THE University of TENNESSEE

KNOXVILLE

COLLEGE of ENGINEERING

HELPING STUDENTS CHANGE THE WORLD

2009-2010 STUDENT GUIDEBOOK

www.engr.utk.edu
Contents

CONTACTS
Administrative Contacts .............................................. 4
Academic Departments ................................................ 4

RESOURCES
Engineering Resources .................................................. 5
Career and Personal Development ................................... 5
Computer and Laptop Help .............................................. 5
Tutoring ......................................................................... 5
Academic Support .......................................................... 5
Additional Resources .................................................... 5

ACADEMIC ADVISING
New Students .................................................................. 6
Academic Standing .......................................................... 6
Good Academic Standing ............................................... 6
Academic Probation ........................................................ 6
Academic Disciplinary ..................................................... 6

SHAREDPERSONALITY
STUDENT PRIVACY
FERPA Statement ............................................................. 8
Waiver of Privacy Rights and Authorization to Release Information Form (Educational) .............................................. 9
Waiver of Privacy Rights and Authorization to Release Information Form (Financial) ............................................... 10

PERFORMANCE AND CHOICES.................................. 11
DEGREES OFFERED
College of Engineering Overview ..................................... 12

FIRST YEAR PROGRAMS - HONORS ................................ 13

CAREER INFORMATION
Aerospace Engineering .................................................... 14
Biomedical Engineering .................................................. 14
BioSystems Engineering ................................................. 15
Chemical and Biomolecular Engineering .......................... 15
Civil and Environmental Engineering .............................. 16
Computer Engineering ................................................... 17
Computer Science .......................................................... 17
Electrical Engineering .................................................... 18
Industrial Engineering .................................................... 18
Materials Science and Engineering .................................. 19
Mechanical Engineering .................................................. 20
Nuclear Engineering ........................................................ 21

ENGINEERING MAJORS
Aerospace ........................................................................ 22
Biomedical ...................................................................... 22
BioSystems ...................................................................... 23
Pre-Professional Concentration ....................................... 23
Chemical ........................................................................ 24
Biomolecular Concentration ............................................ 24
Civil .............................................................................. 25
Computer Engineering ................................................... 25
Computer Science .......................................................... 26
Electrical ........................................................................ 26

Engineering Physics ......................................................... 27
Industrial ........................................................................ 27
Materials Science and Engineering .................................. 28
Mechanical ................................................................. 28
Nuclear .......................................................................... 29
Radiological Engineering Concentration .......................... 29

MINORS .................................................................. 30

PRE-HEALTH INFORMATION ........................................... 31

SCHOLARSHIPS & STUDENT ORGANIZATIONS .... 32

DIVERSITY PROGRAMS ................................................. 33

ENGINEERING COOPERATIVE PROGRAM (CO-OP) .... 34

CAREER SERVICES ......................................................... 35

READY FOR THE WORLD
Programs Abroad Office (PMO) .......................................... 37
Semester at Sea ............................................................... 37
Engineering Global Exchange (NSE) ................................. 37

TECHNOLOGY
Hardware and Software Recommendations ....................... 38

GRADES
Undergraduate Grades .................................................... 39
Freshman English ............................................................ 39
A, B, C, NC Grading Scheme ............................................. 39
Grade of Incomplete ....................................................... 39
Grades that do not Influence Grade Point Average ............... 40
Satisfactory/No Credit Grading System ............................. 40
Repeating Courses .......................................................... 40

REGISTRAR SERVICES ...................................................... 41

ADVANCED PLACEMENT
Advanced Placement Examinations ................................. 42
Advanced Placement Scores & Awarded Credit .................... 42
How to Refuse AP and IB credit ........................................ 43

INTERNATIONAL BACCALAUREATE ........................................... 43

HIGH SCHOOL DEFICIENCIES ......................................... 44

COURSE LOAD ................................................................. 45

PLACEMENT EXAMS
Freshman Math Placement ................................................ 46

FOREIGN LANGUAGE .................................................................. 46

GENERAL EDUCATION REQUIREMENTS ....................... 47

NET ID AND PASSWORD .................................................... 49

ACADEMIC CALENDAR ...................................................... 50

KEY TERM DATES ............................................................. 51

MAP, COLLEGE OF ENGINEERING ..................................... 52

EEO/TITLE IX/AA/SECTION 504 STATEMENT
The University of Tennessee is an EEO/AA/Title IX/Title VI/Section 504/ADA/ADEA institution in the provision of its education and employment programs and services. All qualified applicants will receive equal consideration for employment without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation, gender identity, age, physical or mental disability or covered veteran status.

PAN: E01-1301-001-022-09 DOP: 5/22/09
The College of Engineering is committed to the belief that academic advising engages students by teaching them how to become members of the higher education community to think critically about their role and responsibilities as engineers and to prepare them to be educated members of a global community.

New Students

New freshman students are assigned to Engineering Advising Services for academic advising until they have completed the freshman curriculum. Freshman students admitted to the College of Engineering are required to complete a field of study by the end of their freshman year. Upon completion of Engineering Fundamentals 152 (or equivalent), the students are assigned faculty advisors in their selected departments.

The Engineering Advising Office delivers academic advising on an appointment basis. To make an appointment, contact the Advising Office at (865) 974-4008 or come by 202 Estabrook Hall. Advising appointments are normally offered on thirty-minute intervals. Hours of operation are from 8:00 a.m. to 5:00 p.m. (Eastern), Monday through Friday. All students must meet with an advisor in the Engineering Advising Office until they successfully complete Engineering Fundamentals 151-152 or 157-158 and Math 141-142 or 147-148. Once EF 151-152 and Math 141-142 are successfully completed and students have a cumulative GPA of 2.00 (good academic standing), then their files are sent to the Engineering major of their choice. Students are assigned to faculty advisors in their major of choice that assist with academic advising and career planning. The catalog contains additional requirements for specific programs.

Good Academic Standing

A student is in good academic standing when both the student’s term and cumulative GPAs are 2.00 or higher or; if after two consecutive terms, the student’s cumulative GPA is 2.00 or higher and at least one term GPA is also 2.00 or higher.

Academic Probation

A student will be placed on Academic Probation when (1) his/her cumulative GPA falls below the minimum acceptable level of 2.00 for one semester or (2) the semester GPA falls below the minimum acceptable level of 2.00 in two consecutive terms of enrollment. During the semester that a student is placed on Academic Probation, and any other semesters in Academic Probation, a student must participate in a special directive advising program to help the student address concerns that are impeding higher academic performance and to outline a plan for achieving academic success. The model of early intervention is designed to help students regroup and position themselves for academic success. Students on Academic Probation status during a term will automatically be dismissed at the end of that term if both:

- The cumulative GPA is below 2.00, and
- The term GPA is below 2.00

A student will no longer be on academic probation when his or her cumulative grade point average is 2.00 or higher and the term grade point average is 2.00 or higher. This policy is in place in recognition of the University of Tennessee, Knoxville’s minimum grade point average of 2.00 for graduation.

Academic Dismissal

Academic dismissal is the result of a pattern of receiving grades that are below the university’s standards for good academic standing (GPA of 2.00 or better). Students who have been academically dismissed are not eligible to enroll in classes, either full-time or part-time at the University of Tennessee (including correspondence and on-line courses). Academically dismissed students are not permitted to live in university housing and no longer have the privileges provided through the UT student identification card (VolCard). Academically dismissed students must remain away from the university for a mandatory absence and should use the period of dismissal to reflect on and address the factors that led to poor performance.

- First Academic Dismissal

A student dismissed for the first time may not be readmitted until after a full semester (not including summer) has elapsed.

- Second Academic Dismissal

A student dismissed for the second time may be readmitted after one calendar year has elapsed and after completing a minimum of 12 semester credits of academic coursework with at least a 2.50 cumulative grade point average from an accredited institution(s) of higher education. Students who have been dismissed twice are required to complete the Undergraduate Council Appeals Committee. The student may be readmitted only when they present evidence that they are capable of performing at the level required to meet university academic standards and completing all degree requirements within a reasonable length of time.

- Third Academic Dismissal

After a third dismissal, a student is ineligible to attend the university and may not apply for readmission. Students who have been academically dismissed and who are readmitted will be dismissed again if they fail to earn a 2.00 minimum term GPA at the end of the first semester after readmission and every term thereafter until the cumulative GPA reaches a 2.00. For further information on readmission after academic dismissal, see Readmission to the University under the Admission to the University section of the catalog. Students dismissed from the College of Engineering and/or the University of Tennessee, Knoxville, will be removed from all courses if pre-registered for the following term. Dismissed students may no longer pursue a major in the College of Engineering.
FERPA STATEMENT

Family Education Rights and Privacy Act (FERPA)
The method with which the University of Tennessee governs the distribution of student information is based on the Family Educational Rights and Privacy Act of 1974 or FERPA. This Act, as amended, established the requirements governing the privacy of student educational records in regards to the release of those records and access to those records. This Act is also known as the Buckley Amendment.

The Act gives four basic rights to students:
• the right to review their education records;
• the right to seek to amend their education records;
• the right to limit disclosure of personally identifiable information (directory information);
• and the right to notify the Department of Education concerning an academic institution’s failure to comply with FERPA regulations.

FERPA provides for confidentiality of student records; however, it also provides for basic identification of people at the University of Tennessee without the consent of the individual. Release of information to third parties includes directory information, such as contained in the campus telephone book, in the online web-based people directory and in sports brochures. Students are notified of their FERPA rights and the procedures for limiting disclosure of directory information in Hilltopics, at Orientation for new students, and on the Web site of the University Registrar, http://registrar.tennessee.edu.

Student Education Record Release Form

Effective June 1, 2009

The purpose of the Federal Educational Rights and Privacy Act of 1974 is to protect the privacy of information concerning individual students by placing restrictions on the disclosure of information contained in a student’s education records. I understand for the university to release education records, a signed authorization must be on file. Therefore I am filing this release with the University of Tennessee, Knoxville, and I understand that this release applies ONLY to records indicated below. NOTE: Release of financial information requires the use of Student Financial Information Release Form (available at http://ferpa.utk.edu/financial).

PRINT CLEARLY

Therefore, I, ___________________________ UT Student ID # ___________________________ (Student Name) (NOT SSN)

Authorized the university to release information to:

<table>
<thead>
<tr>
<th>Name</th>
<th>Relationship</th>
<th>Secret Word</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above information will be released with my FULL CONSENT. I understand this release authorization remains in effect for one (1) year from the date it is filed or until I submit a written request to revoke it.

Student Signature Date Phone Number

RETURN COMPLETED FORM TO:

Academic Records: Office of the Registrar, Student Success Center, or College Advising office.

Disciplinary Records: Student Judicial Affairs

Other Records: Division of Student Affairs
Performace and Choices

Barriers to Academic Performance and Choices

Life happens to all of us. Less successful students often believe that other students are successful only because those other students do not have bad things happen to them. Whether we are successful or not depends more on the CHOICES we make when faced with the circumstances that life deals us.

<table>
<thead>
<tr>
<th>Presenting Issue</th>
<th>Choice of the Successful Student</th>
<th>Choice of the Less Successful Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don't know how to manage my time</td>
<td>Recognizes that work outside of class is important to success. Uses weekly time schedule, semester calendars, and planners/to do lists to keep organized. Makes good use of daytime hours.</td>
<td>Not sure how much time he/she should spend on work outside of class. No plan. Likes to “go with the flow.”</td>
</tr>
<tr>
<td>My high school didn't cover this subject/didn’t prepare me very well.</td>
<td>Talks to professor when first struggle appears. Talks to academic advisor. Visits Student Success Center to find out about types of academic assistance.</td>
<td>Gets angry that high school didn’t prepare well-enough. Concludes that college is too hard. Concludes that it is unfair to be in this situation and UT shouldn't expect this of me.</td>
</tr>
<tr>
<td>I got A’s in high school and didn’t have to study much</td>
<td>Recognizes that college learning requires different skills than high school. Follows suggestions provided in FYS 101. Visits Student Success Center for assistance in developing better study skills.</td>
<td>“I did okay in high school, so I'm sure I'll do fine here.”</td>
</tr>
<tr>
<td>I had personal and family issues. • Relationships with friends, significant others • Death/illness in Family or Friends • Divorce • Personal Illness</td>
<td>Recognizes that he/she needs some support to work through the difficult times. Seeks counseling at the Counseling Center. Decides to withdraw for the semester to work through the issues. Develops better coping skills.</td>
<td>Withdrawn, depressed, feels alone, skips classes.</td>
</tr>
<tr>
<td>I don’t have a major or I’m not sure where I’m going with the major I’m in.</td>
<td>Recognizes that this current plan may not be the best fit. Is undecided but recognizes the importance of getting a college degree. Visits Career Services to seek assistance with finding a (new) major.</td>
<td>Continues to pursue major even though he/she dislikes it and struggles with the courses. Is frustrated that he/she doesn't know what to major in.</td>
</tr>
<tr>
<td>I think I might have (or I have been diagnosed with) learning (or other) disability.</td>
<td>Seeks evaluation and assessment of disability. Registers with Office of Disability Services. Uses accommodations at Office of Disability Services.</td>
<td>Wants to try things on his/her own. Does not seek assistance on campus.</td>
</tr>
<tr>
<td>I am more motivated by social life and free time than academics.</td>
<td>Learns to say “no” and “bargain” on social invitations. Limits Facebook time until academic work is complete. Limits TV shows to only those most desired.</td>
<td>Wants to do it all. Spends lots of time on Facebook. Loved pledging. Watches lots of TV. Loves X-Box.</td>
</tr>
</tbody>
</table>

STUDENT SUCCESS CENTER • 1817 Melrose Avenue • (865) 946-HELP (4357) http://studentsuccess.tennessee.edu • E-mail: studentsuccess@utk.edu
Engineers solve problems. To do so, they apply science, mathematics and creativity to invent, design, test, build and operate engineering systems that will meet the needs of society. In the latter half of the 20th century, engineers developed the personal computer, the space shuttle, artificial hearts and many other "high-tech" products. The opportunities to use technology for the benefit of 21st century society will be even greater.

Engineers use the same problem-solving strategies whether designing a bridge, troubleshooting a computer chip problem or developing a more efficient automobile engine. This commonality of approach makes it easy for an engineer to move from one specialization to another. The engineer's can-do, problem-solving approach makes it easy for an engineer to move from one field.

Increasingly, engineers must also have good interpersonal skills and technical skills. Engineers following this career path.

The career outlook is also good preparation for management, and many engineers follow this career path.

Graduates of the Bachelor of Science curricula offered by the college may enter directly into a position in industry, government, or private practice, or may pursue advanced study in graduate school. Their professional activities include research, development, design, operations analysis, construction, production supervision and technical sales. Many practice their profession in Tennessee, but engineering knows no geographical bounds, and graduates from the college serve throughout the nation and in other countries as well.

Beginning students who wish to pursue an honors concentration in one of the engineering majors will normally be part of the Chancellor's or Haslam Honors Program. Coursework requirements in the upper division are specific to the individual departments and the student is referred to those individual descriptions for explanation.

Specifically, first and second year requirements are:

- English 118, under the same conditions as stated in the requirements for the Chancellor's Honors Program.
- University Honors 100.
- One 200-level University Honors seminar to be completed during the second semester of the freshman year.
- Four additional 100- or 200-level honors courses. For engineering students, these would normally be Engineering Fundamentals 157, Engineering Fundamentals 158 and two courses chosen from Mathematics 147, 148 and 247 or Chemistry 128 and 138.

Other courses may be approved by the individual engineering departments upon entry to their honors concentration.

For more information, contact:
Dr. Chris Pionke
Engineering Honors Director
103 Estabrook Hall
(865) 974-9810.

For more information visit the website at www.ornl.gov. Click on "jobs" on the left hand menu and/or schedule an appointment to talk with Dr. Chris Pionke in room 103 Estabrook Hall, (865) 974-9810.

# First Year Programs - Honors

## First Year Courses for Honors Concentrations

*(For Computer Science, see listing in Department of Electrical Engineering And Computer Science section)*

Beginning students who wish to pursue an honors concentration in one of the engineering majors will normally be part of the Chancellor’s or Haslam Honors Programs. Coursework requirements in the upper division are specific to the individual departments and the student is referred to those individual descriptions for explanation.

**Specifically, first and second year requirements are:**

- English 118, under the same conditions as stated in the requirements for the Chancellor’s Honors Program.
- University Honors 100.
- One 200-level University Honors seminar to be completed during the second semester of the freshman year.
- Four additional 100- or 200-level honors courses. For engineering students, these would normally be Engineering Fundamentals 157, Engineering Fundamentals 158 and two courses chosen from Mathematics 147, 148 and 247 or Chemistry 128 and 138.

Other courses may be approved by the individual engineering departments upon entry to their honors concentration.

**For more information, contact:**

Dr. Chris Pionke
Engineering Honors Director
103 Estabrook Hall
(865) 974-9810.

## Office of External Scholarships

The Office of External Scholarships exists to both inform and mentor students who wish to apply for nationally competitive scholarships and fellowships like the Truman, Rhodes, Marshall or Fulbright. We also assist outstanding undergraduates who wish to apply for Rotary Ambassadorial, Goldwater and Udall scholarships.

The Office of External Scholarships will work with students to determine what fellowship would best fit their interests. Once students have decided to apply, we will assist them with the application process. To apply for most scholarships administered by our office, students need to begin the application process over a year before the scholarship period begins.

For more information about each of the scholarships handled by the Office of External Scholarships, visit F101 Melrose Hall or call (865) 974-7825 to schedule an appointment.
Aerospace Engineering

What is Aerospace Engineering?
Aerospace engineering uses the basic sciences and mathematics to develop the foundation for the design, development, production and applied research associated with aerospace vehicles. These vehicles include aircraft, spacecraft and missiles. Auxiliary and propulsion systems are also an integral part of this education. These include guidance, control, environmental, ramjet, rocket, turbojet, turbofan and piston engine/propeller systems. The educational objectives of the aerospace engineering program are:

• to provide an education that includes in-depth fundamental instruction in aerodynamics, structures, flight mechanics, orbital mechanics, flight propulsion and the design of aerospace systems;
• to prepare students for professional careers in aerospace engineering by developing the skills pertinent to problem solving, ABET design and those personal skills required for teamwork and effective communication;

Career Information
What can I do with this engineering major?

Biomedical Engineering

What is Biomedical Engineering?
Biomedical engineering is the application of engineering principles and methods to the solution of problems in the life sciences. This broad field spans applications at the molecular level (genetic engineering); at the cellular level (e.g., cell and tissue engineering); and in intact organisms, including humans in particular: M mature practice areas include the design of biomedical measurement systems (e.g., intensive care monitoring stations); orthopedic devices (e.g., artificial joints); and artificial organs (e.g., artificial kidneys). Currently, there is much attention being given to computational bioinformatics, advanced medical imaging systems and advanced artificial organs (e.g., heart-assist and total artificial heart blood pumps, artificial livers). Among the most exciting new areas of biomedical engineering research is the newly defined discipline of cell and tissue engineering, which involves the modification of living cells and tissues to meet specific clinical needs (e.g., artificial skin).

In their professional roles, biomedical engineers must be knowledgeable in both the life sciences and the engineering sciences. In many career roles, biomedical engineers serve an intermediary role in bridging the gap between classically trained engineers and medical practitioners. Basic life science preparation includes the study of cell biology and human anatomy and physiology. The engineering preparation includes basic mechanics, electrical and electronic circuits, materials science, thermodynamics and fluid mechanics. Required mathematics include calculus, differential equations, matrix methods and statistics. The educational objectives of the biomedical engineering program are:

• to provide students with a solid foundation in mathematics, the basic and engineering sciences and engineering design methods;
• to provide students with a comprehensive integration of engineering methods of problem-solving and design with the biological sciences;
• to develop the skills needed for work in the medical device industry, including a thorough coverage of engineering materials, biomaterials, biomechanics, medical device design and work in interdisciplinary teams;
• to provide essential laboratory experience with commonly used biomedical devices and systems and to provide coverage of methods for the design of experiments in medical and life science applications.

Biological Engineering

What is Biomedical Engineering?

Career Opportunities in Biomedical Engineering
Biomedical engineers work in a variety of settings including the biomedical product manufacturing industry, biomedical research and development organizations, hospitals (as clinical engineers), for government agencies (e.g., FDA, NASA, DOD), and in biomedical product technical sales. Work in many of the more challenging technical areas (e.g., cell and tissue engineering) requires an advanced degree.

Chemical and Biomolecular Engineering

What is Chemical and Biomolecular Engineering?

Career Opportunities in Chemical and Biomolecular Engineering

Biosystems Engineering

What is Biosystems Engineering?

Career Opportunities in Biosystems Engineering

Career Opportunities in Chemical and Biomolecular Engineering

Career Information
What can I do with this engineering major?

Career Information
What can I do with this engineering major?

Career Information
What can I do with this engineering major?

Career Information
What can I do with this engineering major?

Career Information
What can I do with this engineering major?

Career Information
What can I do with this engineering major?

Career Information
What can I do with this engineering major?

Career Information
What can I do with this engineering major?

Career Information
What can I do with this engineering major?

Career Information
What can I do with this engineering major?

Career Information
What can I do with this engineering major?
Civil and Environmental Engineering

What is Civil and Environmental Engineering?

Civil engineering is about the basic infrastructure of society and community service, development and improvement—the planning, design, construction, and operation of facilities essential to modern life and economic vitality. An established department at the University of Tennessee, Knoxville, Civil and Environmental Engineering dates back to the mid-1800s, making it one of the oldest programs in the Southeast. The Civil and Environmental Engineering Department (CEE) offers proficiency in environmental and water resources engineering, geotechnical and structural engineering, construction, and transportation engineering leading to a Bachelor of Science in Civil Engineering. In addition, the College of Engineering offers an undergraduate minor in environmental engineering. Academic units and areas of research include the following:

- Transportation systems planning and design; transportation safety; traffic operations; transportation air quality; investment and financial analysis; bridge testing and evaluation; testing of masonry in-fill; lateral load test of driven piles; testing, behavior and modeling of highway materials; stability of slopes, embankments and tunnels; non-destructive evaluation of pavement systems; railroad engineering; risk assessment; automated highway systems; intelligent vehicle systems; GPS/GIS applications; air pollution control technologies; air pollution dispersion modeling; climate change and environment and associated impact on infrastructure; water and waste water treatment; hazardous waste management; environmental restoration; mixed and radioactive waste management; bioremediation; aquatic chemistry; fate and transport of contaminants; surface and ground water hydrology; erosion and sediment transport; soil and geosynthetic hydraulic barriers; remediation of mines and characteristic of fractures in soil and rock.

Consonant with the mission of the Department of Civil and Environmental Engineering at The University of Tennessee, graduates of the program will have:

1. Technical competency to conduct engineering projects and to advance with increasing responsibility.
2. Professional competency to continually increase engineering proficiency, proceed on a track to attain professional licensure, and contribute to the profession and community.
3. The university’s engineering programs are fully accredited by the ABET Engineering Accreditation Program.

Career Opportunities in Civil and Environmental Engineering

Civil engineers are found throughout the workplace in a variety of functions. Aside from private engineering firms that are responsible for contracted projects from start to finish, civil engineers work for utility companies, telecommunications businesses, consulting firms and even toy and athletic equipment manufacturers. There are a large number of civil engineers who work in federal, state and local governments, working each day to serve the public in thousands of projects nationwide.

Civil engineers also work in academic fields through teaching, research, evaluation and publishing, generating much of the current information available today. In their first job, most civil engineers are teamed with a senior engineer. They are guided through a variety of assignments, depending on the civil engineering specialty area. Later, job responsibility increases with continuing education and experience. During this process many engineers seek professional licensure that requires a depth of knowledge and skills essential to success in the field.

Civil engineers usually work for one of the following employers:

- Government (every city, county, state and federal operation)
- Consulting firms (all sizes)
- Construction companies
- Industry (e.g., petroleum, utilities, aircraft, chemical, paper, shipbuilding)
- International firms

International firms may involve the categories above.

Computer Engineering

What is Computer Engineering

Computer engineering deals with the electronic hardware side of electrical engineering and the programming side of computer science. Often, a student can study electrical engineering to cultivate a background in computer engineering. However, with the increasing needs of both industry and technology that drive our future, computer engineering has now become a discipline by itself. Typically, a computer engineering curriculum provides a background in three broad areas—hardware, software, and hardware-software integration. Students will also have the opportunity to pursue fundamental topics such as microprocessors, computer architecture, digital signal processing, operating systems, data communications, and other related material. In addition, the program includes core engineering subjects that are common to all engineering disciplines.

The program educational objectives of the computer engineering program include:

- Will apply the knowledge of the fundamentals of engineering, science and mathematics in the practice of electrical/computer engineering or in advanced professional studies;
- Will identify, formulate and solve electrical/computer engineering problems.

Computer Science

What is Computer Science?

At one pole is computer science, primarily concerned with theory, design, and implementation of software. It is a true engineering discipline, even though the product is as intangible as a computer program. At the other pole is computer engineering, primarily concerned with firmware (the microcode that controls processors) and hardware (the processors themselves, as well as entire computers).

It is not possible to draw a clear line between the two disciplines; many practitioners function to at least some extent as both computer engineers and computer scientists.

Computer Science is the study of computer science and software and hardware systems, and theory of computation. Students must be able to integrate material and concepts from these areas. So, for example, students use analysis of algorithms to select or design software to solve a problem on a computer with parallel architecture. Another example would be selecting or writing the software for a network router, combining optimization theory, graph algorithms, networking, knowledge of the hardware and professional software methods. The emphasis is on foundations and the ability to learn new developments in the field.

Career Opportunities in Computer Science

Career Opportunities in many fields exist for our graduates. Most generally, they are prepared to work in laboratories that develop software intensive products. These include, for example, automotive components, financial systems, consumer appliances (cell phones, personal computers), communication infrastructure devices (routers, switches), scientific research facilities (space stations, telescopes, reactors) and weapon systems.

Career Opportunities in Computer Engineering

Computer hardware engineers are expected to have favorable job opportunities. Employment of computer hardware engineers is projected to increase faster than the average for all occupations through 2015, reflecting rapid employment growth in the computer and office equipment industry. It employs the greatest number of computer engineers. Consulting opportunities for computer hardware engineers should grow as businesses need help managing, upgrading and customizing increasingly complex systems. Growth in embedded systems, a technology that uses computers to control other devices such as appliances or cell phones, also will increase the demand for computer hardware engineers.

- Will analyze and design complex devices and systems containing hardware and software components with consideration of economic, ethical, safety, environmental, and social issues; will be able to use modern engineering techniques, skills and tools.
- Will communicate effectively, function on multi-disciplinary teams, and engage in lifelong learning.

The university’s engineering programs are fully accredited by the ABET Engineering Accreditation Program.
**Career Information**

**Electrical Engineering**

**What is Electrical Engineering?**
Electrical engineering deals with the application of the physical laws governing charged particles. From miniature integrated circuits that contain millions of microelectronic devices, to high-speed fiber-optic communication systems that span international boundaries, electrical engineering impacts every aspect of modern-day living. Electrical engineering is unique among the engineering disciplines because of its wide range of applications. Subject areas within electrical engineering are so diverse that it is not always apparent that there is an underlying connection. The range of subjects is not only broad but is also expanding.

The program educational objectives of the electrical engineering program include:

- Will apply the knowledge of the fundamentals of engineering, science and mathematics in the practice of electrical/computer engineering or in advanced professional studies; will identify, formulate and solve electrical/computer engineering problems.
- Will analyze and design complex devices and systems containing hardware and software components with consideration of economic, ethical, safety, environmental, and social issues; will be able to use modern engineering techniques, skills and tools.
- Will communicate effectively, function on multi-disciplinary teams, and engage in lifelong learning.

**Career Information**

**Materials Science & Engineering**

**What is Materials Science and Engineering?**
Materials Science and Engineering (MSE) is a discipline that is on the leading edge of technology through the development of new materials and the improvement of existing materials for applications in all engineering fields. It is at the forefront of modern technological advances and its graduates are in great demand.

Materials engineers can be found working in all technological fields, usually as part of a multidisciplinary team. For this reason, materials engineers receive a broad engineering education that includes design, chemistry, physics, mathematics and electronics. The processing and testing of materials are core subjects in the MSE curriculum that stresses “hands-on” learning though laboratory classes that introduce students to modern processing and characterization techniques.

Modern engineering materials are used in a broad spectrum of products, including automobiles, aircraft and spacecraft, jet and rocket engines, surgical implant devices, computers, cell phones, optical displays, textiles and sports equipment. The types of engineering materials include metals and alloys, polymers and plastics, ceramics, semiconductors, and composites.

The department has one of the lowest student-faculty ratios (about 4:1) in the College of Engineering. This allows MSE students to receive a great deal of individual interaction with the faculty, especially in laboratory courses. The educational objectives of the program for the degree of B.S. in Materials Science and Engineering are:

- to provide students with a knowledge of the fundamentals of appropriate physical and chemical sciences, mathematics and engineering sciences; and to demonstrate the applications of these principles to solve engineering problems with emphases on materials processing, structure, properties and performance. This knowledge base includes the development of analytical and experimental skills.
- to provide students with experiences in design and materials selection such that they can design components, systems or processes with consideration of economic, safety, environmental and social issues.
- to develop professional skills in such areas as written and oral communications, problem solving and working in diverse teams, that prepare graduates to practice materials engineering in contemporary and global environments.
- to provide students with a general education component that complements the technical content, encourages the appreciation of cultural and social values, exhibits the impact of engineering solutions on society, and enhances personal development.

**Industrial Engineering**

**What is Industrial Engineering?**
Originally, the industrial engineering profession focused on manufacturing. Today’s industrial engineer is involved in the design of systems and processes to produce and deliver goods and services not only in manufacturing, but also in the service industries and government sectors of the economy. Industrial engineers are concerned with the design of integrated systems involving people, materials, facilities, finances, equipment, and energy to ensure the overall system functions efficiently and human needs are adequately met. Industrial engineering is distinctive in two respects: The industrial engineer typically works on problems or systems which include human beings as a major variable; and the industrial engineer is by definition a systems engineer, whose unique combination of skills can be applied to many working environments.

It is this emphasis on people, science and technology that distinguishes industrial engineering from the other engineering disciplines. The industrial engineer’s objective is to achieve the best possible results for the benefit of humankind, in terms of safety, quality and productivity. Industrial engineers create value through a systems approach, scientific method, engineering design, and integration of new technologies. In common with all engineering disciplines, industrial engineering is based on mathematics and the physical sciences. However, industrial engineering also emphasizes the life sciences and social sciences. This concern for the human element leads to system designs that enhance the quality of life for all people, both as producers and consumers of products and services.

Students in the Industrial Engineering program can also gain hands on experience and forge beneficial relationships with industry, business, and agencies through the College’s cooperative engineering program or internships. The department’s faculty is also very active in research and offer opportunities for students to get involved including working with various research centers on campus.

The educational objectives of the Industrial Engineering Program are to prepare our students to:

- have successful professional careers that employ industrial and systems engineering concepts and principles,
- pursue lifetimes of learning,
- achieve positions of leadership.

The university’s engineering programs are fully accredited by the ABET Engineering Accreditation Program.

**Career Opportunities in Electrical Engineering**

The growth trends for employment of electrical engineering graduates are expected to increase through 2015. Projected job growth stems largely from increased demand for electrical and electronic goods, including advanced communications equipment, computer communications, biomedical instrumentation, defense-related electronic equipment, and consumer electronics products. The need for electronics manufacturers to invest heavily in research and development to remain competitive and gain a scientific edge will provide openings for graduates who have learned the latest technologies.

**Career Information**

**Materials Science & Engineering**

**What is Materials Science and Engineering?**
Materials Science and Engineering (MSE) is a discipline that is on the leading edge of technology through the development of new materials and the improvement of existing materials for applications in all engineering fields. It is at the forefront of modern technological advances and its graduates are in great demand.

Materials engineers can be found working in all technological fields, usually as part of a multidisciplinary team. For this reason, materials engineers receive a broad engineering education that includes design, chemistry, physics, mathematics and electronics. The processing and testing of materials are core subjects in the MSE curriculum that stresses “hands-on” learning though laboratory classes that introduce students to modern processing and characterization techniques.

Modern engineering materials are used in a broad spectrum of products, including automobiles, aircraft and spacecraft, jet and rocket engines, surgical implant devices, computers, cell phones, optical displays, textiles and sports equipment. The types of engineering materials include metals and alloys, polymers and plastics, ceramics, semiconductors, and composites.

The department has one of the lowest student-faculty ratios (about 4:1) in the College of Engineering. This allows MSE students to receive a great deal of individual interaction with the faculty, especially in laboratory courses. The educational objectives of the program for the degree of B.S. in Materials Science and Engineering are:

- to provide students with a knowledge of the fundamentals of appropriate physical and chemical sciences, mathematics and engineering sciences; and to demonstrate the applications of these principles to solve engineering problems with emphases on materials processing, structure, properties and performance. This knowledge base includes the development of analytical and experimental skills.
- to provide students with experiences in design and materials selection such that they can design components, systems or processes with consideration of economic, safety, environmental and social issues.
- to develop professional skills in such areas as written and oral communications, problem solving and working in diverse teams, that prepare graduates to practice materials engineering in contemporary and global environments.
- to provide students with a general education component that complements the technical content, encourages the appreciation of cultural and social values, exhibits the impact of engineering solutions on society, and enhances personal development.

The university’s engineering programs are fully accredited by the ABET Engineering Accreditation Program. Career Opportunities in Materials Science and Engineering Graduates with a Bachelor of Science (B.S.) degree in Materials Science and Engineering receive employment offers from a wide range of industries both in Tennessee and nationwide. MSE graduates can be found working in many different capacities, including basic and applied research, product and process development, manufacturing, quality control, material selection and failure analysis. Materials science graduates frequently opt to continue their education through graduate school for Master of Science and Ph.D. degrees.
Mechanical Engineering

What is Mechanical Engineering?
Mechanical engineering is the application of the laws of solid and fluid mechanics and the thermal sciences to the analysis, design and/or manufacturing of systems and products. Mechanical engineers play a key role in national, state and local economies by bringing their expertise to the development of power generation systems (such as steam turbines, jet engines and internal combustion engines) that provide mechanical power to all segments of society. They also bring essential expertise to manufacturing processes, efficient production methods and automation vital to the well being of the national economy. Their expertise and involvement in the analysis, design and development of new products and materials for new devices and systems produce economic activity and provide employment opportunities which sustain high standards of living.

The mechanical engineering program at UT offers fundamental education in the engineering sciences and engineering design. The engineering science component educates students in the fundamental principles of engineering, while the engineering design component emphasizes design methodology, enhances creative skills and develops student ability to solve open-ended problems of the type common to industry.

The undergraduate experience is broad-based and includes, in the first two years, general education in mathematics, sciences and preliminary design courses that are common with curricula in other engineering programs.

The discipline of a rigorous technical program along with education in the humanities and social sciences provides a good foundation for a rich and rewarding career in a dynamic marketplace.

The objectives of the mechanical engineering degree program are:

• to prepare students for professional careers by developing their skills in problem formulation, problem solving, analysis, computation, synthesis, teamwork and effective communication
• to teach students the underlying principles of mechanical and thermal systems and the application of these principles in the design process
• to instill in students an appreciation for the importance of lifelong learning, individual professionalism and ethical practice
• to prepare capable students for graduate study at major universities

The university's engineering programs are fully accredited by ABET, Inc. (formerly the Accreditation Board for Engineering and Technology).

Career Opportunities in Mechanical Engineering

Because of the broad-based education received in mechanical engineering, mechanical engineers play a vital role in a wide variety of industries (e.g., aerospace, automotive, electronics, power utilities, chemical, petroleum, textile, manufacturing); federal agencies (e.g., NASA, DOE, DOD, FAA); and consulting firms and national laboratories (e.g., ORNL, SANDIA). In these different sectors, mechanical engineers are involved in analysis and design of systems and products; manufacturing, automation and control of production and processes; heating, ventilation, and air conditioning systems; and research. Mechanical engineers are also found at every level of management.

Mechanical engineers have been and will continue to be in great demand in all of the areas listed above.

Nuclear Engineering

What is Nuclear Engineering?

Nuclear engineering is the engineering discipline that focuses on the application of sub-atomic processes for the benefit of mankind and our environment. Radiological engineering is a special concentration within nuclear engineering that deals with the design and safe utilization of radiation in industry and medicine. Some examples of nuclear and radiological engineering are listed below:

• Production of electric power with essentially no air pollution
• Processes for the diagnosis and treatment of diseases such as cancer
• Activation analysis for identifying materials including environmental pollutants
• Radiography inspection of welds in bridges and boilers
• Food preservation and sterilization of medical supplies
• Radioisotope gauges for use in manufacturing processes
• Nuclear measurement techniques for oil well logging and airport security
• Radioactive tracer elements for use in medical research
• Generation of radioisotope power for deep space exploration

The educational objectives for the department are to:

• provide students with fundamental knowledge in mathematics, computer science, the basic sciences and the engineering sciences that are necessary to solve complex problems in nuclear and radiological engineering;
• provide students with a real-world design and analysis experience in nuclear and radiological engineering that includes environmental, societal, safety and economic considerations;
• provide students with appropriate skills in oral and written communication, teamwork, laboratory work, problem solving and the use of modern engineering tools that will prepare them to work productively in a contemporary and global environment;
• provide students with a diverse general education in the humanities, ethics and social sciences to complement their technological education in order to understand and appreciate the importance of each in society and in personal development; and
• foster a genuine desire for life-long learning in students.

The university's engineering programs are fully accredited by the ABET Engineering Accreditation Program.
Engineering Majors

Once selected, you should formally declare your major.
Freshmen can declare their majors by visiting the Engineering Advising Office, 202 Estabrook Hall, 8 a.m. - 5 p.m. Monday - Friday. Engineering students are asked to declare a major by their sophomore year. Transfer students and upperclass students declare their majors with their department of choice.

Aerospace Engineering Major
Requirements for the Bachelor of Science in Aerospace Engineering

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 English 101* or 118* 102</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry 120* or 128</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 141* or 147* 142* or 148</td>
<td>8</td>
</tr>
<tr>
<td>Engineering Fundamentals 105, 151 or 157, 152 or 158</td>
<td>9</td>
</tr>
<tr>
<td>Mechanical Engineering 202</td>
<td>2</td>
</tr>
<tr>
<td>Social Sciences Elective*</td>
<td>3</td>
</tr>
</tbody>
</table>

Second Year
Mathematics 200, 231 or 247 | 8
Aerospace Engineering 201 | 7
Electrical and Computer Engineering 201 | 7
Mechanical Engineering 231 and 321 | 6
Materials Science and Engineering 201 | 3
Engineering Fundamentals 230 | 2
Economics 201* or 207* | 7
Arts and Humanities Elective* | 3

Total 128

* Meets University General Education Requirement.
1 Students receiving a grade of A or B in English 118 will complete their freshman English requirement by choosing English 102, a sophomore literature course in the English Department, or English 355.
2 Choose from the University General Education list.

Biomedical Engineering Major
Requirements for the Bachelor of Science in Biomedical Engineering

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 English 101* or 118* 102</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry 120* or 128, 130* or 138</td>
<td>8</td>
</tr>
<tr>
<td>Mathematics 141* or 147*, 142* or 148</td>
<td>8</td>
</tr>
<tr>
<td>Engineering Fundamentals 105, 151 or 157, 152 or 158</td>
<td>9</td>
</tr>
<tr>
<td>Mechanical Engineering 202</td>
<td>2</td>
</tr>
</tbody>
</table>

Second Year
Physics 231*, 232* | 7
Mathematics 200, 231, 241 or 247 | 8
Mechanical Engineering 231, 321 | 6
Biochemistry and Cellular and Molecular Biology 230 | 5
Cultures and Civilizations Elective* | 3
Biomedical Engineering 271 | 1
Statistics 251* | 3

Third Year
Aerospace Engineering 241, 245, 351, 363, 370 | 16
Mechanical Engineering 331, 344, 363, 391 | 12
Electrical and Computer Engineering 301 | 7
Philosophy 241* | 3

Fourth Year
Aerospace Engineering 410*, 422, 424, 425, 426, 429, 449 | 21
Engineering Fundamentals 402* | 4
Cultures and Civilizations Elective* | 6

Total 128

* Meets University General Education Requirement.
1 Students receiving a grade of A or B in English 118 will complete their freshman English requirement by choosing English 102, a sophomore literature course in the English Department, or English 355.
2 Choose from the University General Education list.
3 Choose any course from the University General Education list.
4 Departmental and technical electives must be pre-approved by the advisor and department head.
5 Departmental elective: any 200-300 level mechanical, aerospace, or biomedical engineering course.

Biosystems Engineering Major
Requirements for Bachelor of Science in Biosystems Engineering

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biosystems Engineering 104</td>
<td>1</td>
</tr>
<tr>
<td>Engineering Fundamentals 105, 151, 152</td>
<td>9</td>
</tr>
<tr>
<td>Mechanical Engineering 202</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry 120*</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 141*, 142*</td>
<td>8</td>
</tr>
<tr>
<td>English 101*, 102*</td>
<td>6</td>
</tr>
<tr>
<td>Cultures and Civilizations Elective*</td>
<td>3</td>
</tr>
</tbody>
</table>

Second Year
Biosystems Engineering 201, 221, 231, 321 | 10
Mechanical Engineering 231, 321, 391 | 14
Mathematics 231, 241 | 4
Microbiology 210* | 3
Environmental and Soil Sciences 210 | 4

Third Year
Biosystems Engineering 411, 416, 431, 451 | 13
Statistics 251 | 3
Electrical and Computer Engineering 301 | 3
Technical Elective | 3
Philosophy 241 or 245* | 3
English 360* | 3

Fourth Year
Biosystems Engineering 401*, 402, 404, 444 | 14
Technical Elective | 3
Economics 201 (Social Sciences Elective)* | 4
Sociology 241 (Social Sciences Elective)* | 3
Arts and Humanities Elective* | 3
Cultures and Civilizations Elective* | 3

Total 128

* Meets University General Education Requirement.
1 Or equivalent honors course.
2 If mathematics placement test does not indicate placement into at least Mathematics 141, discuss mathematics options with advisor.
3 Select from the corresponding University General Education list after consultation with advisor.
4 Typically upper-division courses in engineering or related areas. Must be approved in advance by advisor.

Biosystems
Pre-professional Concentration
The pre-professional concentration provides comprehensive training in biosystems engineering while preparing the student for candidacy to medical school. While this program meets most of the general pre-medical requirements, it is the student’s responsibility to work with an academic advisor to ensure that his or her program meets the demands of specific schools.

Requirements for Bachelor of Science in Biosystems Engineering - Pre-Professional Concentration

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biosystems Engineering 104</td>
<td>1</td>
</tr>
<tr>
<td>Engineering Fundamentals 105, 151, 152</td>
<td>9</td>
</tr>
<tr>
<td>Mechanical Engineering 202</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry 120*</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 141*, 142*</td>
<td>8</td>
</tr>
<tr>
<td>English 101*, 102*</td>
<td>6</td>
</tr>
</tbody>
</table>

Second Year
Biosystems Engineering 201, 221, 231, 321 | 10
Mechanical Engineering 231, 321, 391 | 14
Mathematics 231, 241 | 4
Microbiology 210* | 3
Environmental and Soil Sciences 210 | 4

Third Year
Biosystems Engineering 411, 416, 431, 451 | 13
Statistics 251 | 3
Electrical and Computer Engineering 301 | 3
Technical Elective | 3
Philosophy 241 or 245* | 3
English 360* | 3

Fourth Year
Biosystems Engineering 401*, 402, 404, 444 | 14
Technical Elective | 3
Economics 201 (Social Sciences Elective)* | 4
Sociology 241 (Social Sciences Elective)* | 3
Arts and Humanities Elective* | 3
Cultures and Civilizations Elective* | 3

Total 128

* Meets University General Education Requirement.
1 Or equivalent honors course.
2 If mathematics placement test does not indicate placement into at least Mathematics 141, discuss mathematics options with advisor.
3 Select from the corresponding University General Education list after consultation with advisor.
Chemical Engineering Major

Requirements for Bachelor of Science in Chemical Engineering

First Year  Hours Credit
1 English 101 or 118, 102*  6
Mathematics 141 or 147, 142* or 148*  8
Chemical Engineering Fundamentals 105, 151 or 157, 152 or 158  9

Second Year  Hours Credit
Chemical Engineering 201, 235, 240, 250  15
Mathematics 200, 231, 241 or 247  8
Engineering Fundamentals 230  2
Biology 140  4
General Education Elective (Social Science)*  3

Third Year  Hours Credit
Chemical Engineering 301, 310(WC), 340, 360, 380  13
Chemistry 350  3
General Education Electives  6
Physics 231  3
Chem Option I  3
Technical Electives  3
General Education Electives (Cultures and Civilizations, and Social Science)*  9
Technical Electives  6
Total 128

Biomolecular Engineering Concentration

Requirements for the Bachelor of Science in Chemical Engineering • Biomolecular Engineering Concentration

First Year  Hours Credit
1 English 101* or 118, 102*  6
Chemistry 120 or 128, 130 or 138*  8
Mathematics 141 or 147, 142* or 148*  8
Engineering Fundamentals 105, 151 or 157, 152 or 158  9

Second Year  Hours Credit
Chemical Engineering 201, 235, 240, 250  15
Mathematics 200, 231, 241 or 247  8
Engineering Fundamentals 230  2
Biology 140  4
General Education Elective (Social Science)*  3

Third Year  Hours Credit
Chemical Engineering 301, 310(WC), 340, 360, 380  13
Chemistry 350  3
General Education Electives  6
Physics 231  3
Chem Option I  3
Technical Electives  3
General Education Electives (Cultures and Civilizations, and Social Science)*  9
Technical Electives  6
Total 128

Civil Engineering Major

Requirements for the Bachelor of Science in Civil Engineering

First Year  Hours Credit
Chemistry 120 or 128, 130 or 138*  8
Mathematics 101 or 118, 102*  6
Engineering Fundamentals 105, 151 or 157, 152 or 158  9

Second Year  Hours Credit
Economics 201 or 207*  4
Civil Engineering 205, 210, 262, 291  12
Mechanical Engineering 202  2
Mathematics 231, 241 or 247  7
Science Elective*  3-4
Statistics 251  3

Third Year  Hours Credit
Arts and Humanities Elective*  3
Civil Engineering 300, 305, 310, 321, 331, 355, 371, 381, 440  24
Arts and Humanities Electives  6

Fourth Year  Hours Credit
Civil Engineering 400, 401, 442  7
Civil Engineering Concentration Electives  6
Civil Engineering Concentration Labs  2
Civil Engineering/Technical Elective*  9
Arts and Humanities Elective*  3
Social Sciences Electives*  3
Engineering Fundamentals 402  8
Total 126-127

* Meets University General Education Requirement.
1 Students must also meet the Communication requirement through a course with an (OC) designation (for example, Philosophy 242 or Philosophy 244).
2 BCMB 230, 310, 321; BIOL 250; MIRC 210, 310.
3 Students must also meet the Oral Communication requirement through a course with an (OC) designation (for example, Philosophy 242 or Philosophy 244).
4 See departmental Web site for course listings.

Computer Engineering Major

Requirements for the Bachelor of Science in Computer Engineering

First Year  Hours Credit
English 101* or 118, 102*  6
Mathematics 101, 102*  6
Mech 141 or 147, 142* or 148*  8
Engineering Fundamentals 151 or 157, 152 or 158  9

Second Year  Hours Credit
Mathematics 147, 148*  8
Electrical and Computer Engineering 206 or Computer Science 102  4

Third Year  Hours Credit
Computer Science 102  7
Mathematics 300 or 307  3
Computer and Information Engineering 316, 342, 355, 395  10
Philosophy 241, 243, or 244  3
Arts and Humanities Electives  6

Fourth Year  Hours Credit
Electrical and Computer Engineering 451-453 or 451-455  6
Electrical and Computer Engineering 400*  5
Computer Engineering Senior Electives  6
2 Computer Engineering Senior Electives  6
2 Social Sciences Electives  6
Engineering Fundamentals 402  8
Total 128

* Meets University General Education Requirements.
1 Engineering Fundamentals 151 and 152 are honors versions of Engineering Fundamentals 150 and 152. Students in the Chancellor’s Honors Program are not required to take Engineering Fundamentals 402.
2 Can be taken at any time.
3 Must be in electrical and computer engineering courses. At most, one computer engineering senior elective can be from any 300-level electrical and computer engineering courses. Approved senior electives are Electrical and Computer Engineering 325, 336, 341, 415, 416, 421, 422, 431, 432, 433, 441, 442, 443, 446, 453, 455, 471, 472, 481, and 482.
## Engineering Majors

### Computer Science Major

**Requirements for the Bachelor of Science in Computer Science**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science 102 or ECE 206, 140</td>
<td>8</td>
</tr>
<tr>
<td>Mathematics 141 or 147, 142 or 148</td>
<td>8</td>
</tr>
<tr>
<td>Physics 135 or 137, 136 or 138</td>
<td>8.10</td>
</tr>
<tr>
<td>English 101 or 118, 102</td>
<td>6</td>
</tr>
</tbody>
</table>

**Second Year**

| Computer Science 160, 311, 302 | 11 |
| Mathematics 241 or 247, 251 or 257, 300 or 307 | 10 |
| Biology 101 or 130 or Chemistry 100 or 120 or Physics 231 | 3-4 |
| Computer Science Upper Division Elective or Mathematics 231 | 3 |
| or 323 or Electrical & Computer Engineering 313 | 3 |
| 2 Computer Science Upper Division Elective | 3 |
| 3 Social Science Elective | 3 |
| 4 Technical Elective | 2 |

**Fourth Year**

| Computer Science 400 | 5 |
| Computer Science Upper Division Electives | 15 |
| English 335 or 360 | 3 |
| or 355 or 360 | 3 |
| for 12 hours of engineering electives | 3 |
| 1 Arts and Humanities Elective | 3 |
| 1 Social Science Elective | 3 |

**Total 120-124**

* Meets University General Education Requirement.
1 Can be taken anytime.
2 Mathematics 231 can be substituted for three hours of upper-division computer science electives.
3 Must be approved by advisor.

### Electrical Engineering Major

**Requirements for the Bachelor of Science in Electrical Engineering**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 118, 102</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics 141 or 147, 142 or 148</td>
<td>8</td>
</tr>
<tr>
<td>Engineering Fundamentals 151 or 157, 152 or 158, 105</td>
<td>9</td>
</tr>
<tr>
<td>Electrical and Computer Engineering 306 or Computer Science 102</td>
<td>4</td>
</tr>
</tbody>
</table>

**Second Year**

| Mathematics 200, 231, 241 or 247 | 8 |
| Physics 231* or 232* | 7 |
| Electrical and Computer Engineering 255, 313 | 7 |
| Electrical and Computer Engineering 300 | 5 |
| or Physics 241* or 243* or 244* | 6 |

**Third Year**

| Electrical and Computer Engineering 315, 325, 335, 341 | 14 |
| Electrical and Computer Engineering 316, 336, 342, 355, 395 | 13 |
| Social Sciences Electives* | 6 |
| Fourth Year | 6 |
| Electrical and Computer Engineering 400* | 5 |
| Electrical Engineering Senior Electives | 12 |
| Technical Electives | 6 |
| Arts and Humanities Elective* | 3 |
| Social Sciences Electives* | 6 |

**Total 127**

* Meets General Education Requirement.
1 Engineering Fundamentals 151 and 158 are honors versions of Engineering Fundamentals 157 and 158.
2 Students in the Chancellor's Honors Program are not required to take Engineering Fundamentals 402.
3 Can be taken at any time.
5 Computer Science 130, Industrial Engineering 405, Materials Science and Engineering 201, 410; Mechanical Engineering 231, 321, 331, 344; Nuclear Engineering 342.

### Engineering Physics Major

**Requirements for the Bachelor of Science in Engineering Physics**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 118, 102</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics 141 or 147, 142 or 148</td>
<td>8</td>
</tr>
<tr>
<td>Engineering Fundamentals 151 or 157, 152 or 158</td>
<td>9</td>
</tr>
<tr>
<td>Chemistry 120 or 128*</td>
<td>8</td>
</tr>
</tbody>
</table>

**Second Year**

| Mathematics 231, 241, 247 | 7 |
| Computer Science 102 | 4 |
| Physics 235* or 237 or 138* | 10 |
| or 3 Engineering/Technical Electives | 3 |
| or Social Sciences Electives | 6 |

**Third Year**

| Physics 250, 321 | 7 |
| Physics 311, 312 | 6 |
| Physics 361 | 3 |
| Physics 421 | 4 |
| or 3 Engineering/Technical Electives | 6 |
| Social Sciences Electives* | 6 |

**Fourth Year**

| Physics 411, 412 | 6 |
| Physics 431, 432 | 6 |
| Physics 461 | 3 |
| or 3 Engineering/Technical Electives | 12 |
| Arts and Humanities Electives | 6 |

**Total 126**

* Meets General Education Requirement.
1 Students who obtain a grade of A or B in English 118 may complete their freshman English requirement with English 102, or with a sophomore literature course in the English Department, or English 355. Students and their advisors are cautioned to ensure that engineering, technical, and general education elective course selections meet the General Education Writing Communication and Oral Communication requirements.
2 Transfer students from other engineering departments may substitute Engineering Fundamentals 152 for Physics 135, Physics 231 for Physics 136, and Physics 232 for Physics 250.
3 A total of 12 hours of engineering electives plus 9 hours of technical electives are required. Engineering electives should form a coherent group of courses taken in the College of Engineering. Technical electives may be taken in physics, engineering, math, other physical sciences, or astronomy. Engineering and technical electives must be approved by the advisor and department head.

### Industrial Engineering Major

**Requirements for the Bachelor of Science in Industrial Engineering**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 120 or 128</td>
<td>4</td>
</tr>
<tr>
<td>English 118, 102</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics 141 or 147, 142 or 148</td>
<td>8</td>
</tr>
<tr>
<td>Engineering Fundamentals 105, 151 or 157, 152 or 158</td>
<td>9</td>
</tr>
</tbody>
</table>

**Second Year**

| Accounting 200 or 207 | 3 |
| Statistics 251 | 3 |
| Math 200, 231, 241 or 247 | 8 |
| Physics 331 | 3 |
| Engineering Fundamentals 230 | 2 |
| Industrial Engineering 202, 250 | 4 |
| Materials Science and Engineering 201 | 3 |
| Economics 201 or 207 | 3 |

**Third Year**

| Mechanical Engineering 231, 331 | 6 |
| Electrical and Computer Engineering 301 | 3 |
| Industrial Engineering 300, 301, 304, 405 | 12 |
| Industrial Engineering 310, 330, 340, 350* | 10 |
| Philosophy 244 | 3 |

**Fourth Year**

| Industrial Engineering 401, 402, 404, 406 | 10 |
| Industrial Engineering 421, 422, 427, 450 | 10 |
| Technical Elective | 3 |
| or 3 Social Sciences Electives | 6 |
| or 3 Arts and Humanities Elective | 3 |

**Total 128**

* Meets General Education Requirement.
**Engineering Majors**

**Materials Science and Engineering**

**Requirements for the Bachelor of Science in Materials Science and Engineering**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials Science and Engineering 101</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>English 118 or 118A</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Chemistry 120 or 128*</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Materials 141 or 147, 142 or 148</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Engineering Fundamentals 105, 151 or 157, 152 or 158</td>
<td>9</td>
<td>27</td>
</tr>
</tbody>
</table>

**Second Year**

| Mathematics 231, 241, 247, 251 or 257 | 10 | 30 |
| Engineering Fundamentals 230 | 3 | 9 |
| Physics 231 | 3 | 9 |
| Mechanical Engineering 231 and 321 | 6 | 18 |
| Materials Science and Engineering 201 | 3 | 9 |
| Economics 201* or 207* | 3 | 9 |

**Third Year**

| Mathematics 344, 345, 363, 366, 391, 466 | 21 | 63 |
| Electrical and Computer Engineering 301 | 3 | 9 |
| 1 Departmental Elective | 3 | 9 |
| Aerospace Engineering 341 | 3 | 9 |

**Fourth Year**

| Mechanical Engineering 410, 475, 499, 540, 460 | 13 | 39 |
| Engineering Fundamentals 402 | 4 | 12 |
| Mechanical Engineering 435 or 463 | 3 | 9 |
| Technical Elective | 3 | 9 |
| 2 Departmental Electives | 6 | 18 |
| 3 Social Sciences Electives | 3 | 9 |
| 1 Arts and Humanities Elective | 3 | 9 |

**Total 128**

*a* Means General Education Requirements.

*b* Students receiving a grade of A or B in English 118 will complete their first year composition requirement by choosing English 102, a sophomore literature course in the English Department, or English 355.

**Engineering Majors**

**Mechanical Engineering Major**

**Requirements for the Bachelor of Science in Mechanical Engineering**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 English 101 or 118*</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>1 English 101* or 118*</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>1 Chemistry 120 or 128</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>1 Mathematics 141 or 147, 142 or 148</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>1 Engineering Fundamentals 105, 151 or 157, 152 or 158</td>
<td>9</td>
<td>27</td>
</tr>
</tbody>
</table>

**Second Year**

| Mathematics 231, 241, 247, 251 or 257 | 10 | 30 |
| Engineering Fundamentals 230 | 3 | 9 |
| Physics 231 | 3 | 9 |
| Mechanical Engineering 231 and 321 | 6 | 18 |
| Materials Science and Engineering 201 | 3 | 9 |
| Economics 201* or 207* | 3 | 9 |

**Third Year**

| Mechanical Engineering 344, 345, 363, 366, 391, 466 | 21 | 63 |
| Electrical and Computer Engineering 301 | 3 | 9 |
| 1 Departmental Elective | 3 | 9 |
| Aerospace Engineering 341 | 3 | 9 |

**Fourth Year**

| Mechanical Engineering 410, 475, 499, 540, 460 | 13 | 39 |
| Engineering Fundamentals 402 | 4 | 12 |
| Mechanical Engineering 435 or 463 | 3 | 9 |
| Technical Elective | 3 | 9 |
| 2 Departmental Electives | 6 | 18 |
| 3 Social Sciences Electives | 3 | 9 |
| 1 Arts and Humanities Elective | 3 | 9 |

**Total 128**

*a* Means University General Education Requirement.

*b* Students receiving a grade of A or B in English 118 will complete their first year composition requirement by choosing English 102, a sophomore literature course in the English Department, or English 355.

**Engineering Majors**

**Nuclear Engineering Major**

**Requirements for the Bachelor of Science in Nuclear Engineering**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 120 or 128, 130 or 138</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>English 118 or 118A</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Engineering Fundamentals 105, 151 or 157, 152 or 158</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>Mathematics 141 or 147, 142 or 148</td>
<td>8</td>
<td>24</td>
</tr>
</tbody>
</table>

**Second Year**

| Arts and Humanities Elective | 3 | 9 |
| Economics 201 or 207 | 4 | 12 |
| Electrical and Computer Engineering 301 | 3 | 9 |
| Engineering Fundamentals 230 | 7 | 21 |
| Mathematics 231, 241, 247 | 7 | 21 |
| Mechanical Engineering 202 | 2 | 6 |
| Mechanical Engineering 331 | 3 | 9 |
| Nuclear Engineering 200 | 1 | 3 |
| Physics 231, 232* | 7 | 21 |

**Third Year**

| Arts and Humanities Elective | 3 | 9 |
| Mathematics 403 | 3 | 9 |
| Nuclear Engineering 342, 351, 360, 401, 433, 470 | 19 | 57 |
| Physics 341 | 3 | 9 |
| Social Sciences Elective | 3 | 9 |

**Fourth Year**

| Arts and Humanities Elective | 3 | 9 |
| Engineering Fundamentals 402 | 1 | 3 |
| Materials Science and Engineering 201 | 3 | 9 |
| Mechanical Engineering 321 | 3 | 9 |
| Nuclear Engineering 400, 402, 406, 472 | 11 | 33 |
| Philosophy 241, 243*, 244* | 3 | 9 |
| Technical Elective | 6 | 18 |

**Total 124**

*a* Means University General Education Requirement.

*b* Technical electives are selected from upper-division mathematics, chemistry, physics, and engineering courses and must be pre-approved by the department.

**Engineering Majors**

**Radiological Engineering Concentration**

**Requirements for the Bachelor of Science in Nuclear Engineering • Radiological Engineering Concentration**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 120 or 128, 130 or 138</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>English 118 or 118A</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Engineering Fundamentals 105, 151 or 157, 152 or 158</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>Mathematics 141 or 147, 142 or 148</td>
<td>8</td>
<td>24</td>
</tr>
</tbody>
</table>

**Second Year**

| Arts and Humanities Elective | 3 | 9 |
| Economics 201 or 207 | 4 | 12 |
| Electrical and Computer Engineering 301 | 3 | 9 |
| Engineering Fundamentals 230 | 2 | 6 |
| Mathematics 231, 241, 247 | 2 | 6 |
| Mechanical Engineering 202 | 1 | 3 |
| Nuclear Engineering 331 | 1 | 3 |
| Nuclear Engineering 200 | 1 | 3 |
| Physics 231, 232* | 7 | 21 |

**Third Year**

| Statistics 351 | 3 | 9 |
| Mathematics 403 | 3 | 9 |
| Nuclear Engineering 342, 351, 401, 433, 470 | 16 | 48 |
| Physics 341 | 3 | 9 |
| Social Sciences Elective | 3 | 9 |

**Fourth Year**

| Arts and Humanities Elective | 3 | 9 |
| Engineering Fundamentals 402 | 1 | 3 |
| Materials Science and Engineering 201 | 1 | 3 |
| Mechanical Engineering 321 | 1 | 3 |
| Nuclear Engineering 400, 402, 406, 472 | 3 | 9 |
| Philosophy 241, 243*, 244* | 3 | 9 |
| Technical Elective | 3 | 9 |

**Total 124**

*a* Means University General Education Requirement.

*b* Technical electives are selected from upper-division mathematics, chemistry, physics, and engineering courses and must be pre-approved by the department. Pre-medical, pre-veterinary and pre-dentistry students must also take Chemistry 360 and Chemistry 369.
Undergraduate Minors Offered at the University of Tennessee, Knoxville 2009 – 2010

**College of Arts and Sciences**
- Anthropology
- Art History
- Art Studio
- Biological Sciences
- Chemistry
- Classical Civilization
- Greek
- Economics
- English
- English Technical Communication
- Geography
- Geology
- History
- Africana Studies
- American Studies
- Asian Studies
- Cinema Studies
- Comparative Literature
- Global Studies
- Judaic Studies
- Chinese
- Japanese
- Portuguese
- Latin American Studies
- Linguistics
- Medieval Studies
- Woman Studies
- Mathematics
- French
- German
- Italian
- Russian
- Spanish
- Music
- Philosophy
- Physics
- Astronomy
- Polical Science
- Psychology
- Religious Studies
- Sociology
- Environmental Issues and Globalization
- Statistics
- Theatre

**Engineering Minors**
- Mechanical engineering
- Biomedical engineering
- Aerospace engineering
- Engineering communication and performance (open to all majors except computer engineering)
- Computer science
- Environmental engineering
- Reliability & maintainability engineering

**College of Business Administration**
- Business administration

**College of Communication and Information**
- Communication & information
- Communication studies
- Information studies & technology
- Journalism & electronic media
- Information studies & technology

**College of Education, Health and Human Sciences**
- Child and family studies
- Elementary education
- Engineering communications and performance
- English Language Learning
- Gerontology
- Middle school education
- Nutrition
- Restaurant and foodservice management
- Retail and consumer sciences
- Secondary education
- Tourism and hospitality management

**College of Engineering**
- Reliability & maintainability engineering
- Environmental engineering
- Computer science (open to all majors except computer engineering)
- Engineering communication and performance
- Materials science & engineering
- Aerospace engineering
- Biomedical engineering
- Mechanical engineering
- Food science
- Food technology
- Forestry
- International agriculture and natural resources
- Plant sciences
- Wildlife and fisheries science

**College of Law**
- Business administration

**Correspondence**

**Pre-Health Information**

All Pre-Health Advising takes place in the Arts & Sciences Advising Center; Room 1 in Alumni Memorial Building, (865) 974-4481. Advisors are available in Arts and Sciences Advising Services to assist pre-medical students as they plan their programs. When a student declares a major, he/she should obtain an advisor in the department of the declared major, but should continue to consult with the pre-medical advisors in Arts and Sciences Advising Services about the pre-medical program.

Students who are currently enrolled in another college, i.e., Engineering or Architecture, are required to take the following minimum courses for most medical schools:
- English 101-102
- Biology 130-140
- Chemistry 120-130
- Chemistry 350-360 and 369
- Physics 221-222 (231-232 for engineering students only)

Note that many of these courses have prerequisites and that the courses listed above constitute the minimal requirements for most medical schools. Pre-medical students are strongly urged to consult with a health professions advisor on a regular basis in Room 1 Alumni Memorial Building. Students will want to verify with the medical schools of interest for specific requirements beyond what is listed here.

**Selection Criteria at UT Health Science Center**

1. Successful completion of the pre-medical requirements with grades of C or better earned in each course.
2. Letters of evaluation from three faculty members who have a good awareness of the student’s ability.
3. Experience in/exposure to the health field.
4. Total academic performance, with attention given to course content and load, trends in performance, and general commitment to scholarship.
5. Satisfactory scores on the Medical College Admission Test (MCAT).
6. Personal interview with two members of the Committee on Admissions. (Competitively qualified applicants will be invited for interviews after their applications have been reviewed by the Committee.)
7. Other criteria such as extracurricular activities; motivation and goals; research experience; the morals, character, and integrity of the individual; and any disciplinary or civil records that a person may have accrued.

Please note that high GPA and MCAT scores are not by themselves a sufficient basis for entrance into medical school. The Committee on Admissions takes a close look at the total experience of the applicant in making its final decisions. In addition, the Committee on Admissions reserves the right to require additional course work from any applicant.

Correspondence course work must be approved prior to scheduling.

**Alpha Epsilon Delta (AED)**

Alpha Epsilon Delta is a pre-health honor society that seeks to provide information and opportunities for students with an interest in the health professions. The Tennessee Beta Chapter of AED is active at the University of Tennessee. AED activities include information sessions on preparing to apply to professional schools, local speakers from the medical community, trips to Tennessee medical schools and health centers, and service activities. The schedule of meetings is available at [http://web.utk.edu/~aed/](http://web.utk.edu/~aed/).

Requirements for membership include three terms of college (at least one at UTK), a cumulative GPA of 3.2, a science GPA of 3.2, and participation in AED sponsored events and meetings. Students interested in joining AED should apply for membership at the beginning of fall term. Applications are available in Arts and Sciences Advising Services, 1 Alumni Memorial Building, and at the organizational Web site. Any pre-health student, regardless of membership, may participate in the programs sponsored by AED. Pre-health students wishing to receive notification of pre-health activities and AED events should send an e-mail to mhskins@utk.edu to request to be added to the pre-health distribution list.

Seminars for Pre-Health Students each fall semester; Arts and Sciences Advising Services offers a one-credit-hour course entitled “Introduction to Health Care Delivery.” This one-credit-hour seminar course is taught in the Wood Auditorium at UT Hospital. The course provides weekly seminars on topics such as managed care, family practice, ethical issues in medicine, malpractice, allied health programs, and many others. The course is listed in the timetable under Interdisciplinary Programs 100. The course is open to any interested student.
Scholarships & Student Organizations

The College of Engineering annually awards an average of nearly $500,000 in scholarships to qualified undergraduate students. Students must be accepted into the University of Tennessee and the College of Engineering to apply for engineering scholarships. Students need not apply for specific scholarships as the Scholarship Committee will match qualified students with available awards. Please contact the Office of Financial Aid & Scholarships for the complete list of application requirements and deadlines, 115 Student Services Building, (865) 974-3131, http://web.utk.edu/~finaid. Application deadline is February 1. Scholarships are awarded each academic year in the spring for the upcoming fall semester. For more information contact the College of Engineering Academic and Student Affairs Office at (865) 974-2454 or stop by 101 Perkins Hall.

Student Organizations and Honor Societies

http://web.utk.edu/~coeamb/life.php

• The Air & Waste Management Association
• Alpha Epsilon Omega, Co-Op Honor Society
• Alpha Pi Mu Industrial Honor Society
• American Institute of Aeronautics and Astronautics
• American Institute of Chemical Engineers
• American Nuclear Society Student Chapter
• American Society for Engineering Education
• American Society of Agricultural and Biological Engineers
• American Society of Civil Engineers
• American Society of Materials
• American Society of Mechanical Engineers
• Biomedical Engineering Society
• Chi Epsilon, Civil Engineering Honor Society
• East Tennessee Section of AAACE International
• Eta Kappa Nu, Electrical Engineering Honor Society
• International Electrical Engineering Honor Society
• Institute of Electrical and Electronics Engineers
• Institute of Industrial Engineers
• Institute of Transportation Engineers - Student Chapter
• Instrument Society of America
• Junior Engineering Technical Society
• National Society of Black Engineers
• The Order of the Engineer
• Pi Tau Sigma International Mechanical Engineering Honor Society
• Society of Automotive Engineers
• Society of Hispanic Professional Engineers
• Society of Plastics Engineers
• Society of Women Engineers
• Tau Beta Pi, The Engineering Honor Society

Diversity Programs

Office of Diversity Programs
110 Estabrook Hall, Knoxville, TN 37996-2360
Telephone: 865-974-1931 • http://www.engr.utk.edu/diversity

Tennessee Louis Stokes Alliance for Minority Participation (TLSAMP)
Tennessee State University, LeMoyne-Owen College, Middle Tennessee State University, University of Memphis, University of Tennessee and Vanderbilt University partnered to form the Tennessee Louis Stokes Alliance for Minority Participation Program (TLSAMP). The goal of the TLSAMP program is to increase the number of under-represented minority students studying and graduating in Science, Technology, Engineering and Math (STEM).

The objectives to support the goal of the alliance are to:
• Recruit under-represented minority students to pursue science or engineering as a career;
• Improve the quality of the learning environment for under-represented minority science and engineering students at all schools; and
• Ensure that a large number of undergraduate students are prepared to enter graduate school.

Programs
• TLSAMP Seminars
• Collaborative Learning

Retention Efforts
• Financial Assistance
• Tutorial Programs/Services
• Strategies for Basic Skills Courses

Pipeline Engineering Diversity Program
The Pipeline Engineering Diversity Program is designed to enhance the number of minority graduate students participating in and graduating with advanced degrees in Engineering. The program includes a Graduate Research Partnership Program designed to recruit and provide partial funding and pair students with engineering laboratory researchers in the College of Engineering.

Applications for membership in TLSAMP and Pipeline Programs are available online at:
http://www.engr.utk.edu/diversity/programs.html
Engineering Cooperative Education (CO-OP)

Office of Professional Practice
310 Perkins Hall, Knoxville TN 37996-2030
Telephone: 865-974-5323 • http://www.coop.utk.edu

How the Program Works
Engineering Cooperative Education is a program whereby upper level students have the opportunity to get “real world” experience in their chosen field of study. Students are required to work at least two terms (semesters), although most employers prefer a three-term commitment. Co-op students typically graduate one semester after their entering class with a year’s worth of substantive work experience and more direction than their non-co-op fellow students.

Employer Provides:
• Description of each available position
• Work related to the student’s field of study with more responsibility added on subsequent work terms
• Supervision by a trained professional
• An evaluation of the student’s performance for each work term
• A salary that is commensurate with the level of responsibility

Students Must:
• Apply for approved, relevant assignments
• Perform work to earn subsequent assignments of increased responsibility
• Return to the same employer as outlined in the work schedule (co-op students only)
• Follow employer policies and procedures
• Maintain accurate information with the Office of Professional Practice
• Complete all requirements of the program
• Uphold the integrity of the co-op engineering program and the engineering profession

Cooperative Engineering Program Will:
• Provide students with information on participating employers
• Refer qualified candidates to appropriately matched employers
• Keep accurate student records to provide to employers upon request
• Monitor progress of students during work terms
• Actively recruit new students and employers to participate in the program

Internships
Intern assignments are one semester in length with one employer. A student must be working toward an engineering degree at UT and in good standing with the university. All assignments are paid. An internship often requires specific skills and experience to apply. Contact the Office of Professional Practice for more information.

Career Services, located at 100 Dunford Hall, is a university-wide department designed to help students explore majors and related career fields, plan and implement career goals, prepare for a job search, conduct on-campus interviews and identify additional employment opportunities and resources.

Services for Engineering students include:

Career Planning
• Research majors and careers on the Career Services website and in the Career Services Resource Center
• Find out “What I Can Do With This Major” – information on majors and careers throughout the college
• Take career assessments to assist with career exploration and career planning
• Meet with a Career Counselor to discuss your options or register for Exploring Majors and Careers, a one-credit course with a focus on choosing a major and learning about what’s available at UT

Career Resources
• Career Resource Center – review a collection of career books, periodicals, pamphlets, and videotapes with information on careers, job search skills, employment opportunities and salary ranges
• Career Services Website – a variety of valuable career articles, resume and cover letter samples and links to hundreds of other career-related Internet resources
• Workshops – held each semester on resume writing, cover letters, job fair success, interviewing, etiquette, company visits/second interview, graduate school and other career topics

Career Events
• Resume Critiques – resumes can be dropped off for overnight critiques at the Career Services offices or students can drop-by for a personalized review Monday-Thursday from 3 pm – 5 pm during Fall and Spring Semester
• Part-Time Employment Listings/Consultant – information on part-time positions for students
• Disability Careers Office – assists students with disabilities with career planning services and guidance
• HIRE-A-VOL at career.utk.edu – online job and resume database listing employment opportunities for part-time, summer, internships and full-time for UT students and alumni
• EF 301 – Engineering Career Planning Placement – a one-hour Pass/Fail course designed to equip Juniors and Seniors with the right tools to land a great full-time job after graduation

College of Engineering Career Consultant
– schedule an appointment with Leslie Fox, who works directly with Engineering students, faculty and employers by calling 865-974-5435 or e-mailing fox6@utk.edu. Students are encouraged to visit with Leslie by the end of their junior year to be ready for employment recruiting opportunities in their senior year.

Career Events
• Annual Job Fairs – Career fair opportunities to speak informally with representatives from hundreds of organizations about part-time and summer jobs, internships and full-time positions
• On-Campus Recruiting/Interviewing – approximately 300 organizations conduct over 6,000 interviews annually at UT through Career Services
• Information Sessions – conducted by employers throughout the year on opportunities within their organizations
• Special Engineering Career Events – watch for these each semester!

Career Events
• Annual Job Fairs – Career fair opportunities to speak informally with representatives from hundreds of organizations about part-time and summer jobs, internships and full-time positions
• On-Campus Recruiting/Interviewing – approximately 300 organizations conduct over 6,000 interviews annually at UT through Career Services
• Information Sessions – conducted by employers throughout the year on opportunities within their organizations
• Special Engineering Career Events – watch for these each semester!

Career Events
• Annual Job Fairs – Career fair opportunities to speak informally with representatives from hundreds of organizations about part-time and summer jobs, internships and full-time positions
• On-Campus Recruiting/Interviewing – approximately 300 organizations conduct over 6,000 interviews annually at UT through Career Services
• Information Sessions – conducted by employers throughout the year on opportunities within their organizations
• Special Engineering Career Events – watch for these each semester!

Career Events
• Annual Job Fairs – Career fair opportunities to speak informally with representatives from hundreds of organizations about part-time and summer jobs, internships and full-time positions
• On-Campus Recruiting/Interviewing – approximately 300 organizations conduct over 6,000 interviews annually at UT through Career Services
• Information Sessions – conducted by employers throughout the year on opportunities within their organizations
• Special Engineering Career Events – watch for these each semester!

Career Events
• Annual Job Fairs – Career fair opportunities to speak informally with representatives from hundreds of organizations about part-time and summer jobs, internships and full-time positions
• On-Campus Recruiting/Interviewing – approximately 300 organizations conduct over 6,000 interviews annually at UT through Career Services
• Information Sessions – conducted by employers throughout the year on opportunities within their organizations
• Special Engineering Career Events – watch for these each semester!

Career Events
• Annual Job Fairs – Career fair opportunities to speak informally with representatives from hundreds of organizations about part-time and summer jobs, internships and full-time positions
• On-Campus Recruiting/Interviewing – approximately 300 organizations conduct over 6,000 interviews annually at UT through Career Services
• Information Sessions – conducted by employers throughout the year on opportunities within their organizations
• Special Engineering Career Events – watch for these each semester!

Career Events
• Annual Job Fairs – Career fair opportunities to speak informally with representatives from hundreds of organizations about part-time and summer jobs, internships and full-time positions
• On-Campus Recruiting/Interviewing – approximately 300 organizations conduct over 6,000 interviews annually at UT through Career Services
• Information Sessions – conducted by employers throughout the year on opportunities within their organizations
• Special Engineering Career Events – watch for these each semester!

Career Events
• Annual Job Fairs – Career fair opportunities to speak informally with representatives from hundreds of organizations about part-time and summer jobs, internships and full-time positions
• On-Campus Recruiting/Interviewing – approximately 300 organizations conduct over 6,000 interviews annually at UT through Career Services
• Information Sessions – conducted by employers throughout the year on opportunities within their organizations
• Special Engineering Career Events – watch for these each semester!
Planning for Engineering Career Success

Set goals for each year to achieve your career plans.

**Freshman Year**
- Demonstrate excellent academic performance - make the best grades you can every semester.
- Don’t procrastinate. Begin building strong time and task management skills which will carry over to your career success.
- Strengthen your written communication skills in English classes and writing labs and work on the Engineering basics of math and science. Don’t forget to enhance your computer skills as well.
- Discover “hidden” UT resources - Career Services, Student Counseling, COE Advising, tutorial services, etc…”
- Think about what jobs and employers interest you. Do research on the skills and qualifications that are required to obtain those positions now and work towards obtaining those qualities by graduation. How do you want to “stand out” from other candidates and what do you need to get there?
- Identify and participate in campus co-curricular activities in your major or in your field of interest. Start building your professional network and identify mentors that can guide you now and in the future.
- Visit the Office of Professional Practice (www.coop.utk.edu) to learn about co-op and intern opportunities.

**Sophomore Year**
- Get to know your faculty. They can guide you in your career and provide references for jobs or graduate school.
- Identify how you will obtain experience in your area of interest - co-op, intern, part-time and summer jobs and/or student association or class projects. Think about what you did and what you accomplished.
- Develop a professional resume and register with Career Services on the HIRE-A-VOL system.
- Talk to professionals in your career field. Use the Career Services Guide to Informational Interviews for suggestions.

**Junior Year**
- If you have not started co-op or intern experiences, it is now critical to begin adding engineering experience to your resume.
- Choose electives to enhance your qualifications, especially your oral and written communication skills, leadership skills and language abilities.
- Seek leadership positions in your campus activities. Employers look for examples of leadership on resumes.
- Begin to plan for your job search or for graduate school. Set deadlines for required steps.
- Schedule an appointment to meet with Leslie Fox, Career Services Consultant for Engineering at 865-974-5435 to update your resume and discuss your career plan.
- Explore the Career Service website at http://career.utk.edu for additional resources.
- Attend Career Fairs to begin identifying employers and to “practice” for your senior year of recruiting.
- Plan to incorporate EF 301 - Career Services for Engineers into the Spring semester of your Junior year (best time) - this course is open to Juniors and Seniors both Fall and Spring Semester.
- Practice your interview skills using “Perfect Interview”.

**Senior Year**
- Start searching for jobs on HIRE-A-VOL, submitting your resume to positions and registering for interviews by September 1st. Continue to check HIRE-A-VOL at least once a week for new positions.
- Participate in Career Services workshops and all special Career Services/Student Group sponsored career events.
- Schedule a “Mock Interview” with Career Services.
- Research companies and/or graduate schools of interest and watch for application deadlines.
- Learn how to conduct a thorough job search campaign and update your career plan by meeting with your career counselor.
- Plan to be job search ready with a polished resume, professional appearance and attire and a plan of action for your companies of interest by the Fall Job Fair (usually in September). Over half of the job offers for seniors graduating in May will be made based on this fair.
- Identify salary ranges and think about salary negotiations and benefits important to you.
- Continue with the process until your goal of employment or graduate school has been achieved.
- Begin preparing for the transition to your first successful year on the job.

The University of Tennessee has embarked on an ambitious plan to help students gain the international and intercultural knowledge they need to succeed in today’s world. Engineering, like all professions, is becoming very globally oriented. It is important for you to take advantage of opportunities while you are a student in order to be Ready for the World. Apply for your passport now- the world awaits!

**Programs Abroad Office (PAO)**

The “PAO” provides students with information about their options for overseas study, research, work, volunteer projects, and travel. The PAO administers most of UT’s international one-for-one student exchange programs, including ISEP, and is also the campus contact for student Fulbright awards, Rhodes Scholarships, Marshall Scholarships and the National Security Education Program. Attend an information session at Program Abroad Office (1620 Melrose Hall). Information sessions are held at 2:00 pm every Monday-Friday during the academic year. During the general information session, we discuss the programs available to you, what to look for in a program, how to use the resource center, using financial aid, transferring credits, programs requirements, and will answer your questions. If you are unable to attend an information session due to a conflict at 2:00 pm, please contact our office and we will be glad to schedule an appointment for you (865.974.2168 or studentweb@utk.edu).

**Study Abroad for Engineering Students**

Engineering study abroad programs allow you to stay one semester or shorter in an English speaking or foreign language-speaking schools throughout the world. You can choose between individual trips through GE3 (Global Engineering Education Exchange) or pre-arranged trips, where you would live and travel with a small group of UT students.

Prior to applying for an Engineering Study Abroad Program, you should schedule an advising session at the College of Engineering Advising Office. You are eligible to apply for the Study Abroad Program after freshman year or after the first semester at UT, if you are a transfer student. Most programs require a minimum 2.5 to 2.75 GPA. For non-English language program, it is required that you have minimum 4 semesters of equivalent of foreign language (faculty-led programs are exceptions).

UT Study Abroad programs include 5 types of programs: UT faculty-led, Exchange, Direct, Third Party, and Academic Internships.

The College of Engineering offers up to 10 competitive fellowships for students studying abroad. Students may apply for these competitive fellowships in the Dean of Academic and Student Affairs Office, 101 Perkins Hall.

**Contact:**
Center for International Education Programs Abroad Office 1620 Melrose Avenue, Knoxville, TN 37996-3531
Phone: (865) 974-3177
Fax: (865) 974-2985
Email: study.abroad@utk.edu

**Semester at Sea**

This program provides study abroad opportunities for the exploration and study of many of the people, places and cultures around the world. Semester at Sea adds a global semester to your undergraduate experience. The shipboard curriculum will give you insights into various cultures and societies and teach you to analyze those you observe and encounter. These intellectual tools will stay with you for life, allowing you to understand new places and to relate past experiences to future situations. Starting with the Summer 2006 voyage, the University of Virginia becomes the academic sponsor of the Semester at Sea program. As the academic sponsor of the program, the University of Virginia grants academic credit for participation in Semester at Sea courses. A University of Virginia academic transcript will be provided to facilitate credit transfer to your home university. The courses examine global crisis issues – the environment, population, foreign policy relationships, economics – in the context of the nations you visit. The ship truly becomes a campus in which you study in a traditional setting, while the world is transformed into an academic laboratory where you will earn 20% of your grade. This integration of classroom and international fieldwork allows Semester at Sea to create a learning environment unmatched on a traditional land campus. For more information visit the Semester at Sea Web site at http://semesteratsea.org.

**Engineering Global Exchange (EGE)**

Global E is an international exchange program for engineering students at member institutions. The program offers the opportunity for American students to study in one of 17 countries overseas and for international students at partner campuses to study in the United States. The program is designed to allow students to take courses overseas for credit at their home institutions.

Engineering and computer science students from Global E consortium member institutions can study abroad for one semester or a full academic year. Students are also given the opportunity to complement their study abroad experience with an internship after one semester of study abroad.

For a list of participating countries and application information, please visit the Engineering Global Exchange online at http://www.iee.org/programs/global-e3/.
**Footnotes**

1. Most new computers have built-in Ethernet networking capabilities. If your computer does not, we suggest that you purchase a network card. These cards are available from a variety of vendors, including the UT Computer Store. More information is available at the Office of Information Technology wireless information website. Contact the help desk at 865-974-9900 or helpdesk@utk.edu.

2. Most new laptops have wireless network capability built in. If yours does not, you will need a USB or PCMCIA wireless network card compatible with your computer. Additional information is available at the Office of Information Technology wireless information website. You may also contact the help desk at the number on your e-mail list above.

3. Windows Vista Home Basic Edition is not compatible with some programs used at UT.

4. These operating system and office software specifications are acceptable for students majoring in Electrical Engineering, Computer Engineering, Electrical, Materials Science and Nuclear Engineering. Sophomores, juniors and seniors majoring in Computer Science, Civil, Computer, Electrical, Materials Science and Nuclear Engineering may own either a laptop or a desktop computer.

5. Students may purchase the student version of Office 2007 from the UT Computer Store for $75. This is significantly less than you would pay elsewhere.

**Grades, Credit Hours, and Grade Point Average**

The basic unit of credit at UT Knoxville is the semester hour. This normally represents one hour of lecture or recitation or two hours of laboratory work per week. Each course at the university carries a number of credit hours specified in the course description. At the completion of each course, a student will be assigned a grade reflecting the student’s performance in the course. Passing grades carry a certain number of quality points per credit hour in the course. A student’s grade point average is obtained by dividing the number of quality points the student has accumulated at UT Knoxville by the number of hours the student has attempted at UT Knoxville, not including hours for which grades of I, N, NC, NR, P, S, W, WP, and WF have been received.

**Undergraduate Grades**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Performance Level</th>
<th>Quality Points Per Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Superior</td>
<td>4.00</td>
</tr>
<tr>
<td>A-</td>
<td>Intermediate Grade</td>
<td>3.70</td>
</tr>
<tr>
<td>B+</td>
<td>Very Good</td>
<td>3.30</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3.00</td>
</tr>
<tr>
<td>B-</td>
<td>Intermediate Grade</td>
<td>2.70</td>
</tr>
<tr>
<td>C+</td>
<td>Fair</td>
<td>2.30</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory</td>
<td>2.00</td>
</tr>
<tr>
<td>C-</td>
<td>Unsatisfactory</td>
<td>1.70</td>
</tr>
<tr>
<td>D+</td>
<td>Unsatisfactory</td>
<td>1.30</td>
</tr>
<tr>
<td>D</td>
<td>Unsatisfactory</td>
<td>1.00</td>
</tr>
<tr>
<td>D-</td>
<td>Unsatisfactory</td>
<td>0.70</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Freshman English**

English 101, 102, 118, 131, and 132 are offered on a system of A, A-, B+, B-, C+, C, I, NC, W grading. All entering freshman, except international students, must enroll in English 101, 102 or 118.

**International Students**

Entering international students whose native language is not English are required to take the University of Tennessee, Knoxville, English Proficiency Examination to determine placement in the appropriate language course. No credit for any English course is awarded through this special examination.
Grades

Grades that do not Influence Grade Point Average

The following grades carry no quality points and hours for which these grades are earned and are not counted in computing a student's grade point average.

- NC (No Credit) indicates failure to complete a course satisfactorily when taken on an S/NC basis.
- S (Satisfactory) is assigned for C or better work when a course is taken on an S/NC grading basis.
- W (Withdrawal) is assigned in courses when a student has officially withdrawn from the university. W is also assigned in courses when a student withdraws from a course between the 11th and 63rd calendar day of classes. Regulations concerning withdrawal from courses or from the university appear under Changes in Registration.
- WP (Withdrawn Passing) is assigned in courses when a student withdraws from a course after the 63rd calendar day of classes and is passing the course at the time of withdrawal.
- WF (Withdrawn Failing) is assigned in courses when a student withdraws from a course after the 63rd calendar day of classes and is failing the course at the time of withdrawal.

Satisfactory/No Credit Grading System

The purpose of this system is to encourage the student to explore subject matter in which performance may not be entirely outstanding. It is a system that allows the student to continue to study a course and, by working harder, to improve his or her performance and attain the grade for which the student is striving.

- The purpose of this system is to encourage the student to explore subject matter in which performance may not be entirely outstanding. It is a system that allows the student to continue to study a course and, by working harder, to improve his or her performance and attain the grade for which the student is striving.
- The grade of I for incomplete work will be recorded as an SI, which will not be computed in the average. A student is permitted to change the system of grading in a course through the add deadline.
- The changing of an S/NC grade to a conventional letter grade or vice versa is not permitted unless an error is determined by the Office of the University Registrar.

Repeating Courses

For the first three repeated lower-division courses (100-200 level), only the last grade earned in the repeated courses will be counted in computing the grade point average. In the case where a student earned a grade of C-, D+, D or D- in the course and subsequently repeats the course with a failing grade (F), the grade of D will be counted in computing the grade point average. If the same course is repeated more than once, the additional repeats count as part of the repeat total. Repeating a course in which an NC grade has been earned does not count as one of the repeats covered by this policy. Grades of W, WP and WF do not count as one of the repeats covered by this policy. For all courses repeated after the first three, all grades will be included when computing the grade point average. All grades for all courses remain on the transcript.

- Neither grade is counted in a student's grade point average, but, like all other grades, is entered on the permanent record.
- S is given for C or better work on the traditional grading scale and NC is given for grades of C-, D+, D, D- and F.
- The student only receives credit in the course if an S is received.
- A student may not repeat a course for S/NC if the student received a conventional grade (A-, A, B+, B, B-, C+, C, C-, D+, D, D-, and F).

Students at UT need to become familiar with the Office of the University Registrar located in room 209 of the Student Services Building (in Circle Park).

The Registrar Web site is http://registrar.tennessee.edu/ and has lots of important links such as:

- Academic Status
  - Academic Review
  - Academic Second Opportunity
  - Degree Audit Reports
- Calendars
  - Academic Calendar
  - Final Exam Schedule
- Curriculum and Catalog
  - Course Descriptions
  - Graduate Catalog
  - Undergraduate Catalog
- Enrollment/Registration
  - Add a Course
  - Drop a Course
  - Residency Status
  - Mini-term Policy
  - Articulation
  - Grades - GPA Calculators
  - High School Deficiencies
  - Registration Policies
- Financial Info
  - Tuition and Fees
  - Financial Aid & Scholarships
- General Info
  - Building Codes
  - Circle Park Online
  - Class Attendance
  - Class Times, Valid
  - Campus Map
  - Honors for Graduating Seniors
  - Dean’s List
  - Online Registration FAQs
  - Web Registration FAQs
  - Veteran’s Affairs
- Graduate School
  - Graduate School Admissions
  - Graduate
  - Graduation/Commencement
  - Graduation Application
  - Undergraduate Students
  - Graduate Students
  - Diplomas
  - Confirmed Degrees
  - Commencement
  - Commencement for Summer Graduates
- Student Records
  - Privacy of Student Records
  - Student ID Numbers
- Student Services
  - Address Change
  - Degree Verification
  - Good Standing Verification
  - Letters of Verification
  - Name Change
  - Repeating Courses
  - Transfer Equivalency Tables
  - Transcripts
  - Withdraw from a Course
  - Withdraw from the University
  - Enrollment Verification
- Timetable
  - Timetable
  - Timetable
  - Timetable
  - Timetable
  - Timetable
  - Timetable
  - Timetable
  - Timetable
- Course Equivalencies
  - The course equivalencies are found on the Office of the University Registrar Website at http://registrar.tennessee.edu/ transfer. Any student planning to take a course at another institution to be used for degree requirements at UT should verify the course credit using the Registrar’s Transfer Web page information.
### Advanced Placement (AP) Exam Credit

<table>
<thead>
<tr>
<th>Subject</th>
<th>AP Score</th>
<th>Credit Given</th>
</tr>
</thead>
<tbody>
<tr>
<td>American History</td>
<td>4 or 5</td>
<td>History 221-222</td>
</tr>
<tr>
<td>Art Drawing</td>
<td>4 or 5</td>
<td>Art 101</td>
</tr>
<tr>
<td>Art 2-D Design</td>
<td>4 or 5</td>
<td>Art 101</td>
</tr>
<tr>
<td>Biology</td>
<td>3 or 5</td>
<td>Biology 101-102</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>3</td>
<td>Math 125</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>4</td>
<td>Math 141</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>5</td>
<td>Math 147</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>3</td>
<td>Math 141</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>4</td>
<td>Math 141-142</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>5</td>
<td>Math 147-148</td>
</tr>
<tr>
<td>Chemistry</td>
<td>4 or 5</td>
<td>Chemistry 120-130</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>5</td>
<td>Computer Science 102</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>4</td>
<td>Computer Science 102</td>
</tr>
<tr>
<td>Economics - Micro &amp; Mac.</td>
<td>3, 4 or 5</td>
<td>Economics 201</td>
</tr>
<tr>
<td>English Language &amp; Composition</td>
<td>4 or 5</td>
<td>English 101</td>
</tr>
<tr>
<td>English Literature &amp; Composition</td>
<td>4 or 5</td>
<td>English 101-102</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>3</td>
<td>Geology 201</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>4 or above</td>
<td>Geology 201-202</td>
</tr>
<tr>
<td>European History</td>
<td>4 or 5</td>
<td>History 241-242</td>
</tr>
<tr>
<td>French Language</td>
<td>3</td>
<td>French 211-212</td>
</tr>
<tr>
<td>French Language</td>
<td>4</td>
<td>French 233-334 or 351-352</td>
</tr>
<tr>
<td>French Language</td>
<td>5</td>
<td>French 233-334 or 351-352 (Use 333-334 as default)</td>
</tr>
<tr>
<td>French Literature</td>
<td>3</td>
<td>French 211-212</td>
</tr>
<tr>
<td>French Literature</td>
<td>4</td>
<td>French 351-352</td>
</tr>
<tr>
<td>French Literature</td>
<td>5</td>
<td>French 351-352</td>
</tr>
<tr>
<td>German Language</td>
<td>4 or 5</td>
<td>German 201-202 or German 311-312</td>
</tr>
<tr>
<td>German Language</td>
<td>3</td>
<td>German 201-202</td>
</tr>
<tr>
<td>Human Geography</td>
<td>4 or 5</td>
<td>Geography 101</td>
</tr>
<tr>
<td>Latin Literature - Catullus/Cicero, Catullus/Horace, Catullus/Ovid, or Virgil</td>
<td>3, 4 or 5</td>
<td>Latin 251-252</td>
</tr>
<tr>
<td>Music</td>
<td>4 or 5</td>
<td>Music Theory 110</td>
</tr>
<tr>
<td>Physics B</td>
<td>4 or 5</td>
<td>Physics 101-102 or Physics 161 or 221</td>
</tr>
<tr>
<td>Physics C - E &amp; M</td>
<td>5</td>
<td>Physics 136</td>
</tr>
<tr>
<td>Physics C - E &amp; M</td>
<td>4</td>
<td>Physics 102 or 222 or 231</td>
</tr>
<tr>
<td>Physics C - Mechanics</td>
<td>5</td>
<td>Physics 135</td>
</tr>
<tr>
<td>Physics C - Mechanics</td>
<td>4</td>
<td>Physics 101 or 161 or 221</td>
</tr>
<tr>
<td>Political Science - Comparative Exam</td>
<td>3, 4 or 5</td>
<td>Political Science 102</td>
</tr>
<tr>
<td>Political Science - US Exam</td>
<td>3, 4 or 5</td>
<td>Political Science 101</td>
</tr>
<tr>
<td>Psychology</td>
<td>3 or 5</td>
<td>Psychology 110</td>
</tr>
<tr>
<td>Spanish Language or Literature</td>
<td>3</td>
<td>Spanish 211-212</td>
</tr>
<tr>
<td>Spanish Language or Literature</td>
<td>4</td>
<td>Spanish 212 and 300</td>
</tr>
<tr>
<td>Spanish Language or Literature</td>
<td>5</td>
<td>Spanish 300 and 305</td>
</tr>
<tr>
<td>Statistics</td>
<td>4 or 5</td>
<td>Statistics 201</td>
</tr>
<tr>
<td>Studio Arts - General or Drawing Portfolio</td>
<td>4 or 5</td>
<td>Art Studio 101</td>
</tr>
<tr>
<td>World History</td>
<td>4 or 5</td>
<td>History 261-262</td>
</tr>
</tbody>
</table>

### International Baccalaureate (IB) Exam Credit

<table>
<thead>
<tr>
<th>Subject</th>
<th>Score</th>
<th>Credit Given</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology (higher level)</td>
<td>5 +</td>
<td>Biology 101-102</td>
</tr>
<tr>
<td>Chemistry (higher level)</td>
<td>5 +</td>
<td>Chemistry 120-130</td>
</tr>
<tr>
<td>English (A1 exam)</td>
<td>5</td>
<td>English 101</td>
</tr>
<tr>
<td>English (A1 exam)</td>
<td>6 +</td>
<td>English 101-102</td>
</tr>
<tr>
<td>French (higher level)</td>
<td>5 +</td>
<td>French 211-212</td>
</tr>
<tr>
<td>German (subsidiary level)</td>
<td>4</td>
<td>German 201-202</td>
</tr>
<tr>
<td>German (higher level)</td>
<td>4 +</td>
<td>German 201-202</td>
</tr>
<tr>
<td>German (higher level)</td>
<td>4 +</td>
<td>German 301-302</td>
</tr>
<tr>
<td>Math (higher level)</td>
<td>4 +</td>
<td>Mathematics 141-142  plus 4 hours LD Math credit</td>
</tr>
<tr>
<td>Philosophy (higher level)</td>
<td>4 +</td>
<td>Philosophy 111</td>
</tr>
<tr>
<td>Physics (higher level 1)</td>
<td>4 +</td>
<td>Physics 221</td>
</tr>
<tr>
<td>Physics (higher level 2)</td>
<td>4 +</td>
<td>Physics 222</td>
</tr>
<tr>
<td>Spanish (higher level)</td>
<td>4 +</td>
<td>Spanish 211-212</td>
</tr>
</tbody>
</table>

### How to refuse AP and IB credits

If you prefer to take the course at UT that you have AP or IB credit for, you must officially refuse your AP or IB credit by going to the Registrar’s Office, 209 Student Services Building by the Add Deadline (first 10 days of the semester).
High School Deficiencies

How to Remove High School Deficiencies

Beginning with fall term 1989, the university adopted new undergraduate admission requirements to include certain specified courses. With the exception of American History, one high-school unit is comparable to one three-hour semester of university work.

- Freshmen must remove any deficiencies within their first 60 hours of university work.
- Transfer students graduating from high school in 1989 or later and having more than 12 hours of transfer work must remove the deficiencies within their first 30 hours at UT Knoxville.
- Transfer students graduating from high school in 1989 or later and having more than 12 hours of transfer work must remove the deficiencies within their first 30 hours at UT Knoxville.
- Transfer students graduating from high school in 1989 or later and having more than 12 hours of transfer work must remove the deficiencies within their first 30 hours at UT Knoxville.
- Transfer students graduating from high school in 1989 or later and having more than 12 hours of transfer work must remove the deficiencies within their first 30 hours at UT Knoxville.

Subject Area | Units Required | If Deficient, Take:
--- | --- | ---
English | 4 | UT: English 101; English 102
Math – Algebra | 2 | High School: Algebra I; Algebra II
UT: Math 100
Math – Geometry | 1 | High School: Geometry*
UT: Any Math course except Math 100*
Math – Advanced Math | 1 | High School: Calculus*
UT: Any Math course except Math 100*
Visual & Performing Arts | 1 | High School: Any visual or performing art
UT: All 100-level Architecture courses; All 100- and 200-level Art courses; All 100- and 200-level Music courses; Classics 232; Theatre 100; or Theatre 220-221
Foreign Language | 2 | High School: Any foreign language in high school
UT: Any foreign language at UT: two semesters (first year) of a single language at UT is equivalent to two high school units (must be same language).
Natural Science | 2 | High School: All natural science, biology, chemistry or physics courses.
UT: All natural science, chemistry or physics courses.
U.S. History | 1 | High School: U.S. History
UT: Requires 6 hours to remove on deficiency. History 221-22 History 227-228
World History | 1 | High School: World Geography
UT: History 241-242; History 247-248; History 261-262; Geography 101-102; or Medieval Studies 201-202

*For Geometry or Advanced Mathematics, any math where algebra and geometry are prerequisites, the math course may be used to fulfill the geometry requirement and the algebra deficiency will be waived. See math course descriptions for prerequisites.

Course Load

The following freshman year curriculum is typical to all engineering programs depending on the major and/or course readiness (except the Engineering Physics and Computer Science programs).

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101, 102</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry 120</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 141, 142</td>
<td>8</td>
</tr>
<tr>
<td>Engineering Fundamentals 151, 152, 105</td>
<td>9</td>
</tr>
<tr>
<td>General Education</td>
<td>3-6</td>
</tr>
<tr>
<td>Total</td>
<td>30-33 hours</td>
</tr>
</tbody>
</table>

Course Loads

During the Fall and Spring terms undergraduate students can take up to 19 hours. Twelve (12) hours qualifies students as full time. The average course load is between 12-16 hours.

Summer undergraduate students may enroll for a maximum of 6 credit hours for each of the first and second sessions. Student may enroll for a maximum of 12 credit hours for those courses that extend through the entire summer.

Advising Questions

Contact: Engineering Advising Services
202 Estabrook Hall
(865) 974-4008

Petitions/Substitutions

Transfer students will work with faculty advisors to determine any necessary additions to or substitutions in the program or electives requiring special approval. The approval must be granted in writing using petition/substitution forms found on the Engineering Advising Web site at http://www.engr.utk.edu/advising/forms.html. It is each student's responsibility to see that all necessary approvals are secured. Inattention to such matters will most likely delay graduation.
### Freshman Math Placement

As an entering freshman in engineering, you are required to take a math placement test. This test is very important and you should take it seriously. The purpose of the test is to help determine the entry-level mathematics course most appropriate for your background. The Math Placement test is designed to determine if you are ready to begin the mainstream calculus courses (Math 141 or 147). It is not necessary to have had calculus in high school in order to take the test. The test assumes you have had two years of algebra, 1/2 year of trigonometry, and one year of geometry. You may have had the trigonometry in a course called Advanced Math or Precalculus.

#### Math Courses In Engineering

<table>
<thead>
<tr>
<th>These Are Elected</th>
<th>These Are Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3)</td>
<td>(1)</td>
</tr>
<tr>
<td>Math 119</td>
<td>Math 109</td>
</tr>
<tr>
<td>College Algebra</td>
<td>Pre Calculus</td>
</tr>
<tr>
<td>Self-Paced Tutorial</td>
<td>(Can be taken with 119 and 130)</td>
</tr>
</tbody>
</table>

### FOREIGN LANGUAGE – Not Required in Engineering

Foreign language choice satisfies the University’s General Education: Cultures and Civilizations requirement. Students can choose to complete two intermediate level courses in a foreign language or take two courses from the Cultures and Civilizations list in the catalog.

#### Placement Exam

All students planning to enroll in a French, German, Latin, or Spanish course who have completed at least two years of this language in high school and have not yet taken a college course in the language must take a UT placement exam before enrolling. This rule does not apply to students who receive AP credit in the language. The score on the exam will determine placement in the appropriate course. Ordinarily, a student will not be allowed to enroll in a course at a level above that determined by his/her placement exam score.

#### Elementary Credit

Students who place into 200-level language courses will receive 6 hours of elementary language credit only if they do not later receive credit for any 100-level course in the same language. If a student with elementary language credit does not receive credit for a 100-level course in the language for which the credit was granted, elementary placement credit is forfeited and removed from the student’s transcript.

#### Intermediate Credit

Students who place into 300-level courses will receive 6 hours of intermediate language credit. No student may earn more than 6 hours of language placement examination credit.

#### Transition Course

Some students who have had two years of the same language in high school and receive a placement score below the level required for admittance into intermediate-level language courses may be placed in a 150 language course. These courses are designed to prepare students for enrollment in intermediate-level foreign language courses and count as elective credit. Students who receive credit for this course may not receive credit for any other 100-level course of the same language.

#### Deficiency

Students with a high school deficiency in foreign language must remove the deficiency during the first 60 credit hours of university work.

### General Education Requirements

**2009-2010 The University of Tennessee, Knoxville General Education Requirement**

General education provides the foundation for successful academic study, for lifelong learning and for carrying out the duties of local, national and global citizenship. By building basic skills in communication, analysis, and computation as well as by broadening students’ historical and cultural perspectives, the general education curriculum helps students acquire an understanding of both self and society, and thus contributes to their personal enrichment while enrolled and after graduation. The University of Tennessee’s general education program has been designed to enable the student to move among colleges within the university or to move to another institution of higher learning. Although it will provide the students with the skills required by college study, those skills are specific neither to UT Knoxville nor to a particular major or career path.

#### These are the General Education requirements

**A. For Building Basic Skills**

I. Communicating through Writing (3 courses including English 010 and 020 plus an approved writing-intensive course).

II. Communicating Orally (1 course)

III. Quantitative Reasoning (2 courses)

**B. For Developing Broadened Perspectives**

I. Natural Sciences (2 courses)

II. Arts and Humanities (2 courses)

To live well in the present, one must have an acquaintance with the past, especially with the cultural achievements that are the distinctive hallmarks of all human societies. An appreciation of art, music, theater, literature and philosophy will not only enrich the lives of students, but it will also help them understand their own and other’s aspirations, both in a historical and a contemporary context. Taking two courses from the list below satisfies this requirement.

**Approved Arts and Humanities (AH) Courses**

<table>
<thead>
<tr>
<th>African Studies</th>
<th>• African Studies 162, 233, 225 or 226 Architecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
<td>• Architecture 111, 117, 211, 212, 217 or 218 Art History</td>
</tr>
<tr>
<td>Art History</td>
<td>• Art History 162, 167, 172, 173, 177, 178, 183 or 187</td>
</tr>
<tr>
<td>Classics</td>
<td>• Classics 221, 222, 232 or 253</td>
</tr>
</tbody>
</table>

**English**

• English 201, 202, 206, 207, 208, 221, 222, 225, 226, 231, 232, 237, 238, 251, 252, 253 or 254

**Haslam Scholars Program**

• Haslam Scholars Program 258

**Musicality**

• Musicology 110, 115, 120, 125, 210, 220 or 290

**Philosophy**

• Philosophy 110, 111, 117, 118, 241, 242, 243, 244, 245, 246, 290

**Religious Studies**

• Religious Studies 244 (same as Philosophy 244)

**Russian**

• Russian 221 or 222

**Theatre**

• Theatre 100

**University Honors**

• University Honors 257

**III. Social Sciences (2 courses)**

The goal of the social sciences is to help us understand the way that we live, especially the relation between the individual and the group, sometimes from an historical but often from a contemporary perspective. Vital to the continued health and success of our society is an understanding of the complex individual, political and social dynamics that make up the modern world. Students should not only have knowledge of the principal concerns of the social sciences, but they should also understand the methods by which social scientists collect and evaluate knowledge.

**This requirement is satisfied by taking two courses from the following list.**

**Approved Social Sciences (SS) Courses**

<table>
<thead>
<tr>
<th>African Studies</th>
<th>• African Studies 201 or 202</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Economics</td>
<td>• Agricultural Economics 201</td>
</tr>
<tr>
<td>Anthropology</td>
<td>• Anthropology 130 or 137</td>
</tr>
<tr>
<td>Child and Family Studies</td>
<td>• Child and Family Studies 210 or 220</td>
</tr>
</tbody>
</table>

**Economics**

• Economics 201 or 207

**Geography**

• Geography 101 or 102

**Haslam Scholars Program**

• Haslam Scholars Program 268

**Political Science**

• Political Science 102

**Psychology**

• Psychology 110 or 117

**Sociology**

• Sociology 110, 117, 120 or 127

**University Honors**

• University Honors 267

**Women’s Studies**

• Women’s Studies 230 (same as Child and Family Studies 220)
General Education Requirements

IV. Cultures and Civilizations (2 courses)

Knowledge of foreign languages and cultures and their histories have long been required of educated people. Today, technologies of travel and communication create global communities, and so increase the importance of this knowledge. While it is not possible to become expert in all cultures and civilizations, a perspective on which to build knowledge over a lifetime can be gained by study of foreign languages and the study of the cultures and histories of their speakers. This perspective improves the ability of students to function effectively in the global community of the twenty-first century by developing an appreciation of linguistic, historical, and cultural diversity. This requirement is satisfied by either

1. taking two courses from the following list or
2. taking a two-course sequence in a foreign language at the intermediate level.
3. taking a six-hour intensive foreign language course at the intermediate level.

Approved Cultures and Civilizations (CC) Courses

- Africana Studies
  - African Studies 235 or 236
- Anthropology
  - Anthropology 120 or 127
- Classics
  - Classics 201
- Environmental and Soil Sciences
  - Environmental and Soil Sciences 120 or 220
- Global Studies
  - Global Studies 250
- History
  - History 241, 242, 247, 248, 255, 256, 261, 262, 267 or 268
- Latin American Studies
  - Latin American Studies 251 or 252

Medieval Studies
- Medieval Studies 201 or 202
Religious Studies
- Religious Studies 101, 102 or 107
Sociology
- Sociology 250
University Honors
- University Honors 277

Intermediate Foreign Language Courses

- Arabic
  - Arabic 221 and 222
- Asian Languages
  - Asian Languages 231 and 232 or 251 and 252
- Asian Studies
  - Asian Studies 221 and 222, 241 and 242 or 261 and 262
- Chinese
  - Chinese 231 and 232 (same as Asian Languages 231 and 232)
- Classics
  - Classics 251 and 252 or 261 and 264
- French
  - French 211 and 212 or 217 and 218
- German
  - German 201 and 202
- Hebrew
  - Hebrew 241 and 242 (same as Asian Studies 241 and 242)
- Italian
  - Italian 211 and 212
- Japanese
  - Japanese 251 and 252 (same as Asian Languages 251 and 252)
- Persian
  - Persian 261 and 262 (same as Asian Studies 261 and 262)
- Portuguese
  - Portuguese 211 and 212
- Russian
  - Russian 201 and 202

Spanish
- Spanish 211 and 212 or 217 and 218

Intensive Intermediate Foreign Language Courses

- French
  - French 223
- German
  - German 223
- Italian
  - Italian 223
- Portuguese
  - Portuguese 223
- Spanish
  - Spanish 223

For a complete listing of all approved courses, please reference the extensive list online in the Undergraduate Catalog, http://catalog.utk.edu/preview_program.php?catoid=1&poid=393

Office of Information Technology (OIT)

OIT handles your NetID and password, T-mail and technology questions on campus. Official correspondence at UT is through email so it will be important for you to check your T-mail regularly. OIT can help you set up your account and even provide information on how to forward email from other accounts to your UT one (or vice versa). The walk-in Help Desk is located on the second floor of Hodges Library in the South Commons.

First Login for New Students

Follow these easy steps to set up your Net ID and Password.

Retrieving Your Net ID

- Visit http://www.utk.edu
- In the search field located in upper right hand corner, type in your given first and last name and choose “People Search” from the drop-down list and click Search.
- The prefix of your UTK e-mail address is also your Net ID.

Default Password formula

- Visit https://ds.utk.edu/passwords/setup.asp to setup your password
- First 2 letters of your birth month (Ex: March = ma)
- Last 2 digits of your birth year (Ex: 1990 = 90)
- Last 4 digits of your Student ID (Ex: 1234-56789 = 6789)
- Default Password = ma906789
- You may now change your password!

Confirmation of Attendance and Building Your Schedule during Orientation

- Login to https://cpo.utk.edu/CPOWeb/
- Select your first term of enrollment and click Choose Term
- On the left hand menu, select Confirm Attendance
- Click Set Confirmation to Yes
- On the left hand menu, select Schedule Builder
- Enter the courses you want in the Schedule Builder and click Accept Changes
- Print a copy of your schedule to take with you
**Academic Calendar**

**Fall Semester 2009**
- **Classes Begin**: Wednesday, August 19
- **Labor Day**: Monday, September 7
- **1st Session Ends**: Wednesday, October 7
- **2nd Session Begins**: Thursday, October 8
- **Fall Break**: Thursday - Friday, October 15-16
- **Thanksgiving**: Thursday - Friday, November 26-27
- **Classes End**: Tuesday, December 1
- **Study Days**: Wednesday (Sat. & Sun.), December 2 (5 & 6)
- **Exams**: Thurs., Friday & Mon. - Thurs., December 3, 4, 7, 8, 9, 10
- **Graduate Hooding**: Friday, December 11
- **Commencement**: Saturday, December 13

**Spring Semester 2010**
- **Classes Begin**: Wednesday, January 13
- **MLK Holiday**: Monday, January 18
- **1st Session Ends**: Thursday, March 4
- **2nd Session Begins**: Monday, March 9
- **Spring Break**: Monday - Friday, March 8-12
- **Spring Recess**: Friday, April 2
- **Classes End**: Friday, April 30
- **Study Days**: Saturday, May 1 (1), 3
- **Exams**: Tuesday – Tuesday, May 4, 5, 6, 7, 10, 11
- **Graduate Hooding**: Thursday, May 13
- **University College Commencement Ceremonies**: Wednesday - Friday, May 12-14

**Summer Term 2010**
- **Mini Session Begins**: Wednesday, May 12
- **Memorial Holiday**: Monday, May 31
- **Mini Session Ends**: Wednesday, June 2
- **Full and 1st Session Begins**: Thursday, June 3
- **Independence Day Holiday**: Monday, July 5 (Sunday July 4)
- **1st Session Ends**: Wednesday, July 7
- **2nd Session Begins**: Thursday, July 8
- **Full and 2nd Sessions End**: Tuesday, August 10
- **Summer Graduation Date**: Wednesday, August 18

*There is no commencement ceremony in the summer. This date is the official graduation date that will appear on the transcript of graduating students. The Academic Calendar is available on the Web site of the Office of the University Registrar.

**Key Term Dates**

**Fall 2009 - Undergraduate**
- **Priority Registration**: March 9 – August 11, 2009
- **Fall 2009 Graduation Application Deadline**: April 24, 2009
- **Spring 2010 Graduation Application Deadline**: August 6, 2009
- **International Student Orientation**: August 10-15, 2009
- **Late Registration**: August 12 to August 28, 2009 until 4:00 p.m.
- **Classes Begin**: September 7, 2009
- **Last Day to Add, Change Grading Options or Drop without a “W” - 1st Session Courses**: August 24, 2009
- **Last Day to Adjust Hours for Financial Aid Awarding**: September 2, 2009
- **Labor Day (No Classes)**: September 7, 2009
- **Last Day to Drop with a “W” - 1st Session Courses**: September 17, 2009
- **Last Day to Drop with “WP/WF” grade - 1st Session Courses**: September 25, 2009
- **First Session Classes End**: October 7, 2009
- **Second Session Classes Begins**: October 8, 2009
- **Last Day to Add, Change Grading Options or Drop without a “W” - 2nd Session Courses**: October 20, 2009
- **Fall Break (No Classes)**: October 15-16, 2009
- **Last Day to Drop with a “W” - Full Term Courses**: November 6, 2009
- **Last Day to Drop with “WP/WF” grade - Full Term Courses**: November 10, 2009
- **Last Day to Drop with “WP/WF” grade - 2nd Session Courses**: November 16, 2009
- **Thanksgiving Holidays (No Classes)**: November 26-27, 2009
- **Total Withdrawal from the University Deadline**: December 1, 2009
- **Classes End (Full and Second Session)**: December 1, 2009
- **Summer 2010 Graduation Application Deadline**: December 1, 2009
- **Study Period**: December 2, 5, 6, 2009
- **Exam Period**: December 3, 4, 7, 8, 9, 10, 2009
- **Commencement Rehearsal (Thompson Boling Assembly Center & Arena)**: December 11, 2009
- **Commencement (Thompson Boling Assembly Center & Arena)**: December 13, 2009

**Financial Calendar for Fall Term 2009**
- **Statement information available on CPO/UTK.Edu or in Bursar areas (211 SSb or 128 UC)**: July 13, 2009
- **Priority Registration Payment/Confirmation Deadline**: August 11, 2009 at 4:30 p.m.
- **however, Circle Park On Line will be available for credit card payments until 11:00 p.m. on August 11, 2009
- **Late Registration/Late Fees Begin**: August 12, 2009
- **Late Registration Payment/Confirmation Deadline**: August 28, 2009

*PAYMENT AND CONFIRMATION OF ATTENDANCE FORM MUST BE RECEIVED BY THESE DEADLINES WHETHER OR NOT YOU HAVE RECEIVED YOUR STATEMENT IN YOUR EMAIL. Only one statement will be sent to your official UTK email address. This statement will be based on the time period within which you register. You may view your account at cpo.utk.edu.
Berry Hall
See individual directory listings

Dougherty Hall
Department of Chemical & Biomolecular Engineering 419
Department of Materials Science & Engineering 425
Department of Mechanical, Aerospace & Biomedical Engineering 414
National Office, Tau Beta Pi Engineering Honor Society 508

Claxton
Computer Science (EECS Department) 203
Innovative Computing Laboratory 413

East Stadium Hall
Center for Materials Processing 513
Department of Industrial & Information Engineering 416
Maintenance & Reliability Center 507

Estabrook Hall
Engineering Fundamentals Division 103
Engineering Diversity Programs 204
Tennessee Louis Stokes Alliance for Minority Participation 204
Engineering Advising Services 202

Ferris Hall
Department of Electrical Engineering & Computer Science 414

Pasqua Hall
Department of Nuclear Engineering 315

Perkins Hall
College of Engineering Administrative Offices:
  Communications 207
  Computer Assistance 318-B
  Dean's Office 124
  Development 120
  Finance & Administrative Affairs 118
  Research 114
  Academic and Student Affairs 101
  Department of Civil & Environmental Engineering 223
  Office of Professional Practice 310

Science & Engineering Research Facility (SERF)
Scintillation Materials Research Center 301

Textiles & Nonwovens Development Center (TANDEC)
See individual directory listings

UT Conference Center
Center for Transportation Research 309

Under Construction or Design
Min H. Kao Electrical & Computer Engineering Building
Joint Institute for Advanced Materials (JIAM)

Not Shown
Biosystems Engineering & Soil Sciences - 2506 E.J. Chapman Drive, Knoxville, TN
National Transportation Research Center - 2360 Cherahala Blvd., Knoxville, TN
Tennessee Space Institute - 411 B.H. Goethert Parkway, Tullahoma, TN