

COLLEGE OF ENGINEERING



2010 - 2011

Undergraduate Academic Guide



Engineering Admissions & Advising Information

Admissions Requirements

In addition to UNT admission requirements, you must also meet requirements for admission to the College of Engineering:

Freshman Applicants:

Must have a Math SAT score of 540 (or higher) or a Math ACT score of 22 (or higher).

Transfer Applicants:

Must be eligible to enroll in Math 1710 (Calculus I) by completion of MATH 1650 (Pre-Calculus) with a grade of "C" or better or equivalent; or in a math course at a higher level than MATH 1710.

Undergraduate Studies – Pre-engineering Admission:

If you do not meet the above requirements, admission will be granted to the pre-engineering program in the Undergraduate Studies Office. You will be eligible to be admitted to the College of Engineering on completion of Math 1650 (Pre-Calculus) with a grade of "C" or better & only if you are in Academic Good Standing (UNT cumulative 2.0 GPA or higher). Until admission is granted into the College of Engineering, all advising & assistance will be provided to you by the Undergraduate Studies advisor.

College of Engineering – Pre-Major Admission:

If you do meet the above requirements, admission will be granted into the pre-major status of your desired program in College of Engineering. Pre-major status is the designation given to all students prior to completing engineering foundations requirements. Major status is the designation given after students have completed engineering foundations requirements.

College of Engineering – Major Admission:

Once you have completed engineering foundations requirements, you must request a degree audit in order to be accepted as a major & enroll in advanced level (junior & senior level) computer & engineering courses. A degree audit is an official document that lists all the courses & requirements you need to complete your degree & shows the application of completed courses & requirements toward graduation. Contact your advisor for more information.

Undergraduate Studies Advising Office

Marquis Hall 208
940-565-2457
www.unt.edu

Pre-Engineering Advisors:

Lindsey Fields, Jen Horton,
Julie Kirkland, Lisa Maxwell

Advising by appointment only.

College of Engineering Advising Office

Discovery Park C104
(940) 565-4201
www.eng.unt.edu/advising

Pre-Major & Major Advisors:

Nicole D' Alesandro, Virginia Fisher,
Chris Heiden, Nancy Shaw

*Advising by appointment only. No walk-ins. Please allow
2 weeks for an available appointment opening.*

Check out the Engineering Advising Office group on Facebook for reminders, updates, & information!

UNT Engineering Degrees, Majors, & Academic Information

Department of Computer Science & Engineering

Discovery Park F201; 940-565-2767

www.cse.unt.edu

Faculty Advisors: Dr. Ryan Garlick, Mr. David Keathly

Bachelor of Science: Computer Engineering

Designing, constructing, & operating computer systems; you can specialize in digital systems, operating systems, real-time & embedded systems, networks, micro-processors, & hardware. You will learn what you need to know to work with cell phones, PDAs, robotics, & biomedical devices.

Bachelor of Science: Computer Science

Software programming -- writing the detailed instructions that list in logical order the steps a computer must follow to organize data, solve a problem, or do some other task. You can specialize in game programming, information security, networks, database design, & artificial intelligence.

Bachelor of Arts: Information Technology

Deals with the application of modern technologies to the creation, management, & use of information. You will learn about programming, information systems, project management, networks/network security, & IT systems. You will have the opportunity to pursue a concentration in game development, business (pre-MBA), information security, or law (pre-law).

Department of Engineering Technology

Discovery Park F115; 940-565-2022

www.etec.unt.edu

Faculty Advisor: Dr. Robert Hayes

Bachelor of Science in Engineering Technology: Electrical Engineering Technology

Deals with circuit analysis, digital systems, micro-processors, computers, circuit board designs, automatic control systems, & network analysis. Sounds similar to Electrical Engineering? Yes, but it differs in that is more focused on application & less focused on theory & math.

Bachelor of Science in Engineering Technology: Mechanical Engineering Technology

Developing & constructing mechanical components or systems that may be used for a wide range of mechanical devices, machinery, & complete mechanical systems such as automobiles, power plants, steam & gas engines, robots, air conditioners, & spacecrafts. Sounds similar to Mechanical & Energy? Yes, but it differs in that it's more focused on application & less focused on theory, math, energy, & thermal fluid sciences.

Department of Electrical Engineering

Discovery Park B252; 940-891-6872

www.ee.unt.edu

Faculty Advisor: Dr. Murali Varanasi

Bachelor of Science: Electrical Engineering

Designing electrical systems, electronic systems, & components in computers, household appliances, televisions, communications equipment, cars, airplanes, satellites, & the space shuttle. You'll learn about electronic circuits, measurement systems, digital signal processing, computer-aided design, microprocessors, & wireless communications.

Department of Materials Science & Engineering

Discovery Park E132; 940-565-3260

www.mstc.unt.edu

Faculty Advisor: Dr. Tom Scharf

Bachelor of Science: Materials Science & Engineering

Developing, changing, & using different processes to turn raw materials into useful substances. You can learn to create new materials, such as the material on the U.S. Air Force's stealth planes that makes them nearly invisible to radar, & work with materials like plastics, metals or ceramics.

Department of Mechanical & Energy Engineering

Discovery Park F101; 940-565-2400

www.mee.unt.edu

Faculty Advisor: Dr. Rios

Bachelor of Science: Mechanical & Energy Engineering

Conceiving, designing, & building mechanical systems used in applications including automated machinery, medical devices, lasers, automobiles, power plants, air conditioners, wind turbines, & spacecraft. You will learn about energy, dynamics, propulsion, robotics, manufacturing, & nanotechnology. Conventional ME programs are generalized, allowing specialization only in the final year whereas MEEN focuses on energy & thermal fluid sciences throughout the entire program, making graduates the most focused, qualified energy engineers available.

Degree Requirements

The structure of engineering bachelor's degrees consists of 3-4 categories of requirements:

- *University Core Curriculum*: set of general education requirements common to all degrees at UNT.
- *Engineering Foundations*: set of requirements unique to engineering. Requirements must be completed in order to progress into major standing & onto advanced level engineering courses.
- *Major*: set of requirements common to primary area of study.
- *Minor*: optional set of requirements for a secondary area of study; a "mini-major".
- *Electives*: set of freely chosen courses; may be optional; see your advisor for more information.

Courses

All UNT courses are documented using a four letter subject abbreviation & four digit number.

<i>Abbreviations:</i>	ENGL for English	<i>Numbers:</i>	Freshman	1000
	HIST for History		Sophomore	2000
	MATH for Mathematics		Junior	3000
			Senior	4000

Different types of courses at UNT:

- *Prerequisite* or "*Prereq*": course that must be completed to move onto another course in a sequence.
- *Corequisite* or "*Coreq*": course that must be taken in the same semester as another course.
- *Recitation* or "*Rec*": extra, required meeting time to cover homework, answer questions, etc..
- *Laboratory* or "*Lab*": required time that's an application of the information that you learn in class.
- *Advanced course*: junior or senior level course.
- *Restricted course*: course or section time that is restricted so that only certain students can enroll.
- *Internet course* or "*INET*": course in which the majority of instruction, assignments, & work is online.
- *Blended course*: course in which a portion of the instruction, assignments, & work is online.

Credit Hours

Number of units assigned to each class. Tells you approximately how many hours per week you'll be in class & approximately how many hours per week you'll need to study for that course.

How many hours do I earn for each class?

Depends on the course. Usually 3 – 4 hours but courses can range from 1 to 5 hours.

How many credits is full-time?

12 hours (approximately 4 courses). UNT bills the same for 12 – 15 hours.

How many hours can I take each semester?

19 hours in the fall/spring semesters & 18 hours in the summer. You can receive overload approval to take more hours if you meet have:

At least a 3.0 GPA on a minimum 15 hour UNT residence load for the semester just completed.
At least a 3.0 GPA on a minimum 12 hour UNT residence load for the summer terms just completed.
At least a 3.0 GPA on all work completed at UNT & a minimum 24 hours of credit in residence.

Do I have to be a full-time student?

No, UNT doesn't require you to be a full-time student but if you are an international student, an athlete, receiving financial aid, scholarships, or insurance coverage from your parents, then yes.

Classification

Classification is based on the number of earned credit hours after semester grade/credit posting.

<i>Freshman:</i>	0 - 29 hours	<i>Junior:</i>	60 - 89 hours
<i>Sophomore:</i>	30 - 59 hours	<i>Senior:</i>	90+ hours

Grade Point Average (GPA)

Grades have a point value & courses are worth a certain amount of credit hours. GPA is calculated by dividing the number of grade points earned by the number of attempted hours.

Attempted credit hours are used in calculating GPA. Credit hours earned by AP, CLEP, or IB & courses dropped "W" don't count as attempted hours & don't average into your GPA.

Careful! Grades of "F" & "WF" are still attempted hours and count heavily against your GPA!

How do grades convert to grade points?

- A = 4 points x # of credit hours course is worth
- B = 3 points x # of credit hours course is worth
- C = 2 points x # of credit hours course is worth
- D = 1 points x # of credit hours course is worth
- F = 0 points x # of credit hours course is worth

How to Calculate Your GPA:

- Determine grade points for each course using the conversion above
- Total your number of grade points
- Total your number of attempted hours
- Divide total grade points by total attempted hours
- Number that results = your GPA

Different types of GPAs:

- *Semester (or Term) GPA:* the GPA you earned for the semester just enrolled.
- *UNT GPA:* the cumulative GPA you earn in all UNT courses. A minimum 2.0 GPA is required. This is the GPA which determines academic status (see the next page).
- *Overall GPA:* the GPA you earn in all courses (UNT & transfer). A minimum 2.0 GPA is required.
- *Engineering Foundations GPA:* the GPA you earn in all foundations courses. A minimum 2.5 GPA is required. See the requirement guide for your desired major in this guidebook).
- *Major GPA:* the GPA you earn in courses in your major. See the requirement guide for your major.

Grade Point Average (GPA): Honors

Semester Honors:

Semester honors is determined from your fall or spring semester GPA & is documented on your UNT transcript. You must complete at least 12 hours. Summer GPA is not recognized.

<i>President's List:</i>	4.000
<i>Dean's List:</i>	3.50 – 3.99

Graduation with Honors:

Graduation with honors is determined by your overall (UNT & transfer) GPA & is documented on your UNT transcript. Candidates for a 2nd bachelor's degree are not eligible for graduation honors.

<i>Cum laude:</i>	3.500 – 3.699
<i>Magna cum laude:</i>	3.700 – 3.899
<i>Summa cum laude:</i>	3.900 – 4.000

Grade Point Average (GPA): Academic Status

Academic Good Standing:

Standing if you earn at least a cumulative 2.0 UNT GPA.

Academic Alert:

Standing if you are a freshmen & your UNT GPA falls below 2.0 for the 1st time. You can only be placed on alert once. You must raise your UNT GPA to 2.0 or higher during the alert semester or you will be placed on probation.

Academic Probation:

Standing if you are not eligible for alert & your UNT GPA falls below 2.0. You must raise your UNT GPA to 2.0 to return to good standing or earn a semester GPA of at least 2.25 to remain on probation.

Academic Suspension:

Standing if you fail to raise your UNT GPA to a 2.0 or earn a 2.25 semester GPA while on probation. A 1st suspension is for 1 long semester, a 2nd suspension is for 2 long semesters, & a 3rd suspension is for 4 long semesters. You **may** be allowed to return to UNT after completing your suspension period.

Summer Sessions & Academic Status:

When on probation, you can't be placed on suspension as a result of UNT summer grades; however, when on good standing, you may be placed on probation as a result of UNT summer grades. You are eligible & are strongly encouraged to take summer courses at UNT if suspended. You may be eligible to attend UNT if you attend summer & raise your UNT GPA to 2.0.

Incompletes

An "I" or "Incomplete" grade is a pending grade on your record which does not affect your GPA. An "I" may be granted by the professor if you meet all the following conditions:

- The final drop & withdraw deadlines for the semester/term have passed.
- You experience an emergency situation that prohibits you from completing remaining work.
- You have been earning a passing grade to the point of the emergency situation.
- You can complete & submit outstanding work within one year after the grade of "I" is granted.

Professors are not required to grant a grade of "I" even if you meet the conditions. Each professor may use his or her discretion when deciding whether or not to grant an "I". Incompletes must be completed within 12 months or an automatic grade of "F" will be posted on your transcript.

Pass/No Pass Grading Option

You may elect to take a course under the Pass/No Pass Grading Option. Certain criteria must be met & you must obtain approval from your advisor. Refer to the Undergraduate Studies Bulletin or www.unt.edu/catalogs for more information & www.unt.edu/registration for deadlines.

Retaking Courses: Course Duplications

If your transcript(s) contains the same course more than once, the 1st course/grade will be treated as a duplication & deleted from your GPA. Any additional courses/grades will be calculated into the GPA. This includes transfer courses/grades.

Please note that only the last attempt/grade will be used in certifying eligibility for graduation. Contact your advisor to confirm how your GPA or graduation eligibility will be affected if you take a course more than once.

Dropping or Withdrawing

Dropping refers to removing yourself from one or more courses for the semester/term (but remain in at least one course for the semester/term). You must follow the procedures & deadlines listed at www.unt.edu/registration. A grade of "W" or "WF" may be recorded on your transcript.

Only 6 drops are allowed during your academic career unless you began college before the fall semester of 2007. Once the 6 drop limit is reached, no additional drops are approved.

Withdrawing refers to dropping all courses for the semester/term. You must follow the procedures & deadlines listed at www.unt.edu/registration. A grade of "W" or "WF" may be recorded on your transcript.

Registration & Payment

You will be using MyUNT to register for classes each semester/term. You can access the system at www.my.unt.edu. You will need your EUID & password to log on. Instructional guides for using MyUNT are available on the login page under the myHelp link.

Information on registration issues, problems, or concerns can be located at the following:
www.unt.edu/registration www.eng.unt.edu/registration

You must register during open enrollment periods & pay by the deadline listed in MyUNT or www.unt.edu/registration. Failure to pay will result in the cancellation of your entire schedule of classes.

Taking Courses at Another Institution: Concurrent Enrollment

You may take courses at another institution to apply at UNT if you meet the following conditions:

- You have been preapproved by your advisor.
- You meet course load approval & residency requirements at UNT.
- You are not graduating the same semester/term in which you will be concurrently enrolled.

Graduation

Graduation Check:

You should make an appointment with the Advising Office the semester before you plan to graduate to confirm that you are on track for graduation.

Graduation Application:

You obtain the application from the Registrar's Office in the ESSC & submit it to the Advising Office by the deadline listed in the Academic Calendar. The deadline is at the beginning of your final semester.

You must apply for graduation at the beginning of the semester in which you intend to graduate!

Discovery Park (formerly North Texas Research Park)

Discovery Park is a 2nd campus located 4 miles north of the main campus. It is the location of all College of Engineering offices, classes, labs, & more.

Free bus transportation is provided between the 2 campuses or you can drive your vehicle. Information on bus routes/times & parking can be found at www.unt.edu/transit.

Bachelor of Science: COMPUTER ENGINEERING

This is an unofficial simplified guide effective Fall 2010

University Core

ENGLISH (3 Hours)

Grade of "D" not accepted.

UNITED STATES HISTORY (6 Hours)

HIST 2610 _____

HIST 2620 _____

Honors equivalents , HIST 4700 or advanced US-Topic History course(s) may substitute for the courses above.

POLITICAL SCIENCE (6 Hours)

PSCI 1040 _____

PSCI 1050 _____

If you are transferring credit for either PSCI course, check with your advisor. Do not make an assumption about the application of course(s) taken elsewhere.

SOCIAL AND BEHAVIORAL SCIENCES (3 Hours)

VISUAL / PERFORMING ARTS (3 Hours)

HUMANITIES (3 Hours)

UNDERSTANDING THE HUMAN COMMUNITY (6 Hours)

Engineering Foundations

MATHEMATICS (19 Hours)

MATH 1710 (4 Hours)

MATH 1720 (3 Hours)

MATH 1780 (3 Hours)

MATH 2700 (3 Hours)

MATH 2730 (3 Hours)

MATH 2770 (3 Hours)

SCIENCE (12 Hours)

CHEM 1410-1430 (4 Hours) **or**

1415-1435(4 Hours)

PHYS 1710-1730 (4 Hours)

PHYS 2220-2240 (4 Hours)

TECHNICAL COMMUNICATIONS (3 Hours)

TECM 2700 (3 Hours)

Grades of "D" not accepted. Needs 2.5 GPA in each area.

Major Requirements: Computer Engineering

ELECTRICAL ENGINEERING (9 Hours)

EENG 2610 (3 Hours)

EENG 2710 (3 Hours)

EENG 3510 (3 Hours)

ADVANCED MATH OR SCIENCE ELECTIVE (3 Hours)

Advanced Math or Science Elective _____

Choose a 3000 or 4000 level course from Math, Physics, Chemistry, Biology, Geology, Geography. Check with your advisor for approval.

ADVANCED TECHNICAL ELECTIVES (6 Hours)

Advanced Technical Elective _____

Advanced Technical Elective _____

Choose 3000 or 4000 level courses from the areas of Engineering, Business, Biology, Chemistry, Economics, Math, or Physics. Check with your advisor for approval .

COMPUTER SCIENCE and ENGINEERING (42 Hours)

CSCE 1030 (4 Hours)

CSCE 1040 (3 Hours)

CSCE 2050 (3 Hours)

CSCE 2610 (3 Hours)

CSCE 3010 (3 Hours)

CSCE 3020 (3 Hours)

CSCE 3612 (3 Hours)

CSCE 3730 (3 Hours)

CSCE 4910 (3 Hours)

CSCE 4915 (3 Hours)

CSCE 4010 (2 Hours)

CSCE Specialty Elective (3 Hours)

CSCE Specialty Elective (3 Hours)

CSCE Specialty Elective (3 Hours)

Choose a specialty area & complete 3 approved courses below:

Specialization Area: Real-time and Embedded Systems

ELET 3750, CSCE 4440, 4610, 4620, 4730

Specialization Area: VLSI and Electronics

ELET 3750, PHYS 4500, CSCE 4610, 4730, 4750

Specialization Area: Communications and Networks

CSCE 3510, 3530, 4520, 4530 ,4550, 4560

Specialization Area: Computer Systems

CSCE 3030, 3650, 4600, 4610 , 4620

Grades of "D" not accepted. Needs 2.75 GPA in CSCE courses.

ELECTIVE COURSES

You may need elective courses to help reach a minimum of 123 Total Hours & 45 Advanced Hours. Check with your advisor .

Bachelor of Science: Major in Computer Engineering

Sample Four-Year Schedule

FRESHMAN YEAR			
FALL		SPRING	
CSCE 1030, Computer Science I	4	CSCE 1040, Computer Science II	3
ENGL 1310 or 1313, College Writing I	3	TECM 2700, Technical Writing	3
HIST 2610 or 2620, United States History	3	HIST 4700, Texas History	3
MATH 1710, Calculus I	4	MATH 1720, Calculus II	3
CHEM 1410 or 1415, Chemistry	3	PHYS 1710, Mechanics	3
CHEM 1430 or 1435, Chemistry Lab	<u>1</u>	PHYS 1730, Mechanics Lab	<u>1</u>
Total Hours	18	Total Hours	16
SOPHOMORE YEAR			
FALL		SPRING	
CSCE 2050, Computer Science III	3	EENG 2610, Circuits Analysis	3
EENG 2710, Digital Logic	3	MATH 2770, Discrete Math	3
PHYS 2220, Electricity and Magnetism	3	CSCE 2610, Computer Organization	3
PHYS 2240, Electricity and Magnetism Lab	1	MATH 2730, Multivariable Calculus	3
Understanding Human Community course	3	MATH 1780, Probability Models	<u>3</u>
MATH 2700, Linear Algebra	<u>3</u>	Total Hours	15
Total Hours	16		
JUNIOR YEAR			
FALL		SPRING	
CSCE 3010, Signals and Systems	3	CSCE 3020, Communications Systems	3
CSCE 3612, Embedded Systems Design	3	EENG 3510, Electronics I	3
CSCE 3730, Reconfigurable Logic	3	Social and Behavioral Science course	3
PSCI 1040, American Government	3	PSCI 1050, American Government	3
Technical Elective (advanced)	<u>3</u>	CSCE Specialty Area Elective	<u>3</u>
Total Hours	15	Total Hours	15
SENIOR YEAR			
FALL		SPRING	
CSCE 4910, Computer Engineering Design I	3	CSCE 4915, Computer Engineering Design II	3
CSCE Specialty Area Elective	3	CSCE Specialty Area Elective	3
Mathematics or Science Elective (advanced)	3	Technical Elective (advanced)	3
Visual and Performing Arts course	3	Understanding Human Community (adv) course	3
Humanities course	<u>3</u>	CSCE 4010, Engineering Ethics	<u>2</u>
Total Hours	15	Total Hours	14

PLEASE NOTE: This is an unofficial sample schedule.

Students must meet with their advisor each semester for individual scheduling, program decisions, etc. Engineering Foundations requirements must be met in order to transition from pre-major to full major in order to progress in the program.

Bachelor of Science: COMPUTER SCIENCE

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University Core

ENGLISH (3 Hours)

Grade of "D" not accepted.

UNITED STATES HISTORY (6 Hours)

HIST 2610 _____
HIST 2620 _____

Honors equivalents, History 4700 or advanced US-Topic History course(s) may substitute for the courses above.

POLITICAL SCIENCE (6 Hours)

PSCI 1040 _____
PSCI 1050 _____

If you are transferring credit for either PSCI course, check with your advisor. Do not make an assumption about the application of course(s) taken elsewhere.

SOCIAL AND BEHAVIORAL SCIENCES (3 Hours)

VISUAL / PERFORMING ARTS (3 Hours)

HUMANITIES (3 Hours)

UNDERSTANDING THE HUMAN COMMUNITY (6 Hours)

Engineering Foundations

MATHEMATICS (16 Hours)

MATH 1710 (4 Hours) _____
MATH 1720 (3 Hours) _____
MATH 1780 (3 hours) _____
MATH 2770 (3 Hours) _____
MATH 2700 (3 Hours) _____

LABORATORY SCIENCE (16 Hours)

PHYS 1710-1730 (4 Hours) _____
PHYS 2220-2240 (4 Hours) _____
CHEM 1410-1430 (4 Hours) **or** _____
 1415-1435 (4 Hours) _____
BIOL 1710-1730 (4 Hours) **or** _____
 1720-1740 _____

TECHNICAL COMMUNICATIONS (3 Hours)

TECM 2700 (3 Hours) _____

Grades of "D" not accepted. Needs 2.5 GPA in each area.

Major Requirements: Computer Science

ELECTRICAL ENGINEERING (3 Hours)

EENG 2710 (3 Hours) _____

ADVANCED TECHNICAL WRITING (3 Hours)

1 course from TECM 4180, 4190 or 4250 _____

Completion of 3 courses earns a certificate in Technical Writing.

COMPUTER SCIENCE and ENGINEERING (45 Hours)

CSCE 1030 (4 Hours) _____
CSCE 1040 (3 Hours) _____
CSCE 2050 (3 Hours) _____
CSCE 2610 (3 Hours) _____
CSCE 3110 (3 Hours) _____
CSCE 3600 (3 Hours) _____
CSCE 4010 (2 Hours) _____
CSCE 4110 (3 Hours) _____
CSCE 4410 (3 Hours) _____

CSCE Advanced Elective (3 Hours) _____
CSCE Advanced Elective (3 Hours) _____
CSCE Advanced Elective (3 Hours) _____
CSCE Advanced Elective (3 Hours) _____
CSCE Advanced Elective (3 Hours) _____
CSCE Advanced Elective (3 Hours) _____

A maximum of 6 hours can be applied to Advanced Electives from CSCE 4890, 4920, 4940, or 4950.

Completion of CSCE 3530, 4550, & 4560 for Advanced Electives earns a certificate from the Committee on National Security Systems.

Completion of CSCE 4210, 4215, 4220, & 4250 for Advanced Electives earns a certificate in Game Programming.

Grades of "D" not accepted. Needs 2.75 GPA in CSCE courses.

ELECTIVE COURSES

You may need elective courses to help reach 123 Total Hours & 45 Advanced Hours. Check with your advisor concerning elective Courses.

Bachelor of Science: Major in Computer Science

Sample Four-Year Schedule

FRESHMAN YEAR			
FALL		SPRING	
CSCE 1030, Computer Science I	4	CSCE 1040, Computer Science II	3
ENGL 1310 or 1313, College Writing I	3	TECM 2700, Technical Writing	3
PSCI 1040, American Government	3	MATH 1720, Calculus II	3
MATH 1710, Calculus I	4	PHYS 1710, Mechanics	3
CHEM 1410 or 1415, Chemistry	3	PHYS 1730, Mechanics Lab	1
CHEM 1430 or 1435, Chemistry Lab	<u>1</u>	Visual and Performing Arts course	<u>3</u>
Total Hours	18	Total Hours	16
SOPHOMORE YEAR			
FALL		SPRING	
CSCE 2050, Computer Science III	3	CSCE 2610, Computer Organization	3
EENG 2710, Digital Logic	3	CSCE 3110, Data Structures	3
PHYS 2220, Electricity and Magnetism	3	MATH 1780, Introduction to Statistical Analysis	3
PHYS 2240, Electricity and Magnetism Lab	1	BIOL 1710 or 1720, Principles of Biology	3
MATH 2770, Discrete Mathematics	3	BIOL 1730 or 1740, Principles of Biology Lab	1
HIST 2610 or 2620, United States History	<u>3</u>	Understanding Human Community course	<u>3</u>
Total Hours	16	Total Hours	16
JUNIOR YEAR			
FALL		SPRING	
CSCE 3600, Principles of Systems	3	CSCE Advanced Elective	3
MATH 2700, Linear Algebra	3	CSCE Advanced Elective	3
TECM 4180 or 4190 or 4250	3	Humanities course	3
CSCE Advanced Elective	3	HIST 4700, Texas History	3
Advanced Elective	<u>3</u>	Understanding Human Community course (adv)	<u>3</u>
Total Hours	15	Total Hours	15
SENIOR YEAR			
FALL		SPRING	
CSCE 4110, Analysis of Algorithms	3	CSCE 4010, Engineering Ethics	2
CSCE 4410, Software Development I	3	CSCE Advanced Elective	3
CSCE Advanced Elective	3	CSCE Advanced Elective	3
Advanced Elective	3	Social and Behavioral Sciences course	3
PSCI 1050, American Government	<u>3</u>	Advanced Elective	<u>3</u>
Total Hours	15	Total Hours	15

PLEASE NOTE: This is an unofficial sample schedule.

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Bachelor of Science: ELECTRICAL ENGINEERING

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University Core

ENGLISH (3 Hours)

Grade of "D" not accepted.

UNITED STATES HISTORY (6 Hours)

HIST 2610 _____

HIST 2620 _____

Honors equivalents, HIST 4700 or advanced US-Topic History course(s) may substitute for the courses above.

POLITICAL SCIENCE (6 Hours)

PSCI 1040 _____

PSCI 1050 _____

If you are transferring credit for either PSCI course, check with your advisor. Do not make an assumption about the application of course(s) taken elsewhere.

SOCIAL AND BEHAVIORAL SCIENCES (3 Hours)

VISUAL / PERFORMING ARTS (3 Hours)

HUMANITIES (3 Hours)

UNDERSTANDING THE HUMAN COMMUNITY (6 Hours)

Engineering Foundations

MATHEMATICS (19 Hours)

MATH 1710 (4 Hours) _____

MATH 1720 (3 Hours) _____

MATH 2700 (3 Hours) _____

MATH 2730 (3 Hours) _____

MATH 3310 (3 Hours) _____

MATH 3680 (3 Hours) _____

SCIENCE (12 Hours)

PHYS 1710-1730 (4 Hours) _____

PHYS 2220-2240 (4 Hours) _____

CHEM 1410-1430 (4 Hours) **or** _____

1415-1435 (4 Hours) _____

TECHNICAL COMMUNICATIONS (3 Hours)

TECM 2700 (3 Hours) _____

Grades of "D" not accepted. Needs 2.5 GPA in each area.

Major Requirements: Electrical Engineering

ELECTRICAL ENGINEERING COURSES (36 Hours)

EENG 2610 (3 Hours) _____

EENG 2710 (3 Hours) _____

EENG 2620 (3 Hours) _____

EENG 3410 (3 Hours) _____

EENG 3510 (3 Hours) _____

EENG 3520 (3 Hours) _____

EENG 3710 (3 Hours) _____

EENG 3810 (3 Hours) _____

EENG 4710 (3 Hours) _____

EENG 4810 (3 Hours) _____

EENG 4010 (6 Hours) _____

PROJECT COURSES (18 Hours)

EENG 1910 (2 Hours) _____

EENG 1920 (2 Hours) _____

EENG 2910 (2 Hours) _____

EENG 2920 (2 Hours) _____

EENG 3910 (2 Hours) _____

EENG 3920 (2 Hours) _____

EENG 4910 (3 Hours) _____

EENG 4990 (3 Hours) _____

SUPPORT COURSES (10 Hours)

CSCE 1020 (4 Hours) _____

MGMT 3830 (3 Hours) _____

MGMT 3850 (3 Hours) _____

Grades of "D" not accepted. Needs 2.5 GPA in EENG courses.

ELECTIVE COURSES

You may need elective courses to help reach 128 Total Hours & 45 Advanced Hours. Check with your advisor concerning elective courses.

Bachelor of Science: Major in Electrical Engineering

Sample Four-Year Schedule

FRESHMAN YEAR

FALL

CHEM 1410 or 1415, Chemistry	3
CHEM 1430 or 1435, Chemistry Lab	1
ENGL 1310 or 1313, College Writing I	3
MATH 1710, Calculus I	4
EENG 1910, Project I	2
PSCI 1040, American Government	<u>3</u>
Total Hours	16

SPRING

TECM 2700, Technical Writing	3
EENG 2710, Digital Logic	3
PHYS 1710, Mechanics	3
PHYS 1730, Mechanics Lab	1
EENG 1920, Project II	2
MATH 1720, Calculus II	<u>3</u>
Total Hours	15

SOPHOMORE YEAR

FALL

CSCE 1020, Program Development	4
EENG 2610, Circuits Analysis	3
EENG 2910, Project III	2
MATH 3310, Differential Equations	3
PHYS 2220, Electricity & Magnetism	3
PHYS 2240, Electricity & Magnetism Lab	<u>1</u>
Total Hours	16

SPRING

HIST 2610, U.S. History to 1865	3
Understanding Human Community course	3
MATH 2730, Multivariable Calculus	3
EENG 2620, Signals and Systems	3
Visual and Performing Arts course	3
EENG 2920, Project IV	<u>2</u>
Total Hours	17

JUNIOR YEAR

FALL

PSCI 1050, American Government	3
EENG 3510, Electronics I	3
MATH 3680, Applied Statistics	3
HIST 2620, U.S. History from 1865	3
EENG 3410, Engr. Electromagnetics	3
EENG 3910, Project V	<u>2</u>
Total Hours	17

SPRING

EENG 3710, Computer Organization	3
EENG 3520, Electronics II	3
EENG 3810, Communication Systems	3
MATH 2700, Linear Algebra	3
EENG 3920, Project VI	2
Humanities course	<u>3</u>
Total Hours	17

SENIOR YEAR

FALL

EENG 4010, Technical Elective	3
EENG 4710, VSLI Design	3
EENG 4910, Project VII	3
Social and Behavioral Science course	3
MGMT 3830, Operations	<u>3</u>
Total Hours	15

SPRING

EENG 4010, Technical Elective	3
EENG 4810, Computer Networks	3
EENG 4990, Project VIII	3
Understanding Human Community course	3
MGMT 3850, Entrepreneurship	<u>3</u>
Total Hours	15

PLEASE NOTE: This is an unofficial sample schedule. Students must meet with their advisor each semester for individual scheduling, program decisions, etc. Engineering Foundations requirements must be met in order to transition from pre-major to full major in order to progress in the program.

Bachelor of Science in Engineering Technology :
ELECTRICAL ENGINEERING TECHNOLOGY

This is an unofficial simplified guide effective Fall 2010

University Core

ENGLISH (3 Hours)

Grade of "D" not accepted.

UNITED STATES HISTORY (6 Hours)

HIST 2610 _____

HIST 2620 _____

Honors equivalents ,History 4700 or advanced US-Topic History course(s) may substitute for the courses above.

POLITICAL SCIENCE (6 Hours)

PSCI 1040 _____

PSCI 1050 _____

If you are transferring credit for either PSCI course, check with your advisor. Do not make an assumption about the application of course(s) taken elsewhere.

SOCIAL AND BEHAVIORAL SCIENCES (3 Hours)

Please note that ENGR 1030 is a Major Requirement & double-dips for this category.

VISUAL / PERFORMING ARTS (3 Hours)

HUMANITIES (3 Hours)

UNDERSTANDING THE HUMAN COMMUNITY (6 Hours)

Please note that ENGR 2060 is a Major Requirement & double-dips for 3 Hours of this category.

Engineering Foundations

MATHEMATICS (7 Hours)

MATH 1710 (4 Hours) _____

MATH 1720 (3 Hours) _____

SCIENCE (12 Hours)

PHYS 1710-1730 (4 Hours) _____

PHYS 2220-2240 (4 Hours) _____

CHEM 1410-1430 (4 Hours) or
 1415-1435 (4 Hours) _____

TECHNICAL COMMUNICATIONS (3 Hours)

TECM 2700 (3 Hours) _____

Grades of "D" not accepted. Needs 2.5 GPA for each area.

Major Requirements: Electrical Engr. Tech.

TECHNOLOGICAL SYSTEMS (3 Hours)

ENGR 1030 (3 Hours) _____

Grade of "D" not accepted.

PROFESSIONAL PRESENTATIONS (3 Hours)

ENGR 2060 (3 Hours) _____

Grade of "D" not accepted.

ENGINEERING ETHICS (2 Hours)

CSCE 4010 (2 Hours) _____

Grade of "D" not accepted.

ELECTRICAL ENGINEERING TECHNOLOGY REQUIREMENTS

(55 hours)

ENGR 2405 (4 Hours) _____

ENGR 2720 (4 Hours) _____

ENGR 2750 (4 Hours) _____

ELET 3700 (4 Hours) _____

ELET 3720 (4 Hours) _____

ELET 3740 (4 hours) _____

ELET 3750 (4 Hours) _____

ELET 3760 (4 Hours) _____

ELET 4710 (4 Hours) _____

ELET 4720 (4 Hours) _____

ELET 4730 (4 Hours) _____

ELET 4770 (4 Hours) _____

ELET 4780 (1 Hours) _____

ELET 4790 (3 Hours) _____

MFET 4190 (3 Hours) _____

ADVANCED TECHNICAL OPTION COURSES (3 Hours)

3 advanced hours (1 course); _____

Choose a 3000 or 4000 level course from the areas of Engineering, Business, Biology, Chemistry, Economics, Math, or Physics. Check with your advisor for approval .

TECHNICAL OPTION COURSES (12 Hours)

12 Hours (3-4 courses); _____

Choose courses from the areas of Engineering, Business, Biology, Chemistry, Economics, Math, or Physics. Check with your advisor for approval .

Grades of "D" not accepted. Needs 2.5 GPA in courses above.

ELECTIVE COURSES

You may need elective courses to help reach 124 Total Hours & 42 Advanced Hours. Check with your advisor concerning elective courses.

Bachelor of Science in Engineering Technology: Major in Electrical Engineering Technology

Sample Four-Year Schedule

FRESHMAN YEAR

FALL

CHEM 1410 or 1415, Chemistry	3
CHEM 1430 or 1435, Chemistry Lab	1
ENGL 1310 or 1313, College Writing I	3
MATH 1710, Calculus I	4
PSCI 1040, American Government	3
HIST 2610, U.S. History to 1865	<u>3</u>
Total Hours	17

SPRING

PSCI 1050, American Government	3
TECM 2700, Technical Writing	3
Visual & Performing Arts course	3
HIST 2620, U.S. History since 1865	3
MATH 1720, Calculus II	3
ENGR 1030, Technological Systems	<u>3</u>
Total Hours	18

SOPHOMORE YEAR

FALL

ENGR 2405, Fund of Electrical Engr	4
ENGR 2720, Digital Logic	4
ENGR 2060, Professional Presentations	3
PHYS 1710, Mechanics	3
PHYS 1730, Mechanics Lab	<u>1</u>
Total Hours	15

SPRING

Technical Elective	3
ENGR 2750, Intro to Microprocessors	4
PHYS 2220, Electricity & Magnetism	3
PHYS 2240, Electricity & Magnetism Lab	1
Humanities course	<u>3</u>
Total Hours	14

JUNIOR YEAR

FALL

ELET 3700, Circuit Analysis	4
ELET 3720, Electronics I	4
ELET 3750, Digital Systems	4
Technical Elective	<u>3</u>
Total Hours	15

SPRING

ELET 3740, Electronics II	4
ELET 3760, Design of DSP Systems	4
Understanding Human Community course	3
Technical Elective	<u>3</u>
Total Hours	14

SENIOR YEAR

FALL

ELET 4720, Control Systems	4
ELET 4710, High Frequency Systems I	4
Technical Elective	3
ELET 4780, Senior Design	1
ELET 4730, Analog Mixed Signal Electronics	<u>4</u>
Total Hours	16

SPRING

ELET 4770, High Frequency Systems II	4
ELET 4790, Senior Design II	3
MFET 4190, Quality Assurance	3
CSCE 4010, Engineering Ethics	2
Advanced Level Technical Elective	<u>3</u>
Total Hours	15

PLEASE NOTE: This is an unofficial sample schedule. Students must meet with their advisor each semester for individual scheduling, program decisions, etc. Engineering Foundations requirements must be met in order to transition from pre-major to full major in order to progress in the program.

INFORMATION TECHNOLOGY

This is an unofficial simplified guide effective Fall 2010

University Core

Major Requirements: Information Tech.

ENGLISH (3 Hours)

Grade of "D" not accepted.

UNITED STATES HISTORY (6 Hours)

HIST 2610 _____
 HIST 2620 _____

Honors equivalents, History 4700 or advanced US-Topic History course(s) may substitute for the courses above.

POLITICAL SCIENCE (6 Hours)

PSCI 1040 _____
 PSCI 1050 _____

If you are transferring credit for either PSCI course, check with your advisor. Do not make an assumption about the application of course(s) taken elsewhere.

SOCIAL AND BEHAVIORAL SCIENCES (3 Hours)

VISUAL / PERFORMING ARTS (3 Hours)

HUMANITIES (3 Hours)

UNDERSTANDING THE HUMAN COMMUNITY (6 Hours)

Engineering Foundations

MATHEMATICS (10 Hours)

MATH 1710 (4 Hours) _____
 MATH 1780 (3 hours) _____
 MATH 2770 (3 Hours) _____

SCIENCE (12 Hours)

Choose 3 courses & labs from the list below:

PHYS 1710-1730 (4 Hours) _____
 CHEM 1410-1430 (4 Hours) or _____
 1415-1435 (4 Hours) _____
 BIOL 1710-1730 _____
 BIOL 1720-1740 _____

TECHNICAL COMMUNICATIONS (3 Hours)

TECM 2700 (3 Hours) _____

Grades of "D" not accepted. Needs 2.5 GPA for each area.

COMPUTER SCIENCE and ENGINEERING (48 Hours)

CSCE 1030 (4 Hours) _____
 CSCE 1035 (3 Hours) _____
 CSCE 1040 (3 Hours) _____
 CSCE 1045 (3 Hours) _____
 CSCE 2050 (3 Hours) _____
 CSCE 2615 (3 hours) _____
 CSCE 3055 (3 Hours) _____
 CSCE 3535 (3 Hours) _____
 CSCE 3605 (3 Hours) _____
 CSCE 4355 (3 Hours) _____
 CSCE 4905 (3 Hours) _____
 CSCE 4925 (3 Hours) _____
 CSCE 4010 (2 Hours) _____

CSCE Adv. Concentration Elective (3 Hours) _____
 CSCE Adv. Concentration Elective (3 Hours) _____
 CSCE Adv. Concentration Elective (3 Hours) _____

SUPPORTING AREA (18 Hours)

(3 Hours) _____
 (3 Hours) _____
 (3 Hours) _____
 (3 hours) _____
 (3 Hours) _____

You must choose 1 concentration & 1 supporting area. You must complete approved courses for each. Check with your advisor concerning approved classes. Suggestions include, but are not limited to:

- Game Development
- Information Security
- Networking
- Business (Pre-MBA)
- Pre-Law
- Pre-Med

A maximum of 6 hours can be applied to concentration and/or supporting area from CSCE 4890, 4920, 4940, 4950 or 4980.

Completion of CSCE 3530, 4550, & 4560 for concentration Electives and/or supporting areas earns a certificate from the Committee on National Security Systems.

Completion of CSCE 4210, 4215, 4220, & 4250 for concentration Electives and/or supporting area earns a certificate in Game Programming.

Grades of "D" not accepted. Needs 2.75 GPA in CSCE courses.

ELECTIVE COURSES

You may need elective courses to help reach 121 Total Hours & 42 Advanced Hours. Check with your advisor concerning elective courses.

Bachelor of Arts: Major in Information Technology

Sample Four-Year Schedule

FRESHMAN YEAR			
FALL		SPRING	
CSCE 1030, Computer Science I	4	CSCE 1040, Computer Science II	3
ENGL 1310 or 1313, College Writing I	3	CSCE 1035, Information Systems I	3
PSCI 1040, American Government	3	TECM 2700, Technical Writing	3
MATH 1710, Calculus I	4	PSCI 1050, American Government	3
CHEM 1410, Chemistry I	3	PHYS 1710, Mechanics	3
CHEM 1430, Lab for Chemistry I	<u>1</u>	PHYS 1730, Lab for Mechanics	<u>1</u>
Total Hours	18	Total Hours	16
SOPHOMORE YEAR			
FALL		SPRING	
CSCE 2050, Computer Science III	3	CSCE 2615, Ent. Architecture/Design	3
CSCE 1045, Information Systems II	3	MATH 1780, Probability Models	3
HIST 2610, United States History	3	HIST 2620, United States History	3
BIOL 1710, Biology I	3	Humanities course	3
BIOL 1730, Lab for Biology I	1	Social and Behavioral Sciences course	<u>3</u>
MATH 2770, Discrete Mathematics	<u>3</u>	Total Hours	15
Total Hours	16		
JUNIOR YEAR			
FALL		SPRING	
CSCE 3055, IT Project Management	3	CSCE 3535, Networks/Security Mgmt	3
CSCE 4355, Database/Info. Int.	3	CSCE Concentration Area	3
Supporting Area	3	Supporting Area	3
Understanding Human Community (Adv)	3	Supporting Area	3
Visual and Performing Arts course	<u>3</u>	Understanding Human Community (Adv)	<u>3</u>
Total Hours	15	Total Hours	15
SENIOR YEAR			
FALL		SPRING	
CSCE 3605, IT Systems/Mgmt	3	CSCE 4010, Engineering Ethics	2
CSCE 4905, Capstone I	3	CSCE 4925, Capstone II	3
CSCE Concentration Area	3	CSCE Concentration Area	3
Supporting Area (Adv)	3	Supporting Area (Adv)	3
Supporting Area	<u>3</u>	Advanced Elective	<u>3</u>
Total Hours	15	Total Hours	14

PLEASE NOTE: This is an unofficial sample schedule. Students must meet with their advisor each semester for individual scheduling, program decisions, etc. Engineering Foundations requirements must be met in order to transition from pre-major to full major in order to progress in the program.

Bachelor of Science:

MATERIALS SCIENCE & ENGINEERING

This is an unofficial simplified guide effective Fall 2010

University Core

Major Requirements: Materials Sci. & Engr.

ENGLISH (3 Hours)

Grade of "D" not accepted.

UNITED STATES HISTORY (6 Hours)

HIST 2610 _____

HIST 2620 _____

Honors equivalents , HIST 4700 or advanced US-Topic History course(s) may substitute for the courses above.

POLITICAL SCIENCE (6 Hours)

PSCI 1040 _____

PSCI 1050 _____

If you are transferring credit for either PSCI course, check with your advisor. Do not make an assumption about the application of course(s) taken elsewhere.

SOCIAL AND BEHAVIORAL SCIENCES (3 Hours)

VISUAL / PERFORMING ARTS (3 Hours)

HUMANITIES (3 Hours)

UNDERSTANDING THE HUMAN COMMUNITY (6 Hours)

Please note that ENGR 2060 (3 Hours) is a Major Requirement & double-dips for 3 Hours of this category .

Engineering Foundations

MATHEMATICS (10 Hours)

MATH 1710 (4 Hours) _____

MATH 1720 (3 Hours) _____

MATH 3310 (3 Hours) _____

SCIENCE (18 Hours)

PHYS 1710-1730 (4 Hours) _____

PHYS 2220-2240 (4 Hours) _____

PHYS 3010 (3 Hours) _____

CHEM 1410-1430 * (4 Hours) _____

CHEM 1420 *(3 Hours) _____

TECHNICAL COMMUNICATIONS (3 Hours)

TECM 2700 (3 Hours) _____

Grades of "D" not accepted. Needs 2.5 GPA for each area.

PROFESSIONAL PRESENTATIONS (3 Hours)

ENGR 2060 (3 Hours) _____

MATERIALS SCIENCE & ENGINEERING REQUIREMENTS

(59 Hours)

MTSE 3010 (3 Hours) _____

MTSE 3020 (3 hours) _____

MTSE 3030 (3 hours) _____

MTSE 3040 (3 hours) _____

MTSE 3050 (3 Hours) _____

MTSE 3060 (3 hours) _____

MTSE 3070 (3 hours) _____

MTSE 3080 (3 Hours) _____

MTSE 3090 (1 Hour) _____

MTSE 3100 (1 Hour) _____

MTSE 4010 (3 Hours) _____

MTSE 4030 (3 hours) _____

MTSE 4050 (3 Hours) _____

MTSE 4060 (3 Hours) _____

MTSE 4090 (2 Hours) _____

MTSE 4100 (2 hours) _____

MEEN 2130 (4 Hours) _____

ENGR 2332 (4 hours) _____

ENGR 3450 (3 Hours) _____

Plus 6 hours (2 courses) of advanced level MTSE electives

Grades of "D" not accepted. Needs 2.5 GPA in MTSE courses.

ELECTIVE COURSES

You may need elective courses to help reach 120 Total Hours & 45 Advanced Hours. Check with your advisor concerning elective courses.

• Please note that CHEM 1415-1435 cannot be approved in substitution for CHEM 1410-1430 or 1420 for MTSE students.

Bachelor of Science: Major in Materials Science & Engineering

Sample Four-Year Schedule

FRESHMAN YEAR

FALL

CHEM 1410, General Chemistry	3
CHEM 1430, General Chemistry Lab	1
ENGL 1310 or 1313, College Writing I	3
MATH 1710, Calculus I	4
HIST 2610, U.S. History to 1865	<u>3</u>
Total Hours	14

SPRING

PHYS 1710, Mechanics	3
PHYS 1730, Mechanics Lab	1
TECM 2700, Tech Writing	3
HIST 2620, U.S. History since 1865	3
MATH 1720, Calculus II	3
CHEM 1420, General Chemistry II	<u>3</u>
Total Hours	16

SOPHOMORE YEAR

FALL

MATH 3310, Differential Equations	3
MEEN 2130, Statics & Dynamics	4
ENGR 2060, Professional Presentations	3
PHYS 2220, Electricity & Magnetism	3
PHYS 2240, Electricity & Magnetism Lab	<u>1</u>
Total Hours	14

SPRING

Social & Behavioral Sciences course	3
ENGR 2332, Mechanics of Materials	4
PHYS 3010, Modern Physics	3
ENGR 3450, Engineering Materials	3
PSCI 1050, American Government	<u>3</u>
Total Hours	16

JUNIOR YEAR

FALL

MTSE 3010, Bonding & Structure	3
MSTE 3020, Micro & Characterization	3
MTSE 3030, Thermo & Phase Diagrams	3
MTSE 3040, Transport Phenomena	3
MTSE 3090, Materials Science & Engr. Lab I	1
PSCI 1040, American Government	<u>3</u>
Total Hours	16

SPRING

MTSE 3050, Mech Properties	3
MTSE 3060, Phase Transformations	3
MTSE 3070, Elect Opt & Mag Properties	3
MTSE 3080, Materials Processing	3
MTSE 3100, Materials Science & Engr. Lab II	1
Visual and Performing Arts course	<u>3</u>
Total Hours	16

SENIOR YEAR

FALL

MTSE 4010, Phys Metallurgy Principles	3
MTSE 4030, Ceramic Science & Engr.	3
MTSE 4050, Polymer Science & Engr.	3
MTSE 4090, Senior Research Project I	2
Humanities course	<u>3</u>
Total Hours	14

SPRING

MTSE Advanced Elective (4000 level)	3
MTSE Advanced Elective (4000 level)	3
Understanding Human Community course	3
MTSE 4060, Materials Selection & Perform.	3
MTSE 4100, Senior Research Project II	<u>2</u>
Total Hours	14

PLEASE NOTE: This is an unofficial sample schedule. Students must meet with their advisor each semester for individual scheduling, program decisions, etc. Engineering Foundations requirements must be met in order to transition from pre-major to full major in order to progress in the program.

Bachelor of Science:

MECHANICAL & ENERGY ENGINEERING

This is an unofficial simplified guide effective Fall 2010

University Core

ENGLISH (3 Hours)

Grade of "D" not accepted.

UNITED STATES HISTORY (6 Hours)

HIST 2610 _____
HIST 2620 _____

Honors equivalents , HIST 4700 or advanced US-Topic History course(s) may substitute for the courses above.

POLITICAL SCIENCE (6 Hours)

PSCI 1040 _____
PSCI 1050 _____

If you are transferring credit for either PSCI course, check with your advisor. Do not make an assumption about the application of course(s) taken elsewhere.

SOCIAL AND BEHAVIORAL SCIENCES (3 Hours)

VISUAL / PERFORMING ARTS (3 Hours)

HUMANITIES (3 Hours)

UNDERSTANDING THE HUMAN COMMUNITY (6 Hours)

Please note that ENGR 2060 is a Major Requirement & double-dips for 3 Hours of this category.

Engineering Foundations

MATHEMATICS (16 Hours)

MATH 1710 (4 Hours) _____
MATH 1720 (3 Hours) _____
MATH 2700 (3 Hours) _____
MATH 2730 (3 Hours) _____
MATH 3310 (3 Hours) _____

SCIENCE (12 Hours)

PHYS 1710-1730 (4 Hours) _____
PHYS 2220-2240 (4 Hours) _____
CHEM 1415-1435 * (4 Hours) _____

TECHNICAL COMMUNICATIONS (3 Hours)

TECM 2700 (3 Hours) _____

Grades of "D" not accepted. Needs 2.5 GPA for each area.

Major Requirements: Mechanical & Energy Engr.

PROFESSIONAL PRESENTATIONS (3 Hours)

ENGR 2060 (3 Hours) _____

MECHANICAL & ENERGY ENGINEERING REQUIREMENTS (66 Hours)

MEEN 1110 (1 Hour) _____
MEEN 1210 (1 hour) _____
MEEN 2130 (4 Hours) _____
MEEN 2210 (3 Hours) _____
MEEN 2250 (3 Hours) _____
MEEN 3110 (3 Hours) _____
MEEN 3120 (3 Hours) _____
MEEN 3125 (2 hours) _____
MEEN 3130 (3 Hours) _____
MEEN 3210 (3 Hours) _____
MEEN 3230 (3 hours) _____
MEEN 3240 (2 Hours) _____
MEEN 3242 (2 Hours) _____
MEEN 4150 (3 Hours) _____
MEEN 4250 (3 Hours) _____

EENG 2610 (3 Hours) _____

ENGR 2332 (4 Hours) _____
ENGR 3450 (3 Hours) _____
ENGR 3451 (1 Hour) _____

CSCE 1020 (4 Hours) _____

6 hours (2 courses) of advanced level MEEN electives

6 hours (2 courses) of advanced level technical electives

Grades of "D" not accepted. Needs 2.5 GPA in MEEN courses.

ELECTIVE COURSES

You may need elective courses to help reach 127 Total Hours & 42 Advanced Hours. Check with your advisor concerning elective courses.

** Please note that CHEM 1410-1430 cannot be approved for MEEN students unless CHEM 1420-1440 is completed in addition to CHEM 1410-1430.*

Bachelor of Science: Major in Mechanical & Energy Engineering

Sample Four-Year Schedule

FRESHMAN YEAR

FALL

CHEM 1415, Chemistry for Engineers	3
CHEM 1435, Chemistry for Engineers Lab	1
ENGL 1310 or 1313, College Writing I	3
MATH 1710, Calculus I	4
MEEN 1110, MEE Practice I	1
CSC 1020, Intro. Computer Programming	<u>4</u>
Total Hours	16

SPRING

PHYS 1710, Mechanics	3
PHYS 1730, Mechanics Lab	1
TECM 2700, Tech Writing	3
PSCI 1040, American Government	3
MEEN 1210, MEE Practice II	1
MATH 1720, Calculus II	3
HIST 2610, U.S. History to 1865	<u>3</u>
Total Hours	17

SOPHOMORE YEAR

FALL

MATH 2730, Multivariable Calculus	3
MATH 2700, Linear Algebra	3
ENGR 2060, Professional Presentations	3
PHYS 2220, Electricity & Magnetism	3
PHYS 2240, Electricity & Magnetism Lab	1
MEEN 2130, Statics & Dynamics	<u>4</u>
Total Hours	17

SPRING

MATH 3310, Differential Equations	3
ENGR 2332, Mechanics of Materials	4
MEEN 2250, Computer Aided Engineering	3
MEEN 2210, Thermodynamics I	3
HIST 2620, U.S. History from 1865	<u>3</u>
Total Hours	16

JUNIOR YEAR

FALL

MEEN 3240, MEE Lab 1	2
EENG 2610, Circuits Analysis	3
ENGR 3450, Engineering Materials	3
MEEN 3120, Fluids	3
ENGR 3451, Engineering Materials Lab	1
MEEN 3110, Thermodynamics II	<u>3</u>
Total Hours	15

SPRING

MEEN 3230, Dynamics, Vibrations, Control	3
MEEN 3242, MEE Lab II	2
MEEN 3130, Machines	3
MEEN 3125, Thermal Projects	2
MEEN 3210, Heat Transfer	3
PSCI 1050, American Government	<u>3</u>
Total Hours	16

SENIOR YEAR

FALL

MEEN 4150, Design I	3
Advanced MEEN Elective	3
Advanced Technical Elective	3
Social & Behavioral Sciences course	3
Humanities course	<u>3</u>
Total Hours	15

SPRING

MEEN 4250, Design II	3
Advanced MEEN Elective	3
Advanced Technical Elective	3
Understanding Human Community course	3
Visual and Performing Arts course	<u>3</u>
Total Hours	15

PLEASE NOTE: This is an unofficial sample schedule. Students must meet with their advisor each semester for individual scheduling, program decisions, etc. Engineering Foundations requirements must be met in order to transition from pre-major to full major in order to progress in the program.

Bachelor of Science in Engineering Technology :

MECHANICAL ENGINEERING TECHNOLOGY

This is an unofficial simplified guide effective Fall 2010

University Core

ENGLISH (3 Hours)

Grade of "D" not accepted.

UNITED STATES HISTORY (6 Hours)

HIST 2610 _____
HIST 2620 _____

Honors equivalents ,History 4700 or advanced US-Topic History course(s) may substitute for the courses above.

POLITICAL SCIENCE (6 Hours)

PSCI 1040 _____
PSCI 1050 _____

If you are transferring credit for either PSCI course, check with your advisor. Do not make an assumption about the application of course(s) taken elsewhere.

SOCIAL AND BEHAVIORAL SCIENCES (3 Hours)

Please note that ENGR 1030 is a Major Requirement & double-dips for this category.

VISUAL / PERFORMING ARTS (3 Hours)

HUMANITIES (3 Hours)

UNDERSTANDING THE HUMAN COMMUNITY (6 Hours)

Please note that ENGR 2060 is a Major Requirement & double-dips for 3 Hours of this category.

Engineering Foundations

MATHEMATICS (7 Hours)

MATH 1710 (4 Hours) _____
MATH 1720 (3 Hours) _____

SCIENCE (12 Hours)

PHYS 1710-1730 (4 Hours) _____
PHYS 2220-2240 (4 Hours) _____
CHEM 1410-1430 (4 Hours) **or** _____
1415-1435 (4 Hours) _____

TECHNICAL COMMUNICATIONS (3 Hours)

TECM 2700 (3 Hours) _____

Grades of "D" not accepted. Needs 2.5 GPA for each area.

Major Requirements: Mechanical Engr. Tech.

TECHNOLOGICAL SYSTEMS (3 Hours)

ENGR 1030 (3 Hours) _____

PROFESSIONAL PRESENTATIONS (3 Hours)

ENGR 2060 (3 Hours) _____

ENGINEERING ETHICS (2 Hours)

CSCE 4010 (2 Hours) _____

MECHANICAL ENGINEERING TECHNOLOGY REQUIREMENTS (62 Hours)

ENGR 1304 (3 Hours) _____
ENGR 2301 (3 Hours) _____
ENGR 2302 (3 Hours) _____
ENGR 2332 (4 Hours) _____
ENGR 2405 (4 Hours) _____
ENGR 3450 (3 Hours) _____
ENGR 3451 (1 Hour) _____

MEET 3650 (3 Hours) _____
MEET 3940 (3 Hours) _____
MEET 3990 (3 Hours) _____
MEET 4050 (3 Hours) _____
MEET 4350 (3 Hours) _____
MEET 4360 (2 Hours) _____
MEET 4780 (1 Hour) _____
MEET 4790 (3 Hours) _____

MFET 3110 (4 Hours) _____
MFET 4190 (3 Hours) _____
MFET 4200 (2 Hours) _____
MFET 4210 (3 Hours) _____

CSCE 1020 (4 Hours) _____
ELET 3980 (3 Hours) _____

ADVANCED TECHNICAL OPTION COURSES (6 Hours)

6 advanced hours (2 courses); _____

TECHNICAL OPTION COURSES (3 Hours)

3 hours (1 course); _____

Choose 2 courses at 3000 or 4000 level & 1 course from any level from the areas of Engineering, Business, Biology, Chemistry, Economics, Math, or Physics. Check with your advisor for approval.

Grades of "D" not accepted . Needs 2.5 GPA in courses above.

ELECTIVE COURSES

You may need elective courses to help reach 124 Total Hours & 42 Advanced Hours. Check with your advisor concerning Elective courses.

Bachelor of Science in Engineering Technology: Major in Mechanical Engineering Technology

Sample Four-Year Schedule

FRESHMAN YEAR

FALL

CHEM 1410 or 1415, Chemistry	3
CHEM 1430 or 1435, Chemistry Lab	1
ENGL 1310 or 1313, College Writing I	3
MATH 1710, Calculus I	4
ENGR 1304, Engineering Graphics	3
PSCI 1040, American Government	<u>3</u>
Total Hours	17

SPRING

TECM 2700, Technical Writing	3
MATH 1720, Calculus II	3
PSCI 1050, American Government	3
PHYS 1710, Mechanics	3
PHYS 1730, Mechanics Lab	1
ENGR 1030, Technological Systems	<u>3</u>
Total Hours	16

SOPHOMORE YEAR

FALL

CSCE 1020, Program Development	4
HIST 2610, U.S. History to 1865	3
ENGR 2301, Statics	3
ENGR 2405, Fund. Of Electrical Engineering	4
ENGR 2060, Professional Presentations	<u>3</u>
Total Hours	17

SPRING

ENGR 2332, Mechanics of Materials	4
ENGR 2302, Dynamics	3
PHYS 2220, Electricity & Magnetism	3
PHYS 2240, Electricity & Magnetism Lab	1
Understanding the Human Community	<u>3</u>
Total Hours	14

JUNIOR YEAR

FALL

ENGR 3450, Engineering Materials	3
MEET 3940, Fluid Mechanics Application	3
MFET 3110, Mach Principles & Processes	4
ENGR 3451, Engineering Materials Lab	1
HIST 2620, U.S. History from 1865	3
Humanities course	<u>3</u>
Total Hours	17

SPRING

ELET 3980, Digital Controls	3
MEET 3650, Design of Mech Components	3
MEET 3990, Applied Thermodynamics	3
MFET 4190, Quality Assurance	3
MFET 4210, CAD/CAM System Operations	<u>3</u>
Total Hours	15

SENIOR YEAR

FALL

MEET 4050, Mechanical Design	3
MEET 4350, Heat Transfer Applications	3
MFET 4200, Engineering Costs Analysis	2
Technical Elective	3
Visual & Performing Arts course	3
MEET 4780, Senior Design I	<u>1</u>
Total Hours	15

SPRING

MEET 4790, Senior Design II	3
CSCE 4010, Engineering Ethics	2
MEET 4360, Experimental Thermal Sciences	2
Advanced Technical Elective	3
Advanced Technical Elective	<u>3</u>
Total Hours	13

PLEASE NOTE: This is an unofficial sample schedule. Students must meet with their advisor each semester for individual scheduling, program decisions, etc. Engineering Foundations requirements must be met in order to transition from pre-major to full major in order to progress in the program.

Course Offering for UNT Core Requirements

ENGLISH

ENGL 1310 College Writing I
 1313 Computer Assisted College Writing I
 1311 Honors Composition I
 1315 Computer Assisted Writing About Lit. I
 TECM 1312 Gram. & Comp. For International Students

VISUAL AND PERFORMING ARTS

ART 1300 Art Appreciation
 2360 Art History Survey II
 DANC 1200 Appreciation of Dance
 MUMH 1600 Music in Human Imagination
 2040 Music Appreciation
 3000 Nineteenth-Century Music
 3010 Twentieth-Century Music
 THEA 1340 Aesthetics of the Theatre
 1375 The Actor and the Text
 2340 Theater Appreciation

HUMANITIES

AGER 2250 images of Aging in Film & Lit.
 ENGL 2210 World Literature I
 2211 Honors World Literature I
 2220 World Literature
 2221 Honors World Literature
 2322 British Literature to 1780
 2323 British Literature from 1780
 2327 American Literature to 1870
 2328 American Literature from 1870
 2352 Lit. for International Students I
 2362 Lit. for International Students II
 PHIL 1050 Introduction to Philosophy
 1400 Intro. To Contemp. Moral Issue
 2050 Introduction to Logic
 2310 Intro. To Ancient Philosophy
 2330 Intro. To Modern Philosophy
 2500 Intro. To Contemp. Environ. Issues

UNITED STATES HISTORY

HIST 2610 US to 1865
 2675 Honors US History to 1865
 2620 US from 1865
 2685 Honors US History from 1865
 4700 Texas History
 Advanced (3*** or 4***) level U.S. Hist.

AMERICAN GOVERNMENT

PSCI 1040 American Government
 1041 Honors American Government
 1050 American Government
 1051 Honors American Government
 1060 American Government Topics

SOCIAL & BEHAVIORAL SCIENCES

ANTH 1010 Intro. to Anthropology
 2300 Culture and Society
 BEHV 2300 Behavior Principles I
 CJUS 2100 Crime and Justice in the U.S.
 DFST 1013 Human Development
 ECON 1100 Microeconomics
 1110 Macroeconomics
 ENGR 1030 Technological Systems
 GEOG 1170 Intro. To Human Geography
 PHIL 2600 Ethics in Science
 PSCI 3120 Women and Politics
 3310 Political Theory: Socrates to 18th Cent.
 3320 Political Theory: From 18th Cent

PSYC 1630 General Psychology I
 1650 General Psychology II
 RHAB 3100 Disability & Society
 SOCI 1510 Individuals in Society
 1520 Contemporary Social Problems
 2100 Crime & Justice in the U.S.

UNDERSTANDING THE HUMAN COMMUNITY

AGER 4560 Minority Aging
 4800 The Social Context of Aging
 ANTH 2200 Gender Across Cultures
 1150 World Cultures Through Film
 1100 World Cultures
 ART 2350 Art History Survey
 BIOL 1024 Biological Principles of Women's Health
 BUSI 1340 Freelance Enterprise System in a Global Environ.
 CJUS 2600 Diversity Issues in Criminal Justice
 COMM 1010 Intro. to Communication
 1440 Honors Classical Argument
 2020 Interpersonal Communication
 2040 Public Speaking
 2060 Performance of Literature
 4260 Performance & Culture
 DANC 1100 Stress Reduction through Movement
 2800 Survey of Dance
 DFST 2033 Parenting in Diverse Families
 EDEE 2000 Exploring Diversity through Social Action
 EDSP 2500 Human Exceptionality
 ENGL 3450 Short Story
 3920 Survey of Ethnic Literature
 4300 Modern Drama
 ENGR 2060 Professional Presentations
 GEOG 1200 World Regional Geography
 3100 Geography in the U.S. & Canada
 3750 Geography of Contemp. Sub Saharan Africa
 HIST 1050 World Civilization to 16th Cent.
 1075 Honors World Civ. to 16th Cent.
 1060 World Civilization from 16th Cent.
 1085 Honors World Civ. from 16th Cent.
 HLTH 1100 School & Community Health Services
 2200 Family Life & Human Sexuality
 JOUR 1210 Mass Communications & Society
 4250 Race, Gender, and the Media
 KINE 2000 History & Philosophy of Sport
 2050 Sociology of Sport
 LING 1020 Speech for International Students
 MGMT 3330 Communicating in Business
 MKTG 2650 Principles of Global Marketing
 3010 Professional Selling
 MUAG 1500 Occupational Health: Lessons from Music
 MUET 3020 Popular Music in American Culture
 3030 Music Cultures of the World
 PADM 2100 Diversity in Urban Governance
 PHED 1000 Health Related Fitness
 PHIL 2070 Introductions to Great Religions
 2400 Religions & American Society
 PSCI 3500 Introduction to Peace Studies
 3810 International Relations
 4520 International Human Rights
 4660 Democracy & Democratization

PSCI 4710 Middle East Politics
 4720 Ethnicity in World Politics
 4850 Critical Issues in World Politics
 PSYC 2580 Health Psychology
 RECR 2550 Leisure & Society
 RHAB 3000 Microcounseling
 SMHM 1450 Principles of Nutrition
 2750 Consumers in a Global Market
 3450 Presentation Techniques
 4750 Managing a Diverse Workforce
 SOCI 2010 Race, Class, Gender, Ethnicity
 2050 Sociology of Sport
 2070 Intro. To Race & Ethnic Relations
 4160 Developing Societies
 4540 Race & Ethnic Minorities
 SOWK 4540 Human Diversity for the helping Professions
 THEA 3030 World Theatre to 1700
 3040 World Theatre after 1700
 UCRS 1000 Freshman Seminar
 WMST 2100 Woman & Society: Intro to Women's Studies
 2420 Race, Class, Gender & Ethnicity
 2620 Biological Principles of Women's Health
 FOREIGN LANGUAGE(Arabic, Chinese, French, German, Hebrew, Italian, Japanese, Portuguese, Russian, Spanish)
 LANG 1010 Elementary Lang I
 1020 Elementary Lang II
 2040 Intermediate Lang I
 2050 Intermediate Lang II

Resources

<i>Name</i>	<i>Location</i>	<i>Phone</i>	<i>Web Address</i>
Career Center	Chestnut Hall 103	565-2105	www.careercenter.unt.edu
Center for Student Rights & Responsibilities	UU 324	565-2039	www.unt.edu/csrr
Chemistry Resource Center	CHEM 231	565-2556	www.chem.unt.edu/crc
Computer Labs some General Access Labs offer specialized equipment & software, but most are available for use by all students	Numerous locations on main campus & Discovery Park	Check website	www.gal.unt.edu
Computer Class Help Lab	Discovery Park F205	565-2767	www.cse.unt.edu
Counseling & Testing Service	Chestnut Hall 311	565-2741	www.unt.edu/cat
Deadlines : Add, Drop, Withdrawal, Payment, Incomplete, Pass/No Pass, Graduation Application	Academic Calendar & MyUNT	565-2111	www.unt.edu/registration www.my.unt.edu
Dean of Students	UU 216	565-2648	www.unt.edu/dos/
EagleConnect: Student Email Account	N/A	Check website	www.eagleconnect.unt.edu www.unt.edu/helpdesk
Engineering Student Organizations & Honor Societies	Discovery Park	Check website	www.eng.unt.edu/organizations
Financial Aid: Grants & Loans	ESSC 228 (for some aid)	565-2302 or 565-2016	www.essc.unt.edu/finaid
Internships & Cooperative Education Office	Chestnut Hall 155	565-2861	www.unt.edu/coop
Libraries	Numerous locations on main campus & Discovery Park	Check website	www.library.unt.edu
Math Lab & Short-Term Tutoring	GAB 440	565-2155	www.math.unt.edu/mathlab
Office of Disability Accommodation	UU 321	565-4323	www.dos.unt.edu/oda
Physics Instructional Center (PIC)	PHYS 209	565-3275	www.phys.unt.edu/PIC
Registrar: General Information Graduation Registration Transcripts	ESSC 209 ESSC 210 ESSC 147 ESSC 209	565-2111 565-4625 565-2378 565-2344	www.admin.unt.edu/assist
Student Accounting –Tuition & Fees	ESSC 105	565-3225	www.admin.unt.edu/assist
Student Activities & Organizations	UU 216	565-3807	www.unt.edu/sac
Student Employment at UNT	Chestnut 103	565-2105	www.careercenter.unt.edu
Multicultural Center	UU 216	565-3424	www.unt.edu/edo/multicultural
Scholarships	ESSC 228 (for some scholarships)	Check website	www.essc.unt.edu/finaid www.eng.unt.edu/adving www.opgf.unt.edu www.searchforcolleges.org
Student Government Association	UU 216B	565-3850	www.unt.edu/sga
Student Health & Wellness Center	Chestnut Hall	565-2333	www.healthcenter.unt.edu
Student Money Management Center	Chestnut Hall 313	369-7761	www.moneymangement.unt.edu
Student Legal Advisor	UU 322AA	565-2614	www.unt.edu/legal
Texas Success Initiative : Academic Readiness	Stovall Hall 117	565-4403	www.unt.edu/academic-readiness
Thinkwell Tutoring	N/A	Check website	www.thinkwell.com
Writing Center	AUD 105	565-2563 565-4311	www.unt.edu/writinglab

For Additional Help or Information Visit: www.unt.edu