their professional careers.

Graduation Requirements

Upon a student's admission to the Computer Information Systems major, a faculty member will serve as the student's academic advisor to work with the student in planning a program to complete the degree requirements. Students are encouraged to meet with their academic advisor throughout the semester and are required to meet with their advisor prior to registering for the next semester.

Before enrolling in upper-division (junior and senior level) courses, students must have earned a grade of "C" or better in each of the following:

Programming Fundamentals	3 or 4 semester hours
Object-Oriented Programming	3 or 4 semester hours
Advanced Microsoft Office	3 semester hours
Introduction to Information Systems with Visual BASIC	3 semester hours
Computer Organization	3 semester hours
Mathematics for Business and Economics I and II	6 semester hours
Principles of Accounting I and II	6 to 8 semester hours

In addition, preparation should be started for upper-division work in supporting areas such as accounting, bioinformatics, criminal justice, management, and medical records database management.

To graduate with a degree in Computer Information Systems, the student must meet the following specific requirements in addition to the general baccalaureate degree requirements:

- Twenty-nine semester hours of upper-division computer science, with at least 15 hours completed at UT Tyler
- Grade of "C" or better in all COSC courses and courses listed in C.1, C.2, and C.3 below.
- Forty-nine hours of computer science courses:
 - Required courses are as follows:
 - COSC 1310: Advanced Information Systems Software
 - COSC 1436: Programming Fundamentals
 - COSC 1437: The Object-Oriented Paradigm
 - COSC 2325: Foundations of Computer Information Systems
 - COSC 2315: Computer Organization
 - COSC 3215: Social and Professional Issues in Computing
 - COSC 3310: Internet and Web Applications
 - COSC 3365: Programming with Data, File and Object Structures
 - COSC 3385: Database Design

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- COSC 3375: Analysis and Logical Design
COSC 4309: Design of Modern Information Systems
COSC 4325: Data Communications and Computer Networks
COSC 4375: Information Systems Design Project
2. Six hours of approved upper-division COSC electives.
 3. Three semester hours in an approved technical elective
- D. Twenty-four hours of specified support courses:
- ACCT 2301: Principles of Financial Accounting
 - ACCT 2302: Principles of Managerial Accounting
 - MANA 3370: Information and Communication Techniques
 - MANA 3311: Organization Theory and Behavior
 - MATH 1324: Mathematics for Business and Economics
 - MATH 1325: Mathematics for Business and Economics II
 - MATH 1342: Statistics
 - MATH 2330: Discrete Structures
- E. Nine hours of approved electives in supporting disciplines. Six hours must be upper-division

Bachelor of Science in Computer Information Systems Requirements

Total Semester Credit Hours=120

Freshman Year

First Semester (16 hrs.)

- COSC 1310: Advanced Information Systems Software
- COSC 1436: Programming Fundamentals
- ENGL 1301: Grammar and Composition I
- HIST 1301: United States History I
- MATH 1324: Math for Business and Economics. I

Second Semester (16 hrs.)

- COSC 1437: Object-Oriented Paradigm
- ENGL 1302: Grammar and Composition II
- HIST 1302: United States History II
- MATH 1325: Math for Business and Economics II
- Humanities

Sophomore Year

First Semester (16 hrs.)

- ACCT 2301: Principles of Accounting I
- COSC 2325: Foundations of Computer Information Systems
- Social Sciences
- Natural Science I
- Natural Science Lab I
- MATH 2330: Discrete Structures

Second Semester (16 hrs.)

- ACCT 2302: Principles of Accounting II
- COSC 2315: Computer Organization
- MATH 1342: Statistics
- COSC 3310: Internet and Web Applications
- Natural Science II
- Natural Science Lab II

Junior Year

First Semester (14 hrs.)

- COSC 3365: Programming with Data, File and Object Structures
- COSC 3375: Analysis and Logical Design
- World/European Literature
- POLS 2305: Introductory American Government
- COSC 3215: Social and Professional Issues

Second Semester (15 hrs.)

- COSC 3385: Database Design
- Visual and Performing Arts
- POLS 2306: Introductory Texas Politics
- MANA 3311: Managing People and Organizations
- Approved Lower/Upper Elective

Senior Year

First Semester (15 hrs.)

- COSC 4309: Design of Modern Information Systems
 - COSC 4325: Data Communications and Computer Networks
 - MANA 3370: Information and Communication Techniques
 - COSC Upper-Division Elective I
 - Approved Upper-Division Elective I
- Second Semester (12 hrs.)
- COSC 4375: Information Systems Design Project
 - COSC Upper-Division Elective II
 - Approved Upper-Division Elective II
 - Approved Technical Elective

Computer Science as a Minor

A student may choose Computer Science as a minor to satisfy bachelor degree programs with majors in other fields. This program requires a total of 20 semester hours of Computer Science. Courses required are:

- COSC 1436: Programming Fundamentals
- COSC 1437: The Object-Oriented Paradigm
- COSC 2336: Data Structures and Algorithms
- COSC 2315: Computer Organization
- Six additional hours of upper-division COSC courses

Computer Information Systems as a Minor

A student may choose Computer Information Systems as a minor to satisfy bachelor degree programs with majors in other fields. This program requires a total of 22 semester hours of Computer Information Systems. Courses required are:

- COSC 1310: Advanced Information Systems Software
- COSC 1436: Programming Fundamentals
- COSC 2325: Foundations of Computer Information Systems
- COSC 3310: Internet and Web Applications
- COSC 3365: Programming with Data, File and Object Structures
- COSC 3375: Analysis and Logical Design
- COSC 3385: Database Design

Cooperative Computer Science Education Program

The Computer Science cooperative (co-op) program is offered as an educational enhancement to the Bachelor of Science degree in Computer Science and the Bachelor of Science degree in Computer Information Systems. To complete the computer science co-op program, a student works full-time in an approved computing or information technology environment for three semesters, before the student's senior year. Students may fulfill their three semester requirement by working during three 12 week summer semesters.

To participate in the computer science co-op program, a student must have completed at least one semester at UT Tyler with a cumulative GPA of at least 2.5 on all course work completed at UT Tyler; and the student must have completed COSC 1436 and COSC 1437 (or their equivalents) with a grade of "C" or better. Students must maintain a 2.5 GPA to continue their participation in the co-op program. The student, an assigned computer science faculty member, and an official representative of the host company will develop a written plan of activities that constitute the goals for each semester of the co-op. The student, in cooperation with an official representative of the host company, will provide periodic reports to the assigned computer science faculty member to demonstrate satisfactory progress toward the goals of the written plan. A summary report/performance evaluation of the work of the student at the end of the semester is also required.

During the student's co-op semesters he/she will be considered a full-time student at UT Tyler and will register for the appropriate one semester hour co-op course selected from COSC 3191, 3192, or 3193.

Students may apply to participate in the computer science co-op program by submitting a co-op application form to the chair of the department at least six weeks prior to the semester in which the student plans to start the co-op.

Teacher Certification

Candidates for secondary teaching certification (grades 8-12) should pursue a major in computer science and should consult with an advisor in the School of Education, College of Education and Psychology. In addition to the required professional education course sequence, requirements for secondary certification in computer science are outlined below:

A candidate for certification must:

- A. Complete a minimum of 12 upper-division semester hours of computer science at UT Tyler.
- B. Have a minimum grade point average of 2.0 in all upper-division computer science courses attempted and a grade of "C" or better in each of the computer science or math courses listed below.
 1. Non-degreed, non-certified students should complete requirements for the Bachelor of Science degree in Computer Science including: COSC 4340 Comparative Study of Programming Languages.
 2. Students who have already completed a baccalaureate degree, hold a secondary teaching certificate in another academic field, and/or seek a second teaching field should minimally complete the following courses or their equivalents:
 - COSC 1436: Programming Fundamentals
 - COSC 1437: The Object Oriented Paradigm
 - COSC 2315: Computer Organization
 - COSC 2336: Data Structures and Algorithms
 - COSC 3215: Social and Professional Issues
 - COSC 3325: Algorithm Design and Analysis
 - COSC 3445: Computer Architecture
 - COSC 4340: Comparative Study of Programming Languages
 - MATH 2330: Discrete Structures

CNSS Computer Security Certifications

The Department of Computer Science has been approved by the Committee on National Security Systems (CNSS) and the National Security Agency (NSA) as meeting the requirements of the CNSS 4011 and CNSS 4012 security standards. This accreditation confirms compliance with Federal Security Standards through the year 2014. Any UT Tyler student awarded these certificates will automatically meet federal employment requirements for the CNSS 4011 or 4012 certification. CNSS is a federal government entity under the U.S. Department of Defense that provides procedures and guidance for the protection of national security systems.

The CNSS 4011 standard consists of the fundamental security knowledge needed by an Information Systems Security professional. Students who successfully complete the following courses in their degree program will receive the CNSS 4011 certificate: COSC 2315, 4360, 4361, and 4362.

The CNSS 4012 standard consists of the security knowledge needed by a Chief Information Officer (Senior Systems Manager) in authorizing systems certified as security by a security manager. Students who successfully complete the following courses in their degree program will receive the CNSS 4012 certificate: COSC 4360, 4361, and 4362.

Engineering

In support of the missions of the University and the College of Engineering and Computer Science, the degree programs in Civil, Construction Management, Electrical, and Mechanical Engineering are offered through the Department of Civil Engineering, Department of Construction Management, Department of Electrical Engineering and the Department of Mechanical Engineering, respectively. The Civil, Electrical, and Mechanical Engineering Departments also offer Master of Science degrees. These engineering degree programs prepare students to enter the engineering profession and, subsequently, to develop interest and expertise in many areas within the profession.

Students learn the fundamentals of their chosen program with emphasis on critical thinking, communication skills, problem solving, design, and integrated systems, while also taking courses in mathematics, chemistry, physics, English, humanities, and social sciences. Graduates are prepared for practice as professional engineers. They have acquired the foundation for maintaining professional competence throughout their careers, and they have the skills and experiences needed to move quickly into leadership roles in today's engineering and construction environments.

Students who desire the option of further study at the graduate level are well prepared to continue their engineering education at the master's and

doctoral level. And, in today's highly technological world, the Bachelor of Science degree programs in Civil Engineering, Construction Management, Electrical Engineering, and Mechanical Engineering provide an excellent core, when combined with appropriate preparatory electives, for studies in medicine, law, and other specialties.

Cooperative Education Program

The Cooperative (co-op) Education Program is offered as an educational enhancement to the Bachelor of Science in Civil Engineering, Bachelor of Science in Construction Management, Bachelor of Science in Electrical Engineering, and Bachelor of Science in Mechanical Engineering programs. To complete the Co-op Program, a student works full-time in approved progressive work assignments for at least three academic semesters prior to the student's senior year. (The three academic semesters or terms may include 12-week summer sessions.)

At any time after completing a minimum of all the freshman year course work, an engineering student with a cumulative GPA of at least 2.50 may apply to participate in the Co-op Program. A transfer student must complete at least one full-time academic semester at UT Tyler and must have a minimum cumulative GPA of at least 2.50 to qualify.

A co-op student alternates between full-time academic semesters and semesters of progressive full-time approved work assignments until the student has completed at least three work semesters. Alternatively, a co-op student may alternate between a year of full-time academic terms and a year of full-time approved work assignments. The full-time work assignments are a planned part of the co-op student's educational program; are with the same employer; and are progressive in complexity, responsibility, and pay. The student's senior year is spent in residence at the University with no further co-op work assignments.

During the student's full-time work terms, the student is considered a full-time student by the University, and the student registers for the appropriate co-op course from ENGR 3191 through ENGR 3196. The co-op courses carry one semester hour of credit and have requirements for the student to submit educational objectives, status reports, and a final technical report. The student is also required, in cooperation with the student's employer, to host a work site visit by a UT Tyler engineering faculty member responsible for the co-op course and to submit at the end of the work term a performance appraisal/evaluation by the employer.

Students enrolling in the Co-op Program gain the benefits of a planned progression of work experiences that complement and enrich their engineering studies on campus. Participants gain insight into the engineering and construction world, are able to apply their insights from actual practice to their studies, grow in understanding of their own interests and career objectives, and advance in professional maturity. All work assignments are in paid positions, and students are able to help finance their education while gaining professional experience.

Department of Civil Engineering

Dr. J. Torey Nalbone, Interim Chair

Civil Engineering, one of the largest engineering branches, is a creative, demanding and rewarding profession. From the pyramids of Egypt to the exploration of space, civil engineers have always faced the challenges of the future – advancing civilization and improving the quality of life. Civil engineers design and manage the building of the world's infrastructure and thus affect the everyday life of every member of society. It would be difficult to imagine life without the many contributions of civil engineers to the public's health, safety, and standard of living. Civil engineering's contributions to daily life include modern transportation, clean water, and power generation.

Civil engineering involves the use of complex technology and a strong scientific, mathematical, and engineering knowledge base to creatively solve society's problems. Civil engineers then go beyond the science, math, engineering, technology, and problem solving to make the world a better place by serving in communities and by participating in the public policy process.

Today, civil engineers are designing complex systems for highway exchanges, major bridges, modern hospitals, water purification, theme

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parks, airports, and launch pads. In the future, civil engineers will be designing special rail beds for magnetic levitation trains and will be making Mars a hospitable habitat for humans. Civil engineering is also about community service, development, and improvement. It involves the conception, planning, design, construction, and operation of facilities essential to modern life, ranging from transit systems to offshore structures to space satellites. Civil engineers are problem solvers, meeting the challenges of pollution, traffic congestion, drinking water, energy needs, urban redevelopment, and community planning.

The Department of Civil Engineering offers programs leading to the Bachelor of Science in Civil Engineering and the Master of Science in Civil Engineering.

Bachelor of Science in Civil Engineering Objectives

Mission

The faculty and staff provide the opportunity for civil engineering students to develop state-of-the-art engineering knowledge and skills through student-centered education and research. Teamwork, professionalism and the importance of life-long learning are hallmarks of our program. Students and faculty provide outreach through innovative civil engineering solutions to significant regional, national, and global issues.

Vision

The department will be a leader in civil engineering education through the integration of design in the curriculum. Upon graduation, our students will be able to excel in the global civil and environmental engineering community. We will be a recognized center for innovative civil engineering research and expertise that meets the needs of industry, government, and society.

Program Educational Objectives

1. Graduates demonstrate the knowledge, skills, and attitudes necessary to become engineering leaders and assume responsibility for multidisciplinary engineering design; project construction, and asset management; and ethical decision making in professional practice.
2. Graduates continue to grow intellectually and professionally through participation in professional society activities, continuing engineering education, graduate studies, and/or self study during their professional career.
3. Graduates demonstrate effective oral, written, and graphical communication skills to meet increasing professional demands.
4. Graduates become licensed professional engineers.

Program Educational Outcomes

Graduates:

1. Apply knowledge of traditional mathematics, science, and engineering skills, and use modern engineering tools to solve problems.
2. Design and conduct experiments, as well as analyze and interpret data in more than one civil engineering sub-discipline.
3. Design systems, components, and processes and recognize the strengths and areas for possible improvement of their creative designs within realistic constraints such as economic, political, social, constructability, sustainability, public health and safety, environmental, and ethical.
4. Work independently as well as part of a multidisciplinary design team.
5. Identify, formulate, solve, and evaluate engineering design problems using engineering models in the disciplines of structural engineering, transportation engineering, hydrology, construction management, and/or environmental engineering.
6. Analyze a situation and make appropriate professional and ethical decisions.
7. Demonstrate effective oral, written, and graphical communication skills.
8. Demonstrate a commitment to learning and continued professional development outside the classroom, incorporate contemporary issues

and historical perspectives during problem solving, and determine the impact of engineering solutions in a global and societal context.

9. Explain professional practice attitudes, leadership principles and attitudes, management concepts and processes, and concepts of business, public policy, and public administration.

Bachelor of Science in Civil Engineering Requirements

Graduation Requirements

During a civil engineering student's first semester at The University of Texas at Tyler, a civil engineering faculty member is assigned as the student's academic advisor to work with the student in planning a program of study to complete degree requirements. Students are encouraged to meet with their advisor throughout the semester and are required to meet with their advisor prior to registering for the next semester or summer session.

To graduate with a Bachelor of Science in Civil Engineering degree, a student must

1. complete the general baccalaureate degree requirements for the university;
2. complete the Civil Engineering curriculum requirements as shown below; with an average of 2.5 GPA on all courses taken in the College of Engineering and Computer Science, and
3. achieve a satisfactory score on the National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering (FE) examination. The NCEES FE exam is offered twice each year in April and October. A senior may take the FE exam within one year of completing the BSCE curriculum. The FE exam may be taken more than once, and seniors will be encouraged to take the exam at the earliest opportunity.

Civil Engineering Completion Curriculum

Students who have earned the Texas Associate of Science in Engineering Science degree from an ASAC/ABET accredited program at a participating community college, with an overall GPA of at least 2.50/4.00 and with no grade lower than "C," are eligible to pursue the Civil Engineering Completion Program to earn a Bachelor of Science in Civil Engineering. If you are eligible, this program will likely enable you to complete the degree in the shortest time. Before beginning study, however, you should discuss your eligibility with an engineering advisor.

Total Semester Credit Hours=128

Freshman Year

First Semester (16 hrs.)

ENGR 1200: Engineering Methods
ENGL 1301: Grammar & Composition I
MATH 2413: Calculus I
CHEM 1311: General Chemistry I
CHEM 1111: General Chemistry I Lab
POLS 2306: Introductory Texas Politics

Second Semester (16 hrs.)

ENGR 1204: Engineering Graphics
ENGL 1302: Grammar & Composition II
MATH 2414: Calculus II
PHYS 2325: University Physics I
PHYS 2125: University Physics I Lab
Visual & Performing Arts

Sophomore Year

First Semester (17 hrs.)

POLS 2305: Introductory American Government
CENG 2336: Geomatics
CENG 2301: Engineering Mechanics - Statics
MATH 3404: Multivariate Calculus
PHYS 2326: University Physics II
PHYS 2126: University Physics II Lab

Second Semester (18 hrs.)

HIST 1301: United States History I
CENG 2302: Engineering Mechanics - Dynamics

CENG 3306: Mechanics of Materials
 ECON 2301/2302: Macro/Microeconomics
 MATH 3305: Differential Equations
 PHIL 2306: Introduction to Ethics

Junior Year

First Semester (16 hrs.)

CENG 3434: Materials, Codes, Specifications
 CENG 3310: Fluid Mechanics
 MATH 3351: Probability & Statistics for Engineers & Scientists
 CENG 4339: Construction Management
 Additional Science Elective

Second Semester (15 hrs.)

CENG 3361: Applied Eng. Hydrology and Hydraulic Design/lab
 CENG 3351: Transportation Engineering Systems
 CENG 3371: Introduction to Environmental Engineering/lab
 CENG 3336: Soil Mechanics & Foundation Design/lab
 CENG 3325: Structural Analysis

Senior Year

First Semester (15 hrs.)

CENG 4351: Traffic Engineering/lab
 CENG 4412: Structural Concrete & Steel Design
 CENG 4371: Environmental Engineering Design
 CENG 4115: Senior Design I
 CENG 4381: Foundation Design
 ENGR 4109: Senior Seminar

Second Semester (15 hrs.)

CENG 4315: Senior Design II
 HIST 1302: United States History II
 CENG 4341: Leadership, Business
 CENG Elective
 World or European Literature elective

Department of Construction Management

Dr. J. Torey Nalbone, Interim Chair

Bachelor of Science in Construction Management Requirements

Total Semester Credit Hours = 120

A degree in Construction Management prepares graduates to administer the entire range of construction operations on a project, from start to finish. The construction business is the largest industry in the United States with approximately 7 million employees. Construction and related industries account for more than 8 percent of the nation's Gross Domestic Product. Managing the construction process requires an extensive understanding of the principles of construction management as well as autonomy, professionalism, and leadership skills. Construction Managers are responsible for motivating teams, facilitating subcontractors, and managing equipment and materials to produce a finished structure.

The Construction Management Program prepares graduates for professional careers and leadership roles in construction and construction-related industries. The Construction Curriculum focuses on Professionalism, Leadership, Ethics, and Autonomy. Students are expected to participate in Service Learning and Community Service during their academic career at The University of Texas at Tyler. The Department of Construction Management offers a plan of study leading to Bachelor of Science in Construction Management.

Objectives

Students completing the construction management major should be able to:

- Read construction plans & documents
- Execute construction specifications and building codes
- Reliably estimate construction projects by reading plans & specifications
- Schedule and plan construction projects

- Incorporate construction management, accounting, and financial principles to interpret and manage construction cost controls and the construction project
- Develop professionalism, autonomy, and leadership skills needed to excel in the construction industry as leaders and managers.

Graduation Requirements

During a construction management student's first semester at The University of Texas at Tyler, a construction management faculty member is assigned as the student's academic advisor to work with the student in planning a program of study to complete degree requirements. Students are encouraged to meet with their advisor throughout the semester and are required to meet with their advisor prior to registering for the next semester or summer session.

To graduate with a Bachelor of Science in Construction Management degree, a student must

- earn a grade of "C" or better in all courses used to meet degree requirements.
- complete the general baccalaureate degree requirements of the University,
- complete the Construction Management curriculum requirements specified in the following sections

Suggested Four-Year Curriculum

Freshman Year

First Semester (16 hrs.)

ENGL 1301: Grammar and Composition I
 MATH 1316: Trigonometry
 ART 1301: Design I
 HIST 1301: United States History I
 PHYS 1301: College Physics I
 PHYS 1101: College Physics Lab

Second Semester (16 hrs.)

ENGL 1302: Grammar and Composition II
 HIST 1302: United States History II
 Lab Science
 ENGR 1304: Engineering Graphics I
 MATH 1324: Mathematics for Business and Economics I

Sophomore Year

First Semester (15 hrs.)

POLS 2305: Introductory American Government
 CENG 2336: Geomatics
 ACCT 2301: Principles of Financial Accounting
 ECON 2301: Principles of Economics I
 CMGT 2302: Introduction to Construction Management

Second Semester (15 hrs.)

ENGL (choose one: 2322, 2323, 2362, or 2363)
 POLS 2306: Introductory Texas Politics
 SPCM 1315: Fundamentals of Speech
 MATH 1342: Statistics
 CMGT2303: Construction Materials and Methods

Junior Year

First Semester (15 hrs.)

CMGT 3310: Introduction to Construction Structural Systems
 TECH 3348: Construction Safety
 FINA 3311: Principles of Finance
 MANA 3311: Managing People in Organizations
 CMGT 4310: Construction Estimating

Second Semester (15 hrs.)

CMGT 3315: Construction Design Theory
 CMGT 3320: Soils & Foundations in Construction
 CMGT 3365: Mechanical and Electrical Systems
 GENB 3301: Business Law and Social Responsibility
 CMGT 4312: Advanced Estimating

Senior Year

First Semester (13 hrs.)

CMGT 4331: Construction Scheduling
 CMGT 4335: Construction Law & Ethics
 CMGT 4375: Construction Administration

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CMGT 4315: Construction Systems
CENG 4199: Independent Study
Second Semester (15 hrs.)
ENGR 4370: Undergraduate Internship
CMGT 4313: Applied Construction Structural Systems
CMGT 4385: Commercial Construction or
CMGT 4330: Construction Equipment
CMGT 4395: Construction Management Capstone
Elective

Department of Electrical Engineering

Dr. Mukul V. Shirvaikar, Chair

Electrical Engineering prepares individuals to use science, math, computers, and modern technology together with well developed critical thinking and problem-solving skills to analyze, design, construct, and maintain products and services related to electrical and electronic devices and systems. Some areas in which an electrical engineer may specialize are computers, communication systems, control systems, signal processing, microelectronics, and electrical power systems. Electrical engineers work in design, development, research, testing, manufacturing, and sales. With experience, many electrical engineers also serve as managers of large engineering projects, executives in major corporations, or as owners of their own companies. Whether developing and designing computers; space vehicle guidance, navigation, and control systems; satellite, optical and wireless communication systems; advanced medical diagnostic equipment and precision surgical tools; or large electric power systems, an electrical engineer has varied and growing opportunities for a challenging and rewarding career in today's high tech world.

The Electrical Engineering program is accredited by the ABET Engineering Accreditation Commission.

Bachelor of Science in Electrical Engineering Objectives

Mission Statement

The Department of Electrical Engineering supports the mission of the College of Engineering and Computer Science through its teaching, research, and community service activities. The Department is committed to excellence in undergraduate electrical engineering education and provides its students with a strong theoretical foundation, practical engineering skills, experience in communication and teamwork, and training in ethics and professional conduct. Graduates are prepared for successful engagement in industrial enterprises, research and development, graduate study, and practice as professional engineers. The Department also provides advanced studies in support of the graduate programs of the College of Engineering and Computer Science.

Program Educational Objectives

Educational objectives of the electrical engineering program are the knowledge, skills, and experiences that enable graduates to:

1. be involved in professional practice through the application of problem solving skills, using relevant technology in their field;
2. demonstrate professional leadership skills through effective communication, critical thought, creativity, and teamwork;
3. integrate engineering principles and social, business, and ethical issues in modern society in the process of decision making;
4. be professionally engaged in serving the needs of business, industry, government, and academic organizations;
5. grow professionally through activities such as graduate study, continuing education, professional licensure, and participation in technical societies.

Program Outcomes

Electrical Engineering students at the time of graduation are expected to:

1. have the ability to apply knowledge of the fundamentals of mathematics, science, and engineering;
2. have the ability to use modern engineering tools and techniques in the practice of Electrical Engineering;
3. have the ability to analyze electrical circuits, devices, and systems;
4. have the ability to design electrical circuits, devices, and systems to meet application requirements;
5. have the ability to design and conduct experiments, and analyze, and interpret experimental results;
6. have the ability to identify, formulate, and solve problems in the practice of Electrical Engineering using appropriate theoretical and experimental methods;
7. have effective written, visual, and oral communication skills;
8. possess an educational background to understand the global context in which engineering is practiced, including:
 - a. knowledge of contemporary issues related to science and engineering;
 - b. the impact of engineering on society;
 - c. the role of ethics in the practice of engineering;
9. have the ability to contribute effectively as members of multi-disciplinary engineering teams;
10. have a recognition of the need for and ability to pursue continued learning throughout their professional careers.

Bachelor of Science in Electrical Engineering Requirements

Graduation Requirements

Upon admission to the Electrical Engineering major, an electrical engineering faculty member will serve as the student's academic advisor to work with the student in planning a program to complete degree requirements. Students are encouraged to meet with their advisor throughout the semester and are required to meet with their advisor prior to registering for the next semester.

To graduate with a Bachelor of Science degree in Electrical Engineering, the student must:

1. earn a grade of "C" or better in all courses used to meet degree requirements.
2. earn a grade of "C" or better in any course that is a prerequisite for subsequent courses in the curriculum prior to taking a course that requires the prerequisite,
3. complete the general baccalaureate degree requirements of the University,
4. complete the Electrical Engineering curriculum requirements specified in the following sections,
5. take the Fundamentals of Engineering examination of the National Council of Examiners for Engineering and Surveying (NCEES), including the discipline-specific examination for electrical engineering.

The NCEES Fundamentals of Engineering (FE) examination is offered twice each year, in April and October, and may be taken more than once. A student should take the examination at least one semester prior to the semester in which the student plans to graduate. Students expecting to complete their course work for an engineering degree in May or August should take the FE exam in October of the preceding year. Those expecting to complete their course work in December should take the exam the preceding April. Detailed information about the FE exam content, exam schedule, registration for the exam, and review sessions is available through the Office of the Dean of Engineering and Computer Science.

Concentrations

In addition to the required Electrical Engineering courses, each student may choose technical electives to develop skills in a particular career area.

Students should select the area prior to completion of the junior year, and plan their course of study in order to satisfy the prerequisites for elective courses.

Computer Engineering Area

The Computer Engineering curriculum focuses on developing knowledge and practical skills in the design, development, and applications of computer systems including hardware, software, and hardware-software interaction. Computer Engineers require the knowledge and skills necessary to evaluate trade-offs and optimize the design of computer systems based on the attributes of both the hardware and the software. To meet the requirements for this concentration, a student must take the course Computer Architecture (EENG 4320), and two additional Computer Engineering elective courses.

Electrical Engineering Completion Curriculum

Students who have earned the Texas Associate of Science in Engineering Science degree from an ASAC/ABET accredited program at a participating community college, with an overall GPA of at least 2.50/4.00 and with no grade lower than "C," are eligible to pursue the Electrical Engineering Completion Program to earn a Bachelor of Science in Electrical Engineering. If you are eligible, this program will likely enable you to complete the degree in the shortest time. Before beginning study, however, you should discuss your eligibility with an engineering advisor.

Total Semester Credit Hours=128

Freshman Year

First Semester (16 hrs.)

CHEM 1311: General Chemistry I
CHEM 1111: General Chemistry I Lab
ENGL 1301: Grammar & Composition I
MATH 2413: Calculus I
Engineering or Science elective¹
EENG 1301: Engineering the Future

Second Semester (16 hrs.)

PHYS 2325: University Physics I
PHYS 2125: University Physics I Lab
ENGL 1302: Grammar & Composition II
MATH 2414: Calculus II
COSC 1436: Programming Fundamentals
EENG 2101: MATLAB for Engineers

Sophomore Year

First Semester (17 hrs.)

HIST 1301: United States History I
MATH 3404: Multivariate Calculus
PHYS 2326: University Physics II
PHYS 2126: University Physics II Lab
EENG 3302: Digital Systems
Visual and Performing Arts (Core Curriculum)

Second Semester (16 hrs.)

HIST 1302: United States History II
MATH 3305: Differential Equations
Economics²
Humanities Elective (Core Curriculum)
EENG 3304: Linear Circuits Analysis I
EENG 3104: Linear Circuits Analysis I Lab

Junior Year

First Semester (15 hrs.)

MATH 3203: Matrix Methods in Science and Engineering³
MATH 3351: Probability and Statistics
EENG 3303: Electromagnetic Fields
EENG 3305: Linear Circuits Analysis II
EENG 3306: Electronic Circuits I
EENG 3106: Electronic Circuits I Lab

Second Semester (16 hrs.)

EENG 4308: Automatic Controls
EENG 4311: Signals and Systems
EENG 3307: Microprocessors
ENGR 3314: Design Methodology-in Engineering
EENG 4309: Electronic Circuits II
EENG 4109: Electronic Circuits II Lab

Senior Year

First Semester (17 hrs.)

POLS 2305: Introductory American Government.
EENG 4115: Senior Design I
ENGR 4109: Senior Seminar
EENG 4310: Electric Power Systems
EENG 4312: Communications Theory
Technical Elective
Engineering/Science Elective⁴

Second Semester (15 hrs.)

EENG 4315: Senior Design II
POLS 2306: Introductory Texas Politics
Technical Elective
Technical Elective
ENGL ___: World or European Lit

¹ Selected from approved departmental list

² Selected from ECON 2301 or ECON 2302

³ MATH 3315 can be substituted for MATH 3203

⁴ Course outside of Electrical engineering--junior/senior level, may be utilized towards a minor

Department of Mechanical Engineering

Dr. Yueh-Jaw Lin, Chair

Mechanical Engineering is one of the broadest of the engineering disciplines, and mechanical engineers find themselves engaged in a wide variety of industrial and business operations. Computer-aided design and analysis, thermal and fluid systems, manufacturing processes and control, bioengineering, aerospace systems, and instrumentation are several of the many areas that require mechanical engineering skills. Graduates with bachelor's degrees in mechanical engineering work in all types of organizations, from large corporations to government offices to small consulting firms. Entry-level positions include engineering design, testing, manufacturing, maintenance, and sales. With experience, mechanical engineers may become managers of large engineering projects, plant managers, owners of their own firms, or executives in large corporations. The bachelor's degree also provides a solid foundation for graduate study.

The Mechanical Engineering program is accredited by the ABET Engineering Accreditation Commission.

Bachelor of Science in Mechanic Engineering Objectives

Mission Statement

The Mechanical Engineering Department of The University of Texas at Tyler is committed to producing graduates who are sought after by employers and graduate schools in the region, state, and nation. In both the undergraduate and graduate programs the department stresses the development of strong professional knowledge, critical thinking, and communication skills. The faculty seeks to create and disseminate new knowledge in engineering and engineering education, and to be a source of expertise for industry and government, while maintaining a balance between education, research, and service.

Program Educational Objectives

Educational objectives of the mechanical engineering program are the knowledge, skills, and experiences that enable graduates to:

1. formulate and solve complex practical and theoretical engineering problems, while at the same time understanding business objectives and appreciating the social, economic, and ethical issues encountered in a modern global society
2. think critically and creatively, work effectively on interdisciplinary teams and communicate clearly in both technical and non-technical forums
3. be professionally employed, serving the rapidly changing technological needs of industry or governmental organizations regionally in East Texas or throughout the state and nation

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

- continue to grow professionally through activities such as pursuing formal graduate study, research, or continuing education; achieving professional licensure; and participating in technical societies.

Program Outcomes

Mechanical Engineering students at the time of graduation are expected to:

- be able to apply science, mathematics, and modern engineering tools and techniques to identify, formulate, and solve engineering problems
- be able to design thermal/fluid, mechanical, and electro-mechanical components or systems, individually or on interdisciplinary teams, and effectively communicate those designs in both technical and non-technical forums
- be able to collect, analyze, and interpret data from prescribed and self-designed experimental procedures and formally communicate the results
- be able to apply a broad-based educational experience to understand the interaction of engineering solutions with contemporary business, economic, and social issues
- recognize that ethical behavior and continuous acquisition of knowledge are fundamental attributes of successful mechanical engineering professionals
- pass the Fundamentals of Engineering examination.

Bachelor of Science in Mechanical Engineering Requirements

Graduation Requirements

Upon a student's admission to the Mechanical Engineering major, an engineering faculty member will serve as the student's academic advisor to work with the student in planning a program to complete degree requirements. Students are encouraged to meet with their advisor throughout the semester and are required to meet with their advisor prior to registering for the next semester.

To graduate with a Bachelor of Science degree in Mechanical Engineering, the student must:

- earn a grade of "C" or better in all courses used to meet degree requirements,
- complete the general baccalaureate degree requirements for the university,
- complete the Mechanical Engineering curriculum requirements specified in the following sections,
- pass the National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering examination.

The NCEES Fundamentals of Engineering (FE) examination is offered twice each year, in April and October, and may be taken more than once. Students expecting to complete their course work for an engineering degree in May or August should take the FE exam in October of the preceding year. Those expecting to complete their course work in December should take the exam the preceding April. Detailed information about the FE exam content, exam schedule, registration for the exam, and review sessions is available through the Office of the Dean of Engineering and Computer Science.

Mechanical Engineering Completion Curriculum

Students who have earned the Texas Associate of Science in Engineering Science degree from an ASAC/ABET accredited program at a participating community college, with an overall GPA of at least 2.50/4.00 and with no grade lower than "C," are eligible to pursue the Mechanical Engineering Completion Program to earn a Bachelor of Science in Mechanical Engineering. If you are eligible, this program will likely enable you to complete the degree in the shortest time. Before beginning study, however, you should discuss your eligibility with an engineering advisor.

Total Semester Credit Hours = 128

Course Requirements

Freshman Year

First Semester (16 hrs.)

CHEM 1311: General Chemistry
CHEM 1111: Chemistry I Lab
ENGL 1301: Grammar & Composition I
MATH 2413: Calculus I
Humanities Elective

ENGR 1201: Introduction to Engineering

Second Semester (16 hrs.)

PHYS 2325: University Physics I
PHYS 2125: Physics I Lab
ENGL 1302: Grammar & Composition II
MATH 2414: Calculus II
MENG 1201: Mechanical Engineering I
Visual and Performing Arts

Sophomore Year

First Semester (15 hrs.)

PHYS 2326: University Physics II
PHYS 2126: University Physics II Lab
MATH 3404: Multivariate Calculus
MENG 2201: Mechanical Engineering II
ENGR 2301: Statics (or CENG 2301)
MATH 3203: Matrix Methods (or MATH 3315)

Second Semester (15 hrs.)

MATH 3305: Differential Equations
EENG 3304: Linear Circuits
MENG 3319 Materials Science and Manufacturing
ECON 2302: Microeconomics (or ECON 2301)
MENG 2302: Dynamics (or CENG 2302)

Junior Year

First Semester (17 hrs.)

MENG 3301: Thermodynamics I
MENG 3306: Mechanics of Materials
MENG 3310: Fluid Mechanics
MENG 3303: Dynamics of Machinery
MENG 3210: Mechanical Engineering Lab I
MATH 3351: Probability and Statistics for Engineers.

Second Semester (17 hrs.)

MENG 3304: Thermodynamics II
MENG 3316: Heat Transfer
MENG 3309: Mechanical Systems Design
MENG 3211: Mechanical Engineering Lab II
ENGR 3314: Design Methodology
POLS 2306: Introductory Texas Politics

Senior Year

First Semester (17 hrs.)

MENG 4115: Senior Design I
MENG 4311: Electro-Mechanical Systems. Design
MENG 4313: Thermal/Fluid Design
HIST 1301: United States History I
POLS 2305: Introductory American Government
() Technical Elective

ENGR 4109: Senior Seminar

Second Semester (15 hrs.)

MENG 4315: Senior Design II
() Technical Elective
HIST 1302: United States History II
ENGL ___ World/European Literature.
() Technical Elective

A list of courses from which the student may select appropriate electives should be obtained from the department chair.

ENGINEERING AND COMPUTER SCIENCE COURSE DESCRIPTIONS

PLEASE NOTE: Most courses have fees attached, and those fees are subject to change. Please consult the UT Tyler web page for current fees.

Prefix and number in parentheses following the U.T. Tyler course title is the Texas Common Course Number designation.

Civil Engineering (CENG)

CENG 2301: Statics [TCCN: ENGR 2301]

Analysis of forces, moments, and couples acting on stationary engineering structures; equilibrium in two and three dimensions to include vectors; free-body diagrams; friction; centroids; centers of gravity; moments of inertia.

Prerequisites: PHYS 2325; **Co-requisite:** MATH 2414.

CENG 2302: Dynamics [TCCN: ENGR 2302]

Analysis of kinematics and kinetics and particles, systems of particles, and rigid bodies. **Prerequisite:** CENG 2301 and MATH 2414

CENG 2336: Geomatics

Introduction to surveying including distance measurement, corrections, leveling, measurement of angles and directions, traverse adjustment, volumes, cross section and area computations, horizontal and vertical curves, and error theory. Methods and technologies such as Excel, MathCAD, global positioning system and geographic information systems used to manage data in surveying. Emphasis on the use of total stations. **Prerequisite:** ENGR 1304

CENG 3306: Mechanics of Materials

Stress and strain, uniaxially loaded members; normal and shear stresses; torsion; flexural behavior; beam deflections; buckling of columns; pressure vessels; combined loading; failure criteria; shear/moment diagrams. **Prerequisite:** CENG 2301.

CENG 3310: Fluid Mechanics

Basic concepts of a fluid and the fundamentals/applications of idea/real flow. Topics: fluid statics, conservation principles, Bernoulli, pipe flow, pump/turbines, momentum, drag, similitude, open channel flow. **Prerequisites:** MENG 2302 and MATH 3305.

CENG 3325: Structural Analysis

Introduction to structural requirements, structural systems and specification of loads; analysis of statically determinate and indeterminate structures using equations of equilibrium, moment distribution, and energy methods; determination of design forces in the structural components including shearing force and bending moment; and brief introduction to the direct stiffness method. Three hours of lecture per week. **Prerequisite:** CENG 3306 or MENG 3306.

CENG 3336: Soil Mechanics and Foundation Design

Mechanical and physical properties of soils and their relation to soil action in problems of engineering, such as classification, permeability, shearing strength, and consolidation. Introduction to foundation design. Two hours of lecture and three hours of laboratory per week. **Prerequisite:** CENG 3306 or MENG 3306

CENG 3341: Public Domain - Texas Disposition of Public Lands of the State of Texas

This course investigates the basis of all land mineral development in the State of Texas.

CENG 3342: Applications of Photogrammetry

Applications of photogrammetry and air-photo interpretation in land surveying; cameras and photographs; orthophotos; planning mapping projects; stereoscopy and parallax; remote sensing techniques; air-photo interpretation of land use, cultural features, drainage patterns as applied to land surveying.

CENG 3351: Transportation Engineering Systems

Introduction to analysis and design of fundamental transportation system components, such as highways and traffic systems, individual vehicle motion, basic elements of geometric design, pavement design, vehicle flow and elementary traffic flow relations, capacity analysis, and traffic forecasting. Three hours of lecture per week. **Prerequisite:** MATH 3351 or ENGR 3301.

CENG 3361: Applied Engineering Hydrology and Hydraulic Design

Concepts covered are precipitation, hydrograph analysis, evapotranspiration, runoff, flood routing, open channel flow and design of stable channels, and hydraulic design. A design project involving hydrologic system analysis and design is assigned. Two hours of lecture and three hours of lab per week.

Prerequisite: CENG 3310 or MENG 3310.

CENG 3371: Introduction to Environmental Engineering

Concepts covered are essentials of environmental engineering and the process materials and energy balance as a tool for understanding environmental processes and solving environmental engineering problems. Environmental engineering concepts must include the concept of sustainability and the process of waste minimization, conservation and resource management in a global community. **Prerequisite:** CHEM 1311/CHEM 1111

CENG 3434: Civil Engineering Materials, Codes, and Specifications

Physical properties of typical construction materials will be investigated including steel, Portland cement concrete, wood, and bituminous asphalt; classification of aggregates, concrete mix design, and field control and adjustment. Application of model building codes to commercial and industrial structures; nonstructural and structural plan review; fire codes, inspection techniques. **Prerequisites:** CENG 2353 and CENG 3306 or MENG 3306.

CENG 4115: Senior Design I

Problem definition, project planning and scheduling, follow-up and control techniques. Results in presentation and plan for senior capstone design project. Multidisciplinary teams will work on design problems defined in cooperation with representatives from engineering firms, industry, or government organizations when possible. Three hours of Design Studio Lab per week. **Prerequisite:** Department Chair approval.

CENG 4199-4399: Civil Engineering Independent Study

Civil Engineers are required to be creative, life-long learners who understand contemporary issues and how they influence civil engineering projects. An independent study course will require the CE students to tackle a real problem, teach themselves skills beyond what has been covered in the curriculum while studying and considering the current contemporary issues influencing possible solutions. **Prerequisite:** Department Chair approval

CENG 4311: Reinforced Concrete Design

Design of reinforced concrete structural members; design of beams, one-way slabs, columns, and footings, with reference to the most recent ACI 318 design code and other supporting design documents. Development length provisions, design for serviceability, use of high-strength materials, composite construction. Introduction to precast/prestressed concrete. Three hours of lecture per week. **Prerequisites:** CENG 3325 and CENG 3434

CENG 4314: Advanced Structural Analysis

This course builds upon the material covered in CENG 3325 to develop a better understanding of structural behavior. Matrix analysis methods, including an introduction to finite elements, are developed as the basis for modern, computer-based structural analysis. These and other advanced analytical techniques are used to analyze and design trusses, beams, and frames. Course-work involves extensive use of the computer as an analytical tool. **Prerequisite:** CENG 3325. Co-listed with CENG 5314.

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CENG 4315: Senior Design II

The senior design project, which was proposed and approved in CENG 4115, continues to completion. This capstone design project builds on previous course work, includes all stages of the design process, and takes into account a variety of realistic constraints such as manufacturability and sustainability; economic factors; and environmental, safety and reliability issues. Preparation and presentation of final oral and written reports are required. Nine hours of Design Studio per week. **Prerequisite:** CENG 4115.

CENG 4317: Structural Steel Design

Design of structural elements in steel buildings, in particular the design of steel tension members, beams, columns, beam columns, and connections. Composite members and plate girders. Emphasis on the AISC-LRFD Specifications for steel design, with comparisons made where appropriate to ASD Specifications. Three hours of lecture per week. **Prerequisite:** CENG 3325.

CENG 4318: Design of Timber Structures

Introduction to the design of structural elements for timber buildings including tension and compression members, timber trusses, plywood decking, beam-columns, bolted and nailed connections, diaphragms, shear walls, and columns; design of timber elements by allowable stress and strength design methods; introduction to construction techniques, materials and terminology used in timber design. **Prerequisite:** CENG 3325. Co-listed with CENG 5318.

CENG 4322: Structural Masonry Design

Introduction to the design of structural elements for masonry buildings including lintels, walls, shear walls, columns, pilasters, and retaining walls; design of reinforced elements of concrete or clay masonry by allowable stress and strength design methods; introduction to construction techniques, materials and terminology used in masonry. **Prerequisite:** CENG 3325. Co-listed with CENG 5322.

CENG 4328: Structural Fire Behavior

Course provides an overview of fire effects on building structures. Topics covered include: fire chemistry, behavior and development, heat transfer terminology and processes, fire modeling, heat transfer modeling, material properties at elevated temperatures, effects of insulation, and effects of fire on structures. The Eurocode approach to structural design for fire will be introduced. **Prerequisites:** CENG 3325, CHEM 1311/CHEM 1111 and CENG 4317 or CENG 4311. Co-listed with CENG 5328.

CENG 4330: Water Resources Planning and Management

The course provides students with the principles of analysis, decision-making, and problem solving required in managing water resources under relentless pressure from development, pollution, and climate change. It focuses on local and global problems, integrated water resources management, the water industry, water law, water security, natural systems protection, water use efficiency, and management tools. **Prerequisite:** CENG 3361. Co-listed with CENG 5330.

CENG 4339: Civil Engineering Construction Management

Introduction to construction planning and management to include planning, programming, design, bid, and construction, how commercial construction projects are planned and executed, project scope definition, construction estimating, scheduling, and management controls during construction, and engineering economics. Three hours of lecture. **Prerequisite:** ECON 2301 or ECON 2302

CENG 4341: Civil Engineers and Leadership, Public Policy, Business Practices, and Asset Management

Civil Engineers are required to be leaders of their communities as well as their firms. Leadership, public policy, business practices, and asset management are critical areas that a civil engineer must have skills in, albeit the skills that allow entry at the engineer in training level. This course will tie these required skills to tasks Civil Engineers are required to perform. Three lectures per week. **Prerequisite:** Department Chair approval.

CENG 4342: Applied Geodesy

Applications of precise surveying technology in boundary location and surveying. Topics include: photogrammetry, GPS, GIS, remote sensing, coordinate systems, and map projections.

CENG 4343: Legal Principles in Surveying and Mapping

Boundary law including topics on conflict and litigation, courtroom presentation, determination of boundaries, evidence and procedures and special boundaries such as gradient and riparian.

CENG 4350: Topics in Civil Engineering

Advanced studies in topics not covered fully in regular undergraduate courses. May be repeated as content changes. Department Chair approval.

CENG 4351: Traffic Engineering: Operations and Control

Introduction to traffic systems, flow characteristics, data collection, control of urban streets and freeways, operations of arterial streets, freeway, and networks, optimal signal timing design, capacity analysis using theoretical and experimental techniques, especially computer simulation. Introduction to current analysis and optimization tools for control device design/implementation. Two hours lecture and 3 hour lab. **Prerequisites:** CENG 3351, CENG 2336.

CENG 4354: Urban Transportation Planning

Overview of the four-step urban transportation planning process, estimation of the travel demand models of trip generation, trip distribution, mode choice, and traffic assignment, and the forecasting of travel patterns using the travel demand models, state-of-the-art approaches and transportation network analysis for evaluation of system alternatives. **Prerequisite:** CENG 3351. Co-listed with CENG 5354.

CENG 4355: Transportation Systems Management and Operations

Foundations of the transportation system management and operations, including arterial street systems and freeway systems. Principles of simulation of urban streets operations and traffic signal control and optimization, and freeway operations analysis and simulation using commercially available packages. **Prerequisite:** CENG 4351. Co-listed with CENG 5355.

CENG 4370: Undergraduate Internship

Program provides for a learning experience in an engineering environment appropriate to the undergraduate level of work with a minimum of 150 hours of work. A written report of the experience and presentation is required. Department Chair approval.

CENG 4371: Environmental Engineering Design

Introduction to environmental engineering design to include techniques to address radiological hazards, human health protection, and limit the impact of traditional pollutants in the aquatic environments and releases into the atmosphere. Design of solid-waste management systems, basic air pollution control systems, and basic water and waste water treatment systems. **Prerequisite:** CENG 3371.

CENG 4381: Foundation Design

Relationship of local geology to soil formations, groundwater, planning of site investigation, sampling procedures, and determination of soil parameters. Analysis and design of shallow foundations, deep foundations, and earth retaining structures. Three hours of lecture per week. **Prerequisite:** CENG 3336.

CENG 4395: Undergraduate Research

Directed engineering research involving a problem of mutual interest to the student and the faculty member. An oral presentation and a written report of the research results are required. Department Chair approval.

CENG 4412: Reinforced Concrete and Steel Design

Design of reinforced concrete members: beams, one-way slabs, and columns using the ACI 318 design code. Design of steel members: tension members, beams, columns, and connections using the AISC LRFD code.

Computer Science (COSC)

COSC 1301: Computers in Society [TCCN: COSC 1301]

A general introduction to computers and their applications with emphasis on breadth of coverage. Topics include computer system components, terminology, and use of productivity tools such as word processing, spreadsheets, database, and Internet usage. Case study analysis of the social impacts of computerization and networking. Topics include computer ethics,

crime, privacy, security, reliability, and vulnerability. Not for CS or CIS degree credit.

COSC 1307: Introduction to Information Systems Software [TCCN: BCIS 1305]

Students in this course will develop a proficiency in the use of the common applications of a productivity suite like Microsoft Office. Applications covered will include Windows, word-processing, spreadsheets, database, presentations, e-mail and the HTML editors. No prior computer experience is required.

COSC 1308: Introduction to Visual BASIC

This course introduces the fundamental concepts of programming including data types, control structures, subprograms, arrays, and simple graphical user interfaces using the Visual BASIC language. **Note:** Cannot be applied toward a CS or CIS degree.

COSC 1310: Advanced Information Systems Software

This course enables students to improve their skills as knowledge workers. The emphasis is on personal productivity concepts through use of advanced features in computer software such as spreadsheets, databases, and presentation graphics. Prior knowledge of productivity software (i.e. databases, spreadsheets, and word processors) is strongly recommended.

COSC 1436: Programming Fundamentals

Fundamental concepts of procedural programming including data types, control structures, functions, arrays, files, and the mechanics of running, testing, and debugging as well as an introduction to the historical and social context of computing and an overview of computer science as a discipline. Includes laboratory sessions dealing with the fundamental concepts of procedural programming.

COSC 1437: The Object-Oriented Paradigm

Introduces the concepts of object-oriented programming to students with a background in the procedural paradigm. Topics covered include a review of control structures and data types, the object-oriented programming paradigm, object-oriented design, an overview of programming language principles, simple analysis of algorithms, basic searching and sorting techniques, and an introduction to software engineering issues. Includes laboratory sessions dealing with the fundamental concepts of object-oriented programming. **Prerequisite:** COSC 1436

COSC 2315: Computer Organization

Introduces the concept of computers and information systems by presenting the process of computation as a hierarchy of virtual machines, beginning with the hardware and moving upward through various levels of increasingly sophisticated software. **Prerequisites:** COSC 1336/1136, MATH 1314, 1324 or 2330.

COSC 2325: Foundations of Computer Information Systems

This course provides a thorough introduction to graphical user interface programming using visual programming tools. After this course students will be proficient in developing Windows programs. **Prerequisites:** COSC 1336/1136.

COSC 2336: Data Structures and Algorithms [TCCN: COSC 2336]

Topics include recursion, the underlying philosophy of object-oriented programming, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), secure programming techniques, the basics of algorithmic analysis, and an introduction to the principles of language translation. **Prerequisites:** MATH 2330, COSC 1337/1137.

COSC 3191, 3192, 3193: Computer Science Co-Op I, II, III

Once a student has been approved for the co-op program, students can sign up for the appropriate co-op course (3191 for the first semester, 3192 for the second semester, 3193 for the third semester) with the approval of the chair of computer science. A student will hold a full-time computer or information technology position for the entire semester of the co-op. During the semester of a co-op course a student will submit biweekly status reports and, in collaboration with the employer, submit at the end of the semester a performance appraisal/evaluation by the employer. Graded on a credit/no credit basis. **Prerequisites:** COSC 1336/1136, COSC 1337/1137, and permission of the chair of the Department of Computer Science.

COSC 3215: Social and Professional Issues in Computing

Introduction to the social and professional issues that arise in the context of computing. **Prerequisite:** COSC 1437

COSC 3310: Internet and Web Applications

This course includes a detailed coverage of Internet protocols, Web site management, Web page design and e-commerce. The course examines the linkage of organizational strategy and electronic methods of delivering products and services in inter-organizational, national, and global environments.

Prerequisite: COSC 2325.

COSC 3325: Algorithm Design and Analysis

Introduction to formal techniques used to support the design and analysis of algorithms, focusing on both the underlying mathematical theory and practical considerations of efficiency. Topics include asymptotic complexity bounds, techniques of analysis, algorithmic strategies, and an introduction to automata theory and its application to language translation. **Prerequisite:** COSC 2336.

COSC 3331: E-Commerce Programming

The course deals with the technical aspects of e-commerce. Students will learn to design, build, and maintain a complete e-commerce website. Topics include: e-commerce modeling, designing, and implementing a website that meets user requirements, maintaining and setting web servers, multi-tiered web architecture, database servers, accessing remote databases, shopping cart fundamentals, commerce server, advertising on the web, e-cash and electronic payments, and Internet Security and encryption. Students will build their own projects. **Prerequisite:** COSC 3310.

COSC 3355: Operating Systems

Fundamentals of operating systems design and implementation. Topics include an overview of the components of an operating system, mutual exclusion and synchronization, implementation of processes, scheduling algorithms, memory management, operating system security, and file systems. **Prerequisites:** COSC 3345/3145.

COSC 3365: Programming with Data, File and Object Structures

This course covers computer concepts, algorithm development, programming and program validation. It includes a special emphasis on the design and application of data and file structures. **Prerequisite:** COSC 2325.

COSC 3375: Analysis and Logical Design

This course introduces the systems development process. Topics covered include structured and object-oriented analysis and design, use of modeling tools and the methodological life cycle and project management. It includes the study of interpersonal skill development with clients, users, team members, and others associated with the development, operation and maintenance of systems. **Prerequisite:** COSC 2325.

COSC 3385: Database Design

This course covers information systems design and implementation within a database management system environment. Students will design and construct a system using database software to implement the logical design. **Prerequisites:** COSC 3365 and COSC 3375.

COSC 3445: Computer Architecture

Introduces students to the organization and architecture of computer systems, beginning with the standard von Neumann model and moving forward to more recent architectural concepts. Includes laboratory experiments in logic circuits (such as adders, multiplexers, arithmetic logic units, counters, shift registers, and memory units) and computer subsystems (such as buses, central processing units, and input-output systems). **Prerequisites:** COSC 2315, COSC 2336

COSC 4309: Design of Modern Information Systems

Introduction to prototyping and computer-aided software engineering. This course will provide a detailed study of advanced topics in information systems software including system libraries, database design, and distributed software. A complete information system will be developed from various software components. **Prerequisites:** COSC 3310, COSC 1337/1137, COSC 3385.

COSC 4315: Information and Knowledge Management

The investigation of how information is a unifying theme within a range of issues in computer science, including database systems, artificial intelligence,

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human-computer interaction, multimedia systems, and data communication.
Prerequisite: COSC 2336.

COSC 4325: Data Communications and Computer Networks
Study of problems and limitations associated with interconnecting computers by communication networks. OSI reference model, architecture of circuits, message and packet switching networks, network topology, routing, flow control, capacity assignments, protocols, coding and multiplexing. **Prerequisite:** COSC 2315.

COSC 4327: UNIX Shell Programming
Introduction to programming in the UNIX Shell; directory structure and file manipulation, built-in functions, control structures, utilities, and sublanguages. **Prerequisite:** COSC 2336.

COSC 4335: Artificial Intelligence
Survey of current artificial intelligence technologies: game playing, theorem proving, pattern recognition, searching algorithms, knowledge representation, neural networks, fuzzy systems, and heuristic programming. **Prerequisite:** COSC 2336.

COSC 4336: Software Development
Provides an intensive, implementation-oriented introduction to the software-development techniques used to create medium-scale interactive applications, focusing on the use of large object-oriented libraries to create well-designed graphical user interfaces. Topics include event-driven programming, computer graphics, human-computer interaction (HCI), and graphical user interfaces. **Prerequisite:** COSC 2336.

COSC 4340: Comparative Study of Programming Languages
Introduction, analysis, and evaluation of the important concepts found in a variety of programming language paradigms; formalisms useful in specifying language syntax and semantics; programming language paradigms including algorithmic, functional, logic, object-oriented, visual, etc. **Prerequisite:** COSC 2336.

COSC 4345: Computer Graphics
Graphics hardware, software, and applications. Data structures for graphics, graphic languages, computer-aided design, and three-dimensional graphics. **Prerequisite:** COSC 2336.

COSC 4352: Data Mining
The course deals with knowledge discovery from databases (KDD). Topics covered in the course include data warehouse, model fitting, classification, prediction, clustering, market basket analysis, extracting knowledge from data models, and data visualization techniques. **Prerequisite:** COSC 2336.

COSC 4356: Computer Vision
The course deals with extracting meaningful descriptions of physical objects from images. Topics covered include computer vision fundamentals, preprocessing techniques, feature extraction, supervised classifiers, unsupervised classifiers, and computer vision applications. **Prerequisite:** COSC 2336.

COSC 4360: Net-Centric Computing
Introduces the structure, implementation, and theoretical underpinnings of computer networking and the applications that have been enabled by that technology. **Prerequisite:** COSC 3355.

COSC 4361: Computer Security Management
This course will cover the techniques used to secure and manage computers, computer networks and enterprise computer systems. Topics covered will include security policies, computer network management, and disaster recovery. Special emphasis will be given to designing, deploying and managing complete security systems. **Prerequisite:** COSC 2315.

COSC 4362: Computer Security
This course will give a complete coverage of cryptography, network protocols and their use in computer security. This will include an overview of symmetric and asymmetric cryptographic algorithms and their use for authentication, e-mail and e-commerce. Network security protocols covered will include Kerberos, SET and SMIME. **Prerequisites:** COSC 2336, and COSC 4360 or COSC 4325.

COSC 4370: Undergraduate Internship Program
An 8- to 16-week program providing a new learning experience in a computer or information technology environment. A written report describing the activities and accomplishments of the student during the internship is required at the conclusion of the internship period. May be repeated once for credit. A maximum of three credit hours may be applied toward the undergraduate degree. **CR/NC only. Prerequisites:** COSC 1337/1137.

COSC 4375: Information Systems Design Project
An integrated perspective of the problems in today's information systems environment, concentration on contemporary design, methodologies, and considerations unique to users of computers and information systems. **Prerequisites:** GENB 3301 or COSC 3315, COSC 1337/1137, COSC 3385.

COSC 4377: Compiler Techniques
Characteristics of the compiling process, syntax directed compiling, symbol table construction and searching, top down and bottom up methods, formal grammars, and a formalization of syntax. **Prerequisites:** COSC 2315 and COSC 2336.

COSC 4381: Seminar in Computer Science
This course is designed to study current trends in computer science. **Prerequisite:** Junior or Senior classification in computer science or computer information systems.

COSC 4385: Database Management Concepts
Database system architecture; file structures for databases, including indexing, hashing, and B+ trees, the relational model and algebra; the SQL database language; alternative database systems (network, hierarchical, object-oriented, object-relational, logical implementation, temporal, etc.), conceptual data modeling including Entity-Relationship data modeling; advanced data modeling concepts; functional dependencies, basic normalization, and database security management. **Prerequisite:** COSC 2336.

COSC 4387: Computer Performance Evaluation
Discrete and continuous simulation of dynamic systems. Topics include: simulation of probabilistic systems; mathematical models of real systems; system classifications; random number generators; simulation languages; single queue and queue networks. Workloads, benchmarks, performance measurement techniques, and case studies will be used in system capacity planning, hardware selection and upgrade, and performance tuning. **Prerequisites:** COSC 2336, COSC 3345/3145.

COSC 4199 - 4399: Independent Study
Independent study in specific areas of computer science not covered by organized undergraduate courses. A maximum of six credit hours for independent study courses may be applied toward an undergraduate degree. **Prerequisite:** Consent of department chair.

COSC 4395: Capstone Project
This course offers students the opportunity to integrate their knowledge of the undergraduate computer science curriculum by implementing a significant software system as part of a programming team. **Prerequisites:** COSC 3315, COSC 3325, COSC 4315, COSC 4336, COSC 4360, COSC 4385.

Construction Management (CMGT)

CMGT 2302: Introduction to Construction Management
Characteristics of the construction industry; types of construction companies; contracts; people involved in a project, their responsibilities and interrelationships; ethical conduct, evolution of a project; interpreting working drawings; construction bonds; contract documents.

CMGT 2303: Construction Materials and Methods
Materials, methods and sequences of the construction process; emphasis on design, specification, purchase and use of concrete, steel, masonry and wood. An understanding of the uses of construction materials.

CMGT 3310: Intro to Construction Structural Systems
The description of forces, moments, and couples acting on stationary structures, equilibrium in 2/3-D; free-body diagrams; centroids and moments

of inertia; stress and strain; uniaxially loaded members; Torsion. **Prerequisite:** MATH 1316 and PHYS 1301/PHYS 1101

CMGT 3311: Construction Estimating

Systems approach to determining required quantities of construction materials; quantification of various types of foundation systems, structural systems and building envelope systems; excerpts of contract documents from a variety of different building projects.

CMGT 3312: Advanced Estimating

Quantification and pricing of direct field costs and general condition costs from construction documents; the preparation of complete lump sum bid package ready for project execution; utilization of complete set of contract documents required. **Prerequisite:** CMGT 3311

CMGT 3315: Construction Design Theory

The principles flexure and shear, deflections, buckling are used to consider design/build construction including building systems, building codes, criteria and selection, economic feasibility, value engineering, customer control, and value-added construction services as well as an introduction to Building Information Modeling BIM. **Prerequisite:** CMGT 3310

CMGT 3320: Soils and Foundations in Construction

Introduction to soil types found on construction projects; properties and classification of soil, embankment control, dewatering, excavation supports, foundations, piers, and pilings. **Prerequisite:** CMGT 3310

CMGT 3348: Construction Safety

Examines the application of OSHA 29CFR 1926 for the construction industry along with applicable state and federal construction safety laws pertaining to construction, altercations, or repair work at construction site.

CMGT 3365: Mechanical and Electrical Systems

Mechanical and electrical systems with a major emphasis on the estimate and installation, design and control of the electrical, heating, ventilation and cooling system, site planning and acoustical treatments. **Prerequisites:** PHYS 1301/PHYS 1101

CMGT 4313: Applied Construction Structural Systems

Structural principles applied to the design and construction of architectural reinforced concrete structures, reinforced masonry structures, and other selected topics. Students build projects utilizing a Service Learning Project. **Prerequisite:** CMGT 3315

CMGT 4315: Construction Systems

Application of statics and strength of materials for construction of architectural timber and steel buildings with computer analysis and design of specific topics. **Prerequisite:** CMGT 3315

CMGT 4330: Construction Equipment and Methods

Principles of managing construction equipment including: selection, operation and safety; development of skills necessary to choose an equipment mix that yields maximum productivity and best value. **Prerequisite:** CMGT 3311

CMGT 4331: Construction Scheduling

An introduction to construction project management scheduling covering concepts of project selection and scheduling, utilizing the estimate to predict the schedule, scheduling subcontracting, cost controls, project documentation, construction bonds, insurance, payments and the elements of close out; development of professional communication skills through student prepared multi-media presentations. **Prerequisite:** CMGT 3311

CMGT 4335: Construction Law and Ethics

Introduction to basic contract and tort issues and their application in the construction industry; delineation of the various types of contracts and remedies available to parties involved in a construction project; additional related topics including bidding, delays, mechanics liens, site conditions, warranties and the Uniform Commercial Code as it relates to the construction industry. **Prerequisite:** GENB 3301

CMGT 4375: Construction Administration and Economics

Project planning, cost controls, and construction related financial documents including: schedule of values, labor and operations cost reports, income statements, balance sheets and construction budgets; emphasis on the

development of techniques required to ethically and effectively monitor the financial aspects of a construction project. **Prerequisite:** FINA 3311

CMGT 4385: Commercial Construction

A senior course for students preparing to enter the commercial construction sector; project management of commercial construction projects, including: aspects of design, bidding/estimating. Presentation, value engineering, contracts/negotiation, subcontractor relations, cost controls, management during construction, close out, and post-construction requirements. **Prerequisite:** CMGT 3311

CMGT 4395: Construction Management Capstone

A senior capstone course with a significant Service Learning Project for students preparing to enter all sectors of the construction industry; integration of all construction management principles learned are put to use in the delivery and management of a cohesive community service project. **Prerequisite:** Department Chair approval

Electrical Engineering (EENG)

EENG 1301: Engineering the Future

An introduction to the electrical engineering profession, disciplines, and careers. Covers basic principles of electric circuits, power systems, electronics, communications, and computer engineering. Also, familiarization with electrical engineering tools, software packages and equipment. Team design project, integrated weekly lab. Two hours of lecture and three hours laboratory each week.

EENG 2101: MATLAB for Engineers

An introduction to engineering problem solving; Matlab environment; Matlab functions; matrix computations; graphing and plotting data; numerical techniques. One hour of lecture in integrated lab.

EENG 3104: Linear Circuits Analysis I Lab

Introduction to principles and operation of basic laboratory equipment; engineering report preparation; design and implementation of experiments based on DC and AC circuit theory, network theorems, time and frequency domain circuit analysis. One three-hour laboratory per week. **Prerequisite or Co-requisite:** EENG 3304.

EENG 3106: Electronics Circuits Analysis I Lab

Circuit applications of operational amplifiers; circuit effects of non-ideal characteristics of operational amplifiers; diode characteristics; diode circuits and applications; transistor biasing (bipolar junction transistors and field effect transistors); low frequency transistor amplifier design. One three-hour laboratory per week. **Prerequisite or Co-requisite:** EENG 3306.

EENG 3302: Digital Systems

Boolean algebra, logic gates; number systems and codes; combinational logic; sequential logic; design of logic circuits; analog-digital interface; memory devices. Two hours of lecture and one three-hour lab per week.

EENG 3303: Electromagnetic Fields

Vector analysis; static electric fields; steady electric currents; static magnetic fields; time varying fields and Maxwell's equations; plane electromagnetic waves; transmission lines; introduction to waveguides; introduction to antennas. Three hours of lectures per week. **Prerequisites:** MATH 3404, MATH 3305, and PHYS 2326/2126.

EENG 3304: Linear Circuits Analysis I

Basic circuit elements (resistance; inductance, mutual inductance, capacitance, independent and controlled voltage and current sources). Topology of electrical networks; Kirchhoff's laws; node and mesh analysis; dc analysis; introduction to operational amplifiers; complex numbers; sinusoidal steady-state ac circuit analysis; first and second-order circuits; transient analysis of first-order circuits. Three hours of lecture per week. **Prerequisite:** EENG 1301. Pre-or Co-requisites: MATH 3305 and PHYS 2326/2126.

EENG 3305: Linear Circuits Analysis II

Laplace transform and its application to circuit analysis and design; generalized transient response; convolution in time and frequency domain; transfer functions; frequency response and Bode plots; frequency selective circuits -

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passive and active filter design; Fourier series; Fourier transform; two-port networks; balanced 3-phase ac circuits. Three hours of lecture per week.

Prerequisites: EENG 3304, MATH 3305, MATH 3404, and COSC 1436.

EENG 3306: Electronic Circuit Analysis I

Generalized amplifier models; two-port networks applications of operational amplifiers; non-ideal characteristics of operational amplifiers; electrical characteristics, small-signal models and applications of diodes; bipolar junction transistors, and FETS; amplifier analysis and design; limitations of small-signal models. **Prerequisites:** EENG 3304, and CHEM 1311/1111.

EENG 3307: Microprocessors

Microprocessor architecture, programming and interfacing. Introduction to assembly language programming; microcomputers, microcontrollers, instruction set, chip interfacing, addressing modes, interrupts, input/output, communication. Three hours of lecture per week with integrated laboratory sessions. **Prerequisites:** EENG 3302 and COSC 1436.

EENG 4109: Electronic Circuit Analysis II Lab

Structure of a simple operational amplifier; active filters; feedback concepts and oscillators; small-signal analysis; introduction to nonlinear electronic circuits; transfer characteristics of CMOS digital circuits; introductory LabVIEW programming. One three-hour lab per week. **Prerequisite or Co-requisite:** EENG 4309.

EENG 4110: Electric Power Systems Lab

Electric power circuit measurements; transformers; synchronous, induction, and DC machine measurements, performance, and analysis. One three-hour laboratory per week. **Prerequisite or Co-requisite:** EENG 4310.

EENG 4115: Senior Design I

The goal establishment, planning and proposal phases of a capstone design project required of all seniors in Electrical Engineering. Includes the selection of a suitable project, an analysis of the design problem, the planning required to reach the desired goal, and the preparation of project preliminary design document defined in cooperation with representatives from industry when possible. Three hours of Design Studio Lab per week. **Prerequisites:** ENGR 3314, EENG 4309, and EENG 4109.

EENG 4199-4399: Independent Study

Independent study in a specific advanced area of engineering not covered by organized courses. May be repeated as content changes. A maximum of six (6) hours may be used for undergraduate credit on the degree plan if topics vary. **Prerequisite:** Consent of Instructor and Department Chair

EENG 4302: Instrumentation and Measurement Systems

An introduction to instrumentation and measurement systems. Generalized instrument characteristics, signal condition, and sensors for measurement of various physical quantities. Three hours of lecture per week. **Prerequisite or Co-requisite:** EENG 4309.

EENG 4308: Automatic Control Systems

Introduction to automatic control systems; mathematical models of physical systems; block diagrams and signal flow graphs; transient and steady state responses; PID controllers; stability of linear feedback systems; root-locus and Routh's criteria; frequency response methods; polar, Nyquist and Bode plots; stability margins; state-variable formulation. **Prerequisites:** EENG 2101 or MENG 2201 and MATH 3305.

EENG 4309: Electronic Circuits Analysis II

CMOS digital circuits; structure of operational amplifiers; feedback concepts; oscillators; small-signal analysis; load-line analysis; introduction to nonlinear electronic circuits. Three hours of lecture per week. **Prerequisites:** EENG 3305 and EENG 3306, 3106.

EENG 4310: Electric Power Systems

Magnetic circuits; principles of electromechanical energy conversion; transformers; induction motors; synchronous machines; direct current (DC) machines; fundamentals of power system modeling; introduction to power flow analysis. Three hours of lecture per week. **Prerequisites:** EENG 3303 and EENG 3305. **Prerequisite or Co-requisite:** MATH 3203

EENG 4311: Signals and Systems

Types of signals; types of systems; properties of systems; convolution; Fourier series, Fourier transforms; Laplace transforms; Difference equations; Z-transform; Discrete-time systems; applications and design concepts. Three hours of lecture per week. **Prerequisite:** EENG 2101 and EENG 3305.

EENG 4312: Communications Theory

Signals, systems, and analog modulation techniques; effects of noise in modulation systems, signal-to-noise ratio; digital data transmission; probability of error. Three hours of lecture per week. **Prerequisite:** EENG 4311.

Prerequisite or Co-requisite: MATH 3351.

EENG 4315: Senior Design II

The senior design project, which was begun in EENG 4115, continues to completion. This capstone design project builds on previous course work, includes all stages of the design process, and takes into account a variety of realistic constraints such as manufacturability and sustainability; economic factors; and environmental, safety, and reliability issues. Preparation and presentation of final oral and written reports are required. Nine hours of Design Studio Lab per week. **Prerequisite:** EENG 4115.

EENG 4316: Digital Control Systems

Sampling; Z-transform; stability; frequency response; root locus; state variables in discrete time; controllability; observability; state variable feedback. Extensive use of computer programs for homework and in a design project. Three hours of lecture per week. **Prerequisite:** ENGR 4308.

EENG 4317: Power Electronics Design and Applications

The use of solid state components in power systems; rectifying devices; diode circuits and rectifiers; controlled rectifier circuits; AC voltage controllers; thyristor commutation techniques; DC choppers; speed torque characteristics of motors and loads; starting, braking and transient analysis of electric motors; introduction to HVDC. Three hours of lecture per week. **Prerequisite:** EENG 4309. **Prerequisite or Co-requisite:** EENG 4310.

EENG 4318: Applied Electromagnetic Theory

Introduction to guided waves and to numerical techniques in electromagnetics; applications of Maxwell's equations and electromagnetic wave phenomena to radiation, design of antennas, transmission lines and wave guides. Three hours of lecture per week. **Prerequisite:** EENG 3303.

EENG 4319: Power Systems Analysis and Design

Transmission line modeling; transformer modeling; the per-unit system; generator modeling; power flow analysis; economic operation of power systems; power system stability; symmetrical components; fault analysis and sequence networks; power system protection. **Prerequisite:** EENG 4310.

EENG 4320: Computer Architecture and Design

Introduction to computer architecture, RISC, CISC and VLIW processors, data path, control, ALU; pipelining, memory, cache, I/O, digital logic, micro architecture, instruction sets, addressing modes; operating systems, virtual memory, processes, assembly language. **Prerequisite:** EENG 3307.

EENG 4325: Real Time Systems

Basic Real-Time Concepts; Computer Hardware; Languages Issues; Real-Time Kernels; Intertask Communication and Synchronization; Real-Time Memory Management; The Software Life Cycle; System Performance Analysis and Optimization; Reliability, Testing, and Fault Tolerance; Hardware/Software Integration; Integrated lab. **Prerequisite:** EENG 3307.

EENG 4330: Solid State Devices

Introduction to the operation and fabrication of solid state electronic devices; Principles describing charge transport in semiconductors, standard fabrication methods for diffusion, oxidation and lithography; Electrical models for diodes, bipolar junction and field effect transistors. **Prerequisite:** EENG 3303. **Prerequisite or co-requisite:** EENG 4309.

EENG 4331: VLSI Design

Design and fabrication of digital integrated circuits. CAD tools for the design, layout, and verification of VLSI circuits; fabrication of CMOS integrated circuits; computer modeling of submicron transistors; static and dynamic CMOS logic design; microprocessor datapath circuits and sub-system design

issues; testing and verification of integrated circuits. **Prerequisites:** EENG 3302 and EENG 3306.

EENG 4332: FPGA Design

Digital systems design with Field Programmable Gate Arrays (FPGAs); Design and synthesis of reconfigurable logic with high-level descriptor languages; Logic design using FPGAs; Architectural and systems design issues. **Prerequisites:** EENG 3307 and EENG 4309

EENG 4336: Introduction to Electromagnetic Compatibility (EMC)

Introduction to Electromagnetic Compatibility (EMC); EMC Requirements for Electronic Systems; Signal Spectra - The Relationship between the Time Domain and the Frequency Domain; Transmission Lines and Signal Integrity; Non-ideal Behavior of Components; conducted Emissions and Susceptibility; Radiated Emissions and Susceptibility; Crosstalk; Shielding; System Design for EMC. Three hours of lecture. **Prerequisites:** EENG 3303 and EENG 3306.

EENG 4339: CMOS Analog Integrated Circuits

CMOS device characteristics, fabrication, and modeling; CMOS analog subsystems (switches, current sources, and voltage references), amplifiers, and voltage comparators. **Prerequisites:** EENG 4309, EENG 4109

EENG 4350: Special Topics in Electrical Engineering

Advanced studies in electrical engineering in topics not fully covered in existing undergraduate courses. May be repeated as topics change. A maximum of nine (9) hours may be applied toward the undergraduate degree. **Prerequisites:** Consent of instructor

EENG 4370: Undergraduate Internship

An 8- to 16-week program providing for a learning experience in an engineering environment. A written report of the experience is required at the conclusion of the internship period. May be repeated once for credit. A maximum of three credit hours may be applied toward the undergraduate degree. **Prerequisite:** Consent of the department chair.

EENG 4395: Undergraduate Research

Directed research in electrical engineering involving a problem of mutual interest to the student and a faculty member. An oral presentation and a written report of the research results are required at the conclusion of the course. A maximum of 3 credit hours may be applied toward an undergraduate degree in electrical engineering. **Prerequisite:** Consent of the department chair.

Engineering (ENGR)

ENGR 1200: Engineering Methods

An introduction to the engineering profession, technical communication, and engineering design. Emphasis on writing laboratory reports, including data analysis, business correspondence, technical papers and a design report. Additional emphasis on presentation skills. Introduction to design methodology and team-based project activities. One hour of lecture and three laboratory hours per week.

ENGR 1201: Introduction to Engineering

An introduction to the engineering profession with emphasis on technical communication and team-based engineering design. One hour of lecture and three hours of laboratory each week. **Prerequisite:** MATH 1314 - College Algebra or equivalent academic preparation.

ENGR 1204: Engineering Graphics I

Intro to computer-aided drafting using CAD software to generate 2- and 3-dimensional drawings based on the conventions of eng graphical communication; to include spatial relationships, multi-view projections/sectioning, dimensioning, graphical presentation of data, and computer graphics.

ENGR 1304: Engineering Graphics I

Intro to computer-aided drafting using CAD software to generate 2- and 3-dimensional drawings based on the conventions of eng graphical communication; to include spatial relationships, multi-view projections/sectioning, dimensioning, graphical presentation of data, and computer graphics.

ENGR 2301: Engineering Mechanics: Statics

Forces, moments, and couples acting on stationary engineering structures; equilibrium in two and three dimensions; free-body diagrams; friction; centroids; centers of gravity; and moments of inertia. **Prerequisites:** PHYS 2325, PHYS 2125, MATH 2414

ENGR 2302: Engineering Mechanics: Dynamics

Motion of particles, rigid bodies, and systems of particles; Newton's Laws; work and energy relationships; principles of impulse and momentum; application of kinetics and kinematics to the solution of engineering problems. **Prerequisite:** ENGR 2301 - Engineering Mechanics: Statics

ENGR 3301: Probability and Statistics for Engineers

Fundamentals of probability and statistics with relevant engineering applications. Random variables, discrete and continuous probability distributions, statistical inference, parameter estimation, regression analysis, design of experiments, and model verification. Three hours of lecture per week. **Prerequisites:** MATH 2414.

ENGR 3191 - 3196: Engineering Co-Op I - VI

First (For ENGR 3191 and second, third, fourth, fifth, sixth for ENGR 3192-3196, respectively) engineering cooperative education work experience. Full-time engineering position for length of the academic term. Requirements include submission of educational objectives for the work term, biweekly status reports, and a final technical report. In collaboration with the employer, the student hosts a work site visit by the instructor and submits at the end of the work term a performance appraisal/evaluation by the employer. **Prerequisite:** Approval for participation in Engineering Cooperative Education. Graded on a credit/no credit basis.

ENGR 3314: Design Methodology in Engineering

An overview of the design activity in engineering. Topics include the product design process; project planning; quality function deployment; design specification; concept generation and selection; system and subsystem design. Also, an introduction to engineering economics and its application to the design process. Design team projects. Three hours of lecture per week. **Prerequisite:** Junior standing in Engineering.

ENGR 4109: Senior Seminar

Speakers from within the university and from outside organizations address professional ethics, organizations, and licensure, necessity for life-long learning, environmental and political constraints, engineering in a global context, social responsibilities, leadership, and the engineer's role in business and in society. Each student will develop a resume and professional development plan to follow after graduation. Each student will have an opportunity to develop a testing and study strategy for the Fundamentals of Engineering Exam and will have access to review materials and the opportunity to attend optional review sessions. One hour of lecture per week. **Prerequisite:** ENGR 3314 or senior standing with departmental approval.

ENGR 4306: Engineering Economics

Engineering decision making; cash flow equivalents, present worth analysis, rate of return, cost to benefits ratio, payback; effects of inflation, depreciation and tax rates; introduction to project management. Three hours of lecture per week. **Prerequisites:** MATH 2414, ECON 2301 or 2302.

ENGR 4310: Simulation and Optimization

System modeling; construction of computer simulations of complex systems; optimization techniques; linear programming. Three hours of lecture per week. **Prerequisites:** MATH 3404, MATH 3305, successful completion of a structured programming language course.

ENGR 4312: Transducer Design

Theory and design of sensors, transducers and signal conditioners for force, strain, temperature, displacement, flow, acceleration, optical and chemical phenomena measurements. Three hours of lecture per week with limited integrated laboratory sessions and a required student design project. **Prerequisite:** EENG 3304.

ENGR 4326: Numerical Methods in Engineering

A basic exploration of the numerical methods used in the solution and analysis of engineering problems. Focus will be given to linear systems, ordinary differential equations, and partial differential equations. Three hours of lecture

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per week. **Prerequisites:** MATH 3305, MATH 3203 or MATH 3315 and COSC 1336/1136.

ENGR 4199 - 4399: Independent Study

Independent study in a specific area of engineering not covered by an organized undergraduate course. A maximum of three credit hours may be applied toward the undergraduate degree. **Prerequisite:** Consent of the chair of the student's department.

Engineering and Computer Science (CECS)

CECS 1300 History of Modern Engineering and Computer Science

An exploration of the history of modern engineering and computer science and its impact in today's world. Students will analyze critical questions in the development of technology. They will develop an understanding of the design process and explore ethical concerns related to technological advances. Students will work individually as well as in teams, developing critical thinking, writing and verbal skills. **Prerequisites:** none.

Mechanical Engineering (MENG)

MENG 1201: Mechanical Engineering I

An introduction to CAD-based engineering design graphics, including spatial visualization, projection theory and parametric, feature-based, solid modeling techniques. Both skill development and project oriented laboratory sessions. Team based semester-long mechanical engineering design project. One hour of lecture and three hours of laboratory per week. **Prerequisite:** ENGR 1200.

MENG 2201: Mechanical Engineering II

An introduction to computer based problem solving in mechanical engineering. Excel, Mathcad and Matlab software tools are used for data analysis, equation solving, plotting and graphing, matrix operations, and an introduction to object oriented programming. One hour of lecture and three hours of laboratory per week. **Prerequisite:** MATH 2413.

MENG 2301: Statics [TCCN: ENGR 2301]

Analysis of forces, moments, and couples acting on stationary engineering structures; equilibrium in two and three dimensions to include vectors; free-body diagrams, friction; centroids/center of gravity; moments of inertia. Students may not count both MENG 2301 and CENG 2301 for credit. **Prerequisites:** MATH 2414 and PHYS 2325.

MENG 2302: Dynamics [TCCN: ENGR 2302]

Analysis of kinematics and kinetics of particles, systems of particles, and rigid bodies. Students may not receive credit for both MENG 2302 and CENG 2302. **Prerequisite:** CENG 2301 or MENG 2301 and MATH 2414.

MENG 3210: Mechanical Engineering Laboratory I

Experimental measurement of electromechanical systems. Sensors for measuring Strain, Force, Pressure, Displacement, Acceleration, and Temperature will be introduced as well as data acquisition and signal processing techniques. Student teams will design, analyze and document an experimental procedure. All procedures will result in a professional quality laboratory report. One hour of lecture and three hours of laboratory per week. **Prerequisites:** ENGR 1200 or completion of a technical writing course, MENG 2201, PHYS 2326, PHYS 2126.

MENG 3211: Mechanical Engineering Laboratory II

Introduction to basic Thermal/Fluid sciences laboratory procedures and practices with uncertainty analysis. Experimental topics to include fluid flow, heat exchanger basics, and basics of refrigeration. Student teams will design, analyze and document an experimental procedure. All procedures will result in a professional quality laboratory report. One hour of lecture and one three-hour lab per week. **Prerequisites:** MENG 3210; Concurrent enrollment in or completion of: MENG 3304, MENG 3316.

MENG 3301: Thermodynamics I

Properties; heat and work; first and second laws; thermodynamic processes; Carnot heat engines and heat pumps. Three hours of lecture per week. **Prerequisites:** PHYS 2325 and 2125.

MENG 3303: Dynamics of Machinery

Analysis of the kinematics and forces in mechanical mechanisms and assemblies. Three hours of lecture per week. **Prerequisite:** MENG 2302.

MENG 3304: Thermodynamics II

Power and refrigeration cycles, chemical reactions, combustion, gas mixtures, psychometrics, availability analysis. Three hours of lecture per week. **Prerequisites:** MENG 3301, MATH 3305.

MENG 3305: Transport Processes

Basic study of momentum, energy, and mass transport, dimensional analysis, includes laminar and turbulent fluid flow, conduction heat transfer, convection heat transfer, and radiation heat transfer. Three hours of lecture per week. (Not for mechanical engineering majors.) **Prerequisite:** MENG 3301.

MENG 3306: Mechanics of Materials

Stress and strain; uniaxially loaded members; centroids and area moments of inertia; normal and shear stresses; beam deflections; buckling of columns; pressure vessels; combined stresses; failure criteria. Three hours of lecture per week. **Prerequisite:** MENG 2301.

MENG 3309: Mechanical Systems Design

Characterization, design, selection, and integration of mechanical systems and components including shafts, bearings, seals, gears, springs, mechanical fasteners, linkages. Three hours of lecture per week. **Prerequisites:** MENG 3303 and MENG 3306.

MENG 3310: Fluid Mechanics

Basic concepts of a fluid, and the fundamentals and applications of ideal and real fluid flow. Topics include fluid statics, conservation principles, the Bernoulli equation, fluid flow in pipes, open channel flow, and fluid flow measurement devices. Three hours of lecture per week. **Prerequisites:** MENG 2302, MATH 3404, and concurrent registration or completion of MATH 3305.

MENG 3316: Heat Transfer

Fundamentals and applications of conduction, convection, and radiation heat transfer. Analysis of steady-state and transient conduction employing analytical methods and numerical techniques. Simple theory of laminar and turbulent, free and forced convection and use of practical correlations. Basic thermal radiation concepts and applications. Three hours of lecture per week. **Prerequisites:** MENG 3301 and MENG 3310.

MENG 3319: Materials Science and Manufacturing

Introduction to materials science including the structure of metals and polymers, the testing of mechanical properties of materials, the relationship between material properties, structure and processing techniques, and the capabilities and limitations of modern manufacturing methods. Two one-hour lectures and one three-hour lab per week. **Prerequisites:** CHEM 1311 and CHEM 1111 or equivalent, ENGR 1200 or completion of a technical writing course, MENG 1201 or completion of a Computer Aided Drafting course.

MENG 4115: Senior Design I

The goal establishment, planning and concept generation phases of a capstone design project required of all seniors in Mechanical Engineering. Includes the selection of a suitable project, an analysis of the design problem, the planning required to reach the desired goal, and the preparation of a project preliminary design document.. Multidisciplinary teams will work on design problems defined in cooperation with representatives from industry when possible. Three-hour design studio per week. **Prerequisite:** ENGR 3314; concurrent registration or completion of MENG 3309, 4311, and 4313.

MENG 4199-4399: Independent Study

Independent study in a specific advanced area of mechanical engineering not covered by organized courses. May be repeated as content changes. A maximum of six (6) hours may be used for undergraduate credit on the degree plan if topics vary. **Prerequisite:** Consent of Instructor and Department Chair

MENG 4302: Intermediate Dynamics

Kinematics and dynamics of particles and rigid bodies with engineering applications: kinematics, inertia properties, Newton-Euler equations of motion, Lagrange's equations of motion. Three hours of lecture per week. **Prerequisites:** MENG 2302, MATH 3305, MATH 3203

MENG 4311: Electro-Mechanical Systems Design

Characterization, design selection, and integration of electro-mechanical systems and components including AC and DC motors, generators, servo-motors, stepper motors, controllers, solenoids, hydraulic and pneumatic actuators. Two hours of lecture and one three-hour lab per week. **Prerequisites:** MENG 3210, MENG 3303, EENG 3304 and MATH 3305.

MENG 4313: Thermal/Fluid Systems Design

Characterization, component selection, and integration of thermal systems and components including engines, turbines, compressors, pumps, and heat exchangers. Two hours of lecture and one three-hour lab per week. **Prerequisites:** MENG 3211, MENG 3304 and MENG 3316.

MENG 4315: Senior Design II

The senior design project, which was begun in MENG 4115, continues to completion. This major capstone design project builds on previous course work, includes all stages of the design process, and takes into account a variety of realistic constraints, such as manufacturability and sustainability; economic factors; and environmental, safety, and reliability issues. Preparation and presentation of final oral and written reports are required. The design project may be a team effort and may be defined in conjunction with industry. Three three-hour design studios per week. **Prerequisite:** MENG 4115.

MENG 4317: Vibrations

Analysis and prediction of the free and forced dynamic behavior and of mechanical systems; first, second, and higher order systems; vibration isolation and absorption; vibration characteristics of rotating machinery. Three hours of lecture per week. **Prerequisites:** ENGR 2302 and MATH 3305.

MENG 4318: Heating, Ventilation, and Air Conditioning

Analysis and design necessary to plan and specify equipment for heating, refrigeration, and air conditioning systems; heat transfer analysis of structures and equipment, psychometric analysis, thermodynamic and economic analysis. Three hours of lecture per week with integral laboratory emphasizing design. **Prerequisites:** MENG 3304 and MENG 3316.

MENG 4320: Design for Manufacturing

Design principles for achieving quick, low cost product introduction through consideration of cost, quality, reliability, maintainability, appearance and ergonomics; consideration of the interaction between design, materials, and method of production. Three hours of lecture per week. **Prerequisite:** MENG 3319.

MENG 4322: CAD/CAM

This course covers topics in object representation, geometric transformation, solid modeling, feature-based modeling, computer numerical control, kinematic modeling, and machining simulation and computer animation appropriate for the undergraduate level of work. Three hours of lecture per week. **Prerequisite:** Consent of the instructor.

MENG 4323: Introduction to Industrial Robotics

An overview of industrial robots including manipulator arm selection guidelines and the application of robots in manufacturing and assembly. Principles of kinematics, dynamics and control of robotic manipulators. Robotic sensors, end effectors and actuators. Coordinate frames and homogeneous transformations. Robotic system integration, and path planning. Industrial robot programming in a laboratory setting. Three hours of lecture per week with integrated laboratory sessions. **Prerequisites:** MENG 3309, MATH 3203 and MATH 3305.

MENG 4325: Digital Control of Mechanical Systems

Computer control of machines and processes. Topics include digital control theory, signal processing strategies, analog-to-digital and digital-to-analog (A/D-D/A) conversion, dedicated microprocessor control, sensor and actuator selection. Two hours of lecture and one three-hour laboratory per week. **Prerequisite:** Concurrent enrollment in or completion of MENG 4311 or ENGR 4309.

MENG 4326: Finite Element Methods in Mechanical Engineering

An introduction to the finite element method in mechanical engineering. Emphasizes linear stress and strain analysis, but includes other field problems. Utilizes commercial computer codes to solve stress analysis, heat transfer, and

other engineering related problems. Three hours of lecture per week with integrated lab. **Prerequisites:** MATH 3203, MENG 3306, and MENG 3316.

MENG 4327: Introduction to Turbomachinery

Fundamental aerothermodynamics and design of turbomachinery components, including axial and centrifugal compressors, and axial and radial turbines, as well as in depth analysis of Brayton cycles. Three hours of lecture per week with integrated laboratory sessions. **Prerequisites:** MENG 3301, MENG 3304, and MENG 3316.

MENG 4328: Fundamentals of Aerospace Sciences

An introduction to fundamental concepts of aerospace engineering. Three hours of lecture per week. **Prerequisites:** MENG 3304 and MENG 3310.

MENG 4329: Compressible Flow

Introductory analysis of compressible flows, mathematical background, and physical concepts of isentropic flow, shock waves, expansion waves, and applications. Three hours of lecture per week. **Prerequisites:** MENG 3304 and MENG 3310.

MENG 4330: Process Control & Automation

The use of controls in the process industry and in automation; measurement of variables, controller types, final elements, application of controllers, application of programmable logic controllers, ladder logic, general instrumentation design and practice. **Prerequisite:** MENG 4311 or instructor approved Automatic Controls course.

MENG 4370: Undergraduate Internship

A program providing a new learning experience in mechanical engineering and environment appropriate for the undergraduate level of work with a minimum of 150 hours work. A written report describing the activities and accomplishments of the student during the internship is required at the conclusion of the internship period. May be repeated once for credit. A maximum of three (3) credit hours may be applied toward the undergraduate degree. Offer every Fall, Spring, and Summer. CR/NC only. **Prerequisite:** Consent of the department chair.

MENG 4395: Undergraduate Research

Directed research in Mechanical Engineering involving a problem of mutual interest to the student and a faculty member. An oral presentation and a written report of the research results are required at the conclusion of the course. A maximum of 3 credit hours may be applied toward an undergraduate degree in mechanical engineering. **Prerequisite:** Consent of the department chair.

MENG 4150-4350: Topics in Mechanical Engineering

Studies in mechanical engineering topics not covered in regularly scheduled undergraduate courses. May be repeated as content changes. A maximum of nine credit hours may be used for undergraduate credit. **Prerequisite:** CI.

GRADUATE POLICIES AND PROGRAMS

Donna L. Dickerson, Dean

The University of Texas at Tyler provides graduate courses and degree and certificate programs for persons seeking to continue their studies past the baccalaureate and offers the following graduate degrees and certificates:

Doctoral Programs

U. T. Tyler offers the Ph.D. in Nursing, an on-line degree program, and the Ph.D. in Human Resource Development, an on-campus traditional doctoral program.

Master of Arts

Degree programs include majors in art, counseling psychology, English, history, interdisciplinary studies, political science, reading, school counseling, and special education. The program in interdisciplinary studies provides the student the opportunity to focus on courses from at least three fields.

Master of Business Administration

This thesis or non-thesis integrated program with a major in business administration includes courses in accounting, economics, finance, general business, management, and marketing.

Master of Education

Degree programs include majors in curriculum and instruction, educational leadership, health and kinesiology, reading, and special education.

Master of Public Administration

This non-thesis program includes courses in public management; public finance and budgeting; policy, analysis and evaluation, and research methods. In addition, an Executive Health Care Administration track is available for health professionals with three or more years of experience. Admission is highly selective.

Master of Science

Degree programs include majors in biology, civil engineering, clinical psychology, computer science, communication, criminal justice, electrical engineering, human resource development, industrial management, interdisciplinary studies, kinesiology, mathematics, and mechanical engineering. The program in interdisciplinary studies provides the student the opportunity to focus on courses from at least three fields.

Master of Science in Nursing

This thesis or non-thesis program provides a firm basis for doctoral level education with several options including administration, education, and nurse practitioner routes. The RN-MSN degree option also is offered for registered nurses who may be eligible for early admission into the nursing graduate program.

Master of Science in Nursing / Master of Business Administration

This coordinated degree option incorporates content in management, economics, finance and marketing into a framework for nursing service and health care administration.

Graduate Certificate Programs

Post-baccalaureate certificate programs are offered in a limited number of fields. These programs are not part of a degree, however, coursework may be counted toward a degree with the approval of the College in which they are housed. Certificate programs are narrower in their focus than degrees and provide preparation in a specific field. Upon completion of the program the student is awarded a certificate in that field. The certificate is not the equivalent of a license or certification required for practice in the professions. The following certificate programs are offered:

Accounting Certificate Program: Refer to the College of Business and Technology in the Graduate Section of this catalog for details.

Nursing Education Certificate Program: Refer to the College of Nursing and Health Sciences in the Graduate Section of this catalog for details.

Organizational Leadership and Consulting Certificate Program: Refer to the College of Business and Technology in the Graduate Section of this catalog for details.

Principal's Certificate: Refer to the College of Education and Psychology in the Graduate Section of this catalog for details.

Superintendent's Certificate: Refer to the College of Education and Psychology in the Graduate Section of this catalog for details.

GRADUATE POLICIES--GENERAL AND MASTER'S

(These policies apply to all graduate students unless otherwise stated. For policies specific to doctoral students and doctoral programs, refer to the Doctoral Policies following this section)

Graduate Courses Taken by Undergraduates

An undergraduate student at UT Tyler may take a maximum of 6 graduate credit hours to apply toward a graduate degree, subject to the following conditions:

- The student must be within 12 semester hours of graduation.
- Student must apply for undergraduate graduation.
- Enrollment in each graduate course must receive prior approval by the graduate coordinator or appropriate department chair of the college offering the course.
- The approval must be submitted by the student at registration.

Graduate Admission Requirements

Application Process

A student seeking a graduate degree must fulfill the following in addition to the general graduate admission requirements:

- Complete a graduate application at <http://www.applytexas.org>, select a specific program, pay the application fee, and have official transcripts showing proof of baccalaureate sent to the Office of Graduate Admissions.
- Select a specific degree program
- Take the appropriate entrance examination for the selected degree program
- Satisfy the entrance examination, grade-point average and any other specific requirements for the selected degree program
- Receive official admission to the selected degree program

Admissions

The University of Texas at Tyler recognizes five categories of graduate admission at the master's level: Full Graduate Admission; Conditional Admission; Provisional Admission; Special Admission; and Non-Degree Seeking.

At the doctoral level, students may be admitted only under Full Graduate Admission or, under certain circumstances approved by the Dean of Graduate Studies, Conditional Admission.

I. Full Graduate Admission

A student seeking a graduate degree must fulfill the following admission requirements:

- A. Hold a baccalaureate degree from an accredited institution and, at least four weeks prior to the semester of initial enrollment, submit the following items:
1. application for admission to a degree program. Only applications made online at <http://www.applytexas.org> will be accepted.
 2. official transcripts (sent directly from the institution) showing proof of baccalaureate (NOTE: some programs may require transcripts of all college and university level work);
 3. official scores for the required entrance examination.
- B. Contact the program graduate advisor to review specific entrance requirements of the selected degree program. The decision to admit a student is made at the program level.

Because some programs accept only a limited number of students, or do not have the faculty or facilities to accommodate a student's particular area of study, some applicants who exceed minimum requirements for admission may not be accepted.

II. Conditional Admission

This status is granted to applicants who have not satisfied, at the time of enrollment, the minimum GPA or test score requirements, or who have other deficiencies in their preparation. The status of conditional admission is established at the program level. An applicant who has been admitted conditionally will complete a degree plan with the graduate advisor that specifies the conditions to be met. The conditions may not include more than 9 hours of graduate work. Upon completion of the requirement(s), the student's academic record will be reviewed for consideration to be granted full graduate status.

NOTE: A student who completes nine graduate hours as a non-degree seeking student, may not subsequently be admitted conditionally to a graduate degree program.

III. Provisional Admission

This status is granted to those whose application files lack required items such as official transcripts, official report of test scores, or verification of licensure. An applicant who has been admitted provisionally must contact the program graduate advisor to review specific entrance requirements of the selected degree program before being allowed to enroll. Provisional admission allows the applicant to enroll for only one semester with a maximum of nine (9) graduate hours. Provisional admission will not be continued beyond one semester.

NOTE: A student who completes nine graduate hours as a non-degree seeking student, may not subsequently be admitted provisionally to a graduate degree program.

IV. Special Admission

A student seeking teaching certification, a graduate certificate, or other graduate non-degree program (such as licensure) may be admitted as a special student. The student must submit a Graduate Application and meet all admission requirements set by the particular program. Individual programs determine the number of hours to be taken and other requirements. Students may enroll only in graduate courses required for the specific non-degree program. Registration is approved by the program advisor and College Graduate Coordinator. Graduate hours completed prior to admission as a special student may not be accepted by a particular program. If a student subsequently decides to pursue a degree, the selected degree program will determine which courses taken while classified as a special student will apply to the degree.

V. Non-Degree Seeking

A student who desires to take graduate courses for personal enrichment, for job advancement, or for transfer to another institution, may do so by completing a graduate application. Non-degree seeking students are limited to enrolling in a total of nine graduate hours unless approval is given by the Dean of The Graduate School.

A maximum of nine graduate hours of UT Tyler credit earned as a non-degree seeking student may subsequently be applied toward a master's degree if approved by the degree-granting program. Individual programs may limit the number of hours applicable to the program.

A student who completes nine graduate hours as a non-degree seeking student, may not subsequently be admitted conditionally or provisionally to a graduate degree program.

Academic Fresh Start

An applicant who has earned a baccalaureate degree under the "academic fresh start" statute, Texas Education Code, § 51.931, and applies for admission to a postgraduate or professional program will be evaluated only on the grade point average of the course work completed for that baccalaureate degree and the other criteria stated herein for admission to the postgraduate or professional program.

International Graduate Student Admissions

Applicants from countries other than the United States may be admitted to the university subject to the following regulations in addition to the general admission requirements:

- A. Accompanying the application must be an official English evaluation of the transcripts if the academic transcripts are in a foreign language.
- B. Results of the Test of English as a Foreign Language (TOEFL) must be submitted before admission will be granted.

A minimum score for graduate admission is 79 on the internet-based test. Information concerning the TOEFL may be obtained by writing to TOEFL, P.O. Box 899, Princeton, New Jersey 08540 U.S.A. The ETS institutional code for UT Tyler is 6850. There is no departmental code for TOEFL.

- C. An affidavit of support is required indicating the source of funds being made available to the student and the amount of money being provided and the length of time the funds will be made available.
- D. Holders of student (F-1) visas must be classified as full-time students.

For international students, the minimum course load is 9 semester credit hours for graduate students.

- E. The filing deadlines for applications and the required documents to be received in the Office of Graduate Admissions are as follows:

April 30 for the fall semester, September 30 for the spring semester, and February 29 for the summer terms.

- F. International students holding non-immigrant visas are required to maintain approved comprehensive medical insurance, repatriation insurance and medical evacuation insurance. An international student may purchase his or her own insurance. However, the policy must meet or exceed UT System Student Health Insurance Plan requirements and a health insurance waiver must be submitted by the deadline for the insurance charge on the student bill to be waived.

If no waiver form is submitted, a health insurance fee will be assessed at the time of enrollment. The health insurance fee (currently \$220, subject to change) will be in the amount of the premium approved for the UT System Student Health Insurance Plan for the actual cost of the insurance.

A health insurance fee will be assessed at the time of enrollment. The health insurance fee will be in the amount of the premium approved for the UT System Student Health Insurance Plan for the actual cost of the insurance.

Student Seeking a Second Graduate Degree

A student who already holds a graduate degree from an accredited institution may pursue a second graduate degree. The second degree must open a new area, field, or major approved by the student's advisor.

With the exception of coordinated degree programs, the degree requirements for the second graduate degree must be satisfied without using courses applied to a previous degree. Credit applied to a previous degree which duplicates a portion of the program required under the second degree will not reduce the number of hours required for the second degree. Courses already taken would not have to be repeated, but additional course work would be substituted for such previously completed courses.

Concurrent Enrollment in Two Master's Degree Programs

In unusual instances a student may be concurrently admitted to, and enrolled in, two master's degree programs. The student must satisfy all

GRADUATE POLICIES AND PROGRAMS

requirements for each degree and may not use more than 9 hours of course work from one degree to satisfy common requirements for the other degree. Course work that is used to satisfy common requirements for the two degrees must be approved by the advisor of each degree program, the college graduate coordinators, and the Dean of the Graduate School.

Transient Admission: Student Pursuing Degrees at Other Universities

Graduate students pursuing degrees at other colleges and universities who wish to take courses at the University may be admitted as transient students. The transient student application is available through ApplyTexas.

A transient student who later wishes to be admitted to the University on a regular basis must reapply for admission.

Students who attend the University as transient students and then are admitted on a regular basis are immediately subject to the University's academic regulations.

Transient Admission: UT Tyler Students at Other Universities

After a student is admitted at UT Tyler, he or she should not register for any course(s) at any other institution until approval is granted. Approval by the student's advisor, department chair, dean, and University Registrar is required to assure that the courses taken at another institution will count toward the student's degree. The student should not register at another institution until the request for graduate transient admission form has been completed and approved. Forms for this purpose are available online or in the Office of the Graduate Admissions, ADM 345.

Transfer of Graduate Credit

Transfer of graduate credit from a regionally accredited institution is limited to 9 hours for master's degrees. All transfer credit must have been completed with a grade of "B" or better and approved by the degree-granting program. Transfer credits should be evaluated and approved during the first semester. Since the restrictions placed upon transfer work may vary from program to program, each graduate degree student should refer to the section of this catalog that details the requirements of the proposed degree. Forms for this purpose are available online or in the Office of Graduate Admissions, ADM 345.

Scholastic Load

The minimum credit hour load to be considered a full-time graduate student is nine semester hours of graduate-level courses during a fall or spring semester or six hours during a regular summer session. The maximum credit hour load permitted is 12 hours during a fall or spring semester, six hours during each Summer I and II session, and six hours during each Long Summer Session. However, total summer hours may not exceed 12. Students enrolled in 9 or more hours in the Long Summer Session are not eligible for enrollment in the Summer I or Summer II sessions. (Texas Administrative Code, Title 19, Part 1, Chapter 4, Subchapter A, Rule §4.6).

Catalog Year

In order to graduate, a student must fulfill catalog requirements in effect at the time of admission to a graduate program; however, a student who is continuously enrolled must complete all requirements within seven years or be subject to degree requirements of a subsequent catalog. If a matriculated student has a break in enrollment at UT Tyler for three consecutive semesters or more, the student is required to complete a readmission application. If a student is readmitted, the applicable catalog is the one in effect at the time of readmission.

Change of Program

If a student desires to change from one graduate program to another graduate program, the student must complete Change of Graduate Program form, which is available on The Graduate School web site at: <http://www.uttyler.edu/graduate/forms/>
<http://www.uttyler.edu/graduate/forms/>.

Course Enrollments

The university reserves the right to cancel a scheduled course upon evidence of inadequate enrollment. Normally a minimum of five enrolled students is required in a graduate course.

Grading System

Grades, levels of performance, and grade points awarded for graduate credit at UT Tyler are as follows:

Grade	Level of Performance	Grade points
A	excellent	4
B	average	3
C	poor	2
D	failing	1
F	failing	0

Most courses use the traditional grading system, providing grades of A through F. However, grading may take other forms, including:

P/F	This grade may only be used for thesis or dissertation credit, special project, practicum, internship or other specialized course.
CR/NC	Credit/No courses as approved by the program. CR or NC may not subsequently be changed to a letter grade (See credit/no-credit option policy.)
I	Indicates incomplete coursework (See incomplete policy.)
W	Indicates withdrawal (See withdrawal policies.)
IP	Indicates a course "in progress" that spans more than one semester

There is a one-year time limit for grade changes (except Incompletes) and only the original instructor of the course may change a grade. CR, P and W designations may not be changed to letter grades. An "I" must be removed from the student's record within one semester. See specific sections that elaborate on the institutional policies concerning the designations CR/NC, I, Pass/Fail and W.

Calculation of Grade Point Average

Grades A, B, C, D, and F and the associated semester credit hours will be used to calculate grade point averages. The designations I, W, CR, and NC and the associated semester credit hours will not be used. Only grades and associated semester credit hours for courses taken in residence at UT Tyler will be used in the calculation of grade point averages.

If a student repeats a course and requests grade forgiveness, only the last grade earned and the last semester credit hours attempted are used to compute the grade point average. If grade forgiveness is not requested, then both grades will be calculated and used to compute the grade point average (See Repeating Courses and Grade Forgiveness Policy). If the student receives a W or I in the repeated course, then the previous grade continues to be used to compute the grade point average.

Credit/No Credit Option

Certain courses in the curriculum may be taken only on a credit/no-credit basis. Pre-professional students should note that many professional schools, e.g. law, count CR as a "C" and NC as an "F" in computing grade point averages. The following provisions apply to courses taken on a credit/no-credit basis:

1. Special form requiring the signature of the student's advisor.
2. The designation CR will not be changed to a grade of A, B, C, or D.
3. The designation of CR and NC will not be used in calculating the grade point average.

4. The designation CR will be counted toward the total number of hours passed.

Incomplete Policy ("I" Grade)

If a student, because of extenuating circumstances, is unable to complete all of the requirements for a course by the end of the semester, then the instructor may recommend an incomplete (I) for the course. The "I" may be assigned in lieu of a grade only when all of the following conditions are met: (a) the student has been making satisfactory progress in the course; (b) the student is unable to complete all course work or final exam due to unusual circumstances that are beyond personal control and are acceptable to the instructor; and (c) the student presents these reasons prior to the time that the final grade roster is due.

Effective with incompletes earned in Fall 2009, the time limit in which the work must be completed may not exceed one semester (or full summer). Should the student fail to complete all of the work for the course within the time limit, the "I" will be automatically changed to an "F." An "I" will not be used in calculating the grade point average for a student.

Pass/Fail Policy

To register for a class on a Pass/Fail basis, a student must have the signatures of his/her advisor and the instructor for the course.

1. Students may take only one course per semester for P/F credit. Students may take only three courses on a pass/fail basis during their graduate career at UT Tyler.
2. The P/F option may not be used for any course that fulfills graduate degree requirements.
3. If you are on academic probation, you may not enroll in a course on a P/F basis.
4. A course cannot be changed from a P/F basis to letter grade or vice versa after the first five class days.
5. A final grade of P will not be changed to a grade of A, B, C, or D.
6. A final grade of P will be counted in the total number of hours passed.

Repeating Courses

A graduate student may repeat any graduate course previously taken at UT Tyler if the last grade received in the course was a C, D, F or NC. Repeated courses may not be taken on a CR/NC or P/F basis unless the course is only offered on a CR/NC or P/F basis. Students repeating a single course more than two times may be billed at a higher tuition rate. All grades will appear on the student's official transcript. Once the graduate degree has been awarded by UT Tyler, a student may repeat a course taken prior to graduation, but the repeated course will not be used to recalculate the grade point average.

Grade Forgiveness

A master's student may receive grade forgiveness (grade replacement) for only two course repeats during his/her graduate career at UT Tyler. Grade forgiveness means that only the last grade and associated semester credit hours earned are used to compute the grade point average. However, all grades and associated semester credit hours will appear on the student's official transcript.

Upon receiving a C, D or F, a student must file a Grade Replacement Contract with the Enrollment Services Center by the Census Date (see the Academic Calendar for date). Failure to file a Grade Replacement Contract will result in both the original and repeated grade and associated semester credit hours being used to calculate overall grade point average.

If a student files a Grade Replacement Contract for a course but withdraws and receives an automatic "W," the attempt counts against the grade forgiveness limit and the original grade remains. Students may, on or prior to the Census Date, request in writing to withdraw a Grade Replacement Contract by contacting the Enrollment Services Center.

A student may not exercise grade forgiveness for courses taken at UT Tyler and repeated at another college or university, nor may grade forgiveness be used when a course taken elsewhere is repeated at UT Tyler.

The grade forgiveness option may not be exercised to remove a grade awarded in a case of academic dishonesty. Once the degree has been

awarded by UT Tyler, grade forgiveness may not be used to replace a grade taken before graduation.

Implementation

The grade forgiveness limit is not retroactive regarding grades already forgiven. The policy affects all students enrolled in Fall 2006 and thereafter, no matter when the course being repeated was originally taken.

Withdrawals/Drops

All students are encouraged to meet with their advisor and instructor prior to dropping a course. In addition, students should review the Academic Calendar located in the Schedule of Classes for "W" withdrawal/drop dates and the refund schedule. For more information regarding refunds, please see the Schedule of Refunds in this catalog. Students should be aware that dropping a course will affect their financial aid, and they should consult the Enrollment Services Center prior to withdrawal. Students are encouraged to maintain a copy of their Withdrawal Form.

Students must withdraw in writing by one of the following methods:

1. Fill out the Withdrawal Form available in the Enrollment Services Center, or
2. Send a Letter of Withdrawal to the Enrollment Services Center. The letter must contain the student's name, student ID number, the course(s) from which the student is withdrawing, the reason for withdrawing, and the student's signature. Letters may be mailed or faxed to the Enrollment Services Center. For mailed withdrawals, the effective date of withdrawal will be the date when the withdrawal is officially completed and recorded by the Enrollment Services Center. A copy of the withdrawal will be mailed to the student once the procedure has been completed.

Dropping Courses Late

No course may be dropped after the published "Last Day to Withdraw" unless the Student Appeals Committee approves a late drop (see the Academic Grievances policy). The appeal must provide justification of extenuating circumstances that go beyond academic progress in the course.

Withdrawal for Active Military Service

If a student withdraws from an institution of higher education because the student is called to active military service, the institution, at the student's option, shall:

1. refund the tuition and fees paid by the student for the semester in which the student withdraws;
2. grant a student, who is eligible under the institution's guidelines, an incomplete grade in all courses by designating "withdrawn-military" on the student's transcript; or
3. assign an appropriate final grade or credit, as determined by the instructor, to a student who has satisfactorily completed a substantial amount of coursework and who has demonstrated sufficient mastery of the course material. (See next page for Excused Absences for Active Military Service)

Readmission

A formal request for readmission is required whenever a student fails to register for three consecutive semesters or has an approved leave of absence for twelve or more months. To resume studies, students must submit an Application for Graduate Studies via the ApplyTexas website according to the following deadlines:

- August 15 for the fall semester
- December 20 for the spring semester
- April 15 for summer

Readmission is not automatic and will be reviewed carefully by the Office of Graduate Admissions and the academic program prior to making a recommendation.

If a student is readmitted, the applicable catalog is the one in effect at the time of readmission.

Excused Absences

Excused Absence for Religious Holy Days

An institution of higher education shall excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

Any student seeking to be excused for religious observance, must provide written notification to the instructors at least two weeks* prior to the date of the planned absence. At that time the instructor will set a date and time with the student when any make-up assignment or equivalent work will be completed. Make-up work will be mutually arranged; however, availability of the instructor will be given priority in setting the arrangements.

It is expected that students will not abuse the privilege of being absent from class for religious observance.

**Events scheduled within the first month of an academic term may require a shortened lead time.*

Excused Absence for Active Military Service

Any student who has been called up for military service after a semester begins should immediately provide the Registrar's Office and course instructors a copy of the military orders. Such students are excused from attending classes, turning in assignments, taking examinations or participating in any other required activity **if the absence is for no more than 25% of the total number of class meetings** (excluding final examination period). If the absence is for more than 25% of the class meetings, please refer to the policy on Withdrawal for Military Service.

Within 5 days of the student returning to UT Tyler from active service, he or she shall notify the Registrar's Office and course instructors. The student will be allowed to complete all assignments and examinations within a reasonable time as agreed upon by the course instructors and under the same requirements in effect when the student enrolled in the course.

Should any dispute arise as to the student's inability to complete assignments or examinations within a reasonable time after the absence, the student should first seek informal resolution with the faculty member, the department chair and then the dean of the college in which the course or courses are located. If an informal process is not successful, the student may institute a grade grievance process after the final course grade is recorded.

Excused Absence for Active Military Service

Any student who has been called up for military service after a semester begins should immediately provide the Registrar's Office and course instructors a copy of the military orders. Such students are excused from attending classes, turning in assignments, taking examinations or participating in any other required activity during their absence if the absence is for no more than 25% of the total number of class meetings (excluding final examination period). If the absence is for more than 25% of the class meetings, please refer to the policy on Withdrawal for Military Service.

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Should any dispute arise as to the student's inability to complete assignments or examinations within a reasonable time after the absence, the student should first seek informal resolution with the faculty member, the department chair and then the dean of the college in which the course or courses are located. If an informal process is not successful, the student may institute a grade grievance process after the final course grade is recorded.

Academic Grievances

Academic related grievances, such as disputes regarding grades, must be initiated within sixty (60) days from the date of receiving the final course grade by filing a Grade Appeal Form with the instructor who assigned the grade. If the student is not satisfied with the decision, the student may

appeal in writing to the appropriate Chairperson of the department from which the grade was issued. Grievances may then be appealed to the Academic Dean and the Vice President for Academic Affairs. Grade Appeal Forms are available in each academic dean's office.

Discrimination Complaints

Please see the appropriate section in the Student Affairs section of this catalog.

Student Records

Please see the Family Educational Rights and Privacy Act (FERPA) policy in the Undergraduate Policies Section of this catalog.

Probation/Suspension for Graduate Students

Graduate Academic Probation

A graduate student who has a cumulative grade-point of less than 3.0 will be placed on academic probation. For the purposes of determining compliance with the policies of academic probation, the three summer sessions are treated as one semester.

Students on academic probation must earn a minimum grade-point average of 3.0 or above in subsequent semesters until the cumulative grade point deficiency is removed. Failure to do so results in academic suspension. A student on academic probation should not register for more than six hours and must obtain his/her advisor's approval on a Graduate Student Probation Petition for Readmission form to register. The form is available on the Registrar's Office website:
<http://www.uttyler.edu/registrar/forms/index.php>.

Grade points earned at other institutions are not used in computing the grade-point average and may not be used to remove a deficiency. A student who leaves the University on academic probation will be readmitted on academic probation even if he or she has attended another institution in the interim.

Graduate Academic Suspension

A graduate student will be suspended from the University for one semester or full summer for failure to meet the terms of academic probation. A student suspended from the University for the first time must receive approval for readmission from the program advisor and the appropriate dean.

A student admitted to the University after having been suspended must complete a Graduate Student Suspension Petition for Readmission form, with signatures from both their academic advisor and the appropriate college dean, to register.

A second academic suspension will be for at least twelve months. Students wishing to reenroll at the University after the mandatory period of enrollment ineligibility must reapply via the ApplyTexas website. Submission of a completed Graduate Student Suspension Petition for Readmission to the Enrollment Services Center is also required as part of the readmission process and as a requirement for enrollment. This form requires the signature of the student's academic advisor and the appropriate college dean.

A third suspension will result in permanent dismissal from the graduate program and the University.

Thesis

Several graduate degree programs at UT Tyler require a thesis. A student seeking a degree should consult the appropriate section of this catalog to determine if a particular degree requires a thesis.

Guidelines and Procedures

Students considering enrollment in a thesis course should obtain a copy of *Guidelines for Preparation of Thesis or Dissertation* at The University of Texas at Tyler. These guidelines describe procedures for typing, formatting, and submitting the thesis. Thesis guidelines also may be found on the University website at the following address:
<http://uttyler.edu/graduate/thesisguide.pdf>

Enrollment

Students required to write a thesis for their degree must register for a thesis course each semester, after research has commenced, until the thesis has been accepted.

Oral Defense of Thesis/or Thesis Substitute

If a thesis or thesis substitute is required, a final oral defense also may be required by the program. The oral defense should be held only after all members of the committee have had adequate opportunity to review a draft of the master's thesis/substitute. The advisor is responsible for determining that the draft is in an appropriate form for committee evaluation. If substantial revisions are necessary, they should be completed before the final oral defense is scheduled. The committee may, at the time of the final oral but no later, require alterations and corrections, but these should constitute relatively minor changes agreed to by a majority of the committee members. The advisor is responsible for verifying that the changes required by the committee have been made.

All committee members are expected to be present at the defense. The final oral is open to the public. A thesis/substitute is accepted only after the approval of a majority of the examining committee members.

Failure of Examinations

A master's candidate who fails the oral defense may not take the examination a second time until at least three months after the first attempt. A student who fails an examination for the second time becomes ineligible for further graduate work. Upon request from the student's director of graduate studies, The Graduate School may grant a student a third and final opportunity to take the oral defense.

Thesis Submissions Deadlines

The final PDF copy of the thesis, prepared under standards as defined in *Guidelines for Preparation of Thesis or Dissertation* must be submitted via email to the director of Graduate Student Services for the mechanical check no later than two weeks before the last day of final exams of the semester of intended graduation. The PDF version must include a scanned copy of the signature page with all signatures present. After making any required changes, resubmit the PDF of the entire thesis/dissertation (including a scan of any signature pages) via email to the director of Graduate Student Services. Students will then receive a signed Thesis/Dissertation Approval Form and Electronic Thesis/Dissertation Submission Form, as well as information on author rights and instructions for submitting the thesis/dissertation in electronic format to the Robert R. Muntz Library.

Theses are regarded as publications and will be made available to the public once they are approved and submitted to the Graduate School.

Grading Policy

A student registered for thesis who does not submit the approved thesis to the dean or graduate coordinator of the appropriate college before the thesis deadline for that semester will receive an incomplete "IP" grade. Once the thesis has been accepted, previous "IP" grades for thesis work will be changed to credit "CR". A maximum of six semester hours of thesis credit may be applied to the masters degree.

Approval

The completed thesis must be approved by the thesis advisor, and the college graduate coordinator or dean before the student will receive final certification for the degree.

Thesis Substitution

Some master's programs require a substitute for the thesis. Examples of substitutes include a journal article(s), technical report, case study, or independent research project. The policies and procedures for completing the thesis substitute are determined by the program itself.

Final Examination

Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule.

Graduation Guidelines and Procedures

Graduation Requirements--Master's

- A. Complete a Graduate Transfer Credit Approval form within the first semester following admission to a program that identifies the transfer credit awarded and specifies any special requirements.
- B. Complete the total number of semester credit hours and other requirements of the degree plan (including transfer credit) within a six-year period. Courses completed on a credit-granting basis (CR) may not be applied toward a graduate degree without approval of the graduate coordinator or the appropriate department chair.
- C. Earn a "C" or better in all courses applied to the degree.
- D. Earn a cumulative grade point average of 3.0 or higher on all work counted toward the degree.
- E. Pass the appropriate comprehensive examination(s) if required for the program.
- F. Submit an approved thesis if required. See Thesis in this section.
- G. Pay the non-refundable graduation fee in the Cashier's Office.
- H. Take the receipt to the Enrollment Services Center and exchange it for an Application for Graduation.
- I. Complete the Application for Graduation form and return it to the Enrollment Services Center.

Application for Graduation Deadlines

In order to facilitate a timely pre-graduation review of their graduation eligibility, all students are highly encouraged to apply prior to the Priority Filing Date for their term of graduation, as listed below.

Priority Filing Dates:

Fall graduation	June 15
Spring graduation	October 15
Summer graduation*	March 15

Students must file for graduation no later than the Final Filing Deadline, as listed below:

Final Filing Deadlines:

Fall graduation	November 01
Spring graduation	April 01
Summer graduation*	July 15

*Summer graduates must participate in the following Fall commencement ceremony, and are automatically included in the program. Early participation in the preceding Spring ceremony is not permitted.

Students will receive updates on the status of their Application for Graduation from the department of their major field of study. Updates about the commencement ceremonies will be distributed by the Office of the Registrar.

Verification of Degree

A degree will not be granted until all requirements have been verified. All incomplete grades, required transcripts from other institutions, required examinations, and other evidence of outstanding requirements must be verified within 30 days following the final day of the graduation term. If the requirements have not been verified by this date, graduation will be denied and the student must refile for graduation subject to the filing for graduation guidelines.

Time Limitation

Degree requirements for all master's programs at UT Tyler must be completed within a six-year period. Graduate credit transferred from another institution must meet the limitations imposed by each degree program. Exceptions to the six-year time limitation must be approved by the academic advisor, graduate coordinator for the college, and the University's Coordinator of Graduate Studies.

Master of Arts and Master of Science Degrees in Interdisciplinary Studies

The Master of Arts and the Master of Science degrees in interdisciplinary studies are intended for persons desiring graduate studies in a wider range of fields than normally possible in a program with a traditional major. The student's background and goals are considered in the design of the individual degree plan.

Admission Requirements

The following are required for admission:

- Submit a satisfactory score on the Verbal and Quantitative sections of the Graduate Record Examination (GRE).
- Have a minimum grade-point average (GPA) of 2.5 on the last 60 hours of upper-division course work and a 3.0 on all graduate work taken.
- Consideration is also given to one or more of the following: the applicant's demonstrated commitment to his or her chosen field of study, socioeconomic background, first generation college graduate, multilingual proficiency, geographic region of residence, and level of responsibility in other matters including extracurricular activities, employment, community service, and family responsibilities.

Degree Requirements

The Master of Arts or Master of Science degree designation will be determined by the student's advisor according to the first field emphasis of the student's degree plan. Specific requirements for both degrees follow:

- A total of 36 semester hours of graduate work. No more than six semester hours of undergraduate courses approved for graduate credit may apply to this degree. A student may transfer a maximum of 9 semester hours of graduate credit in which a grade of "B" or better has been earned from approved institutions. All transfer work is subject to approval by the student's advisor.
- From the alphabetical list below, the student must select a minimum of 12 hours of course work in the first field and a minimum of six hours each in the second and third fields. A maximum of 18 hours in any one field may be applied to these degrees. Please note: Not all programs below accept students into the first field; check with the graduate advisor.

First, Second, Third fields available	Second and Third Fields Only
Allied Health Science	Art
Chemistry	Communication
Computer Science	Criminal Justice
English	History
Music	Political Science
Psychology	Public Administration
	Sociology
- Electives may be chosen from any field with the advisor's approval.
- A minimum grade-point average of 3.0 in each of the three selected fields and a minimum grade-point average of 3.0 in all graduate work. No course with a grade below "C" may be applied toward this degree.
- No more than six semester credit hours in independent study courses. If English or history is chosen as the student's first field, no more than three semester hours of travel/study courses may be applied to the first field.
- Successful completion of a written, comprehensive examination over the fields of study shown in the degree plan, excluding electives. This examination will be administered and evaluated by the student's examination committee (see below).

Comprehensive Examination Committee

The committee must have a minimum of three faculty members including the student's chief advisor, who chairs the committee and is a faculty member in the predominant field of the student's degree program, and one faculty member from each of the remaining two fields of that program.

GRADUATE POLICIES--DOCTORAL

The policies and requirements outlined in this section of the catalog apply without exception to all departments or programs at the University of Texas at Tyler that offer doctoral degrees. The Graduate School and the Graduate Council work closely with departments and programs to coordinate degree requirements and to ensure that they are fairly and equitably applied.

For a detailed set of doctoral policies and procedures, students should download the *UT Tyler Graduate Handbook* at <http://www.uttyler.edu/graduate/gradhbk.pdf>

Doctoral Excessive Hours Fee ("99-Hour Rule")

All doctoral students (regardless of state residency classification) who exceed 99 hours of doctoral coursework will be required to pay out-of-state tuition. Doctoral coursework is any coursework taken by a student seeking a doctoral degree after the completion of an initial 30 semester hours of graduate credit (typically master's level work, regardless of whether the hours are taken as part of a master's degree, as a non-degree seeking student, certificate work, or as part of the doctoral program). (See *Texas Education Code Sec. 61.046 (1)*)

This rule applies to all students admitted to a doctoral program at UT Tyler. This tuition structure applies to Texas residents as well as out-of-state residents and international students who were eligible to be charged tuition at the resident rate as a result of scholarship, fellowship awards, or employment as Graduate Assistants.

Program of Study

All doctoral programs consist, at minimum, of a coherent set of courses and other educational experiences, a Preliminary Examination for Candidacy, a dissertation, and a Final Oral Defense. Students must satisfy not only their departmental requirements, but also any additional requirements specified by the The Graduate School.

Foreign Language Requirements

The Graduate School has no foreign language requirement for doctoral degrees; however, knowledge of one or more foreign languages may be required by individual doctoral programs.

Admissions

The University of Texas at Tyler admits students to its Ph.D. programs under the Full Admission criteria. Conditional Admission may be considered under certain circumstances with the approval of the program and The Graduate School.

I. Full Doctoral Admission

Students seeking a doctoral degree must fulfill the following admission requirements:

- Hold a baccalaureate degree from an accredited institution.
- Have of at least a 3.00 grade point average in all upper-division (junior- and senior-level) coursework, or a 3.00 grade point average in the last graduate degree earned.
- Satisfy any additional requirements (official entrance examination scores, essay, grade-point average, letters of recommendation, etc.) for the selected degree program. If the GRE is required, the test must have been taken within the past 5 years.
- Additional consideration for admission will be based upon the applicant's demonstrated commitment to his or her chosen field of study, involvement and level of responsibility in non-academic matters including extracurricular activities, employment, community service, and socioeconomic background.

II. Conditional Doctoral Admission

Under certain circumstances and with the approval of the doctoral program and the The Graduate School, a student may be admitted conditionally. This status is granted to applicants who, at the time of enrollment, require leveling work or additional courses to prepare them for doctoral work. An applicant who has been admitted conditionally will complete a degree plan with the graduate advisor that specifies the conditions to be met. The conditions may not include more than 9 hours of

graduate work. Upon completion of the requirement(s), the student's academic record will be reviewed for consideration to be granted full doctoral admission.

Because some programs accept only a limited number of students, or do not have the faculty or facilities to accommodate a student's particular area of study, some applicants who exceed minimum requirements for admission may not be accepted.

Transfer of Graduate Credit

Students wishing to apply transfer credits toward a doctoral program must complete a Graduate Transfer Credit Approval Form within the first semester following admission into a doctoral program.

Transfer of graduate credit from a regionally accredited institution is limited to 20% of the total hours required for the doctoral degree. Hours transferred into a doctoral program should represent credit earned after the award of the master's degree. Exceptions to the number of hours transferred may be requested by the program to the Dean of the Graduate School. Only credit with a grade of "B" or better may be transferred.

Credit earned more than six calendar years before admission to the program will not be accepted for transfer. A graduate program may request the Dean of The Graduate School to approve additional transfer credit. The program will determine what courses, if any, are accepted for transfer. The doctoral student may be examined on all transferred courses at the time of the doctoral preliminary examinations.

Transfer work does count toward the 99-Hour Rule for tuition purposes. See above for state law regarding the 99-Hour Rule.

University Requirements for Doctoral Degree

- A. Satisfactory completion of all coursework required by the plan of study.
- B. Satisfactory completion of the Preliminary Examination
- C. Registration for at least three credit hours during the semesters in which the Preliminary Examination and the Oral Dissertation Defense are taken and during the semester in which graduation is expected.
- D. Completion of the required residency requirements before Candidacy is awarded.
- E. Graduate cumulative grade point average of at least 3.0
- F. Satisfactory completion of the Oral Dissertation Defense.
- G. Submission of both a hard copy and electronic version of the approved dissertation, a separate copy of the dissertation abstract, copy of Human Subjects or Animal Subjects approval form (if required), Survey of Earned Doctorates, payment of the doctoral hood and thesis binding fees.
- H. Completion of Ph.D. degree requirements within five years after being admitted to candidacy.
- I. Completion of any incomplete coursework within 30 days of the final day of the graduation term.
- J. Complete the Application for Graduation form and return it to the Enrollment Services Center. Refer to the Application for Graduation Deadlines section for filing deadlines.

Residency and Enrollment Requirements

The doctoral degree is granted in recognition of high attainment in a specific field as demonstrated by passing coursework, the successful completion of required examinations and the successful defense of a dissertation based on original research. Consequently, the University does not specify a minimum number of courses or credits that must be completed for the degree.

Residency Requirement

The residency requirement provides students an opportunity to be engaged in concentrated study over an extended period of time in association with faculty and other students in an atmosphere conducive to a high level of intellectual and scholarly activity.

Doctoral students must be registered for nine (9) hours each semester at UT Tyler for a minimum of two consecutive semesters or six (6) hours each semester for three consecutive semesters (not necessarily including summer). However, the student does not necessarily have to be physically present on campus (for example, the student may be taking courses over the internet or doing field research). The residency requirement must be met prior to admission to candidacy.

Hours taken as part of a master's degree or during conditional admission status may not count toward the residency requirement.

Time Limit

All requirements for the doctoral degree must be completed and the degree awarded within a maximum of nine years from the term of full doctoral admission, and within five calendar years from the term after the student passes the preliminary oral examination.

(Example: if the date of admission is Fall 2008, the nine-year time limit ends Summer 2017. If the student in this example is admitted to candidacy in March 2010, the time to degree expires at the end of the spring semester 2015). When extenuating circumstances warrant, the Dean of The Graduate School may grant an extension for one year. The student must complete the Request for Extension of Time Form and receive approval from the major advisor/dissertation chair and the program's graduate director, who forwards the request to the Dean of The Graduate School.

Leave of Absence

A student in good academic standing may request a leave of absence from doctoral study for up to one year for any of the following reasons: childbearing, adoption, illness, critical care of child, spouse or parent, or job related interruptions.

To be eligible for a leave of absence, a student must not have received an extension of the time limit for the degree, must not have any Incomplete ("I") grades, and must be in good academic standing.

If the leave of absence is approved, the time of that leave will not count against the total time allowed for the degree. Ordinarily, a leave of absence may not be renewed.

To request a leave of absence, a student must complete and submit a Request for Leave of Absence Form and receive approval from the major advisor/dissertation advisor and the program's graduate director, who forwards the form to the Dean of The Graduate School.

Upon returning from a leave of absence, the student must complete an Application for Graduate Studies.

Inactive Status

A student not yet admitted to candidacy who has not enrolled for two consecutive calendar years and has not been granted an extension or a leave of absence will be placed in inactive status.

In order to resume graduate studies, the student must complete an Application for Graduate Studies and meet all admission requirements in force at the time of the new application. Readmission under these circumstances is not guaranteed, however. If readmitted, the student will be subject to all program requirements in force at the time the student is readmitted.

Doctoral candidates who have not enrolled for two consecutive calendar years, have not graduated by the end of the five-year candidacy period, or have not been granted an extension or a leave of absence will be placed in inactive status and their candidacy revoked.

To resume studies, the student must complete an Application for Graduate Studies and receive approval from the dissertation chair, the program's graduate director and/or Graduate Program Committee, and the Dean of The Graduate School.

Readmission is not guaranteed, however. The faculty in the major field and/or the Dean of The Graduate School may set any readmission conditions deemed necessary, such as, but not limited to, registering for additional coursework, retaking examinations, filing a revised doctoral proposal, or completing the degree within a specified time period.

Grading Policies

(See general graduate policies at the beginning of this chapter)

Repeating a Course

Doctoral students may repeat a 5000- or 6000-level course if the original grade earned was a C, D, F or NC. The course may be repeated only once and the original grade continues to be included in the computation of the graduate point average. There is no grade replacement at the doctoral level. Individual programs may have limits on the number of times a student may repeat courses.

Probation/Suspension for Doctoral Students

Academic Probation

A doctoral student who has a cumulative grade-point of less than 3.0 will be placed on probation. Students on academic probation must earn a minimum grade-point average of 3.0 or above in each subsequent semester of enrollment (including summer, if registered) until the cumulative grade point deficiency is removed.

Students have two semesters to remove themselves from probation. Failure to do so results in academic suspension. A student on probation should not register for more than six hours and must obtain his/her advisor's approval on a Graduate Probation Petition for Readmission to register.

Grade points earned at other institutions are not used in computing the grade-point average and may not be used to remove a deficiency. A doctoral student who leaves the University on probation will be readmitted on probation even if he or she has attended another institution in the interim. However, readmission as a degree-seeking student is not guaranteed.

Academic Suspension

A doctoral student who fails to make satisfactory academic progress may be dismissed from the doctoral program. Failure to make satisfactory progress may be the result of, but not limited to, failure to raise grade point average to 3.0 within the subsequent two semesters, poor performance on preliminary exams, unsatisfactory research progress, or inability to meet other degree requirements.

Although cases of improper conduct of research or unprofessional behavior are addressed according to other University procedures, these behaviors may also result in dismissal from the University.

For details regarding doctoral committees, preliminary examinations, dissertation and dissertation defense, etc. please refer to the UT Tyler Graduate Handbook at <http://www.uttyler.edu/graduate/gradhbk.pdf>

Application for Candidacy

Provided that the student has completed all required coursework, has no "incomplete" grades, has satisfactorily completed all portions of the preliminary examination, and is in good academic standing, the student is admitted to candidacy for the doctoral degree. Candidacy is effective at the end of the semester in which the signed Recommendation for Candidacy form is submitted to The Graduate School. A notation-- "Advanced to Candidacy for Doctorate"--will appear on the student's transcript.

Dissertation

All doctoral candidates are required to complete and defend a dissertation. Only students who have been admitted to candidacy may register for dissertation hours. The University requires a minimum of 9 hours of dissertation credit; however, most doctoral programs require more hours.

The dissertation is an independent scholarly contribution to knowledge in the student's area of specialization. By researching, writing, and defending a dissertation, the student demonstrates a high level of knowledge in the chosen field and the ability to conduct independent research.

Dissertations are regarded as publications and will be made available to the public once they are approved and submitted to the Graduate School. In order to protect patent or other intellectual property rights, the Dean of The Graduate School may, upon request, delay for a period of up to one year the binding, distribution, and/or publication of the dissertation. This

request must be supported by a written recommendation of the Supervising Professor.

Doctoral candidates are required to register for a minimum of 3 credits of dissertation during each semester until the dissertation is accepted by the The Graduate School. (See, Enrollment Requirements)

Animal and Human Subject Approval

Federal regulations and University policy require that all investigations using animal or human beings as subjects of research be reviewed and approved by the appropriately constituted committees before such investigations may begin.

No dissertation based on the use of animals or human beings as subjects can be accepted without prior review and approval handled in accordance with University procedures. The faculty advisor requests such a review, where needed; however, each student should check to ascertain whether the review is required, and if so, the requirements for the review.

GRADUATE COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

Dr. James Nelson, Dean

Master of Science in Civil Engineering

Dr. J. Torey Nalbone, Interim Chair

The Department of Civil Engineering offers the Master of Science in Civil Engineering and the Master of Science in Industrial Safety. The M.S. in Civil Engineering has three options to earn the degree: (1) research option, (2) professional practice option, and (3) technical and management development option.

Master of Science in Civil Engineering--30-36 Semester Credit Hours

Admission Requirements

Students entering the Master of Science in Civil Engineering (MSCE) program are expected to have a background equivalent to that of students graduating from the Bachelor of Science in Civil Engineering (BSCE) program offered at The University of Texas at Tyler, or to obtain such background through specified prerequisite coursework.

In addition to the general requirements for admission to graduate study at The University of Texas at Tyler, to be admitted to the MSCE program a student must meet the following admission requirements.

- A. Satisfactory score on the General Test (verbal and quantitative) of the Graduate Record Examination (GRE)
- B. Satisfactory grade point average on the student's last four semesters of academic study and last 60 semester credit hours of upper division undergraduate or graduate courses
- C. A bachelor's degree in a Civil Engineering program accredited by the ABET Engineering Accreditation Commission. Students who have not earned such a degree will be required to complete prerequisite coursework before starting the MSCE program.
- D. A demonstrated proficiency in the use of the English language, both spoken and written
- E. Approval of the MSCE Program Administrator and the Chair, Department of Civil Engineering

Consideration for admission to the Master of Science in Civil Engineering program will also be given to one or more of the following: the applicant's demonstrated commitment to his or her chosen field of study, socioeconomic background, first generation college graduate, multilingual proficiency, geographic region of residence, and level of responsibility in other matters including extracurricular activities, employment, community service, and family responsibilities.

Graduation Requirements

There are three options to earning the Master of Science in Civil Engineering (MSCE): (1) research option, (2) professional practice option, (3) technical and management development option.

Regardless of option selected, a student must complete a graduate course in advanced mathematics. At least 50 percent of the required total credit hours applied to the MSCE, excluding thesis or design project, must be Civil Engineering courses and at least two-thirds of the credit hours applied to the degree must be taught by a department in the College of Engineering and Computer Science. No more than three credit hours of independent study courses may be applied to the degree. The student must attain an average of 3.0 GPA on all course work applied to the MSCE. The program options and additional degree requirements are as follows:

Option 1 – Research (30 SCH): Students must successfully complete at least 24 semester credit hours of graduate coursework, including at least three courses in a primary area of study within civil engineering and at least two courses in a secondary area of study within civil engineering, successfully complete at least six credit hours of graduate thesis research, successfully prepare a research thesis, and pass a final oral examination that is primarily focused on the research thesis but may also address coursework. The final examination will be administered by the student's graduate academic committee. This program option is intended primarily for students who wish to conduct research and expand civil engineering knowledge. (This is the only degree option for which graduate assistantships are available.)

Option 2 – Professional Practice (30 SCH): Students must successfully complete at least 27 semester credit hours of graduate coursework, including at least three courses in each of two areas of civil engineering, and at least three semester credit hours of graduate capstone design that culminates in the preparation of a design project report. Depending upon the student's previous background, a course in management may be required, because the focus of this degree option is professional practice. Further, each student must pass the National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering (FE) examination and must pass a final oral examination that is focused on the graduate design project. The final examination will be administered by the student's graduate academic committee. This degree option is intended primarily for students who intend to practice civil engineering at the professional level.

Option 3 – Technical and Management Development (36 SCH): Students must successfully complete at least 36 semester credit hours of graduate coursework, including at least three courses in each of two areas of civil engineering and three courses developing business management and engineering management skills. At least two Civil Engineering courses used for the program must be graduate design courses. Further, students must pass a final comprehensive written and/or oral examination that addresses the student's undergraduate and graduate education. The final examination will be coordinated by the student's graduate academic advisor. This degree option is intended primarily for students in practice who want to enhance their technical skills and to develop management skills.

Master of Science in Electrical Engineering

Dr. Mukul Shrivaiakar, Chair

The Department of Electrical Engineering offers the Master of Science in Electrical Engineering with two options to earn the degree: (1) research option and (2) non-thesis option.

Master of Science in Electrical Engineering--Total Semester Credit Hours = 30-36

Admission Requirements

Students entering the Master of Science in Electrical Engineering (MSEE) program are expected to have a background equivalent to that of students graduating from the Bachelor of Science in Electrical Engineering (BSEE) program offered at The University of Texas at Tyler, or to obtain such background through specified prerequisite coursework.

In addition to the general requirements for admission to graduate study at The University of Texas at Tyler, to be admitted to the MSEE program a student must meet the following admission requirements.

GRADUATE COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

- A. Satisfactory score on the General Test (verbal and quantitative) of the Graduate Record Examination (GRE).
- B. Satisfactory grade point average on the student's last four semesters of academic study and last 60 semester credit hours of upper division undergraduate or graduate courses.
- C. A bachelor's degree in an Electrical Engineering program accredited by the ABET Engineering Accreditation Commission. Students who have not earned such a degree will be required to complete prerequisite (leveling) coursework before starting the MSEE program as determined by the MSEE Program Administrator.
- D. A demonstrated proficiency in the use of the English language, both spoken and written.
- E. Approval of the MSEE Program Administrator and the Chair, Department of Electrical Engineering.

Consideration for admission to the Master of Science in Electrical Engineering program will also be given to one or more of the following: the applicant's demonstrated commitment to his or her chosen field of study, socioeconomic background, first generation college graduate, multilingual proficiency, geographic region of residence, and level of responsibility in other matters including extracurricular activities, employment, community service, and family responsibilities.

Graduation Requirements

There are two options to earning the Master of Science in Electrical Engineering (MSEE): (1) thesis option and (2) non-thesis option. Regardless of option selected, a student must complete a graduate course in advanced mathematics.

At least eighteen hours (including the thesis) must be in the major area; at least six hours must be in a supporting area and can include courses outside the department. The supporting courses may be in electrical engineering but must represent a specialty distinct from the major courses. At least two-thirds of the credit hours applied to the degree must be taught by a department in the College of Engineering and Computer Science. To graduate the student must earn at least a 3.0 grade point average on all course work used for the graduate degree. No more than three credit hours of independent study courses may be applied to the degree.

The program options and additional degree requirements are as follows:

Thesis Option (30 SCH): Students must successfully complete at least 24 semester credit hours of graduate coursework, successfully complete at least six credit hours of graduate thesis research, successfully prepare a research thesis, and pass a final oral examination that is primarily focused on the research thesis but may also address coursework. The final examination will be administered by the student's graduate academic committee. This program option is intended primarily for students who wish to conduct research and expand electrical engineering knowledge. (This is the only degree option for which graduate assistantships are available.)

Non-Thesis option (36 SCH): Students must successfully complete at least 36 semester credit hours of graduate coursework. Further, students must pass a final comprehensive written and/or oral examination that addresses the student's undergraduate and graduate education. The final examination will be coordinated by the student's graduate academic advisor. This degree option is intended primarily for students in practice who want to enhance their technical skills.

Program Outcomes

The "Program Outcomes" of the MSEE program represent the knowledge, skills, and abilities that graduates are expected to have at the time of completion of their program.

- A. **Graduates of the program will possess a breadth and depth of knowledge in electrical and computer engineering:** Students will possess and be able to apply knowledge and principles at a graduate level in two or more of the following areas utilizing modern engineering tools: electronics, power systems, controls, advanced engineering mathematics, signal processing, communications, real-time systems, computer systems, electromagnetic and power electronics.

- B. **Graduates of the program will possess and demonstrate oral and written communication skills:** Students will be adequately prepared for entrance into advanced careers or into a doctoral program through reports, papers, publications or presentations.
- C. **Graduates of the programs will demonstrate the capability to perform independent learning and investigation:** Students will successfully address electrical or computer engineering problems through independent research activity in coursework or a thesis.

Transfer of Credit

A student may transfer a maximum of 9 semester hours of graduate credit in which a grade of "B" or better has been earned from approved institutions. Transfer credit is subject to the approval of the student's advisor and departmental chair.

Master of Science in Mechanical Engineering

Dr. Yueh-Jaw Lin, Chair

Master of Science in Mechanical Engineering--Total Semester Credit Hours=30-36

The Master of Science in Mechanical Engineering gives students two options to earn the degree: (1) the research option and (2) the non-thesis option.

Admission Requirements

Students entering the Master of Science in Mechanical Engineering (MSME) program are expected to have a background equivalent to that of students graduating from the Bachelor of Science in Mechanical Engineering (BSME) program offered at The University of Texas at Tyler, or to obtain such background through specified prerequisite coursework.

In addition to the general requirements for admission to graduate study at The University of Texas at Tyler, to be admitted to the MSME program a student must meet the following admission requirements.

- A. Satisfactory score on the General Test (verbal and quantitative) of the Graduate Record Examination (GRE).
- B. Satisfactory grade point average on the student's last four semesters of academic study and last 60 semester credit hours of upper division undergraduate or graduate courses.
- C. A bachelor's degree in a Mechanical Engineering program accredited by the ABET Engineering Accreditation Commission. Students who have not earned such a degree will be required to complete prerequisite (leveling) coursework before starting the MSME program as determined by the MSME Program Administrator.
- D. A demonstrated proficiency in the use of the English language, both spoken and written.
- E. Approval of the MSME Program Administrator and the Chair, Department of Mechanical Engineering.
- F. Consideration for admission to the Master of Science in Mechanical Engineering program will also be given to one or more of the following: the applicant's demonstrated commitment to his or her chosen field of study, socioeconomic background, first generation college graduate, multilingual proficiency, geographic region of residence, and level of responsibility in other matters including extracurricular activities, employment, community service, and family responsibilities.

Graduation Requirements

There are two options to earning the Master of Science in Mechanical Engineering (MSME):

- 1. Thesis option. This degree option is intended primarily for students who wish to conduct research and expand mechanical engineering knowledge. A thesis is required. (This is the only degree option for which graduate assistantships are available.)

2. Non-thesis option. This degree option is intended primarily for the professional working engineer who wants advanced technical courses but would benefit more from completing an advanced engineering design project than a research program.

Regardless of the option selected, a student must complete a graduate course in advanced mathematics. At least eighteen hours (including the thesis or report) must be in the major area; at least six hours must be in a supporting area and can include courses outside the department. The supporting courses may be in mechanical engineering but must represent a specialty distinct from the major courses. At least two-thirds of the credit hours applied to the degree must be taught by a department in the College of Engineering and Computer Science.

To graduate, students must earn at least a 3.0 grade point average on all coursework used for the graduate degree. The program options and additional degree requirements are as follows:

Thesis Option (30 SCH): Students must successfully complete at least 30 semester hours of graduate credit coursework, including six hours of thesis credits. In addition to the required coursework and thesis, students in the research option must successfully pass a final oral examination administered by the student's graduate academic committee.

Non-Thesis option (36 SCH): Students must successfully complete at least 36 semester credit hours of graduate coursework, including at least three hours in a project course that culminates in an engineering report on a significant design or analysis project performed by the student. In addition to completing all required coursework and the advanced engineering design project, students electing the non-thesis option will also be required to pass a final oral examination that is administered by the student's graduate academic committee.

Master of Science in Computer Science

Dr. Arun Kulkarni, Interim Chair

The Master of Science in Computer Science offers individuals an opportunity to become more competent and productive in a variety of computing environments as computer science professionals and to prepare for further graduate study. The program is oriented toward the design, implementation and application of computer software. The program includes study in the various types of software such as compilers, operating systems, database systems and real-time systems.

The program is designed for graduates of computer science programs as well as baccalaureate graduates in other disciplines. Preparation in computer science will determine the point at which the student will enter this program.

Mission Statement

The Department of Computer Science supports the mission of the College of Engineering and Computer Science through its teaching, research, and service activities. The department is committed to excellence in graduate computer science education and provides students with a strong theoretical foundation, proficiency in programming skills, experience in communications, insight into computer systems security, and training in ethics and professional conduct. In a broad sense, graduate studies provided by the department are intended to increase students' understanding and intellectual maturity in computer science. The curriculum is designed to be responsive to the dynamic requirements of the computer science field and to the needs of the variety of students.

Program Outcomes

Computer science students at the time of graduation are expected to:

1. possess an enhanced breadth of knowledge in computer science, combined with a depth of knowledge in critical core areas of computing;
2. possess the skills and knowledge for lifelong learning in computer science;
3. possess knowledge of the theoretical foundations of computing and have strong practical application experience;
4. possess and demonstrate oral and written communication skills;

5. understand and respect the professional standards of ethics expected of a computer scientist and be knowledgeable concerning the history of the computing field;
6. possess a knowledge of computer security and computer security management;
7. analyze and compare relative merits of alternative software design, algorithmic approaches, and computer system organization, with respect to a variety of criteria relevant to the task (e. g. efficiency, scalability, security);
8. implement algorithms in multiple programming languages, on multiple hardware platforms, and in multiple operating system environments.

Master of Science in Computer Science--Total Semester Credit Hours = 30-36

Admission Requirements

- A. A satisfactory score on the General Test (verbal and quantitative) of the Graduate Record Examination (GRE)
- B. A satisfactory grade point average on all prior advanced-level (junior, senior, and graduate) work taken
- C. A demonstrated proficiency in the use of the English language. If a student's verbal score on the General Test of the GRE is below an acceptable minimum, the student must pass an English proficiency test.
- D. An undergraduate major in computer science or course work in computer science including the content of COSC 2315 and COSC 2336 or equivalent
- E. A student may enroll in a maximum of nine graduate credit hours without a satisfactory score on the General Test of the Graduate Record Examination (GRE).
- F. No more than nine semester credit hours of graduate credit earned prior to acceptance into the program, including transfer credit, may be applied to the MS degree. Students seeking admission to the MS program who have not yet satisfied admission criteria will be considered provisional. Provisional students must earn a grade of "B" or better in all work attempted. A provisional student who earns a grade of "C" or lower will be denied admission to the program.
- G. Approval by the departmental chair

Consideration is also given to one or more of the following: the applicant's demonstrated commitment to his or her chosen field of study, socioeconomic background, first generation college graduate, multilingual proficiency, geographic region of residence, and level of responsibility in other matters including extracurricular activities, employment, community service, and family responsibilities.

Prerequisites

In order to take a COSC course numbered 5326 or higher, a student must have satisfactorily completed six hours of calculus, COSC 2315 and COSC 2336 or equivalent

Transfer of Credit

A student may transfer a maximum of 9 semester hours of graduate credit in which a grade of "B" or better has been earned from approved institutions. Transfer credit is subject to the approval of the student's advisor and departmental chair.

Degree Requirements

Candidates for the Master of Science in Computer Science must satisfactorily complete one of the following options:

Option 1—Thesis (30 SCH): This option requires 30 hours of graduate level course work in computer science including 15 semester hours of core courses and 6 hours of thesis COSC 5395/5396.

Option 2- Project (30 SCH): This option requires 30 hours of graduate-level course work in computer science including 15 semester hours of core courses, COSC 5380, Research Project, and the completion of the Comprehensive Exam.

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Option 3 - Professional (36 SCH): This option requires 36 hours of graduate-level course work in computer science including 15 semester hours of core courses and the completion of the Comprehensive Exam. At least 30 hours must be in Computer Science. Up to 6-hours of approved non-Computer Science are permitted.

The 15-semester-hour core requirement for the Master of Science in Computer Science is as follows:

- COSC 5330: Operating Systems
- COSC 5340: Programming Languages
- COSC 5350: Data Communication and Networks
- COSC 5360: Database Design
- COSC 5393: Graduate Seminar

All candidates for the computer science degree must also meet the following requirements:

- A. A minimum grade point average of 3.0 on all graduate level work taken at UT Tyler. No course with a grade below "C" may be applied toward this degree.
- B. Students must complete each core course (COSC 5330, 5340, 5350, 5360 and 5393) with a grade of "B" or better. (Options 2 and 3 only) Satisfactory performance on a comprehensive written examination.
- C. Students must have completed all of the core courses (COSC 5330, 5340, 5350, 5360, and 5393) with a grade of "B" or better in order to register for COSC 5380 or COSC 5395/5396.
- D. All COSC 5380 and COSC 5395/5396 students will have a committee composed of their advisor plus two additional Computer Science faculty members.

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PLEASE NOTE: Most courses have fees attached, and those fees are subject to change. Please consult the UT Tyler web page for current fees.

Prefix and number in parentheses following the U.T. Tyler course title is the Texas Common Course Number designation.

Civil Engineering (CENG)

CENG 5109: Civil Engineering Seminar

Current and historic topics in various areas of civil engineering. Speakers may include off-campus experts, faculty and graduate students. Presentation of at least one seminar lecture is required.

CENG 5312: Advanced Concrete Design

A second course in the design of reinforced concrete structures; advanced concepts in analysis and design of beams, columns and slabs; and an introduction to pre-stressed concrete. **Prerequisite:** CENG 3325 and CENG 4311 or equivalent or department chair approval.

CENG 5313: Prestressed Concrete Design

Introduction to prestressed concrete; advanced concepts in analysis and design of prestressed beams, columns and slabs. **Prerequisite:** CENG 4311 or CI.

CENG 5314: Advanced Structural Analysis

This course builds upon the material covered in CENG 3325 to develop a better understanding of structural behavior. Matrix analysis methods, including an introduction to finite elements are developed as the basis for modern, computer-based structural analysis. These and other advanced analytical techniques are used to analyze and design trusses, beams, and frames. Course-work involves extensive use of the computer as an analytical tool. Co-listed with CENG 4314. The graduate student will complete an additional project. **Prerequisite:** CENG 3325.

CENG 5316: Advanced Steel Design

Advanced design of structural steel buildings emphasizing the relationship between design and response of the structural system; theoretical basis of building codes provisions; limit state and plastic design; beam-columns; built up sections, and composite sections; and connections. **Prerequisite:** CENG 3325 and CENG 4317.

CENG 5318: Design Timber Structures

Introduction to the design of structural elements for timber buildings including tension and compression members, timber trusses, plywood decking, beam-columns, bolted and nailed connections, diaphragms, shear walls, and columns; design of timber elements by allowable stress and strength design methods; introduction to construction techniques, materials and terminology used in timber design. Co-listed with CENG 4318. The graduate student will complete an additional project. **Prerequisite:** MENG 3306 and CENG 3325.

CENG 5322: Structural Masonry Design

Design of structural elements for masonry buildings including lintels, walls, shear walls, columns, pilasters, and retaining walls; design of reinforced elements of concrete or clay masonry by allowable stress and strength design methods; introduction to construction techniques, materials and terminology used in masonry. Co-listed with CENG 4322. The graduate student will complete an additional project. **Prerequisite:** CENG 3325 or equivalent or department chair approval.

CENG 5324: Advanced Mechanics of Materials

Advanced topics in mechanics of materials, emphasizing analysis and design of load carrying members. Topics covered include: theories of failure, torsion of open and closed sections, unsymmetrical bending, curved beams, beams on elastic foundations, plane elasticity, and energy methods of analysis. The course will highlight approximations necessary to generate 'strength of materials' type

solutions and address the impact of these approximations on the reliability and robustness of member design. **Prerequisite:** CENG 3306 or equivalent or department chair approval.

CENG 5326 Structural Dynamics and Seismic Design

Analysis of linear structural systems subjected to time dependent loads, including free and forced vibration. Classical and numerical methods of solution, including lumped mass techniques, energy methods and introduction of matrix-formulation for dynamic problems. Introduction to earthquake analysis and design. **Prerequisite:** CENG 3325, CENG 2302, MATH 3305 or equivalent or department chair approval.

CENG 5328: Structural Fire Behavior

Course provides an overview of fire effects on building structures. Topics covered include: fire chemistry, behavior and development, heat transfer terminology and processes, fire modeling, heat transfer modeling, material properties at elevated temperatures, effects of insulation, and effects of fire on structures. The Eurocode approach to structural design for fire will be introduced. Co-listed with CENG 4328. The graduate student will complete an additional project. **Prerequisite:** and CENG 3325, CHEM 1311/1111, CENG 4317 or CENG 4311 or equivalent or department chair approval.

CENG 5330: Water Resources Planning and Management

Course covers principles of analysis, decision-making, and problem solving required in managing water resources under pressure from development, pollution, and climate change. It focuses on local and global problems, integrated water resources management, the water industry, water law, water security, natural systems protection, water use efficiency, and management tools. Co-listed with CENG 4330. The graduate student will complete an additional project. **Prerequisite:** CENG 3361 or equivalent or department chair approval.

CENG 5333: Water Resources and Environmental Engineering Modeling

The course will familiarize students with several computer-based models for analyzing and designing a variety of water resources and environmental engineering applications. In addition to using existing software programs common throughout industry, students will also create their own simulation and optimization models using Visual Basic for Applications (VBA). **Prerequisite:** CENG 3361 or equivalent or department chair approval.

CENG 5334: Storm Water Pollution Control

This course provides students with the requirements of facilities that are covered under the General of Multi-sector General (GMG) permit for storm water discharges, as well as municipal facilities covered under a Municipal Separate Stormwater Sewer System (MS4) permit and construction erosion control. The course addresses prevention of storm water pollution by teaching the Best Management Practices (BMPs) of controlling and working with storm water. **Prerequisite:** CI.

CENG 5336: Construction Project Delivery Systems

A comprehensive coverage of the standard contracts between various agencies involved in construction. Analysis of traditional and current project delivery methodologies. **Prerequisite:** CENG 4336 or CI.

CENG 5337: GPS and GIS Applications in Water Resources and Environmental Engineering

This course provides students with an introduction to the general concepts and applications of Global Positioning Systems and Geographic Information Systems through several project-based water resources and environmental engineering applications. Through work on various real-world problems, students develop insight with regard to spatial-based applications and the diversity of each technology's potential applications. The course will emphasize the use of both technologies as part of an integrated planning and decision

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making process. **Prerequisite:** CENG 3310 and CENG 2336 or equivalent or department chair approval.

CENG 5338: Advanced Construction Project Management

This course will build on the information that is normally provided to students in the undergraduate construction management courses on planning and control of construction projects. The focus of this course will be quantitative tools that can be used in planning and controlling construction projects. Topics to be covered will include cash flow forecasting, site planning, site administration, risk analysis, contract documents, and contracts administration. Advanced planning tools such as line of balance, velocity diagrams, time-cost trade off, resource planning with applications to construction projects will also be discussed. **Prerequisites:** CENG 4331, CENG 4336, CENG 4338, ENGR 3301 ENGR 4306 or CI.

CENG 5342: Analysis of Urban Water Systems

The course examines the behavior and interaction between all phases of urban water management: water supply, stormwater management, water distribution, and wastewater collection. Students learn how conservation practices and water sensitive urban design can reduce the amount of water required by an urban area. **Prerequisite:** MENG 3310 or equivalent course in open channel flow.

CENG 5344: Water Engineering for International Development

This course addresses the design of small-scale, low cost systems for drinking water supply and wastewater disposal. Topics include surface water intakes, wells, storage tanks, water distribution systems, water quality testing, septic tanks, leach fields, and oxidation ponds. The course emphasizes on-site data collection methods, practical issues of design, and project sustainability. **Prerequisite:** CENG 3310 or equivalent or department chair approval.

CENG 5347: Irrigation Water Control and Management

The objective of this course is to familiarize students with the fundamentals of water control and its application in flow regulation and measurement in open-channel irrigation systems. Students will learn how water is controlled in irrigation systems in order to satisfy crop water requirements. **Prerequisite:** MENG 3310 or course in open channel flow.

CENG 5352: Transportation Planning

Theoretical foundations of transportation planning, analysis, and evaluation methods. Theory and application of aggregate and disaggregate models of land use, trip generation, and destination, mode, and route choice. Travel demand modeling and transportation network analysis for evaluation of system alternatives. **Prerequisites:** CENG 3351, ENGR 3301, ENGR 4306 or CI.

CENG 5353: Operations Research and Advanced Mathematics

Introduction to operations research techniques and advanced mathematics for the analysis of engineering systems. Principles of problem identification and model formulation, linear and nonlinear programming, integer programming, multi-objective programming, dynamic programming and network programming. Foundations of the risk analysis, statistical modeling, and computer simulation. Topics also include advanced linear algebra, partial differential equations, and fourier analysis. **Prerequisite:** MATH 3351 or equivalent or department chair approval.

CENG 5354: Urban Transportation Planning

Overview of the four-step urban transportation planning process, estimation of the travel demand models of trip generation, trip distribution, mode choice, and traffic assignment, and forecasting of travel patterns using travel demand models, state-of-the-art approaches and transportation network analysis for evaluation of system alternatives. Co-listed with CENG 4354. The graduate student will complete an additional project. **Prerequisite:** CENG 3351 or equivalent or department chair approval.

CENG 5355: Transportation Systems Management and Operations

Foundations of transportation system management and operations, including arterial street systems and freeway systems. Principles of simulation of urban streets operations and traffic signal control and optimization, and freeway operations analysis and simulation using commercially available packages such as HCS+, Corsim, Synchro, Transyt-7F and Passer-V. Co-listed with CENG 4355. The graduate student will complete an additional project. **Prerequisite:** CENG 4351 or equivalent or department chair approval.

CENG 5357: Public Transportation Engineering

Introduction to public transportation systems, including planning, design, management, and operations of mass transit systems in urban and rural areas. Principles of transit demand forecasting, optimal transit route network design, and driver and vehicle scheduling. **Prerequisite:** CENG 3351 and CENG 5353 or equivalent or department chair approval.

CENG 5361: Traffic Flow Theory

In-depth traffic flow theory at micro-, meso-, and macroscopic levels. Fundamentals of traffic flow, traffic flow characteristics, statistical distributions of traffic flow parameter, traffic stream models, car following models, continuum flow models, shock wave analysis, queuing analysis, traffic flow models for intersections, network flow models and control, traffic simulation. **Prerequisite:** CENG 4351 or equivalent or department chair approval.

CENG 5363: Transportation Network Analysis

Introduction to planning and optimization techniques for the analysis of transportation networks. Principles of precise algorithms for finding transport network equilibrium flows and applications that relate to these flows. Topics include routing algorithms, user equilibrium traffic assignments, system optimal, stochastic user equilibrium, traffic paradox, origin-destination matrix estimation, and transportation network design. **Prerequisite:** CENG 4351, CENG 5354 or equivalent or department chair approval.

CENG 5365: Dynamic Transportation Network Modeling

Introduction to the optimization and modeling methodologies required for the analysis of dynamic and stochastic transportation networks. Principles of dynamic network equilibrium via simulation and mathematical programming approaches. Topics include time-dependent routing algorithms, analytical-, cell transmission- and simulation-based dynamic traffic assignment, network paradoxes, network reliability, dynamic network design, and some stochastic extensions. **Prerequisite:** CENG 5363 and CI.

CENG 5370: Environmental Pollution Sources and Control

This course is designed to give students the skills to recognize pollution sources and methods of control for reducing adverse effects on the ambient environment. **Prerequisite:** CENG 3371 or equivalent or department chair approval.

CENG 5371: Graduate Internship

Program provides a learning experience in an engineering environment appropriate to the graduate level of work with a minimum of 150 hours of work. A written report of the experience and presentation is required. Department Chair approval.

CENG 5373: Environmental Management

Federal and State environmental regulations; techniques for environmental control; risk assessment and management strategies; characterization of hazardous materials, spill control strategies and clean-up techniques. **Prerequisite:** CENG 3371 or equivalent or department chair approval.

CENG 5376: Indoor Environmental Quality

Graduate level course in indoor air quality is designed to address the issues associated with maintaining a safe and healthy environment in occupied structures; handling a range of issues like health, comfort effects, physiological thresholds, and ventilation measurement. Students also learn the fundamentals of HVAC and its role in IEQ and occupant comfort. **Prerequisite:** department chair approval.

CENG 5381: Foundation Design

Relationship of local geology to soil formations, groundwater, planning of site investigation, sampling procedures, and determination of soil parameters. Analysis and design of shallow foundations, deep foundations, and earth retaining structures. **Prerequisite:** CENG 3336

CENG 5382: Geotechnical Earthquake Engineering

Introduction to geotechnical earthquake engineering. Topics include earthquake magnitude and intensity, liquefaction and ground failure, design ground motions, elementary dynamics of structures, response spectra, and building code provisions. **Prerequisites:** CENG 3336 and CENG 2302.

CENG 5383: Soil Improvement and Stabilization

Introduction to soil improvement and stabilization. Topics include over excavation/replacement, light-weight fill, compaction, admixture stabilization, preloading, vertical drains, dynamic compaction, granular columns, deep soil mixing, grouting, ground anchor. **Prerequisites:** CENG 3336.

CENG 5387: Air Pollution Control Design

The course covers the fundamentals and impact of air pollution on environmental quality and introduces the process of air monitoring and the design of air monitoring surveys. The course will also introduce the student to contaminant removal devices for specific contaminants, atmospheric dispersion of contaminants, and the process of air quality planning and modeling.

Prerequisite: CENG 5370 and CENG 5373.

CENG 5393: Advanced Design Project

Graduate capstone design project in an area of civil engineering under the direction of graduate civil engineering faculty. A professional quality design project report is required. **CR/NC Only. Prerequisite:** Consent of advisor.

CENG 5395: Thesis

Selection of a research topic and development of a thesis plan. **CR/NC Only.**

Prerequisite: Consent of advisor.

CENG 5396: Thesis

Completion and approval of thesis. **CR/NC Only. Co-requisite or Prerequisite:** CENG 5395.

CENG 5150, 5250, 5350: Advanced Topics in Civil Engineering

Structured study of civil engineering topics not found in other courses. May be repeated for a maximum of six credits if different topics are covered.

Prerequisite: CI.

CENG 5199, 5299, 5399: Independent Study

Independent study in a specific area of civil engineering not covered by organized graduate courses. A maximum of six credit hours may be applied toward a graduate degree if the content of the independent study is different during each registration. **Prerequisite:** Consent of Advisor and Chair.

Computer Science (COSC)

COSC 5325: Workshop in Computer Science

Designed to provide instruction for groups who wish to study current specific areas in computer science. This course may be repeated once for credit when content changes. **MAY NOT BE USED FOR THE MS IN COSC DEGREE.**

COSC 5326: UNIX Programming Environment

This course will cover shell programming, filters, I/O programming, program development, and document preparation. Special attention will be given to UNIX systems programming. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5330: Operating Systems

Analysis of operating systems software for computing systems, and resource management procedures and techniques used in all types of computing environments. Topics include processes, synchronization, scheduling algorithms, memory management, security, device management, deadlocks, and file systems. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5336: Local Area Networks

LAN architectures and media. In addition, course will cover inter-networking, performance, and design issues. Special attention will be paid to IEEE 802 and all current systems. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5340: Programming Languages

Theoretical aspects of programming languages, design and implementation criteria, analysis and classification of programming languages. Topics include: language design principles; translation and the formalization of syntax; generalization of primitive and abstract data types; sequence, data, and subprogram control; and language paradigms such as imperative, object-oriented, functional, logic, concurrent, and visual. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5341: Computer Security

This course will cover cryptography, network protocols and their application, including an overview of symmetric and asymmetric cryptographic algorithms and their use for authentication, e-mail, and e-commerce. Network security protocols covered with include Kerberos, SET, and SMIME. **Prerequisites:** COSC 2315, 2336

COSC 5342: Computer Security Management

This course will cover the techniques used to security and manage computers, computer networks, and enterprise computer systems. Topics covered will include security policies, computer network management, and disaster recovery. The course will cover all of the topics listed in CNSI-4012. **Prerequisite:** COSC 4325

COSC 5345: Computer Graphics

An introduction to computer graphics stressing interactive graphics. Basic theory and applications will be covered. GKS graphics and an introduction to 3-D graphics will be given. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5346: Expert Systems

Basic concepts for building expert systems, architecture of expert systems, the knowledge acquisition process, languages and tools for building expert systems, evaluation of expert systems, issues and case studies, and practices in the design and evaluation of expert systems. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5350: Data Communication and Networks

An introduction to data communications and networking. Covers the architecture, design and implementation of computer networks. Topics include data transmission, switching, protocols and security. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5351: Computer-Human Communications

Study of computer interfaces with a special emphasis on highly interactive interfaces. A complete study of the X Windows Architecture including hardware, communication protocols, and programming. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5352: Client/Server Architectures

Design and implementation of client/server systems. Topics include: network protocols, OLE DGE, CORBA, server design and implementation and tightly integrated message systems. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5354: Parallel and Supercomputing

Methods for creating and implementing parallel algorithms. Parallel programming, programming models, and architectures of vectorized supercomputers, shared memory, and distributed architectures. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5356: Computer Vision

The course deals with extracting meaningful descriptions and recognition of physical objects from digital images. Topics covered include computer vision fundamentals, edge detection, noise removal, enhancement techniques, feature extraction, supervised classifiers, unsupervised classifiers, and computer vision.

COSC 5360: Database Design

An introduction to database systems and design. Covers relational, hierarchical, and logical database models. Topics include database modeling, design, security, management, implementation and integration. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5365: Artificial Intelligence

Introduction to the basic concepts of artificial intelligence. Topics covered will include knowledge representation, A.I. programming, learning, and neural nets. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5370: Software Engineering

Program development techniques with structured methodologies. Top-down development, modeling tools, structured programming, programming style, program testing and debugging. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5371: Data Mining

Study of the concepts and techniques of data mining, or knowledge discovery in databases. The automated or convenient extraction of patterns representing

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knowledge implicitly stored in large databases, data warehouses, and other massive information repositories. **Prerequisite:** COSC 5360.

COSC 5374: Software Architecture

Concepts and methodologies for the systematic analysis, development, evolution, and reuse of software architectures. Understanding the elements of software architectures including components, connectors, styles, patterns, and constraints. Developing software architectures from functional requirements. Evaluation and selection of alternative software architectures based on non-functional requirements. State of the practice and art. **Prerequisite:** COSC 2336 or equivalent.

COSC 5375: Advanced Database Design

Database design issues including: query processing, interpretation, optimization, and methods for implementing and optimizing logic queries. Knowledge databases, distributed databases, and object-oriented databases. **Prerequisites:** COSC 5360.

COSC 5376: Fundamentals of Data Warehouses

This course provides an overview of the fundamentals of data warehousing including planning, designing, building, populating, and maintaining a successful data warehouse. Specific topics covered include the logical design of a data warehouse, data warehousing architecture, extract-transform-load processing, a comparison of OLAP and OLTP and query processing utilizing multidimensional views of data. **Prerequisite:** COSC 5360.

COSC 5377: Fundamentals of Modeling and Distributed Simulation of Complex Systems

This course aims to teach the fundamentals of modeling, simulation, distributed simulation, and large-scale asynchronous distributed simulation of real systems on parallel processors. Examples from the real world include CAD of digital systems, IVHS transportation, military command and control, medical networks, banking networks, and asynchronous transfer mode (ATM) networks. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5378: Applied Computer Graphics

This graduate level course will begin with the basic theory of computational graphics, describe important applications, especially in the fields of medicine and GIS, and require students to complete a substantial applied project utilizing graphical tools and packages that are widely used in industry and the computer graphics community. The basic theory will build on mathematical foundation and focus on geometric primitives, color models, coordinate systems, transformation of object views in 2D and 3D, projection, illumination, reflection, shading, and ray tracing. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5379: Advances in Remote Sensing and GIS Analysis

This course will bring together recent developments in remote sensing and GIS analysis with a particular emphasis on software development techniques. Topics will include GIS data models, software algorithms for data storage, and analysis. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5380: Research Project

Faculty directed independent study of a computer science problem, subject, or research topic relevant to the student's current or anticipated career field. A professional quality computer science project report and an oral presentation of the research project are required. A student may not begin work on the project before completing the graduate core. After starting the project, students must register for at least three credit hours of COSC 5380 each semester until the project is completed and approved. **CR/NC Only. Prerequisites:** COSC 5330, 5340, 5350, and 5360.

COSC 5381: Advanced UNIX O/S Design

This advanced graduate course aims to expose students to practical challenges in operating systems design today, especially securing it from threats from viruses and worms, and intelligent attacks. The course will combine lectures with a significant project and feature extensive analysis of case studies. **Prerequisites:** COSC 5330 and (COSC 5326 or instructor permission).

COSC 5382: Comprehensive Internet Security

This course will introduce the student to the topics of computer security, network security, and Web security, in a coherent manner. It will give detailed coverage of the theory, deployment and management of high security Web

applications. Considerable attention will be paid to methods of Web site authentication, authorization, privacy and confidentiality. As a part of the course, students will build a highly secure Web site project. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5390: Topics in Computer Science

This course can be taken up to two times for credit when content changes. **Prerequisites:** COSC 2315, COSC 2336.

COSC 5391: Topics in Distributed Systems

Selected topics in distributed systems, computer networks, and distributed databases. Design of local area networks and multiple network systems, database programming languages, and operating systems for distributed systems. **Prerequisite:** COSC 5350.

COSC 5392-5692: Graduate Internship Program

A regular academic or extended summer semester program providing for a learning experience in a computing environment, at the graduate level of study. A written report and a presentation describing the activities and accomplishments of the student during the internship is required at the conclusion of the internship period. A maximum of three credit hours may be applied toward the graduate degree. **Prerequisite:** Consent of the department chair.

COSC 5393: Graduate Seminar

This course describes methods of conducting research in computer science. Current research in several different areas of computer science will be presented. Students will review and critique articles in the areas as well, focusing on their underlying principles.

COSC 5395: Thesis

Selection of a research topic and development of a thesis plan. **CR/NC Only. Prerequisites:** COSC 5330, 5340, 5350, and 5360.

COSC 5396: Thesis

Completion and approval of thesis. **Prerequisite:** COSC 5395 or concurrent enrollment. **CR/NC Only.**

COSC 5199-5399: Independent Study

Independent study in specific areas of computer science not covered by organized graduate courses. A maximum of 6 credit hours of independent study courses may be applied toward a graduate degree. **Prerequisite:** Consent of department chair.

Electrical Engineering (EENG)

EENG 5301: Wireless Communications and Networks

Introduction to Wireless Communications and Networks: transmission fundamentals, LANs, MANs, WANs, switching, ATM, TCP/IP; Wireless Communications: antennas, propagation, signal encoding, spread spectrum, error control; Wireless Networking: satellite communications, cellular networks, analog, TDMA, CDMA, cordless systems, wireless local loop, mobile IP, WAP; Wireless LANS: infrared, spread spectrum, microwave, IEEE 802.11, Bluetooth. **Prerequisite:** EENG 4312 or CI.

EENG 5303: Computational Methods in Electromagnetics

Numerical methods for the solution of boundary value problems in electrical engineering applications: the finite difference method (FDM), the charge simulation method (CSM), the method of moments (MOM) and the boundary element method (BEM). Applications include the simulation and modeling of electrostatic, magnetostatic, electromagnetic problems, active shielding of power frequency magnetic fields, optimization of high voltage electrodes and heat transfer problems. Three hours of lecture per week. **Prerequisites:** EENG 3303, MATH 3203 and MATH 3305 or CI.

EENG 5304: Computer-Aided Power Systems Analysis

Modeling of electric power systems. Fault Analysis, symmetrical components, sequence networks, load flow, stability studies. Application of computer methods to power system analysis. Machine dynamics and transients in power system analysis. Three hours of lecture per week. **Prerequisite:** EENG 4310 and MATH 3203 or MATH 3315 or CI.

EENG 5307: Introduction to Random Processes

Review of probability, transformation of random variables, random processes, correlation function and power spectral density, system response to noise, optimal processing. Three hours of lecture per week. **Prerequisite:** EENG 4312 or CI.

EENG 5308: Digital Signal Processing

Introduction to modern digital processing. Basic building blocks, the basic math (Z-Transforms, Fourier Transforms, Fast Fourier Transforms), deterministic processing, FIR and IIR filters, polyphase filtering, introduction to statistical filtering, basic power spectral density. Three hours of lecture per week. **Prerequisite:** ENGR 5307 or CI.

EENG 5309: Statistical Signal Processing

Review of digital signal processing concepts, wavelets, autoregressive modeling, Wiener filtering, adaptive filtering, power spectral estimation, introduction to advanced topics: higher order moments and spectra. Three hours of lecture per week. **Prerequisite:** ENGR 5308 or CI.

EENG 5310: Solid State Devices

Charge transport in semiconductors; Standard approaches for diffusion of dopants and lithography; Development of I-V models for solar cells, diodes, bipolar junction and field effect transistors; independent computer project. **Prerequisites:** EENG 3303 and EENG 4309, or prior coursework in electromagnetic fields and electronics at the undergraduate level.

EENG 5311: Organic Electronics

An introduction to electronic properties of organic materials and devices; charge transport in organic semiconductors; characterization of organic electronic devices such as transistors, organic light emitting diodes and solar cells. **Prerequisite:** EENG 4330 or consent of instructor.

EENG 5316: Optical Fiber Communication

An introduction to the analysis and design of fiber optic communication systems. Electromagnetic wave propagation treatment in optical fibers leading to single and multimode descriptions. Standard methods for measuring fiber parameters, overall communication system performance including sources and receivers. **Prerequisites:** EENG 3303 and EENG 4312 or prior coursework at the undergraduate level in electromagnetic fields and communications theory.

EENG 5330: Communication Systems Engineering

Review of the principles of amplitude and frequency modulation. The main focus for the course will be the reliability issues for digital communication systems. This will include but is not limited to information theory and coding theory. Typical base-band and pass-band modulation schemes will be analyzed in terms of their Bit Error Rate performance. Examples taken from telephone line modems will be discussed. Link budget analysis appropriate for satellite and fiber-optics communication systems will also be covered. Three hours of lecture per week. **Prerequisite:** EENG 4312 or equivalent.

EENG 5333: Power Systems Planning and Operation

Economic dispatch; unit commitment; power control; power system planning and supply costs; demand forecast; long-range distribution system planning; outage cost; shadow pricing and simulation of electricity markets. Three hours of lecture per week. **Prerequisite:** EENG 4319 or CI.

EENG 5334: VLSI Design

Design and fabrication of digital ICs, CAD tools for the design of VLSI circuits; fabrication of CMOS ICs; static and dynamic CMOS logic design; design of low voltage and low power circuits; microprocessor datapath circuits; fault tolerance. **Prerequisites:** EENG 3302 and EENG 3306 or equivalent.

EENG 5335: FPGA Design

Digital systems design with FPGAs; Design and synthesis of reconfigurable logic with high-level descriptor languages; Logic design using FPGAs; Architectural and systems design issues; Fine-grained versus coarse-grained fabrics. Reconfigurable computing. **Prerequisites:** EENG 3307 and EENG 4309.

EENG 5336: Real Time Systems

Basic Real-Time Concepts; Computer Hardware; Languages; Real-Time Kernels; Intertask Communication and Synchronization; Real-Time Memory Management; The Software Life Cycle; System Performance Analysis and

Optimization; Reliability, Testing, and Fault Tolerance; Hardware/Software Integration; Integrated lab experiments with state-of-the-art real-time hardware and software tools. Graduate level term project or paper. **Prerequisites:** EENG 3307 or CI

EENG 5337: Semiconductor Devices

This course is an extension of models and principles of semiconductors developed in a prior introductory level class. The instructor can select from a number of advanced topics. These can include but are not limited to concentrated coverage for device processing, electrical characterization for solar cells, four terminal devices and modeling organic semiconductor based diodes and transistors **Prerequisites:** EENG 4330 or CI.

EENG 5370: Graduate Internship

An 8- to 16-week program providing for a learning experience in an engineering environment, at the graduate level of study. A written report and a presentation is required at the conclusion of the internship period. A maximum of three credit hours may be applied toward the graduate degree. **Prerequisite:** Consent of the Department Chair.

EENG 5140-5340: Advanced Topic in Electrical Engineering

Advanced studies in Electrical Engineering in topics not covered in regularly scheduled graduate courses. May be repeated as content changes. A maximum of nine (9) hours may be used for graduate credit on the degree plan if topics vary. **Prerequisite:** Consent of Instructor.

EENG 5199-5399: Independent Study

Independent study in a specific advanced area of engineering not covered by organized graduate courses. May be repeated as content changes. A maximum of six credits of independent study courses may be applied toward a graduate degree. **Prerequisite:** Consent of instructor and department chair.

EENG 5395: Thesis I

Selection of a research topic and development of a thesis plan. CR/NC Only. **Prerequisite:** Consent of advisor.

EENG 5396: Thesis II

Completion and approval of thesis. CR/NC Only. **Prerequisite or co-requisite:** EENG 5395.

Mechanical Engineering (MENG)

MENG 5306: Intermediate Solid Mechanics

Concepts from the theory of elasticity and topics from advanced mechanics of materials, including exact solutions for bending and torsion, axisymmetrically loaded members, and thin plates. **Prerequisite:** MENG 3306 or equivalent.

MENG 5318: Manufacturing Systems

A study of modern production practices and manufacturing systems including operations and materials planning, inventory control methods, production scheduling, layout of manufacturing cells, machine monitoring, and automation. Three hours of lecture per week. **Prerequisite:** MENG 3319 or CI.

MENG 5322: CAD/CAM

This course covers topics in object representation, geometric transformations, solid modeling, feature-based modeling, computer numerical control, kinematic modeling, and machining simulation and computer animation appropriate for the graduate level of work. Co-listed MENG 4322. **Prerequisites:** Consent of the instructor.

MENG 5324: Engineering Project Management

Project planning; task definition; work breakdown structure; task sequencing, Gantt charts; cost analysis; resource allocation; project tracking; completion projections. Use of commercial project management computer codes. Three hours of lecture per week with integrated computer assignments. **Prerequisite:** Graduate standing in Engineering and CI.

MENG 5325: Design of Turbomachinery

Application of the principles of thermodynamics and fluid mechanics to the performance analysis and design of pumps, blowers, centrifugal compressors, and turbines. Three hours of lecture per week. **Prerequisite:** MENG 3304 and MENG 4313 or CI.

ENGINEERING AND COMPUTER SCIENCE GRADUATE COURSE DESCRIPTIONS

MENG 5326: Vibration Analysis of Rotating Machinery

Instrumentation, measurement techniques, and analytical techniques used in monitoring, diagnosing and evaluating the vibration of rotating machines in industrial environments. Three hours of lecture per week with integrated laboratory. **Prerequisite:** MENG 4317 or CI.

MENG 5327: Quality Control and Engineering Statistics

Statistical methods and theory applicable to problems of product and process development and process monitoring; control charts, feedback control; experimental techniques and analysis in robust product design and process improvement; sampling, elements of six-sigma methodology. **Prerequisite:** MATH 3351 or CI.

MENG 5328: Finite Element Analysis

The mathematical principles of the finite element method applied to the solution of field problems in mechanical engineering. Solutions implemented using current commercial computer application codes. Three hours of lecture per week with integrated computer lab exercises. **Prerequisite:** CI.

MENG 5329: Advanced Production Engineering

Analysis and computer simulation of advanced topics in manufacturing. Topics include servo positioning systems, dynamics of the metal cutting process, machine tool chatter, stress and forces in metal forming and heat transfer in welding. **Prerequisite:** MENG 3319 or CI.

MENG 5331: Constraints Management

An introduction to the Theory of Constraints and its methodology for finding factors that block improvement in simple and complex systems, for identifying effective breakthrough solutions, and for developing improvements in manufacturing systems and engineering projects. Three hours of lecture per week. **Prerequisite:** CI.

MENG 5332: New Product Development

The new product development process and the role of multidisciplinary teams in the product development cycle. The integration of business concepts with engineering methods such as quality function deployment, concept generation and selection, prototyping and FMEA. Three hours of lecture per week. **Prerequisite:** CI.

MENG 5333: Composite Materials

Explores fundamental relationships between both the mechanical and hygrothermal behavior and the composition of multiphase media with an emphasis on fiber-reinforced polymers. Topics include using analytical tools to calculate strength, behavior, and failure of lamina. **Prerequisite:** MENG 3306 or CI.

MENG 5334: Continuum Mechanics

Study of the physical and mathematical principles relating to the behavior of continuous media and interrelationships between fluid and solid mechanics. Topics include compatibility, constitutive relations, isotropy and orthotropy, field equations, and ME applications. **Prerequisite:** MENG 3306 or CI.

MENG 5336: Intermediate Fluid Mechanics

Differential equations of fluid flow, mathematical modeling of Newtonian and non-Newtonian fluids, boundary layer theory, numerical modeling of turbulent flow, and an introduction to compressible flow. **Prerequisite:** MENG 3310 or equivalent undergraduate fluid mechanics course.

MENG 5337: Viscous Flow

Fundamental laws of motion for a viscous fluid; classical solution of the Navier-Stokes equations; inviscid flow solutions; laminar boundary layers; stability criterion. **Prerequisite:** MENG 3310 or equivalent undergraduate fluid mechanics course.

MENG 5338: Conduction Heat Transfer

Analytical methods in conduction; Bessel functions, separation of variables, Laplace transforms, superposition, oscillating solutions; computer methods; finite differences, finite elements. **Prerequisite:** MENG 3316 or equivalent undergraduate heat transfer course.

MENG 5339: Convection Heat Transfer

Development of formulations governing forced, buoyancy induced, and phase change transport and convective motions with emphasis on the underlying

conservation principles. **Prerequisite:** MENG 3316 and MENG 3310 or equivalent undergraduate heat transfer and fluid mechanics courses.

MENG 5140-5340: Advanced Topics in Mechanical Engineering

Advanced studies in topics not covered in regularly scheduled graduate courses. May be repeated as content changes. A maximum of nine credit hours may be used for graduate credit on the degree plan. **Prerequisite:** CI.

MENG 5344: System Dynamics

Mathematical modeling of dynamic mechanical engineering systems. Analytic and numerical simulation. Effects of physical characteristics of system elements on system design and dynamic behavior. **Prerequisites:** MENG 3306, 3310 and 3301.

MENG 5370: Graduate Internship

A program providing a new learning experience in a mechanical engineering environment appropriate for the graduate level of work with a minimum of 150 hours of work. A written report describing the activities and accomplishments of the student during the internship is required at the conclusion of the internship period. May be repeated once for credit. A maximum of three (3) credit hours may be applied toward the graduate degree. Offer every Fall, Spring and Summer. CR/NC only. **Prerequisite:** Consent of the Department Chair.

MENG 5395: Thesis I

Completion and approval of thesis. **Prerequisite:** Advisor approval.

MENG 5396: Thesis II

Completion and defense of an acceptable master's thesis. **Prerequisite:** MENG 5395

MENG 5199-5399: Independent Study

Independent study in specific areas of Mechanical Engineering not covered by organized graduate courses. A maximum of six credit hours may be used for graduate credit on the MSME degree. One to three hours of course meeting per week. **Prerequisite:** CI.

MENG 5350, 5650: Engineering Project

Faculty directed independent study that culminates in a professional quality Engineering Report on a significant design or analysis project. May be repeated once for credit. CR/NC only. **Prerequisite:** 12 hours of graduate coursework and CI.

THE FACULTY

Emeritus Faculty

KENNETH R. CASSTEVENS (2005)

Deceased

Associate Professor Emeritus of Journalism, College of Arts and Sciences

ROGER N. CONAWAY (2009)

Professor Emeritus of Speech Communication, College of Arts and Sciences

ROBERT H. CRANFORD (2006)

Professor Emeritus of Mathematics, College of Arts and Sciences

STEPHEN E. DANIELS (2011)

Professor Emeritus of History, College of Arts and Sciences

VINCENT J. FALZONE (2009)

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THOMAS L. FERNANDEZ (2006)

Professor Emeritus of Accounting & Finance, College of Business and Technology

DONALD E. FISCHER (2002)

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J. PAXTON HART (1991)

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