College of Technology Mission Statement:
The mission of the College of Technology is to provide intellectual leadership in the areas of teaching, research, and service in technology-related disciplines in association with outstanding undergraduate, graduate, and continuing education programs.

The college will achieve its mission through the following activities:

- Deliver high quality education that leverages the intellectual curiosity of individuals to serve their chosen professions and society at large;
- Engage in research into new and innovative applications of existing and emerging technology;
- Function as a leading resource for the life-long learning needs of traditional and non-traditional students; and
- Enable under-privileged and under-represented segments of society to fully participate in the rewards of technology.

Role of the College
The College of Technology has been part of the University of Houston for over 60 years and is well-known in the community for its contributions to the education of traditional and non-traditional students. The faculty play a leading role in providing and guiding the implementation of high quality, leading-edge technology education in Texas and in the nation. Our graduates are often leaders in their fields and are employed all over the world.

The College of Technology is organized as three departments: Engineering Technology (ET), Human Development and Consumer Sciences (HDCS), and Information and Logistics Technology (ILT). The faculty of these departments are involved in a wide spectrum of scholarly activity. Research in the Department of Engineering Technology focuses on the management and conservation of energy sources, heat transfer, materials and manufacturing, computer graphics, construction management, construction materials, surveying, environmental issues, neural networks, applications of fuzzy logic, control theory and applications, power quality, and high frequency amplification. Faculty in the Department of Human Development and Consumer Sciences research subjects in multiple talents, workforce preparation in merchandising, distance education, training and development, marketing education, and E-tailing. Faculty research in the Department of Information and Logistics Technology is concentrated on improving education in the areas of technology literacy, business and office education, supply chain management, data warehousing, grid computing, project management, distance learning, and graphic communications education. The following pages present descriptions of the degree requirements and courses offered by these departments.

Accreditation
The degrees in Computer Engineering Technology, Electrical Technology, Mechanical Technology, and Construction Management Technology are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, Maryland, 21202, telephone 410-347-7700.
Undergraduate Programs

Engineering Technology
- Construction Management Technology
- Construction Management Technology-Surveying and Mapping
- Computer Engineering Technology
- Electrical Power Technology (Pending Approval)
- Mechanical Technology

Human Development and Consumer Sciences
- Consumer Science and Merchandising

Information and Logistics Technology
- Technology Leadership and Supervision
- Technology Leadership and Supervision/Occupational Technology
- Logistics Technology (Pending Approval)
- Information Systems Technology

Graduate Program
For information on the Master of Science and Master of Technology programs in Technology, refer to the Graduate and Professional Studies catalog and the College of Technology web page: [www.tech.uh.edu](http://www.tech.uh.edu).

Computer Facilities
Computer resources in the College of Technology support students and faculty in teaching/learning, research, development, and administration. Computer facilities housed in the college include:

- Connections to university computing resources and applications through the UH network.
- Windows XP, Macintosh, and UNIX workstations with a variety of software applications.
- Special purpose computer-based facilities such as the computer-aided manufacturing laboratory, the PC networking laboratory, the Graphic Communication Technology Laboratory, and the Advanced Applications Development Laboratory.

Academic Advising
The goal of the Academic Services Center in the College of Technology is to ensure that each student has access to competent and consistent academic advising at all stages of the student’s college career. All incoming freshmen and transfer students are required to go through orientation, where pertinent policies and procedures are introduced and potential problems are discussed.

Orientation for the college is handled in conjunction with the Dean of Students Office. Once the student has been given an overview of the university and college, the undergraduate advisor of the student’s major helps students with initial schedule planning and registration. Thereafter, advisors are available on an ongoing basis to answer questions and provide guidance.

Academic advising is important:
- upon entering (freshman or transfer);
- to change a major;
- to declare a minor;
- to clarify any academic policy or procedure;
- to file a degree plan;
- to file petitions (Note: a petition is not considered valid until it is signed by the department chair and the college dean); and
- at the beginning of the semester before graduation, to verify all requirements for graduation.

Degree Plan
After selecting a major field of study, and not later than the beginning of the junior year (60 semester hours), students should request that a degree plan be prepared through the Academic Services Center. Students declaring a minor must file a minor degree plan.

All degree plans in the College of Technology require the signature of the student, academic advisor, and the department chair. Students must meet all requirements of the catalog under which they are graduating. The official degree plan remains in effect unless a 13-month break in enrollment occurs.

Change of Major
Students must have a 2.00 minimum cumulative grade point average to change their majors to any of the college’s degree programs.

Students with less than a 2.00 cumulative grade point average are encouraged to obtain academic advising from an advisor in their intended major; however, they are not eligible for admission to the major until the required grade point average is attained.

To apply for a change of major, consult the Academic Services Center and submit an undergraduate general petition requesting the change. Attach a University of Houston transcript or appropriate transfer transcript to the petition.

After reviewing the petition, the department chair and the college dean will forward notification of approval or disapproval to the Academic Services Center. Students should pick up their copy of the petition from the Academic Services Center, Room 385 Tech 2 Building.

Prerequisites and Corequisites
Students are responsible for taking prerequisites to courses in which they enroll. If course “A” is a prerequisite to course “B,” it means that course “A” must be taken first. If course “A” is listed as a corequisite of course “B,” courses “A” and “B” must be taken together.

An instructor may drop students, regardless of drop deadline, from any class if the student lacks a prerequisite or corequisite. Students may not drop a course that is a corequisite for another course unless they also drop the corresponding course. Students should be aware that prerequisites are cumulative; if course “A” is listed as a prerequisite to course “B,” then any course that is a prerequisite to course “A” also must be completed before the student enrolls in course “B.”
Student Responsibility

Each student is expected to take the responsibility for knowing university and college academic regulations as they are listed in the Undergraduate Studies catalog, including the requirements for the degree program, appropriate course work, and the course prerequisites.

Students are expected to verify their class schedules each semester and to take the responsibility for having any necessary corrections made within the established time periods listed in each schedule. Students should retain all documents of registration and course adjustments (drop/add), as well as any other transaction affecting enrollment during their period of study at the university.

Readmission from Suspension

Any student suspended from the college for academic or disciplinary reasons is ineligible to enroll in classes during the designated period of suspension. After that specified period, students may apply for readmission. Readmission from suspension is neither automatic nor guaranteed. The student must express the desire for readmission and request initiation of the readmission process by completing a “Readmission from Suspension Petition,” which can be picked up from the Academic Services Center, Room 385-T2.

It is the student’s responsibility to see that ALL college transcripts from ALL universities or colleges (UH and transfer schools) are included with the petition. If the student is in active enrollment at a community college or university, the student should request a progress report from the instructor and attach it to the petition.

The deadline dates for submitting the petition are as follows:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester</td>
<td>July 1</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>December 1</td>
</tr>
<tr>
<td>Summer Semester</td>
<td>May 1</td>
</tr>
</tbody>
</table>

A student readmitted from academic suspension enters on probation. The following requirements must be met to avoid further academic action.

- Students must meet with an advisor each semester.
- Students may enroll in no more than 12 semester hours during the fall and spring semesters, and no more than six semester hours during the summer semester.
- Students must not earn any “I” or “F” grades.
- A minimum semester GPA (2.0) must be earned each semester while on academic probation.
- Additional conditions may be required.

Academic Grievance Policy

Occasionally, justifiable grievances may arise concerning the violation of university, college, or department academic policies or procedures. The College of Technology is committed to resolving these grievances in a fair and orderly manner. As a result of this commitment, the college has established procedures for resolving these grievances.

An academic grievance results from actions taken against a student by a member of the faculty, whether full-time or part-time, staff, or administration that violate a university, college, or department academic policy or procedure. Because assigning a grade or evaluating a student’s work performance involves the faculty’s professional judgment and is an integral part of the faculty’s teaching responsibilities, a grade or an evaluation is not the basis for a justifiable grievance unless violation of explicit university, college, or department policy can be shown to have affected the grade or evaluation.

No person shall be subjected to retaliation for having utilized or having assisted others in the utilization of the grievance process.

- A grievance is initiated by discussing the matter with the party involved. If the grievance is not resolved, the process continues by discussing the matter with the department chair. [If the case directly involves a department chair, the student shall discuss the grievance initially with the Associate Dean.]
- If the grievance continues to be unresolved, a written grievance shall be initiated by submitting a written complaint to the chair of the department involved or to the Associate Dean if the chair is a party of the grievance.
- The student who does not receive a satisfactory resolution at the department level shall file an appeal with the Office of the Dean for a hearing by the College Grievance Committee.

The procedures an undergraduate student must follow are available in writing in the office of each department in the college, in the Academic Services Center (385-T2), and in the Office of the Dean (300-T2).

Scholarships

All undergraduate students are encouraged to apply for College of Technology scholarships. Some College of Technology scholarships are based on academic merit, some are based on financial need, and some are based on a combination of merit and financial need. The scholarship donor and the college establish the specific criteria for each scholarship. Students need only fill out one application to be considered for all COT scholarships for which they are eligible. This application is available at www.tech.uh.edu. In addition, COT has relationships with many outside organizations who award scholarships to our students. All COT students are provided application information and informed of these deadlines throughout the semester. For more information, see the College of Technology website at www.tech.uh.edu or visit the Academic Services Center, room 385-T2.

Scholastic Organizations

Omicron Tau Theta is a national professional honor graduate society in vocational-technical education established to acknowledge outstanding leaders in education, government, business, and industry. Eligibility for membership requires a bachelor’s degree, completion of at least eight semester hours of graduate work with a GPA of at least 3.0, and evidence of a graduate major.
Phi Upsilon Omicron is an honor society for students majoring in Human Development and Consumer Sciences. Prospective members must have earned 42 semester hours (12 semester hours in residence) with a minimum 3.00 cumulative grade point average.

Sigma Lambda Chi is the honor society for students in the Construction Management major. Prospective members must have attained at least junior class standing and have completed at least 24 semester hours of credit at the University of Houston with a minimum 2.80 cumulative grade point average.

Tau Alpha Pi is the honor society for engineering technology majors who have completed a minimum of 24 semester hours in the department of Engineering Technology. Students must have maintained a minimum 3.30 grade point average at this university.

Student Organizations

The College of Technology offers opportunities for participation in activities outside the formal classroom structure. Each organization has its own activities and requirements for membership.

Student organizations in the college include the following:

- American Society of Mechanical Engineers
- Association of Information Technology Professionals
- College of Technology Student Council
- Gay, Lesbian and Diversity (GLAD)
- Institute of Electrical and Electronics Engineers
- Instrument Society of America
- International DECA (Delta Epsilon Chi)
- Society for Human Resource Management
- Society of Manufacturing Engineers
- Student Industrial Distribution Organization
- Students in Construction-Related Industries
- Training and Development Organization (TDO)

Core Curriculum

All bachelor’s degrees require completion of a core curriculum. Beginning in Fall 1999, University of Houston students who must complete the requirements of the new core curriculum are as follows:

1. All undergraduate students entering the university for the first time, whether as first-time-in-college students or as transfer students, unless they are transferring from a Texas junior/community college and satisfy all of the following conditions:
   - initially enrolled at the Texas junior/community college no later than summer 1999
   - transferred to UH within three years of their initial enrollment at the Texas junior/community college
   - did not interrupt their enrollment for more than 13 months.

2. All former students returning to the university for a bachelor’s degree program who have interrupted their enrollment for more than 13 months.

3. All postbaccalaureate students who enroll in a bachelor’s degree program unless they are University of Houston graduates who have not interrupted their enrollment for more than 13 months.

4. All continuing students who obtain permission from the dean of the college of their major to graduate under the degree requirements of the new core.

5. All continuing students who do not complete their level 1 and level 2 requirements for the old core before fall 2001.

Other students, including most students enrolled at the University of Houston prior to Fall 1999, will not be required to satisfy the new core requirements; instead, they may choose to satisfy either the old core curriculum (see previous catalogs) or the new core curriculum. Students choosing to complete the old core must complete certain portions of it by Summer 2001; if they do not, they must complete the new core. Further information on core eligibility and on courses that satisfy core curriculum requirements can be obtained by consulting the core curriculum website (www.uh.edu/academics/corecurriculum), the current class schedule, or an academic advisor.

<table>
<thead>
<tr>
<th>Core Curriculum Requirements</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication: English rhetoric and composition</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics: College-level algebra or approved equivalent</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics/Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Visual &amp; Performing Arts</td>
<td>3</td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences</td>
<td>6</td>
</tr>
<tr>
<td>(3 hours must be writing intensive)</td>
<td></td>
</tr>
<tr>
<td>U.S. History</td>
<td>6</td>
</tr>
<tr>
<td>American Government</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
</tr>
</tbody>
</table>

Please note that some majors have specific requirements in the core curriculum. Refer to the specific major in the department section of this catalog for specific requirements.

For a baccalaureate degree in technology, requirements vary from major to major, but students must complete a minimum of 120 semester hours (36 advanced semester hours) including residency requirements and the university core curriculum requirements as stated in the Academic Regulations and Degree Requirements section of this catalog. For specific degree requirements refer to the appropriate department section of this catalog.

Transfer Students

To earn a baccalaureate degree from the College of Technology, students must complete a minimum of 15 advanced semester hours of courses in the department of their approved major at the University of Houston.

Technology Minors

Students may not receive official university recognition in a single degree for having earned both a major and a minor in the same field of study. The programs this affects are the specializations under the majors Electrical Technology (ELE), Technology Leadership and Supervision (TLS), Consumer Science and Merchandising (CSM), and Mechanical Technology (MET). Students pursuing one specialization or elec-
tive block in one of the above majors may not pursue a minor in the alternate specialization or elective block.

The minimum requirements for a minor in the College of Technology are:
1. Fifteen to eighteen semester hours including nine advanced hours.
2. Six of the nine advanced hours must be in residence.
3. A 2.00 minimum cumulative grade point average in all courses attempted in the minor field at the University of Houston.

For additional requirements and other information regarding minor courses of study, refer to the specific department section of the catalog and consult the office of the department in which the minor is offered.

**Department of Engineering Technology**

Chair: Enrique Barbieri
Professor Enrique Barbieri, Curtis D. Johnson
Associate Professors Farrokh Attarzadeh, Farouk G. Attia, Luces M. Faulkenberry, Fred D. Lewallen, Heidar A. Malki, Bernard McIntyre, Ronald C. Paré, Gopal B. Reddy, Wajiha Shireen, David A. Wahlstrom
Assistant Professor Driss Benhaddou
Adjunct Faculty René A. Chapelle, Thomas Massey

The Engineering Technology Council of the American Society of Engineering Education has provided the following definition of Engineering Technology:

"Engineering Technology is the profession in which knowledge of the applied mathematical and natural sciences gained by higher education, experience, and practice is devoted to application of engineering principles and the implementation of technological advances for the benefit of humanity. Engineering Technology education for the professional focuses primarily on analyzing, applying, implementing, and improving existing technologies and is aimed at preparing graduates for practice in that portion of the technological spectrum closest to the product improvement, manufacturing, and engineering operational functions.

The Department of Engineering Technology provides cutting-edge educational opportunities in Computer, Electrical, and Mechanical Engineering Technology programs and Construction Management Technology that are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, Maryland, 21202 (410-347-7700).

To qualify for a Bachelor of Science in Technology degree, students must complete university core curriculum requirements plus college and departmental requirements for a specific program as stated in this section of the catalog.

Curricula offered by the department emphasize the latest technological developments. Students perform meaningful, practical laboratory experiments to verify and reinforce their knowledge. Computer-related courses in all majors provide students with practical experience using digital microcomputers and associated software. Upon graduation, students in the Engineering Technology department are ready for employment in their field and can continue to grow and advance in their field, because they have the skill to:

- Analyze and solve industrial problems;
- Communicate effectively, whether speaking or writing;
- Work effectively in a team setting using current leadership and business practices;
- Learn and apply new technology.

The department also has a research mission to discover new ways to apply basic science and technology discoveries to applications useful to business and industry.

Students pursuing a degree plan in the ET Department must complete the following university requirements:

**University Core Curriculum**

**42 semester hours**

- Communication (6 semester hours)
  - **ENGL 1303.** English Composition I
  - **ENGL 1304.** English Composition II or **ITEC 3372.** Communication in Science, Engineering, and Technology
- History (6 semester hours)
  - **HIST 1376 or 1377, 1378 or 1379**
- American Government (6 semester hours)
  - **POLS 1336, 1337**
- Social and Behavioral Sciences (6 semester hours)
  - Six semester hours (three must be writing intensive) selected from core approved list
- Humanities (3 semester hours)
  - Three semester hours selected from core approved list
- Visual/Performing Arts (3 semester hours)
  - Three semester hours selected from core approved list
- Mathematics (6 semester hours)—includes required courses in Mathematics and Math/Reasoning
  - **MATH 1310.** College Algebra
  - **MATH 1431.** Calculus I
- Natural Sciences (6 semester hours)
  - see individual degree plans

**Construction Management Technology**

This program includes topics directed towards managing construction projects, interpreting codes and specifications, administering contracts, estimating costs, and scheduling project activities.

The objective of the Construction Management Technology program is to provide graduates with knowledge and skills that are valued and sought by the construction industry profession. Commercial, residential, industrial, and highway/heavy sectors of the construction industry need entry-level professional employees who are knowledgeable and skilled. Graduates must have knowledge of construction materials and methods, structural systems, soils, site development, surveying, and contract administration; be capable of interpreting codes, plans, and specifications; and have skills for planning, estimating, scheduling, and evaluating project performance. The
program’s curriculum provides fundamental and advanced coursework that incorporate current standards and technology for managing and providing quality construction. Software is applied in curriculum courses to prepare students for careers that require a knowledge of computer estimating and scheduling. The program is committed to attaining the following goals:

- Provide a career-oriented program that prepares students for productive and professional employment in the construction industry.
- Emphasize inclusion of recent technological advancements into the civil technology/construction management curriculum in the areas of management, scheduling, estimating, cost-control, and other construction courses.
- Construction Management Technology graduates should have knowledge and problem-solving skills to:
  1. Determine costs for construction activities and projects, establish construction schedules, and apply time value of money concepts for evaluation of alternatives;
  2. Evaluate project schedule and cost performance;
  3. Interpret construction material properties and standards;
  4. Produce and interpret drawings; interpret codes for concrete, steel, and timber construction;
  5. Apply design concepts for site development (soils and foundations, water distribution, waste-water collection, and storm-water drainage); and
  6. Perform managerial functions.
- Provide a learning environment where students apply state-of-the-art technological equipment and software.
- Prepare graduates to pursue graduate degrees and life-long education. Provide students with an opportunity to prepare for entry into the Master of Science in Technology, Construction Management Technology program.

At the Master of Technology level, students will receive advanced education, preparing them to be construction management leaders in industry or faculty members in colleges and universities. For more information on the graduate program, please refer to the Graduate and Professional Studies Catalog.

Construction Management Technology Requirements

**Construction Management Technology - Surveying and Mapping**

Instruction in the surveying and mapping concentration emphasizes theoretical principles as well as practical applications of advanced surveying and mapping techniques, related computational procedures, geodesy, map compilation, and photogrammetry. Surveying and Mapping, in its broadest sense, includes making precise measurements of the Earth’s surface using sophisticated optical and electronic instruments, determining the boundaries between adjacent landowners, working as a field engineer for a general contractor establishing the location of new construction, establishing transportation routes, and mapping the earth’s surface. The program is committed to attaining the following goals:

- Provide an educational experience that prepares the student for the challenges of the surveying and mapping profession.
- Employ state-of-the-art technologies in the surveying and mapping curriculum.
- Provide opportunities for the student to exhibit creativity, leadership and team-building abilities, cultural appreciation, and an understanding of global and social issues.
- Incorporate interdisciplinary concepts and problem-solving exercises in the program.
- Provide broad educational experience including communication skills, mathematics and basic sciences, and preparation for life-long learning.

Students pursuing a major in Construction Management Technology must complete the following requirements in addition to the university core and general college requirements.

**Construction Management Technology Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT 2331</td>
<td>Accounting Principles I-Financial</td>
</tr>
<tr>
<td>CNST 1301</td>
<td>Construction Materials and Methods</td>
</tr>
<tr>
<td>MECT 3155</td>
<td>Strength of Materials Lab</td>
</tr>
<tr>
<td>MECT 3355</td>
<td>Strength of Materials</td>
</tr>
<tr>
<td>MECT 3341</td>
<td>Construction Documents</td>
</tr>
<tr>
<td>MECT 3361</td>
<td>Construction Management</td>
</tr>
<tr>
<td>MECT 3362</td>
<td>Surveying II</td>
</tr>
<tr>
<td>MECT 3365</td>
<td>Site Development</td>
</tr>
<tr>
<td>MECT 4311</td>
<td>Structural Steel and Timber Construction</td>
</tr>
<tr>
<td>MECT 4351</td>
<td>Construction Estimating</td>
</tr>
<tr>
<td>MECT 4361</td>
<td>Construction Planning and Scheduling</td>
</tr>
<tr>
<td>MECT 4372</td>
<td>Soil Mechanics and Foundations</td>
</tr>
<tr>
<td>MECT 4381</td>
<td>Reinforced Concrete Construction</td>
</tr>
<tr>
<td>MECT 5305</td>
<td>Construction Safety</td>
</tr>
<tr>
<td>*CNST 5306</td>
<td>Construction Safety II</td>
</tr>
<tr>
<td>CNST 5311</td>
<td>Construction Accounting and Finance</td>
</tr>
<tr>
<td>ITEC 2360</td>
<td>Business Law</td>
</tr>
<tr>
<td>MECT 2354</td>
<td>Introductions to Mechanics</td>
</tr>
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</tbody>
</table>

**Technical Electives (Select 3 SH minimum)**

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CNST 4385</td>
<td>Construction Management Practicum</td>
</tr>
<tr>
<td>CNST 5302</td>
<td>Legal Aspects of Construction</td>
</tr>
<tr>
<td>CNST 5371</td>
<td>Design and Testing of Construction Materials</td>
</tr>
<tr>
<td>ITEC 4350</td>
<td>Industrial and Environmental Safety</td>
</tr>
<tr>
<td>MECT 3341</td>
<td>Computer-Aided Drafting I</td>
</tr>
</tbody>
</table>

*or technical elective if fluent in Spanish

**Technology and Other Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1330</td>
<td>Elementary Functions</td>
</tr>
<tr>
<td>TMTH 3360</td>
<td>Applied Technical Statistics</td>
</tr>
<tr>
<td>PHYS 1301/1101</td>
<td>Introductory General Physics I and Lab</td>
</tr>
<tr>
<td>GEOL 130/1130</td>
<td>Physical Geology and Lab</td>
</tr>
<tr>
<td>CNST 1330</td>
<td>Graphics</td>
</tr>
</tbody>
</table>

**General Technology and College Core (12 SH)**

<table>
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<td>*CNST 5306</td>
<td>Construction Safety II</td>
</tr>
<tr>
<td>*CNST 5311</td>
<td>Construction Accounting and Finance</td>
</tr>
</tbody>
</table>

**Technical Electives (Select 3 SH minimum)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNST 4385</td>
<td>Construction Management Practicum</td>
</tr>
<tr>
<td>CNST 5302</td>
<td>Legal Aspects of Construction</td>
</tr>
<tr>
<td>CNST 5371</td>
<td>Design and Testing of Construction Materials</td>
</tr>
<tr>
<td>ITEC 4350</td>
<td>Industrial and Environmental Safety</td>
</tr>
<tr>
<td>MECT 3341</td>
<td>Computer-Aided Drafting I</td>
</tr>
</tbody>
</table>

*or technical elective if fluent in Spanish

**Math/Reasoning (13 SH)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MATH 1330</td>
<td>Elementary Functions</td>
</tr>
<tr>
<td>TMTH 3360</td>
<td>Applied Technical Statistics</td>
</tr>
<tr>
<td>PHYS 1301/1101</td>
<td>Introductory General Physics I and Lab</td>
</tr>
<tr>
<td>GEOL 130/1130</td>
<td>Physical Geology and Lab</td>
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</tbody>
</table>

**General Technology and College Core (12 SH)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CNST 1330</td>
<td>Graphics</td>
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Computer Engineering Technology

The goal of the Computer Engineering Technology program is to provide students with a high quality applications-oriented undergraduate education based on state-of-the-art technology as a preparation for productive employment in the broad field of microcomputer applications. This goal is achieved through several objectives such as continuing to update specific courses in the program to ensure relevance to the latest industrial changes, supporting the development of appropriate computer facilities, promoting the integration of advanced computer technology in all courses, and encouraging professional growth and development of the faculty. The program is designed to satisfy the educational needs of the urban Houston community by providing a climate that fosters self-awareness, personal growth, and a desire for lifelong learning.

Microcomputers are used to control processes in manufacturing, chemical production, and oil refining. They are used to route data and conversations in telephone communication; provide the best shipping, billing, routing, and inventory information for shipping and trucking; and passenger ticketing and routing information for airlines. Computers and appropriate software packages also are used to solve scientific and engineering problems, to aid in medical tests and diagnoses, and to help design structures and buildings.

With computers assisting nearly every professional and leisure activity of modern life, people who can design, install, configure, network, and maintain microcomputer systems can make a valuable contribution to business and industry. People familiar with both the hardware and software requirements of computers are especially valuable.

Computer Engineering Technology majors study the application of state-of-the-art hardware and software in contemporary computer systems. Students are given a solid foundation in mathematics, basic sciences, and electronics. A thorough study is made of digital circuits and systems, and microcomputer circuits and systems. Hardware and software aspects of microcomputers are covered in detail. Graduates of Computer Engineering Technology are qualified for immediate employment in a variety of industries as sales representatives, field specialists, interface designers, software specialists, and digital applications specialists.

Majors in the Electrical-Electronics Department may use no grade below C in junior and senior level ELET courses to satisfy major degree requirements.

Students pursuing the Computer Engineering Technology major must complete the following requirements, in addition to university core and general college requirements.

Degree awarded: Bachelor of Science in Technology
Major: Construction Management

Electrical Power Technology (Pending Coordinating Board Approval)

The goal of the Electrical Power Technology program is to provide students with a high quality applications-oriented undergraduate education based on state-of-the-art technological equipment associated with electrical technology. This goal is achieved through several objectives such as continuing to update specific courses in the program to ensure relevance to the latest industrial changes, supporting the development of appropriate computer facilities, promoting the integration of advanced technology in all courses, and encouraging professional growth and development of the faculty. The program is designed to satisfy the educational needs of the urban Houston community by providing a climate that fosters self-awareness, personal growth, and a desire for lifelong learning.

Students completing a major in Electrical Power Technology receive a strong foundation in measurement systems, analog and digital signal conditioning, microprocessor hardware and software, industrial...
Electronics, and rotating machinery. Students have the opportunity to select additional coursework in either control systems, electrical power, or a combination of both. Although analog electronics remain important, one of the newest and fastest growing area is in the application of computers for control; this may be control within some manufactured product or control of some manufacturing process. The manufacturers of electrical systems and machines need electrical power technologists who are familiar with machines and machine controls, both traditional and computer-controlled. The electrical industry provides and controls the transformers, motors, generators, switch gear, and protection equipment required to power homes, businesses, and industries. Electrical power technologists plan electrical systems and modifications to existing electrical systems that generate and use large amounts of electricity required for distribution networks that are economical, safe, and functional.

Graduates of the Electrical Power Technology major understand, design, analyze, and work effectively in industrial settings utilizing product/process control systems and electrical power systems. Graduates are working in petrochemical companies, food manufacturing, steel processing, utilities, electrical equipment, sales, manufacturing and testing, and a host of other diverse industries.

Majors in the Electrical-Electronics Department may use no grade below C— in junior and senior level ELET courses to satisfy major degree requirements.

Students pursuing a major in Electrical Power Technology must complete the following requirements, in addition to university core and general college requirements:

**Major Requirements**

- ELET 1300, 1100. Electrical Circuits I, Laboratory
- ELET 1301, 1101. Electrical Circuits II, Laboratory
- ELET 2301, 2101. Poly-Phase Circuits and Transformers, Laboratory
- ELET 2303, 2103. Digital Circuits and Systems, Laboratory
- ELET 2305, 2105. Discrete and IC Semiconductor Circuits, Laboratory
- ELET 3301. Network Analysis
- ELET 3305, 3105. Microprocessor Architecture and Systems, Laboratory
- ELET 3307, 3107. Electrical Machines, Laboratory
- ELET 3312, 3112. Programmable Logic Controllers and Motor, Laboratory
- ELET 4303. Computer-Based Power Distribution and Transmission
- ELET 4305. Project Management and Economic Considerations for Power Systems
- ELET 4310. Alternative Electrical Energy Sources and Power Quality Issues
- ELET 4311. Computer-Based Communications and Security Issues for Electrical Power Systems
- ELET 4317. Computer-Based Electrical System Protection and Safety
- ELET 4319. Electrical Power Systems and Industry Practices

**General Technology Requirements:**

- ELET 2300. Introduction to C Language Programming*
- HSCS 3340. Organizational Leadership and Supervision or Octe 2334. Information Systems Applications
- Free Elective: 3 semester credit hours
- *Prior programming experience is a prerequisite to ELET 2300

**Technology and Other Requirements**

Mathematics (7 semester hours)
- MATH 1330
- MATH 1432

Natural Sciences (11 semester hours which includes university core)
- PHYS 1301, 1101
- PHYS 1302, 1102
- CHEM 1301

Degree awarded: Bachelor of Science in Technology

**Mechanical Technology**

This program includes courses that are directed at both computer-aided manufacturing and computer-aided design and drafting. Individuals interested in manufacturing technology apply fundamental principles of mechanical design and manufacturing processes to new and existing manufacturing systems. Courses focus on manufacturing planning and management, automated manufacturing systems, quality control, and robotics. Computer-aided design and drafting is an essential component of the design procedure; courses focus on computer graphics and applied mechanical design.

The goal of the Mechanical Technology major is to provide students with a well-rounded fundamental and application-oriented education focused on the knowledge of existing and new developments in Mechanical Technology. Graduates of the baccalaureate degree will develop the theoretical and practical knowledge and skills necessary for appropriate careers in local and national industries. To achieve this mission, the Mechanical Technology program is committed to attaining the following goals for all students:

- Provide a career-oriented program that prepares students for productive employment.
- Emphasize the latest technological advancements in computer-aided drafting, computer-aided design, and computer-aided manufacturing. Students should be able to apply problem-solving techniques and critical thinking skills at the level required for their professional practice.
- Provide a learning environment that will enable students to interact with state-of-the-art technological equipment and software. Students should gain experience in the application of computer software to analyze and design mechanical systems and automated manufacturing systems.
- Prepare students to pursue graduate degrees and life-long education.

The programs are designed to satisfy the educational needs of the urban Houston community by pro-
viding a climate that fosters self-awareness, personal growth, and a desire for lifelong learning.

Students pursuing a major in Mechanical Technology must complete the following requirements, in addition to university core and general college requirements.

**Mechanical Technology Requirements**

- **MECT 1364. Materials and Processes I**
- **MECT 2331. Applied Thermodynamics**
- **MECT 2354. Introduction to Mechanics**
- **MECT 3318, 3118. Fluid Mechanics Applications, Laboratory**
- **MECT 3341. Computer-Aided Drafting I**
- **MECT 3355, 3155. Strength of Materials, Laboratory**
- **MECT 3358. Dynamics of Mechanisms**
- **MECT 3365. Computer-Aided Design I**
- **MECT 3367. Quality Control Technology**
- **MECT 4372, 4172. Materials Technology, Laboratory**
- **MECT 4375, 4175. Design of Mechanisms, Laboratory**
- **MECT Elective: Three semester hours**

**General Technology Requirements**

- **CNST 1330. Graphics**
- **ELET 2307. Electrical-Electronic Circuits**
- **ITEC 3340. Organizational Leadership and Supervision or HIDS 3300. Organizational Decisions in Technology**
- **ITEC 3363. Technical Communication or ITEC 3372. Communication in Science, Engineering, and Technology**
- **TECH 1300. Computers and Technology**

**Electives (6 semester hours)**

To complete the Mechanical Technology requirements, select one of the following elective blocks:

- **Computer-Aided Design and Drafting Elective Block**
  - (9 semester hours)
  - **MECT 3342. Computer-Aided Drafting II**
  - **MECT 4342. CADD Applications**
  - **MECT 4365. Computer-Aided Design II**
- **Computer-Aided Manufacturing Elective Block (9 semester hours)**
  - **MECT 3360. Automated Manufacturing Systems**
  - **MECT 4384. Manufacturing Systems Control**
  - **MECT Elective**

**Technology and Other Requirements**

- **Math (7 semester hours)**
  - **MATH 1330**
  - **MATH 1432**
- **Natural Sciences (12 semester hours which includes university core)**
  - **PHYS 1301, 1101**
  - **PHYS 1302, 1102**
  - **CHEM 1301, 1101**

Degree awarded: Bachelor of Science in Technology

**Major: Mechanical Technology**

**Minors in Engineering Technology**

Students may minor in the following programs: Architecture and Construction Technology, Computer Drafting Design, Construction Management Technology, Manufacturing Systems, Electrical Power Technology, Control Systems Technology, Electronics, and Computer Engineering Technology. Students who have declared a major in Mechanical Technology (MET) may not declare a minor in either Computer Drafting Design or Manufacturing Systems. Students majoring in Computer Engineering Technology may minor in Electrical Power Technology; students majoring in Electrical Power Technology may minor in Computer Engineering Technology. Students who select one of these minors must satisfy the general university requirements for a minor as well as the specific minor requirements listed below.

**Architecture and Construction Technology**

(15 semester hours)

The College of Architecture and the College of Technology offer a joint minor in Architecture and Construction Technology. Students interested in this minor should contact the Academic Services Center in the College of Technology. Any petitions for substitutions must be approved by the appropriate college.

**Requirements for Architecture students:**

- **CNST 3361, *4383, *4384**
- Six hours to be selected from: CNST 3361, 3431, 4351, 4361

**Requirements for Technology students:**

- **ARCH 2322, *4383, *4384**
- Six hours to be selected from ARCH 2323, 3332, 3333, 4325

* The dual listed courses, ARCH 4383/ CNST 4383 and ARCH 4384/ CNST 4384 will be taught by a team of Architecture and Technology faculty.

**Construction Management Technology** (15 semester hours)

**Required Courses:**

- **CNST 1301, 3341, 3361, 4351, and 4361.**

**Computer Drafting Design** (15 semester hours)

**Required Courses:**

- **CNST 1330, MECT 3341, 3432, 4342, TECH 1300 or equivalent.**

**Prerequisites for required minor courses: TMTH 1336 or equivalent.**

**Manufacturing Systems** (15 semester hours)

**Required courses:**

- **MECT 1364, 3360, 3362, 3367, 4384**

**Computer Engineering Technology** (17-18 semester hours)

**Required Courses:**

- **ELET 2307, 2303/2103, 3305/3105**
- Select any two of the following courses or sets of courses in consultation with a faculty advisor:
  - ELET 3306, 4300, 4308, 4309, 4321/4121

**Control Systems Technology** (18 semester hours)

**Required courses:**

- **ELET 2307, 2303/2103, 3304/3104, 3306, 4304/4104**

**Electrical Power Technology** (17-18 semester hours)

**Required Courses:**

- **ELET 2307, 2303/2103, 3307/3107**
- Select any two of the following courses or sets of courses in consultation with a faculty advisor:
  - ELET 3310, 3312/3112, 4301, 4303, 4319

**Electronics Technology** (18 semester hours)

**Required Courses:**

- **ELET 2307, 2303/2103, 2305/2105**
- Select any three of the following courses or sets of courses in consultation with a faculty advisor:
  - ELET 3301, 3302/3102, 3303, 3305/3105, 3306, 4302

To file a minor in any of these specializations, students must file a declaration of minor with the Academic Services Center in conjunction with meeting with a faculty advisor before enrolling in any 3000- or 4000-level course.
Courses: Engineering Technology

Construction (CNST)

1301: Construction Materials and Methods (formerly CVT 1301) Cr. 3. (3-0). Materials and methods used by the construction industry.

1330: Graphics I (formerly CVT 1330) Cr. 3. (2-4). Lettering, geometric construction, multiview and auxiliary projections, sections and connections, dimensioning, and isometric and oblique pictorials. Emphasis on freehand sketching skills.

2461: Surveying Cr. 4. (3-3). Prerequisite: concurrent enrollment in TMTH 1336. Plane surveying techniques and computations; horizontal and vertical alignments; coordinate systems; care and use of surveying instruments and equipment.

3161: Surveying Practicum Cr. 1. (0-1). Prerequisite: CNST 3362. Forty-five hours of office and/or fieldwork under the direct supervision of a Registered Professional Land Surveyor.

3321: Mechanical and Electrical Systems Cr. 3. (3-0). Prerequisite: junior standing. Planning and construction of mechanical and electrical systems found in typical residential and commercial projects.

3341: Construction Documents (formerly CVT 3341) Cr. 3. (3-0). Prerequisite: CNST 1301. Plans, specifications writing and interpretation, and contract documents relating to the construction industry.

3361: Construction Management (formerly CVT 3361) Cr. 3. (3-0). Prerequisites: CNST 3341 and junior standing. Principles and techniques of planning the construction process of industrial, commercial, or residential projects. Construction safety and shoring techniques.

3362: Surveying II Cr. 3. (3-0). Prerequisite: CNST 2461. Transportation route surveying, construction surveying, topographic mapping, and astronomy for surveyors.


3365: Site Development Cr. 3. (3-0). Prerequisite: CNST 1301, 2461, and junior standing. Zoning and subdivision regulations, design of residential subdivisions, platting of subdivisions, design of drainage facilities.

4311: Structural Steel and Timber Construction (formerly CVT 4311) Cr. 3. (3-0). Prerequisites: CNST 1301 and MECT 3355. Application of the AISC code to the calculation, selection, and drafting of steel members for simple girders, frames, and trusses. Timber construction and structural processes.

4351: Construction Estimating (formerly CVT 4351) Cr. 3. (2-3). Prerequisites: CNST 3341 and 3361. Analysis and determination of construction operation costs; preparation of bid proposals for construction projects; cost control.

4361: Construction Planning and Scheduling (formerly CVT 4361) Cr. 3. (2-3). Prerequisites: CNST 3361 or MECT 3360. Time value of money and project scheduling techniques.

4363: Legal Aspect of Surveying Cr. 3. (3-0). Prerequisite: Senior standing or permission of the instructor. Various aspects of boundary law, as practiced by registered Professional Land Surveyors, including the drafting of legal property descriptions.

4364: Surveying IV Cr. 3. (3-0). Prerequisite: CNST 3363. Measurements, measurement analyses, and measurement adjustment theory and application.

4369: Survey Analysis Cr. 3. (3-0). Prerequisites: CNST 4363 or consent of instructor. Advanced topics in boundary law including legal research and the preparation of extensive reports covering conflicting survey evidence.

4372: Soil Mechanics and Foundations (formerly CVT 4372) Cr. 3. (2-2). Prerequisites: CNST 1301 and MECT 3355. Soil explorations, ASTM test methods, shallow and deep foundations for buildings, and shoring; laboratory exercises for characterizing soils.

4381: Reinforced Concrete Construction (formerly CVT 4381) Cr. 3. (2-3). Prerequisites: CNST 1301 and MECT 3355. Application of the ACI 318 building code to construct, analyze, and inspect reinforced concrete members. Formwork design, testing methods, quality control, and laboratory tests and analysis for characterizing concrete mixtures.

4383: Architecture and Construction Management Collaborative (also ARCH 4383) Cr. 3. (1-6). Prerequisites: Senior standing and 6 hours of advanced construction management minor courses. Group projects concerned with design and realization of actual community-based projects, either under construction or which have a potential for construction.

4384: Architecture and Construction Management Practicum (also ARCH 4384) Cr. 3. (1-6). Prerequisites: Senior standing and 6 hours of advanced construction management minor courses. Projects within the community for collaborative teams to participate in actual construction and the management of the construction.

4385: Construction Management Practicum Cr. 3. (3-0). Prerequisite: junior standing. Guided work experience in construction management.

4397: Selected Topics in Civil Technology Cr. 3. (3-0). Prerequisite: approval of chair. May be repeated for credit when topics vary.

4398: Special Problems Cr. 3 per semester. Prerequisite: approval of chair. Individual projects on a to-be-arranged basis under faculty sponsorship.

5302: Legal Aspects of Construction (formerly CVT 5302) Cr. 3. (3-0). Prerequisites: CNST 3361 and senior standing. Statute and common laws affecting the construction industry.

5305: Construction Safety I Cr. 3. (3-0). Prerequisite: senior standing. Hazards, applicable regulations, and safe work procedures related to construction activities.

5306: Construction Safety II Cr. 3. (3-0). Prerequisite: CNST 5305. Spanish phrases and grammar relating to the construction industry, especially as they affect safety.

5311: Construction Accounting and Finance (formerly CVT 5311) Cr. 3. (3-0). Prerequisite: senior standing in construction management or consent of instructor. Accounting cost control, finance, and budgeting for construction projects.

5371: Design and Testing of Construction Materials (formerly CVT 5371) Cr. 3. (2-3). Prerequisites: CNST 1301 and MECT 3355. Concrete materials technology, analysis and implementation of ASTM specifications and testing methods, quality control, and laboratory tests and analysis for characterizing concrete mixtures.

Electrical-Electronics Technology (ELET)

1100: Electrical Circuits I Laboratory Cr. 1. (0-3). Prerequisite: concurrent enrollment in ELET 1300. Measurement and analysis of direct current parameters.

1101: Electrical Circuits II Laboratory Cr. 1. (0-3). Prerequisites: ELET 1300 and concurrent enrollment in ELET 1301. Measurement and analysis of circuit parameters for direct current, single phase, and alternating current circuits.

1300: Electrical Circuits I Cr. 3. (3-0). Prerequisite: credit for or concurrent enrollment in TMTH 1335. Principles of direct current electricity and their applications to series, parallel, and series-parallel circuitry including Ohm’s Law, Kirchhoff’s Law, batteries, meters, resistance, capacitance, inductance, magnetism, and electromagnetism.

1301: Electrical Circuits II Cr. 3. (3-0). Prerequisites: ELET 1300 and prior computer use skills. Corequisites: ELET 1101 and TMTH 1336. Principles of single-phase alternating current circuits including Thevenin’s, Norton’s, and superposition theorems, and loop and nodal analysis.

2101: Poly-Phase Circuits and Transformers Laboratory Cr. 1. (0-3). Prerequisite: credit for or concurrent enrollment in ELET 2301. Experiments in poly-phase circuits and power transformers.

2103: Digital Circuits and Systems Laboratory Cr. 1. (0-3). Prerequisite: concurrent enrollment in ELET 2303. Experiments in digital circuits including basic gates through programmed arrays and memory devices.
2105: Discrete and IC Semiconductor Circuits Laboratory
Cr. 1. (0-3). Prerequisite: concurrent enrollment in ELET 2305. Experiments in discrete and integrated circuits, and semi-conductor circuits and systems.

2300: Introduction to C++ Language Programming
Cr. 3. (3-0). Prerequisite: CSCI 1300 or consent of instructor. Corequisite: TMTTH 1336. Introduction to C++ language on microcomputer platforms.

2301: Poly-Phase Circuits and Transformers
Cr. 3. (3-0). Prerequisite: ELET 2301 and TMTTH 1336 or equivalents. Poly-phase circuit and power circuits and transformers fundamentals.

2303: Digital Circuits and Systems
Cr. 3. (3-0). Prerequisite: ELET 1300 or 2307. Basic digital circuits and their application, including basic gates, arithmetic circuits, counters, data-handling circuits, and memory devices.

2305: Discrete and IC Semiconductor Circuits
Cr. 3. (3-0). Prerequisites: ELET 1301 or ELET 2307. Corequisite: ELET 2105. Solid-state devices and circuits (discrete and integrated circuits) including rectifiers, single stage and multistage amplifiers, frequency response and simple filters.

2307: Electrical-Electronics Circuits
Cr. 3. (3-0). Prerequisite: credit for or concurrent enrollment in TMTTH 1335. For non-ELET majors. Basic dc and ac circuits.

3102: Communications Circuits Laboratory
Cr. 1. (0-3). Prerequisite: concurrent enrollment in ELET 3302. Measurement of the transfer functions and Q-factor of series and parallel resonant circuits, transformers, power spectrum, and slotted line measurements.

3104: Control Instrumentation Laboratory
Cr. 1. (0-3). Prerequisite: concurrent enrollment in ELET 3304. Experiments related to signal conditioning and measurements in control systems.

3105: Microprocessor Architecture and Systems Laboratory
Cr. 1. (0-3). Corequisite: ELET 3305. Experiments with basic hardware, software, and operating systems of microprocessor-based systems.

3107: Electrical Machines and Controls Laboratory
Cr. 1. (0-3). Prerequisites: credit for or concurrent enrollment in MATH 1431 and ELET 3307 or equivalents. Experiments in the characteristics, operation, and control of DC and AC motors and generators.

3110: Electrical Systems Design Laboratory
Cr. 1. (0-3). Prerequisite: ELET 3310. Laboratory project in the design and layout of a commercial/industrial electrical system.

3112: Rotating Machine Controls Laboratory
Cr. 1. (0-3). Prerequisite: concurrent enrollment in ELET 3312. Experiments in electromechanical, PLC, and solid-state controls for rotating machines.

3301: Network Analysis
Cr. 3. (3-0). Prerequisites: ELET 2305, TMTTH 2336 and a programming course. Determinants, differential equations, Laplace transforms, Fourier analysis, and their applications to electrical circuits. Computer usage is emphasized in determining steady state and transient solutions.

3302: Communications Circuits

3303: Operational Amplifier Applications
Cr. 3. (3-0). Prerequisites: ELET 2305, ELET 2105, and TMTTH 2335. The basics of linear amplifiers with feedback and their use in amplifiers, wave-shaping circuits, oscillators, active filters, and regulation for linear and switching power supplies. Laboratory exercises included.

3304: Control Instrumentation
Cr. 3. (3-0). Prerequisites: ELET 2305, ELET 2105, and TMTTH 2335. Corequisites: ELET 3104 and TMTTH 2336. Control, analog and digital signal conditioning and transducers used for measurement of temperature, displacement, pressure, flow, and optical processes.

3305: Microprocessor Architecture and Systems
Cr. 3. (3-0). Prerequisites: ELET 2303 and ELET 2103. Corequisite: ELET 3105. Architecture and operation of microprocessor-based systems including basic hardware and software.

3306: Microprocessor/Microcomputer Assembly Language and Applications
Cr. 3. (3-0). Prerequisites: ELET 2300, ELET 3305, and ELET 3105. Basic mnemonic instructions for the microprocessor/microcomputer, and the implementation of algorithms in software and firmware for various types of engineering technology applications.

3307: Electrical Machines and Controls
Cr. 3. (3-0). Prerequisites: ELET 2301 and MATH 1341 or equivalents. Characteristics, operations, and applications of DC and AC motors and generators. Basic motor control principles.

3312: Programmable Logic Controllers and Motor Control Systems
Cr. 3. (3-0). Prerequisite: ELET 3307. Programmable Logic Controllers and microprocessor-based controls for electrical motors and generators.

3316: Electrical Systems, Machines, and Controls
Cr. 3. (3-0). Prerequisites: ELET 2307 and TMTTH 1336. Corequisite: ELET 3116. Basic electrical systems, machines, and their controls.

3399-4399: Senior Honors Thesis
Cr. 3 per semester. Prerequisite: approval of chair. Independent work in Electrical-Electronics Technology under the supervision of a faculty member. Both must be completed for credit.

4103: Power Transmissions Systems Laboratory
Cr. 1. (0-3). Prerequisite: concurrent enrollment in ELET 4303. Experiments in transmission networks characteristics and stability.

4104: Control Systems I Laboratory
Cr. 1. (0-3). Prerequisite: concurrent enrollment in ELET 4304. Experiments on final control elements, controller mode operations, and closed loop control systems (analog and digital).

4108: Microcomputer Interfacing Laboratory
Cr. 1. (0-3). Prerequisite: concurrent enrollment in ELET 4308. Experiments in the interfacing of microcomputers including I/O methods, bus systems, peripheral hardware, and software design.

4114: Microprocessor-based Control Systems Lab
Cr. 1. (0-3). Prerequisite: concurrent enrollment in ELET 4314. Experiments in utilizing microcomputers to study the practical aspects of control principles.

4121: Microcomputer Networks Laboratory
Cr. 1. (0-3). Prerequisite: Enrollment in ELET 4321. Experiments in the application, design, operation, and analysis of microcomputer networks.

4198:4398: Special Problems
Cr. 1, 3 per semester. Prerequisite: approval of chair.

4300: Operating Systems
Cr. 3. (3-0). Prerequisite: ELET 3306. Structure and mechanisms of modern operating systems. The UNIX operating systems and their applications in modern technology.

4301: Power Distribution Systems
Cr. 3. (3-0). Prerequisites: ELET 3307 and TMTTH 2336. Principles of operation and applied design of medium voltage power distribution systems and distribution substations.

4302: Data Communication Systems
Cr. 3. (3-0). Prerequisites: ELET 3305 and 3302. Analysis and design of data communications systems emphasizing system performance calculations and radio wave channels, linear, nonlinear, and pulse/digital modulation, multiplexing, and propagation effects.

4303: Computer-Based Power Distribution and Transmission
Cr. 3. (3-0). Prerequisite: ELET 3307. Principles of operation and applied design of bulk power distribution and transmission systems and substations.

4304: Control Systems I
Cr. 3. (3-0). Prerequisites: ELET 3301, ELET 3304, and ELET 3104. Corequisite: ELET 4104. Final control operations in control systems. Control modes and methods of implementation by analog and digital means, computer control algorithms, and tuning and stability of control systems.

4305: Project Management and Economic Considerations for Power Systems
Cr. 3. (3-0). Prerequisite: ELET 3307. Management, economic factors, design, and layout of electrical power systems for commercial and industrial facilities.

4308: Microcomputer Interfacing
Cr. 3. (3-0). Prerequisites: ELET 2300, ELET 3303, and ELET 3305. Corequisite: ELET 4108. Microcomputer interfacing techniques, including I/O methods, bus systems, peripheral hardware, and software design and implementation.
4309: Advanced C++ Programming Cr. 3. (3-0). Prerequisites: ELET 2300 and senior standing. Advanced aspects of the C++ programming language; object-oriented methodology; Unified Modeling Language (UML), Standard Template Library (SML), and Microsoft Foundation Classes (MFC) concepts.

4310: Alternative Energy Sources and Power Quality Issues Cr. 3. (3-0). Prerequisite: ELET 3307. Relative advantages, economic factors, and power quality issues associated with alternative energy sources.

4311: Computer-Based Communications and Security Issues for Electrical Power Systems Cr. 3. (3-0). Prerequisites: ELET 3307 and 3312. Computer-based communications and security issues for electrical power system operation and SCADA.

4314: Microprocessor-Based Control Systems Cr. 3. (3-0). Prerequisites: ELET 3305, ELET 3105, and ELET 4304. Corequisite: ELET 4114. Practical aspects of control using microcomputers including control principles, transducers, signal conditioning, data acquisition, control software, control algorithms, and programmable controllers.

4315: Telecommunications Cr. 3. (3-0). Prerequisite: ELET 4321. Topics in telecommunications including synchronous and asynchronous techniques in wired, fiber, and wireless systems.


4321: Microcomputer Networks Cr. 3. (3-0). Prerequisites: ELET 3302 and 3305. Corequisite: ELET 4121. Microcomputer networking methods with emphasis on the ISO-OSI model. Applications include star- and ring-type networks and operating systems requirements for networks.

4322: Java Programming Cr. 3. (3-0). Prerequisites: High level language programming and senior standing. The course covers designing classes and objects in Java. Java’s approach to inheritance and polymorphism, and the details of creating Java applets for use on the internet.

4325: Advanced Microcomputer Networks Cr. 3. (3-0). Prerequisite: ELET 4321. Advanced topics in microcomputer networking. including internetworking and routers, and network management.

4397: Selected Topics in Electrical-Electronics Technology Cr. 3. (3-0). Prerequisite: approval of chair. May be repeated for credit when topics vary.

5114: Digital Control Systems Laboratory Cr. 1. (0-3). Prerequisites: Credit for or concurrent enrollment in ELET 5314. Experiments in microprocessor-based signal generators, microprocessor-based process data acquisition (A/D and D/A), on-off controller, computer control of analog proportionally controlled plant, digital proportional-integral controller, microprocessor-based process control temperature measurement.

5314: Digital Control Systems Cr. 3. (3-0). Prerequisites: ELET 3305, 3105, and 4304. Corequisite: ELET 5114. Practical aspects of microcomputer-based control including digital control systems, z-transform, and discrete transfer functions, control system analysis, proportional integral derivative (PID) control, and compensator design.

5397: Selected Topics in Microcomputer Systems Cr. 3. (3-0). Prerequisite: approval of the department chair. May be repeated with the approval of the department chair.

Mechanical Technology (MECT)


2331: Applied Thermodynamics Cr. 3. (3-0). Prerequisites: TMTH 1335, CHM 1301. First and second law problems dealing with gases, vapors, liquids and mixtures. Heat energy concepts with emphasis on power generation and cooling applications.

2354: Introduction to Mechanics Cr. 3. (3-0). Prerequisites: PHYS 1301 and credit for or concurrent enrollment in TMTH 2336. Study of statics, forces, moments, friction, centroids, and moments of inertia.

3118: Fluid Mechanics Application Laboratory Cr. 1. (0-3). Prerequisite: concurrent enrollment in MECT 3318. Laboratory experiments using standard measuring devices for performing hydraulic and pneumatic tests, incompressible fluid piping systems, turbines, and pump stations.

3155: Strength of Materials Laboratory Cr. 1. (0-3). Prerequisite: credit for or concurrent enrollment in MECT 3355. Experimentation to determine the mechanical properties of materials including tensile strength, hardness, creep, and toughness.

3318: Fluid Mechanics Applications Cr. 3. (3-0). Prerequisites: MECT 2354 and TMTH 2336. Concurrent enrollment in MECT 3118. Application of basic principles of fluid mechanics including the interpretation of charts, curves, and tables commonly used in the application of fluid mechanics.

3341: Computer-Aided Drafting I Cr. 3. (2-3). Prerequisites: TMTH 1336 and CNST 1330. Introduction to Computer-Aided Drafting and Design (CADD) systems and computer graphics hardware and software. Selection and evaluation of CAD systems.

3342: Computer-Aided Drafting II Cr. 3. (2-3). Prerequisites: TECH 1300 or equivalent and MECT 3341. Graphics applications of Computer Aided Drafting and Design (CAD) software. Systems development. Use of graphical and nongraphical databases in product data communications. Programming of CAD application.

3355: Strength of Materials Cr. 3. (3-0). Prerequisites: MECT 2354 and TMTH 2336. Stresses, strains, torsion, shear and moment in beams, bending, combined stresses, and columns.

3358: Dynamics of Mechanisms Cr. 3. (2-3). Prerequisite: MECT 2354. The motion of rigid bodies including forces, mass acceleration, work, and energy. Also covered is graphical analysis of devices including four-bar linkages, sliders, gear trains, and cams.

3360: Automated Manufacturing Systems Cr. 3. (2-3). Prerequisite: MECT 1364. Automated manufacturing process planning and analysis, including CNC programming, robotics, and elements of computer-aided manufacturing.

3362: Motion and Time Study Cr. 3. (2-3). Prerequisites: TMTH 1335 and MECT 1364 or equivalent. Workplace design and analysis with respect to operating procedures, time standards, productivity measurement and improvement, and incentive systems.

3365: Computer-Aided Design I Cr. 3. (2-3) Prerequisites: MECT 3341, 3355, and 1364 or equivalent. Use of Computer Aided Design software in the design and engineering of machinery, machine components, and mechanical systems.

3367: Quality Control Technology Cr. 3. (3-0). Prerequisites: MECT 1364 and TMTH 1335 or equivalent. Statistical analysis of data to establish control systems for manufacturing facilities.

4172: Materials Technology Laboratory Cr. 1. (0-3). Prerequisite: concurrent enrollment in MECT 4372. Experiments of materials behavior including hardenability, effect of heat treatment on strength, microstructure and ductility.

4175: Design of Mechanisms Laboratory Cr. 1. (0-3). Prerequisite: concurrent enrollment in MECT 4375. Projects for design of mechanisms in manufacturing.

4198:4398: Special Problems Cr. 1, 3 per semester. Prerequisite: approval of chair.

4342: Computer-Aided Drafting Applications Cr. 3. (3-0). Prerequisite: MECT 3342. Applications of Computer Aided Drafting and Design (CADD) software to integrate the design of system components and assemblies.

4365: Computer-Aided Design II Cr. 3. (3-0). Prerequisite: MECT 3365 and 3318 or equivalent. Advanced use of Computer Aided Design software to integrate the design of system components and assemblies.

4372: Materials Technology Cr. 3. (3-0). Prerequisites: MECT 3355 and concurrent enrollment in MECT 4172. A study of structure/property relationships of materials including metals, ceramics, and polymers. Behavior of materials with emphasis on manufacturing processes and implications.
4375: Design of Mechanisms Cr. 3. (3-0). Prerequisite: MECT 3355. Design procedures, applications to machine elements and assemblies.

4384: Manufacturing Systems Control Cr. 3. (2-3). Prerequisite: MECT 3362 or equivalent. Manufacturing systems including layout, maintenance, and controls. Emphasis on computer-integrated manufacturing, cost analysis, and manufacturing economics.

4397: Selected Topics in Mechanical Technology Cr. 3. (3-0). Prerequisite: approval of chair. May be repeated for credit when topics vary.

5323: Applications in Stress Analysis Cr. 3. (3-0). Prerequisite: MECT 3355 or equivalent. Combined stress systems, nonsymmetrical loadings, structural joints and pressure vessels, beams and columns of composite materials, fatigue and impact applications.

5331: Applied Thermal Systems Cr. 3. (3-0). Prerequisites: MECT 2331 and 3318. Advanced vapor power cycles, air standard cycles, heat transfer concepts, heat exchange systems, and HVAC systems.

Department of Human Development and Consumer Sciences

Chair (Interim): Carole Goodson
Associate Professors Thomas Arcy, Shirley Ezell, Katy Greenwood, Marcella M. Norwood, Barbara L. Stewart
Assistant Professor Consuelo Waight

The Department of Human Development and Consumer Sciences (HDCS) provides a service to the community in which it is embedded by producing a stream of well educated and dedicated professionals in the fields of retail management, Career and Technical Education, and training and development. Through its students, the department will contribute to economic growth and quality of life by providing career-oriented graduates with skills to enrich personal lifestyles.

The primary goal of professionals in human development and consumer sciences is to improve the quality of life. The programs of study prepare students for career opportunities in business and industry, public service organizations, government, and school systems.

Consumer Science and Merchandising

Consumer Science and Merchandising is designed to develop professionals who can integrate knowledge of consumers and merchandising processes and apply that knowledge to a broad spectrum of problems facing individual consumers, families, service agencies, and retail marketers of products and services. Consumer Science and Merchandising focuses on analyzing the consumer as a social and economic unit of society and on the process of merchandising products to consumers. Professional development in this program includes trend analysis, selling, merchandising experience, internship, self assessment, professional goal setting, networking and portfolio development.

Processes of retail marketing and consumer affairs are emphasized. Graduates will:

- Apply retail management techniques and principles to the buying and selling of products and services.
- Have the option to enhance their professional development through the Electronic (on-line) Consumer Science and Merchandising courses (E-CSM), allowing students to earn money while they learn skills from remote locations.
- Demonstrate the relationship between consumers and businesses through employment in the fields of retail marketing, fashion, sales, buying, public relations, and education.
- Display the computer skills required for the merchandising professional in today’s marketplace.

Students pursuing the Consumer Science and Merchandising degree must complete the following specialization requirements, including university core requirements and major core requirements. Since course numbers and titles may change, please check with the Department of Consumer Science and Merchandising for an up-to-date list of courses for the major.

Consumer Science and Merchandising Requirements

HDCS 3303: Merchandising and Consumer Science
HDCS 4300: Research Concepts
HDCS 3301: Consumer Science
HDCS 4303: Merchandising Systems
HDCS 4380: Merchandising
HDCS 4393: Internship in HDCS

Consumer Science and Merchandising Electives (Select 15 semester hours)
- HDCS 3302, Consumer Textiles
- HDCS 3304, Visual Merchandising
- HDCS 4302, Apparel Analysis
- HDCS 4394, Internship in HDCS
- HDCS 4396, Selected Topics in CSM
- LOGT 2362, Introduction to Logistics Technology
- LOGT 3387, Procurement
- LOGT 4387, Global Sourcing
- OCED 5380, Instructional Strategies for Marketing Education
- TRDE 4340, Training Technology for Supervisors

Major Core Requirements

LOGT 2380, Distribution Channels
LOGT 3381, Industrial and Consumer Sales
HDCS 3300, Organizational Decisions in Technology or ITEC 3340, Organizational Leadership and Supervision
HDCS 4369, Entrepreneurship
HDCS 4386, Communication Strategies for Merchandising and Industrial Distribution
ITEC 2371, Industrial Fiscal Records
ITEC 2360, Business Law
TECH 3365, Industrial Computer Applications

University Core Curriculum and College General Requirements

Communication (6 semester hours)
- ENGL 1303, English Composition I
- ENGL 1304, English Composition II or ITEC 3372, Communication in Science, Engineering, and Technology

History (6 semester hours)
- HIST 1376 or 1377, 1378 or 1379

American Government (6 semester hours)
- POLS 1336, 1337

Social and Behavioral Sciences (6 semester hours)
- Three semester hours selected from core approved list
- HDCS 1300 (writing intensive)

Humanities (3 semester hours)
- Three semester hours selected from core approved list
Visual/Performing Arts (3 semester hours)
Three semester hours selected from core approved list
Mathematics/Reasoning (12 semester hours)
- MATH 1310. College Algebra
- TMTH 3360. Applied Technical Statistics
- Math Reasoning/Formal Science
- Math Reasoning/Formal Science
Natural Sciences (6 semester hours)
Six semester hours from core approved list
Computer Literacy
- OCTE 1301. Introduction to Computer Application Technology
Electives: 12 SH Minimum (or minor)

**Consumer Science and Merchandising: Specialization in Technology Entrepreneurship**

**Consumer Science and Merchandising Requirements**
- HDCS 3303. Merchandising and Consumer Science
- HDCS 4300. Research Concepts
- HDCS 3301. Consumer Science
- HDCS 4303. Merchandising Systems
- HDCS 4380. Merchandising
- HDCS 4393. Internship in HDCS

**Technology Entrepreneurship Specialization** (15 semester hours)
- HDCS 4370. Technology Entrepreneurship
- HDCS 4372. Forecasting for Technology Entrepreneurship
- HDCS 4374. Entrepreneurial E-Tailing
- HDCS 4376. Resources in Technology Entrepreneurship
- HDCS 4394. Internship in HDCS
- LOGT 2362. Introduction to Logistics Technology

**Major Core Requirements**
- LOGT 2380. Distribution Channels
- LOGT 3381. Industrial/Consumer Sales
- HDCS 3300. Organizational Decisions in Technology or
  - ITEC 3340. Organizational Leadership and Supervision
- HDCS 4369. Entrepreneurship
- HDCS 4386. Communication Strategies for Merchandising and Industrial Distribution
- ITEC 2371. Industrial Fiscal Records
- ITEC 2360. Business Law
- TECH 3365. Industrial Computer Applications

**University Core Curriculum and College General Requirements**

**Communication (6 semester hours)**
- ENGL 1303. English Composition I
- ENGL 1304. English Composition II or
  - ITEC 3372. Communication in Science, Engineering, and Technology

**History (6 semester hours)**
- HIST 1376 or 1377, 1378 or 1379

**American Government (6 semester hours)**
- POLS 1336, 1337

**Social and Behavioral Sciences (6 semester hours)**
- ECON 2301 or 2304
- HDCS 1300 (writing intensive)

**Humanities (3 semester hours)**
Three semester hours selected from core approved list

**Visual/Performing Arts (3 semester hours)**
Three semester hours selected from core approved list
Mathematics/Reasoning (12 semester hours)
- MATH 1310. College Algebra
- TMTH 3360. Applied Technical Statistics
- Math Reasoning/Formal Science
- Math Reasoning/Formal Science
Natural Sciences (6 semester hours)
 Six semester hours from core approved list

Computer Literacy
 OCET 1301. Introduction to Computer Application Technology
Electives: 12 SH Minimum (or minor)

Degree awarded: Bachelor of Science
Major: Consumer Science and Merchandising

Certification in Marketing Education
Secondary certification in marketing education can be attained by selecting a minor in education in conjunction with the Consumer Science and Merchandising major (see advisor).

Minors in Human Development and Consumer Sciences
The Human Development and Consumer Sciences Department offers the following minors to students who are interested in furthering their knowledge in the fields of consumer sciences and merchandising. Students who have declared a major in Consumer Sciences and Merchandising may not declare a minor in Consumer Sciences and Merchandising (refer to the information on the major for more information.) Students who select one of these minors must satisfy the general university requirements for a minor as well as the following specific course requirements:

Consumer Science and Merchandising (15 semester hours)
Required Courses:
 HDCS 1331, 3301, and 4303
Electives: Six semester hours selected from the following, including at least three advanced hours:
 HDCS 3300, 3302, 3304, 4302, 4369, 4380, 4386, 4396 (Topics in CSM only)

Human Development and Consumer Sciences (15 semester hours)
Required Course:
 HDCS 1300
Electives: Twelve semester hours in HDCS, including nine advanced semester hours.

Note: A student completing any major within the Human Development and Consumer Sciences department may not declare the above minor.

Training and Development (15 semester hours)
Required Courses:
 ITEC 3345
TRDE 4340, 4351
Six semester hours to be selected from the following:
 TRDE 3346, 4344, 4346

Courses: Human Development and Consumer Sciences (HDCS)

Human Development and Consumer Sciences (HDCS)
1300: Family Ecosystems Cr. 3. (3-0). Prerequisite: concurrent enrollment in or completion of ENGL 1303 or equivalent. Introduction to the study of human and consumer needs, values, and goals in relationship to natural, man-made, and behavioral systems.

3300: Organizational Decisions in Technology Cr. 3. (3-0). Prerequisite: Junior standing or consent of instructor. Systems theory approach to organizational planning and decision making in a variety of contexts.

3301: Consumer Science Cr. 3. (3-0). Analysis of consumer models and managerial process as influenced by science, technology, and consumer economics with consideration of impact on individuals and families.

Technology

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3302: Consumer Textiles Cr. 3. (3-0). Analysis of textile components to predict product quality and end-use performance.

3303: Merchandising and Consumer Science Cr. 3. (3-0). Prerequisites: ENGL 1303 or equivalent and MATH 1310 or TMMTH 1335, or consent of instructor. Interdisciplinary analysis and comparison of merchandising and consumer science. Psychology of consumer choice and the structure of the merchandising industry.

3304: Visual Merchandising Cr. 3. (3-0). Prerequisite: HDCS 3303 or consent of instructor: Principles of design: visual merchandising, product promotions, and communication.

4198/4398: Special Problems Cr. 1. 3 per semester, or more by concurrent enrollment. Prerequisite: consent of instructor.

4300: Research Concepts in Human Development and Consumer Sciences Cr. 3. (3-0). Prerequisite: junior standing or consent of instructor. Research processes applicable to human development and consumer sciences.

4302: Apparel Analysis Cr. 3. (3-0). Prerequisite: HDCS 3303 or consent of instructor. Critical evaluation of quality levels of manufactured apparel. Issues involved in merchandising.

4303: Merchandising Systems Cr. 3. (3-0). Prerequisite: HDCS 3303 or consent of instructor. Merchandising systems, including wholesale, retail, and allied markets. Emphasis on initiating and implementing changes within the system.

4309: Entrepreneurship Cr. 3. (3-0). Prerequisite: junior standing. Planning and organizing a single proprietorship with emphasis on technical assistance, marketing strategy, location, financing, legal issues, management of human resources, promotion, business records, credit and collections, and entrepreneurial characteristics.

4370: Technology Entrepreneurship Cr. 3. (3-0). Prerequisite: HDCS 4369. Concepts and issues related to the commercialization of technology based products and services.

4372: Forecasting for Technology Entrepreneur Cr. 3. (3-0). Prerequisite: HDCS 4369. Forecasting technology and organizational change with performance models.

4374: Entrepreneurial E-Tailing Cr. 3. (3-0). Prerequisite: HDCS 4369. Technology based approaches for entrepreneurial enterprises.

4375: Strategies in E-Tailing Cr. 3. (3-0). Prerequisite: HDCS 4374. Strategies for consumer acceptance and profitability in E-Tailing.

4376: Resources in Technology Entrepreneurship Cr. 3. (3-0). Prerequisite: HDCS 4370. Practical approaches to resources for technology-based enterprises.

4380: Merchandising Cr. 3. (3-0). Prerequisite: junior standing. Mathematical, statistical, and control phases of retail buying, computing prices and markups, evaluating inventories, controlling stocks, and budgeting expenses.

4386: Communication Strategies for Merchandising and Industrial Distribution Cr. 3. (3-0). Prerequisite: HDCS 3300 or consent of instructor. Principles and techniques of mass communications, direct marketing and media used in delivering, merchandising, and industrial distribution programs, and providing services.

4393/4394: Internship in Human Development and Consumer Sciences Cr. 3. (3-0). Prerequisite: HDCS major and senior standing. Application of theoretical approaches to the study of the individual, family, and consumer through a supervised practicum in the student’s area of emphasis.

4396: Selected Topics in Human Development and Consumer Sciences Cr. 3. (3-0). Prerequisites: junior standing and permission of the department chair. May be repeated for a maximum of nine semester hours.

Training and Development (TRDE)

4340: Training Techniques for Supervisors Cr. 3. (3-0). Prerequisite: FTTEC 3340. Developing training philosophy, training techniques, training programs, and evaluating training results.

4344: Computer Applications in Training Cr. 3. (3-0). Prerequisite: OECTE 1301 or consent of instructor. Computer-assisted instruction, computer-based evaluation, authoring languages, and systems in a training environment.

4346: Training and Development Programs Cr. 3. (3-0). Prerequisite: TRDE 4340. Needs analysis methods, trainer selection, instructional design, and learning principles, methods and strategies.

4351: Instructional Strategies and Design for Training and Development Cr. 3. (3-0). Prerequisite: TRDE 4340. Applications of instructional strategies and instructional design in an industrial training environment.

Department of Information and Logistics Technology

Chair: John W. Hansen

Professors: Michael Gibson, Carole Goodson, Uma G. Gupta, Sharon Lund O’Neil

Associate Professors: Paul Bigham, Robert L. Fritz, John W. Hansen, Susan L. Miertschin, Jerry J. Waite, Cheryl L. Willis

Assistant Professors: Karla M. Black, Edward T. Crowley (Clinical), Deborah Salvo (Clinical), Robert Seaker, Jeffrey Sumrall

Visiting Assistant Professors: Shelley A. Hinson, Joy D. Lloyd

The Department of Information and Logistics Technology provides educational opportunities designed to prepare students for careers in business, industry, government, and education; the programs are closely linked to workforce quality and productivity for the region, the state, and the nation through its programs in Logistics Technology (LT), Information Systems Technology (IST), and Technology Leadership and Supervision (TLS). Graduates are workforce leaders who bring high levels of technology expertise to the workplace and are prepared to guide technological change.

The programs in Logistics Technology, Information Systems Technology, and Technology Leadership have been designed so that graduates will:

- Apply critical thinking skills related to the discovery, application, and integration of appropriate basic principles;
- Apply problem-solving techniques at a level required for professional practice;
- Demonstrate effective oral, written, and interpersonal communication skills for application in the global workplace; and
- Indicate a commitment to learn, improve the profession, and maintain professional ethics throughout their lifetime.

Students completing the IST or TLS program requirements earn a Bachelor of Science in Technology, while students completing the LT program requirements earn a Bachelor of Science degree. To qualify for these undergraduate degrees, students must complete university requirements for a baccalaureate degree, including university core curriculum requirements and departmental requirements for a specific degree program as stated in this section of the catalog. More current information is available at the College of Technology website, www.tech.uh.edu.

All majors and minors in the Department of Information and Logistics Technology must earn a grade of C or better in all major/minor courses. No grade lower than C will be accepted on any courses applicable to the major transferred to the University of Hous-
ton. A grade point average of 2.00 or better is required for graduation.

The Department of Information and Logistics Technology also offers the Master of Science in Technology Project Management with specializations in Logistics Technology and Information Systems Security. For more information about this graduate program, refer to the Graduate and Professional Studies catalog or to the College of Technology web site at www.tech.uh.edu.

Logistics Technology (Pending Coordinating Board Approval)

Logistics Technology is a technically-based program using information technology to optimize the global flow of industrial goods and services from manufacturer to industrial user. Logistics Technology focuses on the international supply chain from the source of raw material through the final consumption of the product.

Because supply-chain functions are part of all business activities, skills acquired with this degree offer unlimited employment opportunities.

Career options for LT graduates include supply-chain management with domestic and international manufacturing operations, service companies, third-party logistics providers, transportation companies, distribution centers, and other government and private businesses. Graduates are employed as industrial and transportation sales representatives; logistical analysts and consultants; operations managers; purchasing representatives; inventory control specialists; marketing directors; customer service representatives; and warehouse and distribution center managers.

Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>LOGT 2380</td>
<td>Distribution Channels</td>
</tr>
<tr>
<td>LOGT 3384</td>
<td>Logistics Technology and Processes</td>
</tr>
<tr>
<td>LOGT 3385</td>
<td>Transportation Economics and Policy</td>
</tr>
<tr>
<td>LOGT 3387</td>
<td>Procurement</td>
</tr>
<tr>
<td>LOGT 3389</td>
<td>Transportation Law</td>
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<tr>
<td>LOGT 4312</td>
<td>Inventory and Materials Handling</td>
</tr>
<tr>
<td>LOGT 4375</td>
<td>Global Supply Chain</td>
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<tr>
<td>LOGT 4380</td>
<td>Quality Systems</td>
</tr>
<tr>
<td>LOGT 4387</td>
<td>Global Sourcing</td>
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<tr>
<td>LOGT 4389</td>
<td>Practicum in ID</td>
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College and Department Requirements

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>COMM 3356</td>
<td>Business and Professional Communication</td>
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<tr>
<td>ITEC 2360</td>
<td>Business Law</td>
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<tr>
<td>ITEC 3340</td>
<td>Organizational Leadership and Supervision or HIDS 3300 Organizational Decision in Technology</td>
</tr>
<tr>
<td>ITEC 3353</td>
<td>Visual Communications Systems</td>
</tr>
<tr>
<td>ITEC 3363</td>
<td>Technical Communications</td>
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<tr>
<td>LOGT 2362</td>
<td>Introduction to Logistics Technology</td>
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<tr>
<td>OTEC 2332</td>
<td>Introduction to Client/Server Technology</td>
</tr>
<tr>
<td>OTEC 2334</td>
<td>Information Systems Applications</td>
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<tr>
<td>OTEC 2338</td>
<td>Technology in the Community</td>
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Operations Track (15 SH Minimum)

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>LOGT 3381</td>
<td>Industrial/Consumer Sales</td>
</tr>
<tr>
<td>MECT 1364</td>
<td>Materials and Processes I</td>
</tr>
<tr>
<td>ITEC 4341</td>
<td>Production and Service Operations</td>
</tr>
<tr>
<td>TECH 3365</td>
<td>Industrial Computer Applications</td>
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** Approved Elective

Systems Management Track (15 SH Minimum)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>OTEC 3343</td>
<td>Information Systems Analysis and Design</td>
</tr>
<tr>
<td>OTEC 3347</td>
<td>Principles of Information Management</td>
</tr>
<tr>
<td>OTEC 3365</td>
<td>Database Management</td>
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</table>
** Approved Elective
** Approved Elective

**Electives to be chosen from College of Technology, Engineering, or Business (other choices must be pre-approved)

Recommended Electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ELET 2307</td>
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<td>HIDS 4386</td>
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<td>HIDS 4369</td>
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<td>OTEC 4371</td>
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<td>OTEC 4390</td>
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</tbody>
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University Requirements

- Communication (6 semester hours)
  - ENGL 1303 and 1304. English Composition I and II
- History (6 semester hours)
  - HIST 1376 or 1377, 1378 or 1379
- American Government (6 semester hours)
  - POLS 1336, 1337
- Social and Behavioral Sciences (6 semester hours)
  - Three semester hours (writing intensive) selected from core approved list

ECON 2304

- Humanities (3 semester hours)
  - Three semester hours selected from core approved list
- Visual/Performing Arts (3 semester hours)
  - Three semester hours selected from core approved list
- Mathematics/Reasoning (12 semester hours)
  - MATH 1310. College Algebra or TMTH 1335
  - MATH 1313. Finite Mathematics
  - MATH 1314. Elements of Calculus
  - TMTH 3360. Applied Technical Statistics
- Natural Sciences (6 semester hours)
  - Six semester hours from core approved list

Degree awarded: Bachelor of Science

Major: Logistics Technology (Pending Coordinating Board Approval)

Information Systems Technology

The Information Systems Technology program provides for the needs of a dynamic and integral part of business and industry—the information systems environment. Students will obtain a background in business applications, computer concepts, problem solving, decision making, human relations, evaluation, analysis, and communications. Information systems technologists can be found in a broad spectrum of careers in the private and public sectors including the areas of end-user support, telecommunications specialist, applications development, technology management, systems analysis, training, and consulting.

Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>TECH 1300</td>
<td>Computers in Technology</td>
</tr>
<tr>
<td>OTEC 3301</td>
<td>Introduction to Computer Application Technology</td>
</tr>
<tr>
<td>OTEC 2332</td>
<td>Introduction to Client/Server Technology</td>
</tr>
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</table>

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The Technology Leadership and Supervision (TLS) degree focuses on providing individuals with a competitive advantage when moving into leadership and supervisory roles in technology-based organizations. The program investigates the rapidly changing and complex nature of leadership in organizations that use and rely on technology. The TLS degree provides a long-term, empowering approach to the practice of leading people rather than the short term, command and control approach to utilizing human resources. Students learn about leadership, the importance of organizational vision and values, developing human resources, and managing technological resources in corporate, government, non-profit, or community organizations. Leadership skills in goal setting, time management, verbal and visual communication, and leadership values and abilities are developed through relevant real world applications.

Technology Leadership and Supervision students choose between two options to complete their major requirements—Option 1) Technology Leadership and Supervision and Option 2) Technology Leadership and Supervision/Occupational Technology. Although students in one option may enroll in courses within the other option, they may not receive official university recognition as receiving either a double major or a major and a minor within the TLS major.

Graduates of the Technology Leadership and Supervision program may enter a wide variety of leadership and managerial careers in areas such as human resource development, supervision, production control, quality control, customer service, training and development, technical sales, technical education, multimedia specialist, webmaster, electronic prepress technician, digital imaging technician, offset lithographic press operator, and technology education.

**Option 1: Technology Leadership and Supervision**

The Technology Leadership and Supervision option provides students with the knowledge and skills to enter careers related to the effective and appropriate utilization of human resources. The focus is the development of outstanding leaders in technology-driven organizations. Students develop an understanding of the relationships between organizational behavior, technology, and leadership. Students develop knowledge and skills related to information technology, leadership, supervision, verbal and visual communication, human resource development, organizational dynamics, and continuous process improvement.

Students completing the Technology Leadership and Supervision option must select among two elective blocks—Group A, with courses in training and development, and Group B, with courses in graphic communications technology.

The elective block in Group A provides additional human resource development knowledge and skills in training and development that will allow leaders and supervisors to maximize the talents and abilities of the people they lead and supervise. Students develop a practical understanding of the strategies and techniques leaders use to enhance and utilize the technical expertise of their employees.

The elective block in Group B prepares people in graphic communications technology to become leaders in the printing and publishing industries. Publishing is ranked among the largest industries in the United States. This curriculum has been created in conjunction with the leaders of the printing and publishing industry in Texas.

**Elective or Minor Selection**

Students are encouraged to take electives or a minor that includes a planned program of technical skill courses that will provide meaningful background for
their future careers as well as permit them to function effectively in tomorrow’s high technology society.

Option 2: Technology Leadership and Supervision-Occupational Technology

The Technology Leadership and Supervision-Occupational Technology program is designed for working adults who have completed a technology-related associate degree and desire to complete their bachelor’s degree. The faculty members are practitioners, consultants, and educators in technology leadership who provide the working adult with exceptional learning opportunities.

The TLS/OT program helps develop leadership and interpersonal skills, organization and communication skills, critical thinking and decision-making skills, financial analysis and marketing skills, and human resource and change management skills.

To be admitted, students must have an associate of arts, associate of science, or associate of applied science degree in a technology discipline from an accredited institution. Students may transfer up to 36 hours of technology-based courses into the major requirement, as well as approved general education courses that are transferable in the university core curriculum.

Requirements for Option 1, Technology Leadership and Supervision

ITEC 2360. Business Law
ITEC 2371. Industrial Fiscal Records
ITEC 3345. Human Resources in Technology
ITEC 4341. Production and Service Operations
ITEC 4348. Supervisor Employee Relationships
ITEC 4349. Organizational Dynamics
ITEC 4350. Industrial and Environmental Safety
OCTE 4371. Leading Change in the Workplace
TRDE 3346. Wage and Salary Administration
HDCS 3300. Organizational Leadership and Supervision
ECON 2301. Economic Concepts & Issues

Approved electives: 12 semester hours minimum, or minor

Students must complete one of the following groups of electives to complete the major requirements above:

Group A:
TRDE 4340. Training Techniques for Supervisors
TRDE 4344. Computer Applications in Training
TRDE 4346. Training and Development Programs
TRDE 4351. Instructional Strategies in Training and Development
PSYC 3352. Psychology of Knowledge Acquisition

Group B:
ITEC 3350. Graphic Communications Materials and Processes
ITEC 3351. Image Technology I
ITEC 3352. Press Technology I
ITEC 4372. Costing in Graphic Communications Technology
ITEC 4373. Image Technology II

Requirements for Option 2: Technology Leadership and Supervision/Occupational Technology

Students may transfer a total of 36 hours in a technology-based specialization that is approved by the College.

Approved Technical Electives: 6–9 semester hours

Minor: Minor that has been pre-approved by the coordinator of the major.

Departmental Requirements for Option 1 and Option 2 (21 semester hours)
ITEC 3340. Organizational Leadership and Supervision
ITEC 3363. Technical Communications or ITEC 3372.
Communication in Science, Engineering, and Technology
ITEC 4377. Practicum in Technology Leadership and Supervision
HDCS 4369. Entrepreneurship
OCTE 1301. Introduction to Computer Application Technology
ITEC 3353. Visual Communication Systems
ITEC 3365. Computer Applications in Technology

University Core Curriculum

Communication (6 semester hours)  
ENGL 1303, 1304. English Composition I, II
History (6 semester hours)  
HIST 1376 or 1377, 1378 or 1379
American Government (6 semester hours)  
POLS 1336, 1337
Social and Behavioral Sciences (6 semester hours)  
Six semester hours selected from core approved list
(PSYC 1300, 3310)
Humanities (3 semester hours)  
Three semester hours selected from core approved list
Visual/Performing Arts (3 semester hours)  
Three semester hours selected from core approved list
Mathematics (3 semester hours)  
Math 1310
Mathematics/Reasoning (3 semester hours)  
TMTH 3360
Natural Sciences (6 semester hours)  
Six semester hours from core approved list

Degree awarded: Bachelor of Science in Technology
Major: Technology Leadership and Supervision

Minors in Information and Logistics Technology

Graphic Communications Technology (15 semester hours)

Required courses:
ITEC 3353
ITEC 3351, 3352
Six hours to be selected from the following:
ITEC 3350, 4372, 4377

Logistics Technology (Pending Approval) (15 semester hours)

Required Course:
LOGT 2362
Twelve semester hours to be selected from the following:
LOGT 2380, 3381, 3384, 3385, 4312, 4389, ITEC 4341

Industrial Supervision (15 semester hours)

Required Courses:
ITEC 3340, 4341, 4350
Six semester hours to be selected from the following:
ITEC 2360, 2371, 3345, 4348, 4349, ITEC 3346

Information Systems Development (18 semester hours)

Required Courses:
OCTE 2334, 3343, 3347, 3348, 3365, 4337

Information Systems Management (18 semester hours)

Required Courses:
OCTE 2334, 3343, 3347, 4335, 4390
Three hours advanced Information Systems elective
Courses: Information and Logistics Technology

Industrial Technology (ITEC)

2350: Graphics for Digital Media Cr. 3. (2-3). Prerequisite: O CTE 1301. Introduction to pixel-based vector graphics for use in print and digital media.

2360: Business Law (formerly O CTE 2360) Cr. 3. (3-0). Prerequisite: ENGL 1304 or equivalent. General principles of law as they relate to the law of contracts, property, agency, corporations, bankruptcy, mortgages, torts, and the Uniform Commercial Code.

2371: Industrial Fiscal Records Cr. 3. (3-0). Fundamentals of recording and presenting financial data for industry.

3340: Organizational Leadership and Supervision Cr. 3. (3-0). Prerequisite: junior standing. Study of the supervisory process and established practices and supporting knowledge of supervisory planning, leading, organizing, and controlling.

3345: Human Resources in Technology Cr. 3. (3-0). Prerequisite: junior standing. Functions of personnel administration in human resource development, employee-supervisor relationships, interviewing, recruiting, and selection techniques, and training programs.

3346: Wage and Salary Administration (formerly TRDE 3346) Cr. 3. (3-0). Prerequisite: ITEC 2371. Concepts, principles, procedures, processes, and programs related to the design of an effective system of compensation.

3350: Graphic Communications Materials and Processes Cr. 3. (3-0). Prerequisite: ITEC 3353 or equivalent. Graphic communications processes and ancillary operations. Materials used in the graphic reproduction process.

3351: Image Technology I Cr. 3. (2-3). Prerequisite: ITEC 3353 or equivalent. Theory and practice in the preparation of single-color images for reproduction. Conventional and electronic methods; use of appropriate quality control devices.

3352: Press Technology I Cr. 3. (2-3). Prerequisite: ITEC 3353 or equivalent. Theoretical and practical aspects of printing presses for single-color reproductions. Use of appropriate quality control devices.

3353: Visual Communications Systems (formerly O CTE 3353) Cr. 3. (2-3). Prerequisite: O CTE 1301 or equivalent. Graphic, digital, and filmed/taped communications processes.

3363: Technical Communications Cr. 3. (3-0). Prerequisite: ENGL 1303 with grade of C or higher. Procedures and techniques of preparing technical memorandum, oral and written reports, manuals, and other source documents that fit the pattern of industrial and institutional communications.

3372: Communicating Science, Engineering, and Technology Issues and Trends within the Global Workplace Cr. 3. (3-0). Prerequisite: 3 hours in communication with a grade of C or higher; successful completion of computer application course (i.e. MS Word). Analyzing issues and trends in science, engineering, and technology to develop effective communication in global workforce. Focus on oral and written communications, critical thinking, research skills using computer-driven technologies.

4341: Production and Service Operations Cr. 3. (3-0). Prerequisites: MATH 1310 or equivalent and ITEC 3340. Planning and control of production and service operations. Product and service design, design of work systems, forecasting, scheduling, capacity planning, inventory control.

4348: Supervisor-Employee Relationships Cr. 3. (3-0). Prerequisite: ITEC 3340. Supervisor-employee relationships that affect the role of the supervisor in the industrial setting.

4349: Organizational Dynamics Cr. 3. (3-0). Prerequisite: ITEC 3340. In-depth studies in organizational behavior as it relates to organizational development and supervision.

4350: Industrial and Environmental Safety Cr. 3. (3-0). Prerequisite: ITEC 3340. Concepts and principles dealing with problems, methods, and solutions in managing and developing effective industrial and environmental safety programs.

4372: Costing in Graphic Communications Cr. 3. (3-0). Prerequisites: ITEC 3351 and ITEC 3352 or equivalents or consent of instructor. Principles and techniques of cost estimation for graphic communications production.

4373: Image Technology II Cr. 3. (2-3). Prerequisite: ITEC 3351 or equivalent. Theory and practice in the preparation of multi-color images for reproduction. Color theory as it applies to image reproduction. Conventional and electronic methods, use of appropriate quality control devices.

4376: Multimedia Authoring Cr. 3. (2-3). Prerequisite: ITEC 3353. Planning and developing multimedia productions.

4377: Practicum in Technology Leadership and Supervision Cr. 3. (3-0). Prerequisite: senior standing. Guided individual study in the field of technology leadership and supervision. Class presentations by students; instructor-led discussions of research methods.

4390: Current Issues in Graphic Communications Technology Cr. 3. (3-0). Prerequisites: ITEC 3351 and 3352. Issues and topics in graphic communications technology.

4398: Special Problems Cr. 3 per semester. Prerequisite: approval of chair.

5321: Information Systems Security Cr. 3. (3-0). Prerequisite: senior standing in a technology discipline, technical undergraduate degree, or consent of graduate faculty advisor. Contemporary information systems security issues for technology professionals from an applied perspective.

Logistics Technology (LOGT)

2362: Introduction to Logistics Technology (formerly DIST 1362) Cr. 3. (3-0). Functions, processes and objectives of the logistics operation. Industrial distributor and its relationship to other channel members.

2380: Distribution Channels (formerly DIST 3380) Cr. 3. (3-0). Prerequisite: LOGT 2362 or consent of instructor. Organization and operations of distribution channels. Vendor evaluation, value analysis, complex pricing, promotional strategies, and execution issues.

3381: Industrial and Consumer Sales (formerly DIST 3381) Cr. 3. (3-0). Prerequisite: junior standing or consent of instructor. Analysis of consumer bases, product knowledge and applications, benefits selling, competition analysis, and strategies and methods appropriate to inside/outside sales.

3383: Industrial Direct Response (formerly DIST 3383) Cr. 3. (3-0). Prerequisite: LOGT 3381. Development of vendor-customer direct solicitation and order and reorder response systems. Telemarketing, direct mail, and catalog/direct mail as part of closed loop direct response system. Interactive system design.

3384: Logistics Technology and Processes (formerly DIST 3384) Cr. 3. (3-0). Prerequisites: LOGT 2362, and either junior standing or consent of instructor. Capacity allocation, facility and flow design, retrieval mechanisms, and inventory control systems; impacts on service and cost performance.

3385: Transportation Economics and Policy (formerly DIST 3385) Cr. 3. (3-0). Prerequisites: LOGT 2362 and ECON 2304. Cost structures and service capabilities of the major modes of transporta- tion. History and effects of regulatory policies of carriers and shippers.

3387: Procurement (formerly DIST 3387) Cr. 3. (3-0). Prerequisite: LOGT 2362. Purchasing functions: vendor analysis, negotiations, value analysis, systems contracts, public purchasing, organization, personnel, policies, competitive bids and ancillary functions.

3389: Transportation Law Cr. 3. (3-0). Prerequisites: LOGT 2380 and ITEC 2360. Regulatory and procedural requirements pertaining to domestic and international freight transportation.

4312: Inventory and Materials Handling (formerly DIST 4312) Cr. 3. (3-0). Prerequisites: LOGT 3384 and 3387 or consent of instructor. Recognition and utilization of mechanical and automated handling systems, tools, and techniques required for the movement and storage of materials within a logistics operation.
4375: Global Supply Chain (formerly Dist 4375) Cr. 3. (3-0). Prerequisite: Logt 3384 or 3385. Relationships among international trade specialists, global distribution channels, and governments using international documentation, terms of trade, financial, and legal resources.

4380: Quality Systems (formerly Dist 4380) Cr. 3. (3-0). Prerequisites: Logt 2362 and Tmth 3360. Quality techniques and systems with an emphasis on statistical analysis.

4387: Global Sourcing (formerly Dist 4387) Cr. 3. (3-0). Prerequisite: Logt 3387 or consent of instructor. Advanced analysis of purchasing functions. Materials and information processes among global organizations.

4389: Practicum in Logistics Technology (formerly Dist 4389) Cr. 3. Prerequisite: second semester Logt senior standing or consent of instructor. Team approach to research-oriented problems in the field of logistics technology.

4390: Current Issues in Logistics Technology Cr. 3. (3-0). Prerequisite: Senior standing as Logt major. Current issues and topics of significance to logistics technology.

Occupational Technology (OCTE)

1301: Introduction to Computer Application Technology (formerly Tech 1301) Cr. 3. (3-0). Prerequisites: Credit for or concurrent enrollment in Engl 1303 and Tmth 1335 or equivalents. Introduction to computer and information technologies and the application of these technologies in the workplace.

2332: Introduction to Client/Server Technology Cr. 3. (3-0). Prerequisite: Sophomore standing. A conceptual and technological survey of the structure of distributed information systems, architectures, operating systems, network operating systems, data management systems, application development environments, peripheral technology, and user interfaces.

2334: Information Systems Applications Cr. 3. (3-0). Prerequisite: Credit for or concurrent enrollment in Octe 2332. Concepts and production skills relating to information systems technologies, procedures, and resources.

2336: Internet Applications Development Cr. 3. (3-0). Prerequisites: Tech 1300 and Octe 2334. Internet and world-wide web technologies. Construction and maintenance of websites.

2338: Technology in the Community Cr. 3. (3-0). Prerequisites: Octe 2334 and 2336. Credit for or concurrent enrollment in Octe 2336 or at least 6 hours in major for non-Information Systems Technology majors. Introduction to project management in technology-intensive workplaces. Hands-on experience in project management through service to technologically underserved communities.

3343: Information Systems Analysis and Design Cr. 3. (3-0). Prerequisite: Credit for or concurrent enrollment in Octe 3347. Development and evaluation of information systems with relation to efficiency and cost; case study approach.

3347: Principles of Information Management Cr. 3. (3-0). Prerequisites: Octe 2334, Information Systems Technology major or minor, and junior standing. Principles, applications, and administration of information systems.

3348: Applications of Expert Systems Cr. 3. (3-0). Prerequisites: Octe 3343 and Information Systems Technology major or minor. Expert systems concepts, characteristics, applications, and tools.

3365: Database Management Cr. 3. (3-0). Prerequisites: Octe 3343 and Tmth 2335 or Math 1314. Applications of hierarchical and relational database systems.

3368: Advanced Internet Applications Development Cr. 3. (3-0). Prerequisite: Credit for or concurrent enrollment in Octe 3365. Use of web development tools for website development. Architectural planning, technology selection and website programming tasks. Internet applications using COM components on both the client and server.

3399-4399: Senior Honors Thesis Cr. 3 per semester. Prerequisite: approval of chair. Independent work in Industrial Technology under the supervision of a faculty member. Both must be completed for credit.

4335: Integrated Information Systems Cr. 3. (3-0). Prerequisites: Octe 3347, Information Systems Technology major or minor, and senior standing. Evaluation of integrated information systems.

4337: Advanced Information Systems Applications Cr. 3. (3-0). Prerequisites: Octe 3348 and 3365. Information Systems Technology major or minor, and senior standing. Advanced concepts and computer-based applications integral to office information systems.

4338: Database Design and Implementation Cr. 3. (3-0). Prerequisites: Credit for or concurrent enrollment in Octe 4337. Information Systems Technology major or minor, and senior standing. Physical database design, construction, and implementation, including usage analysis, data distribution, replication analysis, storage estimation and load approaches, database application development, and query optimization.

4339: Enterprise Applications Development Cr. 3. (3-0). Prerequisites: Credit for or concurrent enrollment in Octe 4338. Advanced application development techniques in a large enterprise-wide setting. Database connectivity options, distributed object technologies, n-tier client/server applications, transaction systems, web-enabled applications, source code management and version control, and database application installation and deployment issues.

4371: Leading Change in the Workplace Cr. 3. (3-0). Prerequisites: Junior standing and ITEC 3340 or equivalent. Designed for students preparing to assume the role and duties of a leader or supervisor in an organization. How leadership and supervisory knowledge and skills have and will improve productivity and quality.

4375: Practicum in Information Systems Technology Cr. 3. Prerequisites: Octe 4335 and 4337. Guided individual study in the field of information systems technology. Class presentations by students; instructor-led discussion of research methods.

4390: Current Issues in Information Systems Cr. 3. (3-0). Prerequisite: Information Systems Technology major or minor and senior standing. Current issues and topics of significance to information systems.

4396: Internship: Occupational Technology Cr. 3. Prerequisite: consent of instructor.

4397: Selected Topics in Occupational/Technical Education Cr. 3 per semester. Prerequisites: completion of university core and College of Technology general requirements, and approval of chair.

4398: Special Problems Cr. 3 per semester. Prerequisites: completion of university core and College of Technology general requirements, and approval of advisor.

Technology (TECH)

1300: Computers in Technology (formerly Elte 1400) Cr. 3. (3-0). Prerequisite: Tmth 1335; Nontechnology majors may not enroll in this course without permission from the dean’s office. Introduction to computers and their application to various technologies. Concepts of hardware, software, number systems, basic computer organization, and structured programming.

3365: Industrial Computer Applications Cr. 3. (3-0). Prerequisites: Octe 1301 or Tech 1300. Application of computers to such areas as business records, economics, and technical statistics. Emphasis on microcomputer applications.

3366: Applications of Numerical Methods in Technology Cr. 3. (3-0). Prerequisites: Tech 1300 and Tmth 2335. Applications of numerical methods to engineering technology problems using microcomputers.

Technical Mathematics (TMT)

1335;1336: Basic Technical Mathematics Cr. 3 per semester. (3-0).

2335; 2336: Advanced Technical Mathematics Cr. 3 per semester. (3-0). Prerequisite: Tmth 1336. Selected topics from analytic geometry, differential, and integral calculus.

3360: Applied Technical Statistics Cr. 3. (3-0). Prerequisites: Tech 1300 and six semester hours in mathematics, collection, analysis, presentation, interpretation of numerical data; probability, sampling, quality control with special emphasis on application.

4198: Special Problems Cr. 1 per semester. Prerequisite: approval of chair.