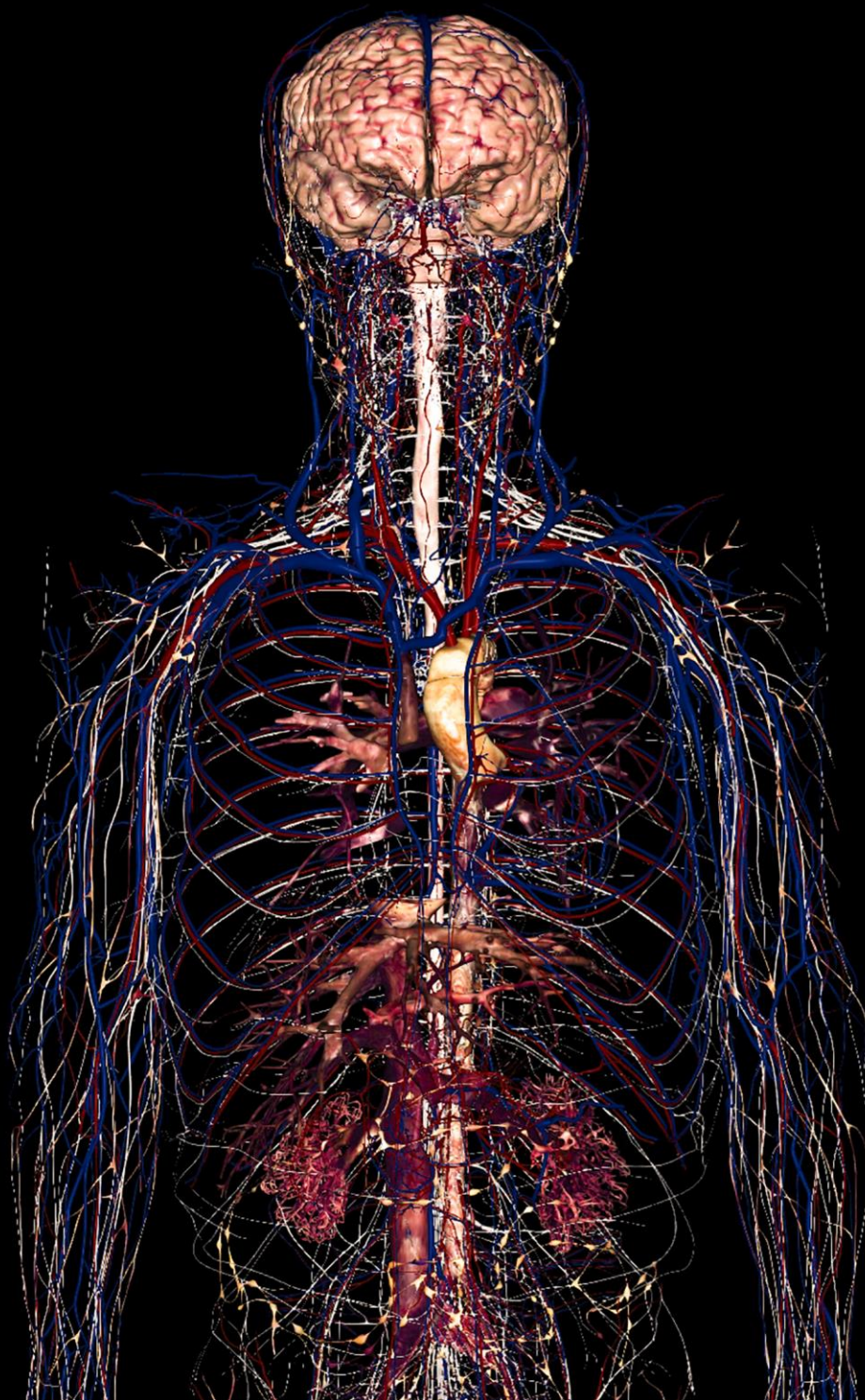

College of Engineering

Undergraduate Academic Guidebook

2019-2020



Engineering Admissions – New Students – First Time in College/Freshman Applicants

In addition to UNT admissions requirements, you must also meet **one** of the following criteria:

- Top 25% of high school graduating class
MATH SAT score of 590 or better and a total SAT score of 1140 or better
MATH ACT score of 23 or better and a composite ACT score of 23 or better
- Top 50% of high school graduating class
MATH SAT score of 620 or better and a total SAT score of 1170 or better
MATH ACT score of 24 or better and a composite ACT score of 24 or better
- 51% or lower high school graduating class
MATH SAT score of 650 or better and a total SAT score of 1250 or better
MATH ACT score of 26 or better and a composite ACT score of 26 or better
- No high school rank (GED or homeschooled) or international high school
MATH SAT score of 620 or better and a total SAT score of 1170 or better
MATH ACT score of 24 or better and a composite ACT score of 24 or better

Construction Engineering Technology or Mechanical Engineering Technology can earn MATH SAT score of 570 or better or MATH ACT score of 22 or better regardless of rank

Engineering Admissions – New Students – Transfer & 2nd Bachelor's Degree Applicants

In addition to UNT admissions requirements, you must also meet **all** of the following criteria:

- Minimum 2.0 GPA based on all transfer coursework
- Minimum 2.0 GPA based on all transfer mathematics, science, engineering, & computing coursework
- Eligibility to enter MATH 1710, Calculus I, via prerequisite completion or testing (see next page)

Pre-Engineering Major Program

If you do not meet the above criteria, you will be in the Pre-Engineering Major program. You may be eligible for admissions into the engineering major you desire when you meet criteria below.

Engineering Admissions – UNT Students – Pre-Major Engineering & Change of Major Applicants

To be admitted from Pre-Major or another UNT major, you must meet **all** of the following criteria:

- Minimum 2.0 GPA based on all UNT coursework
- Minimum 2.5 GPA & minimum "C" grades in the courses below per your destination engineering major

Biomedical Engineering:

Communications Core, TECM 2700
MATH 1710, MATH 1720
BMEN 1300, BMEN 1400

Construction Engineering Technology:

Communications Core, TECM 2700
MATH 1710, PHYS 1710/1730, ENGR 1030
CNET 1160, CNET 2180

Computer Engineering/Computer Science/ Information Technology:

Communications Core, TECM 2700
MATH 1710, CSCE 1030, CSCE 1040

Electrical Engineering:

Communications Core, TECM 2700
MATH 1710, MATH 1720, PHYS 1710/1730
EENG 1910

Materials Science and Engineering:

Communications Core, TECM 2700
MATH 1710, MATH 1720, PHYS 1710/1730
CHEM 1410/1430, CHEM 1420, MTSE 1100

Mechanical and Energy Engineering:

Communications Core, TECM 2700
MATH 1710, MATH 1720, PHYS 1710/1730
MEEN 1000

Mechanical Engineering Technology:

Communications Core, TECM 2700,
MATH 1710, PHYS 1710/1730, ENGR 1304

Must reach MATH 1710 readiness within 3 long semesters and complete all criteria within 5 long semesters or you will be removed from the Pre-Major Program

Engineering Dismissal

You are required to conduct yourself in a professional manner at UNT while making successful progression toward graduation. Failure to do so will result in dismissal from the College of Engineering. Criteria for dismissal includes (but is not limited to):

- Violation of the Code of Student Conduct located at deanofstudents.unt.edu/conduct. This includes, (but is not limited to) dishonesty, cheating, disruptive behavior, theft, hazing, abuse, violence, etc.
- Failure to enroll in engineering required coursework and/or prerequisites each semester.
- Failure to reach or maintain grade and/or GPA criteria for engineering required coursework and/or prerequisites.
- Being placed on academic suspension from UNT due to UNT semester and/or cumulative GPA.

Mathematics

All engineering degree plans require completion of MATH 1710, Calculus I, in the 1st semester to attempt graduation in a reasonable timeframe.

Enrollment in MATH 1710 is contingent on (1) completion of placement tests, or (2) completion of College level math prerequisite courses, or (3) college level math credit earned via AP, IB, or CLEP.

Prerequisite Course Sequence for Calculus I:

MATH 1100, College Algebra → MATH 1650, Pre-Calculus → MATH 1710, Calculus I

If you are TSI incomplete in math, you may have additional courses to take before you can enroll in MATH 1100.

AP, IB, CLEP, DC, Transfer Credits:

- AP Calculus AB score of 3 or higher: MATH 1710
- AP Calculus BC score of 3 or higher: MATH 1710, 1720
- AP Calculus AB sub score of BC score 3 or higher: MATH 1710
- IB Mathematics – Calculus: MATH 1710
- CLEP College Algebra: MATH 1100
- CLEP Pre-calculus: MATH 1650
- CLEP Calculus: MATH 1710
- Community College MATH 1314 or 1414: MATH 1100
- Community College MATH 2312 or 2412: MATH 1650
- Community College MATH 2313 or 2413 or 2513: MATH 1710

Pre-Placement for First Time in College/Freshmen:

If you have not earned credit for math courses via AP, IB, CLEP, dual credit or transfer credit and you are TSI complete, you must begin math courses based on your Math Group Level assigned by the Math Department:

- Math Level 1 or No Math Level: MATH 1100
- Math Level 2: MATH 1650
- Math Level 3: MATH 1710

Placement Testing Options:

If you feel that you are capable of beginning your math course at a higher level than your Math Group Level or qualification based on earned math credit, you can seek approval via 3 testing options:

- **Pearson MyMathTest** – free online test. Must score a minimum of 70 to enter MATH 1710. Must score a minimum of 10 to enter MATH 1650
- **ALEKS** – online test which requires a small fee and completion of a 6 week long tutorial. Must score a minimum of 70 to enter MATH 1710. Must score a minimum of 50 to enter MATH 1650. Must download a web browser called Respondus Lockdown Browser and purchase a license for Respondus Monitor. Must have access to a webcam to complete ALEKS.

Please refer to the Mathematics Department at (940) 565-2155 or math.unt.edu for more testing information.

Courses

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

Abbreviations: ENGL for English
HIST for History

Numbers: Freshman 1000 Junior 3000
Sophomore 2000 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, take tests, 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.
Internet course or "INET": course in which the majority of instruction, assignments, and work is online.
Blended course: course in which a portion of the instruction, assignments, and work is online.
Restricted: course or section time that is limited to certain students such as Honors, Out of State, Majors.
Frisco, course taught at the Frisco campus in Frisco, Texas.
CHEC: course taught at the Collin Higher Education Center in McKinney, Texas.

Different semester offerings of courses at UNT:

Fall: August to December	Summer 3 Week: May	Summer 5 Week 1: June to July
Spring 3 Week (winter): December To January	Summer 8 Week: May to July	Summer 5 Week 2: July to August
Spring: January to May	Summer 10 Week: June to August	

Credit Hours

Number of units assigned to each course. Referred to as "credits", "hours", or "credit hours". Tells you approximately how many hours per week you'll be in class and approximately how many hours per week you'll need to study for that course. It's also used in the calculation of your GPA.

How many hours do I learn for each course?

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

How many credits is full-time?

12 hours (approximately 4 courses).

How many hours can I take each semester?

19 hours in the fall/spring semesters and 18 hours in the summer. This applies to credits enrolled at UNT and another institution (concurrent enrollment). You can receive overload approval to take more hours if you have met the following criteria:

- 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 and a minimum 24 hours of credit in residence.

Do I have to be a full-time student?

No, not unless you are an international student, an athlete, a scholarship receipt or receiving maximum financial aid. To attempt a timely graduation date, you should plan to take 15-16 hours unless you work. Your number of work hours will impact the number of credit hours you should attempt each semester/term. Please consult with your advisor to determine the proper balance of work and school.

Classification

Your classification is based on the number of earned credit hours after semester grade posting; not the number of years you have been in school. Classification dictates your registration appointment time each semester and may impact your eligibility for scholarships, financial aid, internships, etc.

<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 and 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 and courses dropped "W" don't count as attempted hours and don't average into your GPA. Grades of "F" are 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/term just enrolled.
- UNT GPA: the cumulative GPA you earn in all UNT courses. A minimum 2.0 GPA is required.
- Overall GPA: GPA you earn in all courses (UNT and transfer). A minimum 2.0 GPA is required.
- Foundations GPA: GPA you earn in foundations courses. A minimum 2.5 GPA is required.
- Major GPA: the GPA you earn in courses in your major. A minimum 2.0 GPA is required

You can access a GPA calculator at advising.unt.edu/about-your-gpa/calculate-your-gpa

Grade Point Average (GPA): Academic Status

Your cumulative UNT grades are used to calculate academic status. Grades earned in transfer are considered in calculation of Graduation with Honors and fulfillment of degree requirements but are not considered with determination of academic status.

Academic Good Standing:

Standing if you earn at least a cumulative 2.0 UNT GPA. A 1.8 UNT GPA is acceptable during your 1st semester at UNT but it must be increased to at least a 2.0 after your 1st semester.

Academic Alert:

Standing if you are a freshman and your UNT GPA falls below 1.8 during the 1st semester or falls below 2.0 during the 2nd semester. You can only be placed on alert once. You will be required to participate in academic coaching sessions via the Learning Center during your alert semester. You must raise your UNT GPA to 2.0 or higher during your alert semester or you will be placed on probation.

Academic Probation:

Standing if you are not eligible for alert and your UNT GPA falls below 1.8 during the 1st semester or falls below 2.0 during any following semester. 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. You will be required to participate in academic coaching session via the Learning Center during your probation semester.

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. You are prohibited from attending UNT for 1 long semester for a 1st suspension or 2 long semester for a 2nd suspension. You must petition to re-enter the College of Engineering after completing the 1st or 2nd suspension period. You might be approved to return. You will be dismissed permanently from the College of Engineering if you are suspended a 3rd time.

Grade Point Average (GPA): Honors

Semester Honors:

Semester honors is based on your fall or spring semester GPA and is documented on your UNT transcript. You must complete at least 12 hours to be recognized for honors. Summer GPA is not recognized for honors. Candidates for a 2nd bachelor's degree are not eligible for semester honors.

President's List: 4.000

Dean's List: 3.500-3.999

Graduation with Honors:

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

Cum laude: 3.500 – 3.699

Magna cum laude: 3.700 – 3.899

Summa cum laude: 3.900 – 4.000

Retaking Courses: Course Duplications

If your transcript(s) contains the same course with an earned grade more than once, the 1st grade will be treated as a duplication and will be deleted from your GPA. Any additional grades will be calculated into your GPA. This includes transfer courses/grades. Course duplication will impact your GPA, your academic status and excessive hours.

Engineering major required courses must be completed with a grade of C or better by the 2nd attempt.

Only the last grade will be used in fulfilling prerequisite, corequisite, and graduation eligibility. Contact your advisor to confirm how you will be affected if you take a course more than once.

Dropping or Withdrawing

Dropping:

Dropping refers to removing yourself from one or more courses for the semester (but you remain in at least one course for the semester). You can drop yourself via MyUNT before or shortly after the semester begins. The MyUNT drop functionality usually expires on the 1st day of summer semester and approximately 12 days into the fall/spring semesters. After the MyUNT drop functionality expires, you may drop via the procedures and deadlines listed online. Please note that if you are enrolled in only one course for a summer session and you need to remove that one course, it is considered a withdrawal and not a drop. Please see withdrawal information below. 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:

Withdrawing refers to dropping all courses for the semester. You are not allowed to withdraw via MyUNT. You may withdraw via the procedures and deadlines listed online.

Dropping or withdrawing may affect your financial aid and/or excessive hours.

Pass/No Pass Grading Option

You may elect to take courses which are not needed for your degree plan or graduation under the Pass/No Pass Grading Option. Certain criteria must be met and you must obtain approval from your advisor after you have enrolled in the course. A "grade" of "P" or "NP" will be recorded on your transcript. This "grade" is not calculated in your GPA.

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 of the following conditions:

- The final drop and 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 and submit outstanding work within 12 months after the grade of "I" is granted.

Professors are not required to grant an "I" even if you meet the conditions. An automatic grade of "F" will be posted on your transcript if you do not complete the "I" within 12 months.

Taking Courses at another Institution: Concurrent Enrollment

Courses taken outside of UNT will not be applied to your degree audit unless you meet **all** of the following criteria:

- The course you plan to take has been pre-approved by your advisor.
- You do not violate the maximum semester/term credit hour limit or residency requirements at UNT.
- You are not attempting to graduate the same semester/term in which you are concurrently enrolled.
- You submit the official transcript for the course to the Registrar's Office within one month of completion.

Please note that your department reserves the right to reject online courses and/or courses at certain institutions.

Registration

You will be using MyUNT to register for courses each semester/term. Information on registration enrollment periods, payment deadlines, etc. can be located at registration.unt.edu.

Full Courses/Waitlist:

If a course is full, add yourself to the waitlist. Seats are allotted in position order as fully enrolled students vacate the course. The waitlist will not guarantee a seat in the course. You can waitlist for a maximum of 3 courses per semester/term. The waitlist option ends once add/drop closes for the semester/term.

Error Messages:

Read the message to learn why you received it and to determine if you are eligible to enroll in the course. Common errors refer to prerequisite, corequisite, and restricted sections.

Overrides:

Contact the department that teaches the course if you received an error message by mistake and you need to enroll in the open course. Below are department contacts for some common courses:

- | | |
|--------|---|
| • BIOL | Biological Sciences Department: BIOL 210 or (940) 565-3591 |
| • BMEN | Biomedical Engineering Department: Jamie.Tesdahl@unt.edu; DP B-131 or (940) 565-3338 |
| • CHEM | Chemistry Department: CHEM 101 or (940) 565-3525 |
| • CNET | Engineering Technology Department: e-mail etec.etec@unt.edu; DP F-115 or (940) 565-2022 |
| • CSCE | Computer Science and Engineering Department: DP F-201 or (940) 565-2767
or submit request via www.cse.unt.edu/overrides (preferred method) |
| • EENG | Electrical Engineering Department: DP B-270 or (940) 891-6872 |
| • ELET | Engineering Technology Department: e-mail etec.etec@unt.edu; DP F-115 or (940) 565-2022 |
| • ENGR | Engineering Technology Department: e-mail etec.etec@unt.edu; DP F-115 or (940) 565-2022 |
| • MATH | Mathematics Department: GAB 435 or (940) 565-2155 or e-mail Rita Sears at Rita.Sears@unt.edu (preferred method) |
| • MEEN | Mechanical and Energy Engineering Department: DP F-101 or (940) 565-2400
or mechanicalandenergy.engineering.unt.edu/forms/course-override-request |
| • MEET | Engineering Technology Department: e-mail etec.etec@unt.edu; DP F-115 or (940) 565-2022 |
| • MFET | Engineering Technology Department: e-mail etec.etec@unt.edu; DP F-115 or (940) 565-2022 |
| • MTSE | Materials Science and Engineering Department: DP E-132 or (940) 565-3260 |
| • NUET | Engineering Technology Department: e-mail etec.etec@unt.edu; DP F-115 or (940) 565-2022 |
| • PHYS | Physics Department: PHYS 110 or (940) 565-2626 |
| • TECM | Technical Communication Department: AUSB 317 or (940) 565-4458 |

Payment

You must arrange payment prior to the payment deadline listed in MyUNT or online. Failure to pay by the deadline listed will result in the cancellation of your entire schedule of classes. You must elect a tuition plan before your 1st semester/term payment deadline. Information on plans is located at sfs.unt.edu. You have numerous options available to pay. Refer to registration.unt.edu/cost-funding for information. If you have been awarded financial aid, refer to financialaid.unt.edu for information.

Tuition Increases

Repeated Course Tuition Increase:

If you are a resident and you attempt courses for a 3rd time, you are subject to pay an additional tuition rate per semester credit hour for the repeated course. Refer to information at sfs.unt.edu.

Excessive Hours Regarding Tuition:

Texas code specifies that a resident may be subject to a higher tuition rate for attempting excessive hours at any public institution. You cannot exceed more than 30 credit hours (or 45 credit hours if you started school prior to fall 2006) of the number of hours required for the completion of your degree plan. Any additional hours are considered excessive and will result in additional tuition charges. Refer to information at sfs.unt.edu.

Maximum Hours Regarding Financial Aid:

If you receive financial aid and maintain Satisfactory Academic Progress (SAP) and Pace of Progression (POP), your aid eligibility continues until you attempt 150% of the minimum credit hours required for your degree plan. For most students, once they attempt approximately 180 credit hours, their aid is discontinued.

Degree Audit (Plan)

The degree audit is an official document that lists all the requirements you need to complete to earn your degree. It tracks the application of completed requirements each semester/term. A degree audit must be created for you in order to progress toward graduation. Please contact the Engineering Advising Office for any questions or concerns. Registrar.unt.edu → Registration → Online Degree Audit **OR** My.unt.edu → Student Center → My Academics → Run Audit.

Graduation

You must make an appointment with the Engineering Advising Office the semester/term before you plan to graduate to confirm that you are on track. Graduation can usually be achieved 4 years after you are enrolled in Calculus I (MATH 1710), enrolled in the entry level engineering course(s) for your major, follow the correct requisite sequencing, follow the correct semester scheduling path, earn passing grades each semester/term, and complete approximately 30 degree accountable credits per year. Please note that graduation often occurs within 5-6 years for most students.

You must apply for graduation at the beginning of your final semester via your Student Center in MyUNT. Refer to registrar.unt.edu for more information and the application deadline. Failure to apply by the deadline will result in your failure to graduate or earn your degree even if you complete all of your degree audit requirements. You cannot enroll in another institution during your final semester/term or else your graduation will be delayed.

Commencement

Commencement is the name of the graduation ceremony. Commencement is offered in December for students who earn their degree in fall or May for students who earn their degree in spring. Students who earn their degree in summer can choose to attend the December or May commencement. In order to attend commencement, you must have applied for and been approved for graduation at the beginning of your final semester. Refer to unt.edu/commencement for more information.

North Texas Discovery Park (NTDP)

North Texas Discovery Park (NTDP) is a 2nd campus located 4 miles north of the main campus. It is the location of all College of Engineering offices, classes, and labs. NTDP also offers a cafeteria, library, computer access labs, specialty engineering labs, engineering student organizations, an advising office, tutoring services, and a career services office.

Information on free bus transportation routes/times and available student parking passes/locations can be found at unt.edu/transit.

Advising

Academic Advisors:

These advisors work with you to ensure that you are meeting academic goals and requirements in order to earn your degree. You should meet with your academic advisor each semester. You will be required to meet with your advisor if you are a freshman/FTIC, pre-major, or your GPA falls below good standing. Use appointments.unf.edu to schedule your appointment. Allow 3 weeks for an available appointment and note that you will lose your appointment if you arrive late. The office is located in NTDP-A101. The phone number is 940-565-4201. E-mail contact information for the advisors is located at engineering.unf.edu/advising/advisors. Below are the available academic advisors.

Engineering Faculty Advisors:

These professors assist with advising. They can help you with choosing the proper elective, specialization, track, or supporting area courses to prepare you to enter industry after graduation. Contact information is located on the following curriculum pages. Below are the available faculty advisors.

Career Advisor:

Located in NTDP C-111 and Chestnut Hall 103, this advisor helps you with career planning, major selection, resume writing, interviewing skills, internship and full-time employment. You can schedule an appointment in person or via 940-565-2105.

Degree Program/Major	Academic Advisors	Faculty Advisors	Career Advisor
Pre-Biomedical Engineering	David Bekker Azucena (Susie) Pruitt	Dr. Vijay Vaidyanathan	Laura Garza
Pre-Computer Engineering	David Bekker Azucena (Susie) Pruitt	Dr. Robin Pottathuparambil	Laura Garza
Pre-Computer Science	David Bekker Azucena (Susie) Pruitt	Dr. Mark Thompson Dr. Joseph Helsing	Laura Garza
Pre-Construction Engineering Technology	David Bekker Azucena (Susie) Pruitt	Mr. Al Attah	Laura Garza
Pre-Electrical Engineering	David Bekker Azucena (Susie) Pruitt	Dr. Colleen Bailey	Laura Garza
Pre-Information Technology	David Bekker Azucena (Susie) Pruitt	Mr. David Keathly Dr. Ryan Garlick	Laura Garza
Pre-Materials Science and Engineering	David Bekker Azucena (Susie) Pruitt	Dr. Marcus Young	Laura Garza
Pre-Mechanical and Energy Engineering	David Bekker Azucena (Susie) Pruitt	Dr. Cherish Qualls Dr. Xiahoua Li	Laura Garza
Pre-Mechanical Engineering Technology	David Bekker Azucena (Susie) Pruitt	Dr. Leticia Anaya	Laura Garza
Biomedical Engineering	Abdal Elkharoubi Errica Smith	Dr. Vijay Vaidyanathan	Laura Garza
Computer Engineering	Abdal Elkharoubi Errica Smith	Dr. Robin Pottathuparambil	Laura Garza
Computer Science	Heather Burrow Abdon Gonzalez Beverly Wilks	Dr. Mark Thompson Dr. Joseph Helsing	Laura Garza
Construction Engineering Technology	Mia Dallas Rachel Smith Adrian Stephens	Mr. Al Attah	Laura Garza
Electrical Engineering	Abdal Elkharoubi Errica Smith	Dr. Colleen Bailey	Laura Garza
Information Technology	Heather Burrow Abdon Gonzalez Beverly Wilks	Mr. David Keathly Dr. Ryan Garlick	Laura Garza
Materials Science and Engineering	Nancy Van Hoy	Dr. Marcus Young	Laura Garza
Mechanical and Energy Engineering	Mia Dallas Rachel Smith Adrian Stephens	Dr. Cherish Qualls Dr. Xiahoua Li	Laura Garza
Mechanical Engineering Technology	Mia Dallas Rachel Smith Adrian Stephens	Dr. Leticia Anaya	Laura Garza

BIOMEDICAL ENGINEERING

Bachelor of Science (B.S.) degree with a major in Biomedical Engineering
Biomedical Engineering Department, Discovery Park B-131; (940) 565-3338

University Core

COMMUNICATION

- ❑ 1 Course (3 Hours) chosen from options on Page 29

Grade of "C" or better is required

AMERICAN HISTORY I

- ❑ 1 Course (3 Hours) chosen from HIST 2610 or HIST 2675

AMERICAN HISTORY II

- ❑ 1 Course (3 Hours) chosen from HIST 2620 or HIST 2685

FEDERAL GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2305 or PSCI 2315

STATE GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2306 or PSCI 2316

CREATIVE ARTS

- ❑ 1 Course (3 Hours) Chosen from options on page 29

LANGUAGE, PHILOSOPHY, AND CULTURE

- ❑ 1 Course (3 Hours) Chosen from options on page 29

SOCIAL AND BEHAVIORAL SCIENCES

- ❑ 1 Course (3 Hours) Chosen from options on page 29

Major Requirements

Minimum 2.0 GPA

TECHNICAL COMMUNICATIONS

- ❑ TECM 2700, Technical Writing (3 Hours)

MATHEMATICS

- ❑ MATH 1710, Calculus I (4 Hours)
- ❑ MATH 1720, Calculus II (3 Hours)
- ❑ MATH 2700, Linear Algebra (3 Hours)
- ❑ MATH 2730, Multivariable Calculus (3 Hours) **or**
MATH 3350, Numerical Analysis (3 Hours)
- ❑ MATH 3410, Differential Equations (3 Hours)
- ❑ MATH 3680, Applied Statistics (3 Hours)

Completion of the above courses will earn a Mathematics minor.

SCIENCES

- ❑ CHEM 1410, General Chemistry I (3 Hours) **&**
CHEM 1430, General Chemistry I Lab (1 Hour)
- ❑ PHYS 1710, Mechanics (3 Hours) **&**
PHYS 1730 Mechanics Lab (1 Hour)
- ❑ 1 Lab science and lab chosen from:
BIOL 2301, Human Anatomy & Physiology (3 Hours) **&**
BIOL 2311, Human Anatomy & Physiology Lab (1 Hour) **or**
CHEM 1420, General Chemistry II (3 Hours) **&**
CHEM 1440, General Chemistry II Lab (1 Hour) **or**
PHYS 2220, Electricity & Magnetism (3 Hours) **&**
PHYS 2240, Electricity & Magnetism Lab (1 Hour)

Major Requirements

Minimum 2.0 GPA

BIOMEDICAL ENGINEERING

- ❑ BMEN 1300, Discover Biomedical Engineering (3 Hours)
- ❑ BMEN 1400, Software for Biomedical Engineers (4 Hours)
- ❑ BMEN 2210, DAQ Practices (3 Hours)
- ❑ BMEN 2320, Biomedical Instrumentation (3 Hours)
- ❑ BMEN 3310, Engr. Measurements from Human Systems (3 Hours)
- ❑ BMEN 3311, Biomedical Signal Analysis (3 Hours)
- ❑ BMEN 3312, Introduction to Biomechanics (3 Hours)
- ❑ BMEN 3321, Biomaterials (3 Hours)
- ❑ BMEN 3350, Biomedical Transport Phenomena (3 Hours)
- ❑ BMEN 4310, Biomedical Modeling (3 Hours)
- ❑ BMEN 4212, Senior Design I (1 Hour)
- ❑ BMEN 4222, Senior Design II (3 Hours)
- ❑ BMEN 4***, Advanced Elective (3 Hours)
- ❑ BMEN 4***, Advanced Elective (3 Hours)
- ❑ BMEN 4***, Advanced Elective (3 Hours)

BIOMEDICAL ENGINEERING ELECTIVE TRACK

Choose an elective track and complete a minimum of 6 courses (18 Hours) from the approved options below:

- ❑ Track Elective (3 Hours)
- ❑ Track Elective (3 Hours)
- ❑ Track Elective (3 Hours)
- ❑ Track Elective (3 Hours)
- ❑ Track Elective (3 Hours)
- ❑ Track Elective (3 Hours)

Biomedical Instrumentation Elective Track:

EENG 2610/2611, 2620/2621, 2710/2711, 3510, & 4*** level course.

Completion of this track will earn an Electrical Engineering minor.

Biomechanics Elective Track:

MEEN 2301, 2302, 2210, 2332, & two MEEN 3*** and/or 4*** level courses. See advisor for specific course choices.

Completion of an additional MEEN 3*** and/or 4*** level specific course in addition to this track will earn a Mechanical and Energy Engineering minor.

Biocomputing Elective Track:

CSCE 1030, 1040, 2100, 2110, & two CSCE 3*** and/or 4*** level courses.

Completion of this track will earn a Computer Science and Engineering minor.

Biomaterials Elective Track:

MTSE 3000, two courses from 3010, 3030, 3050, 3070, plus 3 MTSE 3*** or 4*** level courses. MTSE 3001 is strongly recommended.

Completion of this track will earn a Materials Science and Engineering minor.

Pre-Medical Elective Track:

BIOL 1710, 1720, 1760, 2041/2042, CHEM 2370/3210, BIOL 3451/3452, and 1 class/lab chosen from BIOL 3770/4580 or BIOC 3621/3622

Completion of BIOL course in this track will earn a Biological Sciences minor. BIOC option will not earn the minor.

Additional courses are required for admissions into medical school.

This is an unofficial simplified checklist effective fall 2019. Degree requirements may change. You may need elective courses to help reach a minimum of 120 Total Hours and 36 Advanced Hours. Check with an advisor.

BIOMEDICAL ENGINEERING

Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses and notes

Must earn at least a grade of "C" in each course except for most University Core courses.

FRESHMAN YEAR			
FALL		SPRING	
MATH 1710, Calculus I (see note 1)	4	MATH 1720, Calculus II (MATH 1710)	3
CHEM 1410, General Chemistry I (see note 2)	3	Lab science lecture	3
CHEM 1430, General Chemistry I Lab (see note 2)	1	Lab science corresponding lab	1
BMEN 1300, Discover BMEN	3	BMEN 1400, Software for BMEN (MATH 1650 or higher)	4
Communication Core course	3	TECM 2700, Technical Writing (Comm. Core)	<u>3</u>
University Core course	<u>3</u>	Total Hours	14
Total Hours	17		
SOPHOMORE YEAR			
FALL		SPRING	
MATH 2700, Linear Algebra (MATH 1720)	3	MATH 3410, Differential Equations (MATH 1720)	3
PHYS 1710, Mechanics (MATH 1710)	3	BMEN 2320, Biomedical Instrumentation (see note 3)	3
PHYS 1730, Mechanics Lab (MATH 1710)	1	Elective Track course (see note 7)	3
BMEN 2210, DAQ Practices (MATH 1720)	3	University Core course	3
Elective Track course (see note 7)	3	University Core course	<u>3</u>
University Core course	<u>3</u>	Total Hours	15
Total Hours	16		
JUNIOR YEAR			
FALL		SPRING	
MATH 2730 Multi. Calculus or MATH 3350 (see note 4)	3	MATH 3680, Statistics and Probability (MATH 1720)	3
BMEN 3310, Human Systems (see note 5)	3	BMEN 3312, Intro. To Biomech. (BMEN 3310, PHYS 1710)	3
BMEN 3311, Signal Analysis (BMEN 2320)	3	BMEN 3321, Biomaterials (BMEN 3310, PHYS, CHEM)	3
BMEN 3350, Transport Phenomena (see note 6)	3	Elective Track course (see note 7)	3
Elective Track course (see note 7)	<u>3</u>	University Core course	<u>3</u>
Total Hours	15	Total Hours	15
SENIOR YEAR			
FALL		SPRING	
BMEN 4310, Modeling (BMEN 3321) or Grad Track	3	BMEN 4222, Senior Design II (BMEN 4212)	3
BMEN 4212, Senior Design I (BMEN 3*** Reqs.)	1	BMEN 4*** Advanced Elective or Grad Track course	3
BMEN 4*** Advanced Elective (BMEN 3311, 3312)	3	BMEN 4*** Advanced Elective or Grad Track course	3
Elective Track course (see note 7)	3	Elective Track course (see note 7)	3
University Core course	<u>3</u>	University Core course	<u>3</u>
Total Hours	13	Total Hours	15

Notes:

Note 1: MATH 1710 requires one of the following as a prerequisite: completion of MATH 1650 with a grade of "C" or higher; or Freshman Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: CHEM 1410 and 1430 requires MATH 1100, College Algebra (or higher) as prerequisite.

Note 3: BMEN 2320 requires completion of BMEN 1300, BMEN 2210, BMEN 1400 or concurrent enrollment in BMEN 1400.

Note 4: MATH 2730 requires completion of MATH 1720. MATH 3350 requires completion of MATH 2700 and Programming.

Note 5: BMEN 3310 requires completion of BMEN 1300, BMEN 2320, BIOL 2301, and BIOL 2311.

Note 6: BMEN 3350 requires completion of BMEN 1300, MATH 3410, PHYS 1710, and CHEM req.

Note 7: Elective Track courses depend on your chosen BMEN track. See BMEN curriculum page for options. Some track courses are offered fall only or spring only. Must meet prerequisites for track courses.

Minimum grades of "C" and minimum 2.5 GPA in Foundations: Communications Core, TECM 2700, BMEN 1300, BMEN 1400, BMEN 2210, BMEN 2320, MATH 1710, MATH 1720, PHYS 1710/1730, Lab science lecture and lab, CHEM 1410/1430 to enroll in advanced courses.

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met and a degree audit must be created in order to progress in the program to a timely graduation.

Computer Engineering

Bachelor of Science (B.S.) degree with a major in Computer Engineering
Department of Computer Science and Engineering, Discovery Park F-201; (940) 565-2767

University Core

COMMUNICATION

- 1 Course (3 Hours) chosen from options on Page 29

Grade of "C" or better is required

AMERICAN HISTORY I

- 1 Course (3 Hours) chosen from HIST 2610 or HIST 2675

AMERICAN HISTORY II

- 1 Course (3 Hours) chosen from HIST 2620 or HIST 2685

FEDERAL GOVERNMENT/POLITICAL SCIENCE

- 1 Course (3 Hours) chosen from PSCI 2305 or PSCI 2315

STATE GOVERNMENT/POLITICAL SCIENCE

- 1 Course (3 Hours) chosen from PSCI 2306 or PSCI 2316

CREATIVE ARTS

- 1 Course (3 Hours) Chosen from options on page 29

LANGUAGE, PHILOSOPHY, AND CULTURE

- 1 Course (3 Hours) Chosen from options on page 29

SOCIAL AND BEHAVIORAL SCIENCES

- 1 Course (3 Hours) Chosen from options on page 29

Major Requirements

Grades of C or better

TECHNICAL COMMUNICATIONS

- TECM 2700, Technical Writing (3 Hours)

MATHEMATICS

- MATH 1710, Calculus I (4 Hours)
- MATH 1720, Calculus II (3 Hours)
- MATH 1780, Probability Models (3 Hours)
- MATH 2700, Linear Algebra (3 Hours)
- MATH 2730, Multivariable Calculus (3 Hours)

SCIENCES

- CHEM 1410, General Chemistry I (3 Hours) & CHEM 1430, General Chemistry I Lab (1 Hour)
- PHYS 1710, Mechanics (3 Hours) & PHYS 1730 Mechanics Lab (1 Hour)
- PHYS 2220, Electricity & Magnetism (3 Hours) & PHYS 2240, Electricity & Magnetism Lab (1 Hour)

ADVANCED MATHEMATICS OR SCIENCE ELECTIVE

- 1 advanced course (3 Hours) chosen from MATH 3***, MATH 4***, PHYS 3***, CHEM 3***, BIOL 3***, BIOL 4***, or GEOG 4***. Check with your advisor for approved options.

Major Requirements

Grades of C or better

ELECTRICAL ENGINEERING

- ENGR 2405, Circuit Analysis (3 Hours) & ENGR 2415, Circuit Analysis Lab (1 Hour)
- ENGR 2720, Digital Logic Design (3 Hours) & ENGR 2730, Digital Logic Lab (1 Hour)
- EENG 3510, Electronics I (3 Hours)

COMPUTER SCIENCE AND ENGINEERING

- CSCE 1030, Computer Science I (4 Hours)
- CSCE 1040, Computer Science II (3 Hours)
- CSCE 2100, Foundations of Computing (3 Hours)
- CSCE 2110, Foundations of Data Structures (3 Hours)
- CSCE 2610, Assembly Lang. & Computer Organization (3 Hours)
- CSCE 3010, Signals & Systems (3 Hours)
- CSCE 3020, Communication Systems (3 Hours)
- CSCE 3600, Principles of Systems Programming (3 Hours)
- CSCE 3612, Embedded Systems Design (3 Hours)
- CSCE 3730, Reconfigurable Logic (3 Hours)
- CSCE 4011, Engineering Ethics (3 Hours)
- CSCE 4910, Senior Design I (3 Hours)
- CSCE 4915, Senior Design II (3 Hours)

SPECIALTY AREA

Choose a specialty area and complete 3 courses from the approved options below:

- Specialty Elective (3 Hours)
- Specialty Elective (3 Hours)
- Specialty Elective (3 Hours)

Real-time & Embedded Systems Specialty Area (Choose 3 courses):

ELET 3750, CSCE 3444, 3610, 4440, 4600, 4610, 4620, 4730, 4890

VLSI & Electronics Specialty Area (Choose 3 courses):

ELET 3750, 4300, 4340, CSCE 3610, 4610, 4730, 4890, PHYS 4500

Communications & Networks Specialty Area (Choose 3 courses):

CSCE 3420, 3530, 3550, 4510, 4520, 4530, 4560, 4890

Computer Systems Specialty Area (Choose 3 courses):

CSCE 3030, 3610, 4050, 4240, 4600, 4610, 4620, 4650, 4730, 4890

Maximum of 6 hours may be taken from CSCE 4890, 4920, 4930, 4940, or 4950.

ADVANCED LEVEL GENERAL ELECTIVE

- 1 advanced course (3 Hours) may be required to reach 42 total advanced hours.

This is an unofficial simplified checklist effective fall 2019. Degree requirements may change. You may need elective courses to help reach a minimum of 121 Total Hours and 42 Advanced Hours. Check with an advisor.

Computer Engineering

Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses and notes

Must earn at least a grade of "C" in each course except for most University Core courses.

FRESHMAN YEAR			
FALL			SPRING
MATH 1710, Calculus I (see note 1)	4		MATH 1720, Calculus II (MATH 1710)
CHEM 1410, General Chemistry I (see note 2)	3		PHYS 1710, Mechanics (MATH 1710)
CHEM 1430, General Chemistry I Lab (see note 2)	1		PHYS 1730, Mechanics Lab (MATH 1710)
CSCE 1030, Computer Science (see note 3)	4		CSCE 1040, Comp. Science II (CSCE 1030, MATH 1710)
Communication Core course	<u>3</u>		TECM 2700, Technical Writing (Communication Core)
Total Hours	15		University Core course
			Total Hours
			16
SOPHOMORE YEAR			
FALL			SPRING
MATH 2730 Multivariable Calculus (MATH 1720)	3		MATH 1780, Probability Models (MATH 1710)
PHYS 2220, E. & M. (MATH 1720, PHYS 1710/1730)	3		MATH 2700, Linear Algebra (MATH 1720)
PHYS 2240, E. & M. Lab (MATH 1720, PHYS 1710/1730)	1		CSCE 2110, Foundations of Data Structures (CSCE 1040)
CSCE 2100, Foundations of Computing (CSCE 1040)	3		CSCE 2610, Assembly (Co. ENGR 2720/2730, CSCE 2100)
ENGR 2720, Digital Logic	3		ENGR 2405, Circuit Analysis (see note 4)
ENGR 2730, Digital Logic Lab	<u>1</u>		ENGR 2415, Circuit Analysis Lab (see note 4)
Total Hours	14		Total Hours
			16
JUNIOR YEAR			
FALL			SPRING
EENG 3510, Electronics I (ENGR 2405/2415)	3		CSCE 3020, Communication Systems (CSCE 3010)
CSCE 3010, Signals & Sys. (ENGR 2405/2415, MATH 2730)	3		CSCE 3612, Embed. Sys. (ENGR 2720/2730, CSCE 2610)
CSCE 3600, Systems Programming (CSCE 2100)	3		CSCE Specialty Area Elective course (see note 5)
CSCE 3730, Reconfigurable Logic (CSCE 2610)	3		Advanced Math or Science Elective
University Core course	<u>3</u>		University Core course
Total Hours	15		Total Hours
			15
SENIOR YEAR			
FALL			SPRING
CSCE 4910, Senior Design I (CSCE 3612, EENG 3510)	3		CSCE 4915, Senior Design II (CSCE 4910)
CSCE Specialty Area Elective course (see note 5)	3		CSCE 4011, Engineering Ethics (CSCE 3600)
CSCE Specialty Area Elective course (see note 5)	3		University Core course
University Core course	3		University Core course
University Core course	<u>3</u>		Advanced Level General Elective (see note 6)
Total Hours	15		Total Hours
			15

Notes:

Note 1: MATH 1710 requires one of the following as a prerequisite: completion of MATH 1650 with a grade of "C" or higher; or Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: CHEM 1410 and 1430 requires MATH 1100, College Algebra (or higher) as prerequisite.

Note 3: CSCE 1030 requires completion of MATH 1650, Pre-Calculus, or co-enrollment in MATH 1710, Calculus I (or higher) as prerequisite.

Note 4: ENGR 2405 and ENGR 2415 require completion of MATH 1720 and either completion of or co-enrollment in PHYS 2220 and PHYS 2240 as prerequisite.

Note 5: See curriculum page for options. Most specialization courses are offered fall only or spring only. Must meet prerequisite for specialization courses. Graduate Track option available.

Note 6: Advanced level general elective may be needed to reach 42 total advanced hours. Please check with an advisor.

Minimum grade of "C" (2.0 GPA) in Foundations: Communications course, TECM 2700, CSCE 1030, CSCE 1040, CSCE 2100, CSCE 2110, and MATH 1710 to enroll in advanced courses.

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met and a degree audit must be created in order to progress in the program to a timely graduation.

Computer Science

Bachelor of Science (B.S.) degree with a major in Computer Engineering
Department of Computer Science and Engineering, Discovery Park F-201; (940) 565-2767

University Core

COMMUNICATION

- ❑ 1 Course (3 Hours) chosen from options on Page 29
Grade of "C" or better is required

AMERICAN HISTORY I

- ❑ 1 Course (3 Hours) chosen from HIST 2610 or HIST 2675

AMERICAN HISTORY II

- ❑ 1 Course (3 Hours) chosen from HIST 2620 or HIST 2685

FEDERAL GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2305 or PSCI 2315

STATE GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2306 or PSCI 2316

CREATIVE ARTS

- ❑ 1 Course (3 Hours) Chosen from options on page 29

LANGUAGE, PHILOSOPHY, AND CULTURE

- ❑ 1 Course (3 Hours) Chosen from options on page 29

SOCIAL AND BEHAVIORAL SCIENCES

- ❑ 1 Course (3 Hours) Chosen from options on page 29

Major Requirements

Grades of C or better

TECHNICAL COMMUNICATIONS

- ❑ TECM 2700, Technical Writing (3 Hours)
- ❑ 1 Advanced TECM course chosen from:
 - TECM 4100, Writing Grants and Proposals (3 Hours)
 - TECM 4180, Advanced Technical Writing (3 Hours)
 - TECM 4190, Technical Editing (3 Hours)
 - TECM 4200, Research Methods (3 Hours)
 - TECM 4250, Writing Procedures and Manuals (3 Hours)
 - TECM 4300, Usability and User Experience (3 Hours)
 - TECM 4400, Advanced Information in TECM (3 Hours)
 - TECM 4500, Content Analysis in TECM (3 Hours)
 - TECM 4700, Writing in the Sciences (3 Hours)

MATHEMATICS

- ❑ MATH 1710, Calculus I (4 Hours)
- ❑ MATH 1720, Calculus II (3 Hours)
- ❑ MATH 1780, Probability Models (3 Hours)
- ❑ MATH 2700, Linear Algebra (3 Hours)

SCIENCES

- ❑ PHYS 1710, Mechanics (3 Hours) &
PHYS 1730 Mechanics Lab (1 Hour)
- ❑ PHYS 2220, Electricity & Magnetism (3 Hours) &
PHYS 2240, Electricity & Magnetism Lab (1 Hour)

Major Requirements

Grades of C or better

SCIENCES (Continued)

- ❑ 1 Lab science and lab chosen from list options below
- ❑ 1 Lab science and lab chosen from list options below
 - CHEM 1410, General Chemistry I (3 Hours) and
CHEM 1430, General Chemistry I Lab (1 Hour)
 - CHEM 1420, General Chemistry II (3 Hours) and
CHEM 1440, General Chemistry II Lab (1 Hour)
 - BIOL 1710, Biology I (3 Hours)
 - BIOL 1720, Biology II (3 Hours)
 - BIOL 1760, Biology Lab (2 Hours)

ELECTRICAL ENGINEERING

- ❑ EENG 2710, Digital Logic Design (3 Hours)

COMPUTER SCIENCE AND ENGINEERING

- ❑ CSCE 1030, Computer Science I (4 Hours)
- ❑ CSCE 1040, Computer Science II (3 Hours)
- ❑ CSCE 2100, Foundations of Computing (3 Hours)
- ❑ CSCE 2110, Foundations of Data Structures (3 Hours)
- ❑ CSCE 2610, Assembly Lang. & Computer Organization (3 Hours)
- ❑ CSCE 3110, Data Structures (3 Hours)
- ❑ CSCE 3444, Software Engineering (3 Hours)
- ❑ CSCE 3600, Principles of Systems Programming (3 Hours)
- ❑ CSCE 4010, Social Issues in Computing (3 Hours)
- ❑ CSCE 4110, Algorithms (3 Hours)
- ❑ CSCE 4901, Capstone I (3 Hours)*
- ❑ CSCE 4902, Capstone II (3 Hours)*

COMPUTER SCIENCE AND ENGINEERING CORE ELECTIVES

- ❑ 1 CSCE Core course (3 Hours) chose from list options below
- ❑ 1 CSCE Core course (3 Hours) chose from list options below

CSCE 3530, Introduction to Computer Networks (3 Hours)
CSCE 4115, Formal Lang., Automata and Compatibility (3 Hours)
CSCE 4430, Programming Languages (3 Hours)
CSCE 4600, Introduction to Operating Systems (3 Hours)
CSCE 4650, Introduction to Compilation Techniques (3 Hours)

COMPUTER SCIENCE AND ENGINEERING BREADTH ELECTIVES

- ❑ 1 CSCE Breadth course (3 Hours) chose from list options below
- ❑ 1 CSCE Breadth course (3 Hours) chose from list options below

CSCE 3550, Introduction to Computer Security (3 Hours)
CSCE 4210, Game Programming I (3 Hours)
CSCE 4230, Introduction to Computer Graphics (3 Hours)
CSCE 4240, Introduction to Digital Image Processing (3 Hours)
CSCE 4290, Introduction to Natural Language Processing (3 Hours)
CSCE 4310, Introduction to Artificial Intelligence (3 Hours)
CSCE 4350, Fundamentals of Database Systems (3 Hours)
CSCE 4460, Software Testing and Empirical Methodologies (3 Hours)

COMPUTER SCIENCE AND ENGINEERING FREE ELECTIVES:

- ❑ CSCE 3*** or 4*** (3 Hours) course not already applied above
- ❑ CSCE 3*** or 4*** (3 Hours) course not already applied above

Maximum of 6 hours may be taken from CSCE 4890, 4920, 4930, 4940, and 4950.

*CSCE 4999, Senior Thesis (3 Hours) may replace Capstones with addition of a CSCE 3*** or 4*** (3 Hours) elective course

This is an unofficial simplified checklist effective fall 2019. Degree requirements may change. You may need elective courses to help reach a minimum of 121 Total Hours and 42 Advanced Hours. Check with an advisor.

Computer Science

Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses and notes

Must earn at least a grade of "C" in each course except for most University Core courses.

FRESHMAN YEAR			
FALL		SPRING	
MATH 1710, Calculus I (see note 1)	4	MATH 1720, Calculus II (MATH 1710)	3
CHEM 1410, General Chemistry I (see note 2)	3	CSCE 1040, Comp. Science II (CSCE 1030, MATH 1710)	3
CHEM 1430, General Chemistry I Lab (see note 2)	1	TECM 2700, Technical Writing (Communication Core)	3
CSCE 1030, Computer Science (see note 3)	4	BIOL 1710, Biology I (see note 2)	3
Communication Core course	3	BIOL 1760, Biology Lab	<u>2</u>
Total Hours	15	Total Hours	14
SOPHOMORE YEAR			
FALL		SPRING	
MATH 2700, Linear Algebra (MATH 1720)	3	MATH 1780, Probability Models (MATH 1710)	3
PHYS 1710, Mechanics (MATH 1710)	3	PHYS 2220, E. & M. (MATH 1720, PHYS 1710)	3
PHYS 1730, Mechanics Lab (MATH 1710)	1	PHYS 2240, E. & M. Lab (MATH 1720, PHYS 1710/1730)	1
CSCE 2100, Foundations of Computing (CSCE 1040)	3	CSCE 2110, Foundations of Data Structures (CSCE 1040)	3
EENG 2710, Digital Logic Design	3	CSCE 2610, Assembly (Co. EENG 2710, CSCE 2100)	3
University Core course	<u>3</u>	University Core course	<u>3</u>
Total Hours	16	Total Hours	16
JUNIOR YEAR			
FALL		SPRING	
CSCE 3110, Data Structures (CSCE 2100, 2110)	3	CSCE 3444, Software Engineering (CSCE 3110)	3
CSCE 3600, Systems Programming (CSCE 2100)	3	CSCE 4110, Analysis of Algorithms (CSCE 3110)	3
CSCE Elective course (see note 4)	3	CSCE Elective course (see note 4)	3
TECM 4*** course (see note 7)	3	CSCE Elective course (see note 4)	3
University Core course	<u>3</u>	University Core course	<u>3</u>
Total Hours	15	Total Hours	15
SENIOR YEAR			
FALL		SPRING	
CSCE 4010, Social Issues (CSCE 3600)	3	CSCE 4902, Capstone II, or CSCE 4999, Thesis (see note 6)	3
CSCE 4901, Capstone I (see note 5)	3	CSCE Elective course (see note 4)	3
CSCE Elective course (see note 4)	3	CSCE Elective course (see note 4)	3
University Core course	3	University Core course	3
University Core course	<u>3</u>	Misc. Elective to reach 120 hours (if needed)	<u>3</u>
Total Hours	15	Total Hours	15

Notes:

Note 1: MATH 1710 requires one of the following as a prerequisite: completion of MATH 1650 with a grade of "C" or higher; or Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: CHEM 1410 and 1430 requires MATH 1100, College Algebra (or higher) as prerequisite.

Note 3: CSCE 1030 requires completion of MATH 1650, Pre-Calculus, or co-enrollment in MATH 1710, Calculus I (or higher) as prerequisite.

Note 4: Most courses are offered fall only or spring only. Must complete appropriate prerequisite(s) for each course. Graduate Track option available.

Note 5: CSCE 4901 requires TECM 2700 and CSCE 3444 as prerequisite as well as CSCE 4110 as corequisite or prerequisite.

Note 6: CSCE 4902 requires CSCE 4901 as prerequisite. CSCE 4999 requires professor consent as prerequisite.

Note 7: TECM 4*** level courses require TECM 2700; certain courses may require additional enrollment requirements.

Minimum grade of "C" (2.0 GPA) in Foundations: Communication core, TECM 2700, CSCE 1030, CSCE 1040, CSCE 2100, CSCE 2110, and MATH 1710 to enroll in advanced courses.

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met and a degree audit must be created in order to progress in the program to a timely graduation.

Construction Engineering Technology

Bachelor of Science in Engineering Technology (B.S.E.T) degree with a major in Construction Engineering Technology
Department of Engineering Technology, Discovery Park F-115; (940) 565-2022

University Core

COMMUNICATION

- ❑ 1 Course (3 Hours) chosen from options on Page 29

Grade of "C" or better is required

AMERICAN HISTORY I

- ❑ 1 Course (3 Hours) chosen from HIST 2610 or HIST 2675

AMERICAN HISTORY II

- ❑ 1 Course (3 Hours) chosen from HIST 2620 or HIST 2685

FEDERAL GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2305 or PSCI 2315

STATE GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2306 or PSCI 2316

CREATIVE ARTS

- ❑ 1 Course (3 Hours) Chosen from options on page 29

LANGUAGE, PHILOSOPHY, AND CULTURE

- ❑ 1 Course (3 Hours) Chosen from options on page 29

SOCIAL AND BEHAVIORAL SCIENCES

- ❑ ECON 1100 (3 Hours)

Major Requirements

Grades of C or better

TECHNICAL COMMUNICATIONS

- ❑ TECM 2700, Technical Writing (3 Hours)

MATHEMATICS

- ❑ MATH 1710, Calculus I (4 Hours)
- ❑ MATH 1720, Calculus II (3 Hours)

SCIENCES

- ❑ PHYS 1710, Mechanics (3 Hours) & PHYS 1730 Mechanics Lab (1 Hour)
- ❑ PHYS 2220, Electricity & Magnetism (3 Hours) & PHYS 2240, Electricity & Magnetism Lab (1 Hour)
- ❑ CHEM 1410, General Chemistry I (3 Hours) & CHEM 1430, General Chemistry I Lab (1 Hour)

MISC. Elective

- ❑ 1 course (3 Hours) may be required to reach 124 total hours (check with advisor)

Major Requirements

Grades of C or better

CONSTRUCTION ENGINEERING TECHNOLOGY

- ❑ CNET 1160, Construction Methods and Materials (3 Hours)
- ❑ CNET 2180, Construction Methods and Surveying (3 Hours)
- ❑ CNET 2300, Construction Graphics and Modeling (3 Hours)
- ❑ CNET 3150, Construction Contract Documents (3 Hours)
- ❑ CNET 3160, Construction Cast Estimating (3 Hours)
- ❑ CNET 3190, Construction Scheduling (3 Hours)
- ❑ CNET 3410, Occupational Safety and Liability (3 Hours)
- ❑ CNET 3430, Structural Analysis (3 Hours)
- ❑ CNET 3440, Steel Structures (3 Hours)
- ❑ CNET 3460, Soils and Foundations (3 Hours)
- ❑ CNET 3480, Structural Design with Concrete, Timber, etc. (3 Hours)
- ❑ CNET 4170, Construction Management (3 Hours)
- ❑ CNET 4180, Problems in Project Management (3 Hours)
- ❑ CNET 4620, Adv. Design in Cold-Formed Steel Structures (3 Hours)
- ❑ CNET 4780, Senior Design I (1 Hour)
- ❑ CNET 4790, Senior Design II (3 Hours)

- ❑ ENGR 1030, Technical Systems (3 Hours)
- ❑ ENGR 2301, Statics (3 Hours)
- ❑ ENGR 2332, Mechanics of Materials (4 Hours)

BUSINESS

- ❑ ACCT 2010, Accounting Principles I (3 Hours)
- ❑ BCIS 3610, Basic Information Systems (3 Hours)
- ❑ BLAW 3430, Legal and Ethical Environment of Business (3 Hours)
- ❑ BLAW 4770, Real Estate Law and Contracts (3 Hours)
- ❑ ECON 1100, Microeconomics (3 Hours)
- ❑ OPSM 3830, Operations Management (3 Hours)

TECHNICAL ELECTIVES

- ❑ Any level course chosen from appropriate elective options (4 Hours)

Electives must be chosen from the subjects of business, engineering, mathematics, and science. Check with an advisor for appropriate technical elective course options. Suggestions include, but are not limited to:

MATH 1600	MFET 3110	LSCM 3960	CSCE 1030
MATH 1610	MGMT 3330	MKTG 3010	CHEM 1420
MATH 1650	MGMT 3720	MKTG 3650	PHYS 3010
MATH 3410	MGMT 3820	ENGR 1304	
MATH 3680	MGMT 3850	ENGR 2302	
ACCT 2020	MGMT 4470	ENGR 3450	

Construction Engineering Technology

Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses and notes

Must earn at least a grade of "C" in each course except for most University Core courses.

FRESHMAN YEAR			
FALL		SPRING	
MATH 1710, Calculus I (see note 1)	4	MATH 1720, Calculus II (MATH 1710)	3
CHEM 1410, General Chemistry I (see note 2)	3	PHYS 1710, Mechanics (MATH 1710)	3
CHEM 1430, General Chemistry I Lab (see note 2)	1	PHYS 1730, Mechanics Lab (MATH 1710)	1
CNET 1160, Const. Methods and Materials	3	CNET 2180, Const. Methods and Surveying (CNET 1160)	3
ENGR 1030, Technological Systems	3	TECM 2700, Technical Writing (Communication Core)	3
Communication Core course	<u>3</u>	University Core course	<u>3</u>
Total Hours	17	Total Hours	16
SOPHOMORE YEAR			
FALL		SPRING	
PHYS 2220, E. & M. (MATH 1720, PHYS 1710)	3	ACCT 2010, Accounting Principles I (ECON 1100)	3
PHYS 2240, E. & M. Lab (MATH 1720, PHYS 1710/1730)	1	BCIS 3610, Basic Information Systems	3
CNET 2300, Construction Graphics and Modeling	3	ENGR 2332, Mechanics and Materials (ENGR 2301)	4
ENGR 2301, Statics (PHYS 1710, 1730)	3	OPSM 3830, Operations Management	3
ECON 1100, Microeconomics	3	University Core course	<u>3</u>
University Core course	<u>3</u>	Total Hours	16
Total Hours	16		
JUNIOR YEAR			
FALL		SPRING	
CNET 3150, Const. Contract Doc. (CNET 2180)	3	CNET 3190, Const. Scheduling (CNET 3160)	3
CNET 3160, Const. Cost Estimating (CNET 2180)	3	CNET 3440, Steel Structures (CNET 3430)	3
CNET 3430, Structural Analysis (ENGR 2332)	3	CNET 3460, Soils and Found. (CNET 2180, ENGR 2332)	3
BLAW 3430, Legal and Ethical (PSCI 2305, PSCI 2306)	3	CNET 3410, Occupational Safety and Liability	3
University Core course	<u>3</u>	University Core course	<u>3</u>
Total Hours	15	Total Hours	15
SENIOR YEAR			
FALL		SPRING	
CNET 3480, Structural Design (CNET 2180, CNET 3430)	3	CNET 4180, Problems in Project Mgmt. (CNET 4170)	3
CNET 4170, Const. Management (CNET 3160)	3	CNET 4620, Adv. Design (CNET 3430)	3
CNET 4780, Senior Design I (see note 3)	1	CNET 4790, Senior Design II (CNET 4780)	3
BLAW 4770, Real Estate Law and Contracts	3	Technical Elective course	4
University Core course	<u>3</u>	Misc. Elective to reach 124 hours (if needed)	<u>3</u>
Total Hours	13	Total Hours	16

Notes:

Note 1: MATH 1710 requires one of the following as a prerequisite: completion of MATH 1650 with a grade of "C" or higher; or Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: CHEM 1410 and 1430 requires MATH 1100, College Algebra (or higher) as prerequisite.

Note 3: CNET 4780 requires senior classification and completion of CNET 3190, CNET 3440, and CNET 3460 as prerequisite.

Minimum grade of "C" (2.0 GPA) in Foundations: Communication Core, TECM 2700, ENGR 1030, MATH 1710, PHYS 1710/1730, CNET 1160, CNET 2180, and CNET 2300 to enroll in advanced courses.

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met and a degree audit must be created in order to progress in the program to a timely graduation.

Electrical Engineering

Bachelor of Science (B.S.) degree with a major in Electrical Engineering
Department of Electrical Engineering, Discovery Park B-270; (940) 891-6872

University Core

COMMUNICATION

- ❑ 1 Course (3 Hours) chosen from options on Page 29

Grade of "C" or better is required

AMERICAN HISTORY I

- ❑ 1 Course (3 Hours) chosen from HIST 2610 or HIST 2675

AMERICAN HISTORY II

- ❑ 1 Course (3 Hours) chosen from HIST 2620 or HIST 2685

FEDERAL GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2305 or PSCI 2315

STATE GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2306 or PSCI 2316

CREATIVE ARTS

- ❑ 1 Course (3 Hours) Chosen from options on page 29

LANGUAGE, PHILOSOPHY, AND CULTURE

- ❑ 1 Course (3 Hours) Chosen from options on page 29

SOCIAL AND BEHAVIORAL SCIENCES

- ❑ 1 Course (3 Hours) Chosen from options on page 29

Major Requirements

Grades of C or better

TECHNICAL COMMUNICATIONS

- ❑ TECM 2700, Technical Writing (3 Hours)

MATHEMATICS

- ❑ MATH 1710, Calculus I (4 Hours)
- ❑ MATH 1720, Calculus II (3 Hours)
- ❑ MATH 2730, Multivariable Calculus (3 Hours)
- ❑ MATH 2700, Linear Algebra (3 Hours)
- ❑ MATH 3410, Differential Equations (3 Hours)
- ❑ MATH 3680, Applied Statistics (3 Hours)

Completion of the above courses will earn a Mathematics minor.

SCIENCES

- ❑ PHYS 1710, Mechanics (3 Hours) &
PHYS 1730 Mechanics Lab (1 Hour)
- ❑ PHYS 2220, Electricity & Magnetism (3 Hours) &
PHYS 2240, Electricity & Magnetism Lab (1 Hour)
- ❑ CHEM 1410, General Chemistry I (3 Hours) &
CHEM 1430, General Chemistry I Lab (1 Hour)

Major Requirements

Grades of C or better

ELECTRICAL ENGINEERING

- ❑ EENG 1910, Introduction to Electrical Engineering (3 Hours)
- ❑ EENG 2610, Circuit Analysis, (3 Hours) &
EENG 2611, Circuit Analysis Lab (1 Hour)
- ❑ EENG 2620, Signals and Systems (3 Hours) &
EENG 2621, Signals and Systems Lab (1 Hour)
- ❑ EENG 2710, Digital Logic Design (3 Hours) &
EENG 2711, Digital Logic Design Lab (1 Hour)
- ❑ EENG 2920, Analog and Digital Circuit Design (3 Hours)
- ❑ EENG 3410, Engineering Electromagnetics (3 Hours) &
EENG 3411, Engineering Electromagnetics Lab (1 Hour)
- ❑ EENG 3510, Electronics I (3 Hours) &
EENG 3511, Electronics I Lab (1 Hour)
- ❑ EENG 3520, Electronics II (3 Hours)
- ❑ EENG 3710, Computer Organization (3 Hours)
- ❑ EENG 3810, Communications Systems (3 Hours) &
EENG 3811, Communication Systems Lab (1 Hour)
- ❑ EENG 3910, DSP System Design (3 Hours)
- ❑ EENG 3920, Modern Comm. System Design (3 Hours)
- ❑ EENG 4910, Senior Design I (3 Hours)
- ❑ EENG 4990, Senior Design II (3 Hours)
- ❑ EENG 4*** Elective (3 Hours)
- ❑ EENG 4*** Elective (3 Hours)
- ❑ EENG 4*** Elective (3 Hours)
- ❑ EENG 4*** Elective (3 Hours)

EENG 4*** level elective can be chose from: EENG 4010, 4310, 4330, 4340, 4350, 4410, 4710, 4760, 4810, 4850, and 4900.

EENG 4010 is a topics course and the content of 4010 varies for each semester. EENG 4010 may be repeated for credit if you do not re-take the exact same topic the 2nd time.

EENG 4920 and 4951 cannot be taken as electives.

COMPUTER PROGRAMMING

- ❑ CSCE 1030, Computer Science I (4 Hours)

MANAGEMENT

- ❑ OPSM 3830, Operations Management (3 Hours)
- ❑ MGMT 3850, Entrepreneurship (3 Hours)

A Business Foundations minor will fulfill the management requirement.

This is an unofficial simplified checklist effective fall 2019. Degree requirements may change. You may need elective courses to help reach a minimum of 128 Total Hours and 42 Advanced Hours. Check with an advisor.

Electrical Engineering

Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses and notes

Must earn at least a grade of "C" in each course except for most University Core courses.

FRESHMAN YEAR				
FALL			SPRING	
MATH 1710, Calculus I (see note 1)	4		MATH 1720, Calculus II (MATH 1710)	3
CHEM 1410, General Chemistry I (see note 2)	3		PHYS 1710, Mechanics (MATH 1710)	3
CHEM 1430, General Chemistry I Lab (see note 2)	1		PHYS 1730, Mechanics Lab (MATH 1710)	1
EENG 1910, Introduction to Electrical Engineering	3		EENG 2710, Digital Logic Design	3
CSCE 1030, Computer Science (see note 3)	4		EENG 2711, Digital Logic Design Lab (co EENG 2710)	1
Communication Core course	<u>3</u>		TECM 2700, Technical Writing (Communication Core)	3
Total Hours	18		University Core course	<u>3</u>
			Total Hours	17
SOPHOMORE YEAR				
FALL			SPRING	
MATH 2700, Linear Algebra (MATH 1720)	3		MATH 2730, Multivariable Calculus (MATH 1720)	3
MATH 3410, Diff. Equations (MATH 1720)	3		EENG 2620, Signals & Sys. (See note 4)	3
PHYS 2220, E. & M. (MATH 1720, PHYS 1710/1730)	3		EENG 2621, Signals & Sys. Lab (co-req. EENG 2620)	1
PHYS 2240, E. & M. Lab (MATH 1720, PHYS 1710/1730)	1		EENG 2920, Analog & Dig. Circuit Des. (EENG 2610/2611)	3
EENG 2610, Circuits (Co PHYS 2220/2240 & MATH 3410)	3		University Core course	3
EENG 2611, Circuit Analysis Lab (co-req. EENG 2610)	<u>1</u>		University Core course	<u>3</u>
Total Hours	14		Total Hours	16
JUNIOR YEAR				
FALL			SPRING	
MATH 3680, Applied Stat. (MATH 1710, co. MATH 1720)	3		EENG 3520, Electronics II (EENG 3510/3511)	3
EENG 3410, Electromag. (EENG 2610/2611, MATH 3410)	3		EENG 3710, Comp. Org. (EENG 2710/2711, CSCE 1030)	3
EENG 3411, Electromag. Lab (co-req. EENG 3410)	1		EENG 3810, Comm. Sys. (EENG 2620, 3510, MATH 3680)	3
EENG 3510, Electronics I (EENG 2610/2611)	3		EENG 3811, Comm. Sys. Lab (co-req. EENG 3810)	1
EENG 3511, Electronics I Lab (co-req. EENG 3510)	1		EENG 3920, Modern Comm. System (co. EENG 3520)	3
EENG 3910, DSP System Design (EENG 2620/2621)	3		University Core course	<u>3</u>
University Core course	<u>3</u>		Total Hours	16
Total Hours	17			
SENIOR YEAR				
FALL			SPRING	
EENG Elective (see note 5)	3		EENG Elective (see note 5)	3
EENG Elective (see note 5)	3		EENG Elective (see note 5)	3
EENG 4910, Senior Design I (See note 6)	3		EENG 4990, Senior Design II (EENG 4910)	3
OPSM 3830, Operations Management	3		MGMT 3850, Entrepreneurship	3
University Core course	<u>3</u>		University Core course	<u>3</u>
Total Hours	15		Total Hours	15

Notes:

Note 1: MATH 1710 requires one of the following as a prerequisite: completion of MATH 1650 with a grade of "C" or higher; or Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: CHEM 1410 and 1430 requires MATH 1100, College Algebra (or higher) as prerequisite.

Note 3: CSCE 1030 requires completion of MATH 1650, Pre-Calculus, or co-enrollment in MATH 1710, Calculus I (or higher) as prerequisite.

Note 4: EENG 2620 requires completion of EENG 2610/2611 as prerequisite and MATH 3410 or co-enrollment in MATH 3410 or MATH 2730 as prerequisite.

Note 5: Must complete prerequisite(s) for each EENG Elective course. Graduate Track option available.

Note 6: All EENG 3*** level courses should be completed prior to enrollment in EENG 4910. All math, science, engineering, and other major required classes in junior year and before should also be completed.

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met and a degree audit must be created in order to progress in the program to a timely graduation.

Information Technology

Bachelor of Arts (B.A.) degree with a major in Information Technology
Department of Computer Science and Engineering, Discovery Park F-201; (940) 565-2767

University Core

Major Requirements

Grades of C or better

COMMUNICATION

- ❑ 1 Course (3 Hours) chosen from options on Page 29

Grade of "C" or better is required

AMERICAN HISTORY I

- ❑ 1 Course (3 Hours) chosen from HIST 2610 or HIST 2675

AMERICAN HISTORY II

- ❑ 1 Course (3 Hours) chosen from HIST 2620 or HIST 2685

FEDERAL GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2305 or PSCI 2315

STATE GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2306 or PSCI 2316

CREATIVE ARTS

- ❑ 1 Course (3 Hours) Chosen from options on page 29

LANGUAGE, PHILOSOPHY, AND CULTURE

- ❑ 1 Course (3 Hours) Chosen from options on page 29

SOCIAL AND BEHAVIORAL SCIENCES

- ❑ 1 Course (3 Hours) Chosen from options on page 29

Major Requirements

Grades of C or better

TECHNICAL COMMUNICATIONS

- ❑ TECM 2700, Technical Writing (3 Hours)

MATHEMATICS

- ❑ MATH 1710, Calculus I (4 Hours)
- ❑ MATH 1680 or MATH 1780, Probability (3 Hours)

SCIENCES

- ❑ PHYS 1710, Mechanics (3 Hours) & PHYS 1730 Mechanics Lab (1 Hour)
- ❑ CHEM 1410, General Chemistry I (3 Hours) & CHEM 1430, General Chemistry I Lab (1 Hour)

Or

- BIOL 1710, Biology I (3 hours) & BIOL 1760, Biology Lab (2 Hours)

COMPUTER SCIENCE AND ENGINEERING

- ❑ CSCE 1030, Computer Science I (4 Hours)
- ❑ CSCE 1040, Computer Science II (3 Hours)
- ❑ CSCE 2100, Foundations of Computing (3 Hours)
- ❑ CSCE 2110, Foundations of Data Structures (3 Hours)
- ❑ CSCE 3055, IT Project Management (3 Hours)
- ❑ CSCE 3220, Human Computer Interfaces (3 Hours)
- ❑ CSCE 3420, Internet Programming (3 Hours)
- ❑ CSCE 3530, Introduction to Computer Networks (3 Hours)
- ❑ CSCE 3550, Introduction to Computer Security (3 Hours)
- ❑ CSCE 3600, Principles of Systems Programming (3 Hours)
- ❑ CSCE 3605, Systems Administration (3 Hours)
- ❑ CSCE 3615, Enterprise Systems Arch., Analysis and Design (3 Hours)
- ❑ CSCE 4010, Social Issues in Computing (3 Hours)
- ❑ CSCE 4350, Fundamentals of Database Systems (3 Hours)
- ❑ CSCE 4355, Database Administration (3 Hours)
- ❑ CSCE 4535, Network Administration (3 Hours)
- ❑ CSCE 4905, Information Technology Capstone I (3 Hours)
- ❑ CSCE 4925, Information Technology Capstone II (3 Hours)

SUPPORTING AREA

- ❑ Course approved by an advisor (3 Hours)
- ❑ Course approved by an advisor (3 Hours)
- ❑ Course approved by an advisor (3 Hours)
- ❑ Course approved by an advisor (3 Hours)
- ❑ Course approved by an advisor (3 Hours)
- ❑ Course approved by an advisor (3 Hours)
- ❑ Course approved by an advisor (3 Hours)

You must choose a supporting area (21 Hours) and complete approved courses. Check with your advisor concerning approved classes. Suggestions include, but are not limited to:

Security	Health Professions
Networking	Pre-Med/Pre-Vet/Pre-Dental
Information Systems	Pre-Law
Software/Web Development	Education/Teach North Texas
Game Development	Pre-MBA Business
Criminology/Forensics	General Business
Technical Communications	Management
Microsoft/Oracle/Cisco Cert.	Logistics
Graphic/Communications Design	
Geographic Information Systems (GIS)	

Completion of CSCE 2610, CSCE 4560, & CSCE 4600 toward a Supporting Area in Security and/or Networking also earns a Security Certificate from the National Security Agency and Department of Homeland Security. CSCE 2610 requires EENG 2710 or ENGR 2720/2730 as prerequisite.

A maximum of 6 hours may be taken for the Supporting Area from CSCE 4890, 4920, 4930, 4940, or 4950.

This is an unofficial simplified checklist effective fall 2019. Degree requirements may change. You may need elective courses to help reach a minimum of 121 Total Hours and 42 Advanced Hours. Check with an advisor.

Information Technology

Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses and notes

Must earn at least a grade of "C" in each course except for most University Core courses.

FRESHMAN YEAR			
FALL		SPRING	
MATH 1710, Calculus I (see note 1)	4	MATH 1680 or MATH 1780 Probability (MATH 1710)	3
CHEM 1410 or BIOL 1710 (see note 2)	3	PHYS 1710, Mechanics (MATH 1710)	3
CHEM 1430 or BIOL 1760 (see note 2)	1	PHYS 1730, Mechanics Lab (MATH 1710)	1
CSCE 1030, Computer Science (see note 3)	4	CSCE 1040, Comp. Science II (CSCE 1030, MATH 1710)	3
Communication Core course	<u>3</u>	TECM 2700, Technical Writing (Communication Core)	3
Total Hours	15	University Core course	<u>3</u>
		Total Hours	16
SOPHOMORE YEAR			
FALL		SPRING	
CSCE 2100, Foundations of Computing (CSCE 1040)	3	CSCE 2110, Foundations of Data Structures (CSCE 1040)	3
Supporting Area course (see note 4)	3	CSCE 3600, Systems Programming (CSCE 2100)	3
University Core course	3	Supporting Area course (see note 4)	3
University Core course	3	University Core course	3
University Core course	<u>3</u>	University Core course	<u>3</u>
Total Hours	15	Total Hours	15
JUNIOR YEAR			
FALL		SPRING	
CSCE 3055, IT Project Management (CSCE 2100)	3	CSCE 4010, Social Issues (CSCE 3600)	3
CSCE 3220, Human Computer Interfaces (CSCE 2110)	3	CSCE 3605, Systems Administration (CSCE 3600)	3
CSCE 3420, Internet Programming (CSCE 2110)	3	CSCE 3615, Enterprise Systems Arch. (CSCE 2100)	3
CSCE 3530, Computer Networks (CSCE 3600)	3	CSCE 4350, Database Systems (CSCE 2110)	3
Supporting Area course (see note 4)	<u>3</u>	University Core course	<u>3</u>
Total Hours	15	Total Hours	15
SENIOR YEAR			
FALL		SPRING	
CSCE 3550, Computer Security (CSCE 3600)	3	CSCE 4925, Capstone II (CSCE 4905)	3
CSCE 4355, Database Administration (CSCE 4350)	3	Supporting Area course (see note 4)	3
CSCE 4535, Network Administration (CSCE 3530)	3	Supporting Area course (see note 4)	3
CSCE 4905, Capstone I (CSCE 3055, CSCE 3615)	3	Supporting Area course (see note 4)	<u>3</u>
Supporting Area course (see note 4)	<u>3</u>	Total Hours	12
Total Hours	15		

Notes:

Note 1: MATH 1710 requires one of the following as a prerequisite: completion of MATH 1650 with a grade of "C" or higher; or Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: BIOL 1710 and 1760 have no prerequisites. CHEM 1410 and 1430 requires MATH 1100, College Algebra (or higher) as prerequisite.

Note 3: CSCE 1030 requires completion of MATH 1650, Pre-Calculus, or co-enrollment in MATH 1710, Calculus I (or higher) as prerequisite.

Note 4: Must enroll in Supporting Area courses approved by an advisor and complete prerequisite(s) for approved courses.

Minimum grades of "C" (2.0 GPA) in Foundations: Communications core, TECM 2700, CSCE 1030, CSCE 1040, CSCE 2100, and MATH 1710 to enroll in advanced courses.

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met and a degree audit must be created in order to progress in the program to a timely graduation.

Materials Science and Engineering

Bachelor of Science (B.S.) degree with a major in Materials Science and Engineering
Department of Materials Science and Engineering, Discovery Park E-132; (940) 565-3260

University Core

COMMUNICATION

- ❑ 1 Course (3 Hours) chosen from options on Page 29
Grade of "C" or better is required

AMERICAN HISTORY I

- ❑ 1 Course (3 Hours) chosen from HIST 2610 or HIST 2675

AMERICAN HISTORY II

- ❑ 1 Course (3 Hours) chosen from HIST 2620 or HIST 2685

FEDERAL GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2305 or PSCI 2315

STATE GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2306 or PSCI 2316

CREATIVE ARTS

- ❑ 1 Course (3 Hours) Chosen from options on page 29

LANGUAGE, PHILOSOPHY, AND CULTURE

- ❑ 1 Course (3 Hours) Chosen from options on page 29

SOCIAL AND BEHAVIORAL SCIENCES

- ❑ 1 Course (3 Hours) Chosen from options on page 29

Major Requirements

Grades of C or better

TECHNICAL COMMUNICATIONS

- ❑ TECM 2700, Technical Writing (3 Hours)

MATHEMATICS

- ❑ MATH 1710, Calculus I (4 Hours)
- ❑ MATH 1720, Calculus II (3 Hours)
- ❑ MATH 2730, Multivariable Calculus (3 Hours)
- ❑ MATH 3410, Differential Equations (3 Hours)

Major Requirements

Grades of C or better

SCIENCES

- ❑ CHEM 1410, General Chemistry I (3 Hours) & CHEM 1430, General Chemistry I Lab (1 Hour)
- ❑ CHEM 1420, General Chemistry II (3 Hours)
- ❑ PHYS 1710, Mechanics (3 Hours) & PHYS 1730 Mechanics Lab (1 Hour)
- ❑ PHYS 2220, Electricity & Magnetism (3 Hours) & PHYS 2240, Electricity & Magnetism Lab (1 Hour)
- ❑ PHYS 3010, Modern Physics (3 Hours)

MATERIALS SCIENCE AND ENGINEERING

- ❑ ENGR 2301, Statics (3 Hours)
- ❑ MTSE 1100, Discover How and Why Materials Matter (3 Hours)
- ❑ MTSE 3000, Fundamentals of Materials Science and Engr. I (3 Hours)
- ❑ MTSE 3001, Fundamentals of Materials Science and Engr. II (3 Hours)
- ❑ MTSE 3010, Bonding and Structure (3 Hours)
- ❑ MTSE 3020, Microstructure and Characterization (3 Hours)
- ❑ MTSE 3030, Thermodynamics and Phase Diagrams (3 Hours)
- ❑ MTSE 3040, Transport Phenomena (3 Hours)
- ❑ MTSE 3050, Mechanical Properties (3 Hours)
- ❑ MTSE 3060, Phase Transformations (3 Hours)
- ❑ MTSE 3070, Electrical, Optical, and Magnetic Properties (3 Hours)
- ❑ MTSE 3080, Materials Processing (3 Hours)
- ❑ MTSE 3090, Laboratory I (1 Hour)
- ❑ MTSE 3100, Laboratory II (1 Hour)
- ❑ MTSE 4010, Physical Metallurgy Principles (3 Hours)
- ❑ MTSE 4030, Ceramic Science and Engineering (3 Hours)
- ❑ MTSE 4050, Polymer Science and Engineering (3 Hours)
- ❑ MTSE 4060, Materials Selection and Performance (3 Hours)
- ❑ MTSE 4090, Senior Design I (3 Hours)
- ❑ MTSE 4100, Senior Design II (3 Hours)

MATERIALS SCIENCE AND ENGINEERING ELECTIVES

- ❑ 1 MTSE 4*** elective (3 Hours) chosen from list options below
- ❑ 1 MTSE 4*** elective (3 Hours) chosen from list options below

MTSE 4020, Materials in Medicine (3 Hours)
MTSE 4040, Computational Materials Science (3 Hours)
MTSE 4070, Electronic Materials (3 Hours)

This is an unofficial simplified checklist effective fall 2019. Degree requirements may change. You may need elective courses to help reach a minimum of 120 Total Hours and 42 Advanced Hours. Check with an advisor.

Materials Science and Engineering

Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses and notes

Must earn at least a grade of "C" in each course except for most University Core courses.

FRESHMAN YEAR				
FALL			SPRING	
MATH 1710, Calculus I (see note 1)	4		MATH 1720, Calculus II (MATH 1710)	3
CHEM 1410, General Chemistry I (see note 2)	3		CHEM 1420, General Chemistry II (CHEM 1410/1430)	3
CHEM 1430, General Chemistry I Lab (see note 2)	1		PHYS 1710, Mechanics (MATH 1710)	3
Communication Core course	3		PHYS 1730, Mechanics Lab (MATH 1710)	1
MTSE 1100, Discover How and Why Materials Matter	3		TECM 2700, Technical Writing (Communication Core)	3
Total Hours	14		University Core course	3
			Total Hours	16
SOPHOMORE YEAR				
FALL			SPRING	
MATH 2730 Multivariable Calculus (MATH 1720)	3		MATH 3410, Diff. Equations (MATH 1720)	3
PHYS 2220, E. & M. (MATH 1720, PHYS 1710, 1730)	3		PHYS 3010, Modern Physics (PHYS 2220/2240)	3
PHYS 2240, E. & M. Lab (MATH 1720, PHYS 1710, 1730)	1		MTSE 3001, Fundamentals II (pre- or co-req. MTSE 3000)	3
ENGR 2301, Statics (MATH 1710, PHYS 1710, 1730)	3		University Core course	3
MTSE 3000, Fundamentals I (CHEM 1410/1430)	3		University Core course	3
University Core course	3		Total Hours	15
Total Hours	16			
JUNIOR YEAR				
FALL			SPRING	
MTSE 3010, Bonding and Structure (MTSE 3000)	3		MTSE 3050, Mechanical Properties (MTSE 3000)	3
MTSE 3020, Micro and Characterization (MTSE 3000)	3		MTSE 3060, Phase Transform. (MTSE 3010, 3030, 3040)	3
MTSE 3030, Thermo. & Phase Diagrams (MTSE 3000)	3		MTSE 3070, Elect, Opt, & Mag, Properties (MTSE 3000)	3
MTSE 3040, Transport Phen. (MTSE 3000, MATH 3410)	3		MTSE 3080, Materials Processing (MTSE 3040)	3
MTSE 3090, Laboratory I (MTSE 3000)	1		MTSE 3100, Laboratory II (MTSE 3090)	1
University Core course	3		University Core course	3
Total Hours	16		Total Hours	16
SENIOR YEAR				
FALL			SPRING	
MTSE 4010, Phys. Metal. Prin. (MTSE 3010, 3030, 3040)	3		MTSE Advanced Level MTSE Elective (see note 4)	3
MTSE 4030, Ceramic Sci. & Engr. (MTSE 3010, 3020, 3040)	3		MTSE Advanced Level MTSE Elective (see note 4)	3
MTSE 4060, Selection & Perform. (MTSE 3030, 3040, 3050)	3		MTSE 4050, Polymer Sci. and Engr. (MTSE 3000)	3
MTSE 4090, Senior Design I (see note 3)	3		MTSE 4100, Senior Design II (MTSE 4090)	3
University Core course	3		Total Hours	12
Total Hours	15			

Notes:

Note 1: MATH 1710 requires one of the following as a prerequisite: completion of MATH 1650 with a grade of "C" or higher; or Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: CHEM 1410 and 1430 requires MATH 1100, College Algebra (or higher) as prerequisite.

Note 3: MTSE 4090 requires completion of MTSE 3010, 3020, 3030, 3040, 3050, 3070, and 3080 as prerequisite.

Note 4: Must complete prerequisite(s) for each Advanced Elective MTSE course. Graduate Track option available.

Minimum grades of "C" (2.0) GPA in Foundations: Communications Core, TECM 2700, MATH 1710, MATH 1720, CHEM 1410/1430, CHEM 1420, PHYS 1710/1730, MTSE 1100, and MTSE 3000 to enroll in advanced courses.

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met and a degree audit must be created in order to progress in the program to a timely graduation.

Mechanical and Energy Engineering

Bachelor of Science (B.S.) degree with a major in Mechanical and Energy Engineering
Department of Mechanical and Energy Engineering, Discovery Park F-101; (940) 565-2400

University Core

COMMUNICATION

- ❑ 1 Course (3 Hours) chosen from options on Page 29
Grade of "C" or better is required

AMERICAN HISTORY I

- ❑ 1 Course (3 Hours) chosen from HIST 2610 or HIST 2675

AMERICAN HISTORY II

- ❑ 1 Course (3 Hours) chosen from HIST 2620 or HIST 2685

FEDERAL GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2305 or PSCI 2315

STATE GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2306 or PSCI 2316

CREATIVE ARTS

- ❑ 1 Course (3 Hours) Chosen from options on page 29

LANGUAGE, PHILOSOPHY, AND CULTURE

- ❑ 1 Course (3 Hours) Chosen from options on page 29

SOCIAL AND BEHAVIORAL SCIENCES

- ❑ 1 Course (3 Hours) Chosen from options on page 29

Major Requirements

Grades of C or better

TECHNICAL COMMUNICATIONS

- ❑ TECM 2700, Technical Writing (3 Hours)

MATHEMATICS

- ❑ MATH 1710, Calculus I (4 Hours)
- ❑ MATH 1720, Calculus II (3 Hours)
- ❑ MATH 2700, Linear Algebra (3 Hours)
- ❑ MATH 2730, Multivariable Calculus (3 Hours)
- ❑ MATH 3410, Differential Equations (3 Hours)

SCIENCES

- ❑ PHYS 1710, Mechanics (3 Hours) &
PHYS 1730 Mechanics Lab (1 Hour)
- ❑ PHYS 2220, Electricity & Magnetism (3 Hours) &
PHYS 2240, Electricity & Magnetism Lab (1 Hour)
- ❑ CHEM 1410, General Chemistry I (3 Hours) &
CHEM 1430, General Chemistry I Lab (1 Hour)

Major Requirements

Grades of C or better

MECHANICAL AND ENERGY ENGINEERING

- ❑ MEEN 1000, Discover Mechanical and Energy (2 Hours)
- ❑ MEEN 2110, Engineering Data Analysis (3 Hours)
- ❑ MEEN 2210, Thermodynamics I (3 Hours)
- ❑ MEEN 2240, Programming for Mechanical Engr. (3 Hours)
- ❑ MEEN 2301, Mechanics I (3 Hours)
- ❑ MEEN 2302, Mechanics II (3 Hours)
- ❑ MEEN 2332, Mechanics III (3 Hours)
- ❑ MEEN 3100, Manufacturing Processes (3 Hours)
- ❑ MEEN 3110, Thermodynamics II (3 Hours)
- ❑ MEEN 3120, Fluid Mechanics (3 Hours)
- ❑ MEEN 3130, Machine Elements (3 Hours)
- ❑ MEEN 3210, Heat Transfer (3 Hours)
- ❑ MEEN 3230, System Dynamics and Controls (3 Hours)
- ❑ MEEN 3240, Laboratory I (2 Hours)
- ❑ MEEN 3242, Laboratory II (1 Hour)
- ❑ MEEN 3250, Analytical Methods (3 Hours)
- ❑ MEEN 4150, Design I (3 Hours)
- ❑ MEEN 4250, Capstone Design (3 Hours)

- ❑ ENGR 1304, Engineering Graphics (3 Hours)
- ❑ ENGR 2405, Circuit Analysis (3 Hours)

Or

- ❑ EENG 2610, Circuit Analysis (3 Hours)
- ❑ MTSE 3000, Fundamentals of Materials Sci. and Engr. (3 Hours) and MTSE 3003, Fundamentals I Lab (1 Hour)

ENERGY ELECTIVES

- ❑ 1 Energy Elective course (3 Hours) chosen from list below
- ❑ 1 Energy Elective course (3 Hours) chosen from list below

MEEN 3125	MEEN 4310	MEEN 4332	MEEN 4410
MEEN 4110	MEEN 4315	MEEN 4335	MEEN 4180
MEEN 4112	MEEN 4320	MEEN 4340	
MEEN 4300	MEEN 4330	MEEN 4350	

TECHNICAL ELECTIVES

- ❑ 1 Technical Elective course (3 Hours) chosen from list below
- ❑ 1 Technical Elective course (3 Hours) chosen from list below

MEEN 4120	MEEN 4151	MEEN 4415	MEEN 4800
MEEN 4130	MEEN 4152	MEEN 4488	MEEN 4930
MEEN 4140	MEEN 4160	MEEN 4510	MFET 4190

This is an unofficial simplified checklist effective fall 2019. Degree requirements may change. You may need elective courses to help reach a minimum of 127 Total Hours and 42 Advanced Hours. Check with an advisor.

Mechanical and Energy Engineering

Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses and notes

Must earn at least a grade of "C" in each course except for most University Core courses.

FRESHMAN YEAR			
FALL			SPRING
MATH 1710, Calculus I (see note 1)	4		MATH 1720, Calculus II (MATH 1710) 3
CHEM 1410, General Chemistry I (see note 2)	3		PHYS 1710, Mechanics (MATH 1710) 3
CHEM 1430, General Chemistry I Lab (see note 2)	1		PHYS 1730, Mechanics Lab (MATH 1710) 1
MEEN 1000, Discover Mech. And Energy (MATH 1650)	2		ENGR 1304, Engineering Graphics 3
Communication Core course	3		TECM 2700, Technical Writing (Communication Core) 3
University Core course	<u>3</u>		University Core course <u>3</u>
Total Hours	16		Total Hours 16
SOPHOMORE YEAR			
FALL			SPRING
MATH 2730 Multivariable Calculus (MATH 1720)	3		MATH 3410, Diff. Equations (MATH 1720, co. MATH 2700) 3
PHYS 2220, E. & M. (MATH 1720, PHYS 1710/1730)	3		MEEN 2210, Thermo. (MEEN 1000, MATH 1720, PHYS 1710) 3
PHYS 2240, E. & M. Lab (MATH 1720, PHYS 1710/1730)	1		MEEN 2302, Mech. II (MEEN 2301, MATH 1720) 3
MEEN 2301, Mech. I (PHYS 1710, 1730, MEEN 1000)	3		MEEN 2332, Mech. III (MEEN 2301) 3
MEEN 2240, Prog. Mech. Engr. (MEEN 1000, co MATH 2700)	3		EENG 2610 or ENGR 2405, Circuit Analysis (see note 4) 3
MATH 2700, Linear Algebra (MATH 1720)	<u>3</u>		MEEN 2110, Engr. Data Analysis (MATH 2700, MEEN 1000) <u>3</u>
Total Hours	16		Total Hours 18
JUNIOR YEAR			
FALL			SPRING
MEEN 3110, Thermodynamics II (MEEN 2210)	3		MEEN 3130, Mach. Elem. (MEEN 2332, ENGR 1304) 3
MEEN 3120, Fluids (MATH 2730, 3410, MEEN 2210, 2332)	3		MEEN 3210, Heat Transfer (MEEN 3110, 3120, 3250) 3
MEEN 3240, Lab I (MEEN 2110, 2210, MATH 3410)	2		MEEN 3230, Dyna. & Confls. (MEEN 2302, MATH 2700, 3410) 3
MEEN 3250, Analyt. Methods (MEEN 2240, MATH 3410)	3		MEEN 3242, Laboratory II (see note 5) 1
MTSE 3000, Materials (CHEM reqt.)	3		University Core course 3
MTSE 3003, Materials Lab (CHEM reqt.)	<u>3</u>		University Core course <u>3</u>
Total Hours	17		Total Hours 16
SENIOR YEAR			
FALL			SPRING
MEEN 3100, Manufact. (MEEN 2332, MTSE 3000, 3003)	3		MEEN 4250, Capstone Design (MEEN 3100, MEEN 4150) 3
MEEN 4150, Design I (see note 6)	3		Energy Elective (see note 7) 3
Energy Elective (see note 7)	3		Technical Elective (see note 7) 3
Technical Elective (see note 7)	3		University Core course 3
University Core course	<u>3</u>		University Core course <u>3</u>
Total Hours	15		Total Hours 15

Notes:

Note 1: MATH 1710 requires one of the following as a prerequisite: completion of MATH 1650 with a grade of "C" or higher; or Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: CHEM 1410 and 1430 requires MATH 1100, College Algebra (or higher) as prerequisite.

Note 3: MEEN 1000 requires MATH 1650, Pre-Calculus, or placement into a higher level math course as prerequisite.

Note 4: EENG 2610 or ENGR 2405 require MATH 1720 as prerequisite and PHYS 2220, 2240 as prerequisite or corequisite.

Note 5: MEEN 3242 requires MEEN 3240 and MEEN 3120 as prerequisite and MEEN 3210 as prerequisite or corequisite.

Note 6: MEEN 4150 requires EENG 2610 or ENGR 2405, MEEN 3130, MEEN 3210, MEEN 3230, MEEN 3242, and completion or concurrent enrollment in MEEN 3100 as prerequisite.

Note 7: Must complete prerequisite(s) for energy and technical electives. Graduate Track option available.

Minimum grades of "C" (2.0 GPA) in Foundations: Communications Core, TECM 2700, MATH 1710, MATH 1720, PHYS 1710/1730, MEEN 1000, MEEN 2210, MEEN 2301, & MEEN 2302 to enroll in advanced courses.

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met and a degree audit must be created in order to progress in the program to a timely graduation.

Mechanical Engineering Technology

Bachelor of Science in Engineering Technology (B.S.E.T) degree with a major in Mechanical Engineering Technology
Department of Engineering Technology, Discovery Park F-115; (940) 565-2022

University Core

COMMUNICATION

- ❑ 1 Course (3 Hours) chosen from options on Page 29

Grade of "C" or better is required

AMERICAN HISTORY I

- ❑ 1 Course (3 Hours) chosen from HIST 2610 or HIST 2675

AMERICAN HISTORY II

- ❑ 1 Course (3 Hours) chosen from HIST 2620 or HIST 2685

FEDERAL GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2305 or PSCI 2315

STATE GOVERNMENT/POLITICAL SCIENCE

- ❑ 1 Course (3 Hours) chosen from PSCI 2306 or PSCI 2316

CREATIVE ARTS

- ❑ 1 Course (3 Hours) Chosen from options on page 29

LANGUAGE, PHILOSOPHY, AND CULTURE

- ❑ 1 Course (3 Hours) Chosen from options on page 29

SOCIAL AND BEHAVIORAL SCIENCES

- ❑ 1 Course (3 Hours) Chosen from options on page 29

Major Requirements

Grades of C or better

TECHNICAL COMMUNICATIONS

- ❑ TECM 2700, Technical Writing (3 Hours)

MATHEMATICS

- ❑ MATH 1710, Calculus I (4 Hours)
- ❑ MATH 1720, Calculus II (3 Hours)

SCIENCES

- ❑ PHYS 1710, Mechanics (3 Hours) & PHYS 1730 Mechanics Lab (1 Hour)
- ❑ PHYS 2220, Electricity & Magnetism (3 Hours) & PHYS 2240, Electricity & Magnetism Lab (1 Hour)
- ❑ CHEM 1410, General Chemistry I (3 Hours) & CHEM 1430, General Chemistry I Lab (1 Hour)

COMPUTER PROGRAMMING

- ❑ CSCE 1030, Computer Science I (4 Hours)

Major Requirements

Grades of C or better

MECHANICAL ENGINEERING TECHNOLOGY

- ❑ ENGR 1030, Technological Systems (3 Hours)
- ❑ ENGR 1304, Engineering Graphics (3 Hours)
- ❑ ENGR 2301, Statics (3 Hours)
- ❑ ENGR 2302, Dynamics (3 Hours)
- ❑ ENGR 2332, Mechanics and Materials (4 Hours)
- ❑ ENGR 2405, Circuit Analysis (3 Hours) & ENGR 2415, Circuit Analysis Lab (1 Hour)
- ❑ ENGR 3450, Engineering Materials (4 Hours)

- ❑ ELET 3980, Digital Control of Industrial Processes (3 Hours)

- ❑ MEET 3650, Design of Mechanical Components (3 Hours)
- ❑ MEET 3940, Fluid Mechanics Applications (3 Hours)
- ❑ MEET 3990, Applied Thermodynamics (3 Hours)
- ❑ MEET 4050, Mechanical Design (3 Hours)
- ❑ MEET 4350, Heat Transfer Applications (3 Hours)
- ❑ MEET 4360, Experimental Thermal Sciences (3 Hours)
- ❑ MEET 4780, Senior Design I (1 Hour)
- ❑ MEET 4790, Senior Design II (3 Hours)

- ❑ MFET 3110, Machining Principles and Processes (3 Hours)
- ❑ MFET 4190, Quality Assurance (3 Hours)
- ❑ MFET 4200, Engineering Cost Analysis (3 Hours)
- ❑ MFET 4210, CAD/CAM System Operations (3 Hours)

TECHNICAL ELECTIVES

- ❑ Advanced level (3*** or 4*** level) course chose from appropriate elective options (3 Hours)
- ❑ Advanced level (3*** or 4*** level) course chose from appropriate elective options (3 Hours)
- ❑ Advanced level (3*** or 4*** level) course chose from appropriate elective options (3 Hours)
- ❑ Any level course chosen from appropriate elective options (3 Hours)

Electives must be chosen from the options below:

MFET 4220	NUET 3910	CNET 3410
MEET 3550	NUET 3930	ELET 3220
MEET 3750	NUET 4950	ELET 4720
MEET 4100	NUET 4800 (Human Performance)	

Completion of MEET 3550 or MEET 3750 or MEET 4100 or MFET 4220 for an advanced technical elective earns a Certificate in Manufacturing Engineering Technology.

Completion of NUET 3910, NUET 3930, NUET 4950, and NUET 4900 for advanced technical electives earns a Certificate in Nuclear Power Technology from the Nuclear Power institute at Texas A&M University.

This is an unofficial simplified checklist effective fall 2019. Degree requirements may change. You may need elective courses to help reach a minimum of 123 Total Hours and 42 Advanced Hours. Check with an advisor.

Mechanical Engineering Technology

Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses and notes

Must earn at least a grade of "C" in each course except for most University Core courses.

FRESHMAN YEAR			
FALL		SPRING	
MATH 1710, Calculus I (see note 1)	4	MATH 1720, Calculus II (MATH 1710)	3
CHEM 1410, General Chemistry I (see note 2)	3	PHYS 1710, Mechanics (MATH 1710)	3
CHEM 1430, General Chemistry I Lab (see note 2)	1	PHYS 1730, Mechanics Lab (MATH 1710)	1
ENGR 1030, Technological Systems	3	TECM 2700, Technical Writing (Communication Core)	3
ENGR 1304, Engineering Graphics	3	University Core course	3
Communication Core course	<u>3</u>	University Core course	<u>3</u>
Total Hours	17	Total Hours	16
SOPHOMORE YEAR			
FALL		SPRING	
PHYS 2220, E. & M. (MATH 1720, PHYS 1710/1730)	3	ENGR 2302, Dynamics (ENGR 2301, MATH 1720)	3
PHYS 2240, E. & M. Lab (MATH 1720, PHYS 1710/1730)	1	ENGR 2332, Mechanics of Materials (ENGR 2301)	4
ENGR 2301, Statics (PHYS 1710, 1730)	3	ENGR 2405, Circuit Analysis (see note 4)	3
CSCE 1030, Computer Science (see note 3)	4	ENGR 2415, Circuit Analysis Lab (see note 4)	1
University Core course	3	University Core course	3
University Core course	<u>3</u>	University Core course	<u>3</u>
Total Hours	17	Total Hours	17
JUNIOR YEAR			
FALL		SPRING	
ENGR 3450, Materials (PHYS 1710, CHEM reqt.)	4	ELET 3980, Digital Controls (MATH 1650 or higher)	3
MEET 3940, Fluid Mechanics (ENGR 2302, MATH 1720)	3	MEET 3650, Design of Mech. Components (ENGR 2332)	3
MEET 3990, Applied Thermo. (ENGR 2332, CHEM reqt.)	3	MFET 4190, Quality Assurance (MATH 1720)	3
MFET 3110, Mach. Principles & Processes (MATH 1650)	3	MFET 4210, CAD/CAM System Operations (see note 5)	3
Technical Elective	<u>3</u>	Advanced Technical Elective	<u>3</u>
Total Hours	16	Total Hours	15
SENIOR YEAR			
FALL		SPRING	
MEET 4050, Mechanical Design (MFET 3650)	3	MEET 4790, Senior Design II (MEET 4780)	3
MEET 4350, Heat Transfer Appl. (MFET 3940, 3990)	3	MEET 4360, Experi. Thermal Sci. (MEET 3940, 3990, 4350)	3
MEET 4780, Senior Design I (see note 6)	1	Advanced Technical Elective	3
MFET 4200, Engineering Costs Analysis (MATH 1720)	3	Advanced Technical Elective	<u>3</u>
University Core course	<u>3</u>	Total Hours	12
Total Hours	13		

Notes:

Note 1: MATH 1710 requires one of the following as a prerequisite: completion of MATH 1650 with a grade of "C" or higher; or Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: CHEM 1410 and 1430 requires MATH 1100, College Algebra (or higher) as prerequisite.

Note 3: CSCE 1030 requires completion of MATH 1650, Pre-Calculus, or co-enrollment in MATH 1710, Calculus I (or higher) as prerequisite.

Note 4: ENGR 2405 and ENGR 2415 require completion of MATH 1720 and either completion of or co-enrollment in PHYS 2220 and PHYS 2240 as prerequisite.

Note 5: MFET 4210 requires MFET 3110, ENGR 1304, and completion of all MATH, PHYS, and CHEM requirements as prerequisite.

Note 6: MEET 4780 requires completion of or concurrent enrollment in MFET 4210, MEET 4050, and MEET 4350. All math, science, engineering, and other major required classes in junior year and before should also be completed.

Minimum grade of "C" (2.0 GPA) in Foundations: Communications Core, TECM 2700, MATH 1710, PHYS 1710/1730, ENGR 1304, and ENGR 2301 to enroll in advanced courses.

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met and a degree audit must be created in order to progress in the program to a timely graduation.

Minor/Certificate Information

BIOMEDICAL ENGINEERING MINOR (18 Hours)

- ❑ BMEN 2210, DAQ Practices (3 Hours)
- ❑ BMEN 2320, Biomedical Instrumentation I (3 Hours)
- ❑ BMEN 3350, Biomedical Transport Phenomena (3 Hours)
- ❑ 6 advanced hours (2 courses) chosen from:
 - BMEN 3311, Biomedical Signal Analysis (3 Hours)
 - BMEN 3312, Intro to Biomechanics (3 Hours)
 - BMEN 3321, Biomaterials (3 Hours)
- ❑ Plus 3 advanced hours (1 course) chosen from BMEN 4***

COMPUTER SCIENCE AND ENGINEERING MINOR (19 Hours)

- ❑ CSCE 1030, Computer Science I (4 Hours)
- ❑ CSCE 1040, Computer Science II (3 Hours)
- ❑ CSCE 2100, Foundations of Computing (3 Hours)
- ❑ CSCE 2110, Foundations of Data Structures (3 Hours)
- ❑ CSCE 3*** or 4***, CSCE advanced level course (3 Hours)
- ❑ CSCE 3*** or 4***, CSCE advanced level course (3 Hours)

ELECTRICAL ENGINEERING MINOR (18 Hours)

- ❑ EENG 2610, Circuit Analysis, (3 Hours) & EENG 2611, Circuit Analysis Lab (1 Hour)
- ❑ EENG 2620, Signals and Systems (3 Hours) & EENG 2621, Signals and Systems Lab (1 Hour)
- ❑ EENG 2710, Digital Logic Design (3 Hours) & EENG 2711, Digital Logic Design Lab (1 Hour)
- ❑ EENG 3510, Electronics I (3 Hours)
- ❑ EENG 4***, EENG advanced level course (3 Hours)

ENERGY ASSESSMENT OF BUILDINGS CERTIFICATE (18 Hours)

- ❑ MEEN 3220, Thermal Fluid Science for Buildings (3 Hours)
- ❑ MEEN 4320, Building Energy Systems (3 Hours)
- ❑ MEEN 4335, Comp. Sim. Of Building Energy Systems (3 Hours)
- ❑ MEEN 4340, Energy Efficiencies & Green Building Design for Commercial Buildings (3 Hours)
- ❑ MEEN 4350, Energy Efficiencies and Green Building Design for Residential Buildings (3 Hours)

GAME PROGRAMMING CERTIFICATE (12 Hours)

- ❑ CSCE 4210, Game Programming I (3 Hours)
- ❑ CSCE 4220, Game Programming II (3 Hours)
- ❑ CSCE 4250, Topics in Game Development (3 Hours)
- ❑ CSCE 4255, Programming Math & Physics for Games (3 Hours)

GENERAL ENGINEERING TECHNOLOGY MINOR (18 Hours)

- ❑ 12 hours (6 courses) chosen from CNET, ELET, ENGR, MEET, MFET, or NUET 1***, 2***, 3***, and/or 4*** level
- ❑ 6 advanced hours (2 courses) chosen from CNET, ELET, ENGR, MEET, MFET, or NUET 3*** or 4*** level

MANUFACTURING ENGINEERING TECHNOLOGY CERTIFICATE (15 Hours)

- ❑ MFET 3110, Machining Principles and Processes (4 Hours)
- ❑ MFET 4190, Quality Assurance (3 Hours)
- ❑ MFET 4200, Engineering Cost Analysis (2 Hours)
- ❑ MFET 4210, CAD/CAM System Operations (3 Hours)
- ❑ 3 Hours (1 course) chosen from:
 - MEET 3550, Geometric Dimensioning & Tolerancing (3 Hours)
 - MEET 3750, Digital Marketing (3 Hours)
 - MEET 4100, Fund. of Product/Process Design & Develop. (3 Hours)
 - MFET 4220, CNC Programming and Operation (3 Hours)

MATERIALS SCIENCE AND ENGINEERING MINOR (18 Hours)

- ❑ MTSE 3000, Fundamentals of Materials Sci. & Engr. I (3 Hours)
- ❑ 6 advanced hours (2 courses) chosen from:
 - MTSE 3010, Bonding and Structure (3 Hours)
 - MTSE 3030, Thermodynamics & Phase Diagrams (3 Hours)
 - MTSE 3050, Mechanical Properties of Materials (3 Hours)
 - MTSE 3070, Elect., Optic. & Magnetic Properties (3 Hours)
- ❑ 9 advanced hours (3 courses) chosen from options above or from any MTSE 3*** or MTSE 4*** level courses. MTSE 3001 is recommended.

MECHANICAL AND ENERGY ENGINEERING MINOR (18 Hours)

- ❑ MEEN 2210, Thermodynamics I (3 Hours)
- ❑ MEEN 2302, Mechanics II (3 Hours)
- ❑ MEEN 2332, Mechanics III (3 Hours)
- ❑ 9 advanced hours chosen from:
 - MEEN 3100, Manufacturing Processes (3 Hours)
 - MEEN 3110, Thermodynamics II (3 Hours)
 - MEEN 3120, Fluid Mechanics (3 Hours)
 - MEEN 3130, Machine Elements (3 Hours)
 - MEEN 3210, Heat Transfer (3 Hours)
 - MEEN 3230, Systems Dynamics and Controls (3 Hours)
 - MEEN 3240, MEE Lab I (2 Hours)
 - MEEN 3242, MEE Lab II (1 Hour)
 - MEEN 4110, Alternative Energy (3 Hours)
 - MEEN 4140, Finite Element Analysis (3 Hours)
 - MEEN 4160, Mechanical Vibrations (3 Hours)

NUCLEAR POWER TECHNOLOGY CERTIFICATE (12 Hours)

Completion of 12 hours (4 courses) of NUET courses at UNT will earn this certificate from the Nuclear Power Institute at Texas A&M University.

- ❑ NUET 3910, Principles of Nuclear Technology (3 Hours)
- ❑ NUET 3930, Radiation Biology and Safety (3 Hours)
- ❑ NUET 4950, Nuclear Plant Systems (3 Hours)
- ❑ NUET 4900, Special Topic: Human Performance (3 Hours)

SECURITY CERTIFICATE (18 Hours)

- ❑ CSCE 2610, Assembly Lang. and Comp. Organization (3 Hours)
- ❑ CSCE 3530, Intro. To Computer Networks (3 Hours)
- ❑ CSCE 4350, Intro. To Database Systems Design (3 Hours)
- ❑ CSCE 4550, Intro. To Computer Security (3 Hours)
- ❑ CSCE 4560, Secure Electronic Commerce (3 Hours)
- ❑ CSCE 4600, Operating Systems (3 Hours)

Completion of a minor and/or a certificate is not required in order to graduate.

Must complete appropriate prerequisites for minor or certificate courses.
Grades of "C" required for most minor or certificate courses.

Information on additional minor and/or certificate options and requirements can be found in the UNT catalog located at catalog.unt.edu.

University Core Options

COMMUNICATION (1 Course)

ENGL 1310, College Writing I
 ENGL 1311, Honors College Writing I
 ENGL 1315, Writing about Literature I
 LING 1312, Writing for International Students
 TECM 1700, Intro. To Technical Writing

AMERICAN HISTORY I (1 Course)

HIST 2610, U.S. History to 1865
 HIST 2675, Honors U.S. History to 1865

AMERICAN HISTORY II (1 Course)

HIST 2620, U.S. History from 1865
 HIST 2685, Honors U.S. History from 1865

FEDERAL GOVT/POLI. SCIENCE (1 Course)

PSCI 2305, U.S. Political Behavior and Policy
 PSCI 2315, Honors U.S. Political Behavior and Policy

STATE GOVT/POLI. SCIENCE (1 Course)

PSCI 2306, U.S. and Texas
 PSCI 2316, Honors U.S. and Texas

CREATIVE ARTS (1 Course)

ART 1300, Art Appreciation
 ART 1301, Honors Art Appreciation
 ART 2360, Art History Survey II
 COMM 2060, Performance of Literature
 DANC 1200, Appreciation of Dance
 DANC 2800, Survey of Dance
 MUJS 3400, Understanding Jazz
 MUMH 2040, Music Appreciation
 MUMH 3000, Nineteenth-Century Music
 MUMH 3010, Twentieth-Century Music
 MUMH 3500, Music History and Lit to 1750
 MUMH 3510, Music History and Lit from 1750
 THEA 1340, Aesthetics of the Theatre
 THEA 2340, Theater Appreciation
 THEA 3030, World Theatre to 1700
 THEA 3040, World Theatre from 1700

LANGUAGE, PHILOSOPHY, & CULTURE (1 Course)

AGER 2250, Aging in Film and Lit
 ANTH 3101, American Culture and Society
 ANTH 3110, Indigenous People of N. Am.
 ANTH 3120, Indigenous Cultures of S.W.
 ANTH 3140, Latinos in the U.S.
 ANTH 3200, Latin American Cultures
 ANTH 3210, Mesoamerica
 ANTH 3220, Mayan Culture
 ANTH 3300, Peoples of the Pacific
 ANTH 3400, Peoples of Africa
 ANTH 3500, Peoples of the Middle East
 ANTH 3700, Peoples of South Asia
 ENGL 2210, World Literature to 1700
 ENGL 2211, Honors World Literature to 1700
 ENGL 2220, World Literature from 1700
 ENGL 2221, Honors World Literature from 1700
 ENGL 3450, Short Story
 FREN 3040, France Today
 FREN 4060, Studies in French Literature
 FREN 4310, Contemp. French Civilization
 GERM 3040, Topics in German Culture
 GERM 3050, Topics in German Culture
 HDFS 2313, Courtship and Marriage
 HIST 1050, World History to 16th Century
 HIST 1060, World History from 16th Century
 ITAL 3040, Topics in Italian Culture
 ITAL 3050, Comp. Italian Culture Through Film
 ITAL 3070, Intro. To Italian Literature
 JAPN 3020, Advanced Japanese I
 LANG 3020, Russian Pop Culture
 MUET 2000, Global Perspectives
 MUET 3030, Music Cultures of the World
 PHIL 1050, Introduction to Philosophy
 PHIL 1400, Contemporary Moral Issues
 PHIL 2050, Introduction to Logic
 PHIL 2070, Great Religions
 PHIL 2100, Intro. To Judaism
 PHIL 2310, Intro. To Ancient Philosophy
 PHIL 2600, Ethics in Science

SOCIAL AND BEHAVIORAL SCIENCES (1 Course)

AGER 4560, Minority Aging
 AGER 4800, Social Context of Aging
 ANTH 1010, Intro. To Anthropology
 ANTH 2300, Culture and Society
 BEHV 2300, Behavior Principles I
 CJUS 2100, Crime and Justice in the U.S.
 COMM 2020, Interpersonal Comm.
 EADP 4050, Special Pop. In Disasters
 ECON 1100, Microeconomics
 ECON 1110, Macroeconomics
 GEOG 1200, Global Societies
 HDFS 1013, Human Development
 HLTH 2200, Family Life and Human Sexuality
 JOUR 1210, Mass Comm. And Society
 MDSE 2750, Consumers in Global Market
 MKTG 2650, Culture and Consumption
 PADM 2100, Cultural Competency
 PSYC 1630, General Psychology I
 PSYC 1650, General Psychology II
 PSYC 3620, Developmental Psychology
 RHAB 3100, Disability and Society
 SOCI 1510, Intro to Sociology
 SOCI 2100, Crime and Justice in the U.S.
 SOWK 1450, Intro to Social Work

AP, IB, CLEP, DC, Transfer – University Core Credits

COMMUNICATION

AP English Lang. And Comp. Score of 3 or
 IB English A: Lang. and Lit. Score of 5
 Community College: ENGL 1301
 Community College: ENGL 1302

AMERICAN HISTORY I

AP U.S. History score of 3
 CLEP History of United States I
 Community College: HIST 1301

AMERICAN HISTORY II

AP U.S. History score of 3
 CLEP History of United States II
 Community College: HIST 1302

FEDERAL GOVT/POLI SCIENCE

AP U.S. Government score of 3
 CLEP American Government
 Community College: GOVT 2305

STATE GOVT/POLI SCIENCE

Community College: GOVT 2306

CREATIVE ARTS

AP Art History score of 3
 IB Dance score of 4*
 Community College: ARTS 1301
 Community College: ARTS 1304
 Community College: MUSI 1306
 Community College: DRAM 1310

LANGUAGE, PHILOSOPHY, AND CULTURE

AP English Literature and Comp. score of 3
 AP World History score of 3
 IB History score of 4*
 IB Philosophy score of 5
 IB English Language A: Lit. Score of 5
 Community College: ENGL 2332
 Community Collee ENGL 2333
 Community College: HIST 2321
 Community College: HIST 2322
 Community College: PHIL 1301
 Community College: PHIL 1304
 Community College: PHIL 2303
 Community College: PHIL 2306

SOCIAL AND BEHAVIORAL SCIENCES

AP Macroeconomics score of 3
 AP Microeconomics score of 3
 AP Psychology score of 3
 IB Economics score of 4*
 IB Geography score of 4*
 IB Psychology score of 4*
 CLEP Macroeconomics
 CLEP Microeconomics
 CLEP Human Growth and Development
 CLEP Introductory Psychology
 CLEP Introductory Sociology
 Community College: ANTH 2346
 Community College: ANTH 2351
 Community College: SPCH 1318
 Community College: ECON 2301
 Community College: ECON 2302
 Community College: GEOG 1303
 Community College: TECA 1354
 Community College: COMM 1307
 Community College: PSYC 2301
 Community College: PSYC 2302
 Community College: SOCI 1301

*Completion of IB program, earned IB Diploma, & minimum score of 4 or completion of IB program without the earned diploma & minimum score of 5, 6, or 7.
 Other community college or university courses may fulfill requirements. Please confirm with your advisor.

AP, IB, CLEP, DC, Transfer – University Core Credits

TECHNICAL WRITING

- ❑ Community College ENGL 2311: TECM 2700

COMPUTING/PROGRAMMING

- ❑ AP Computer Science A score of 3: CSCE 1010
- ❑ AP Computer Science A score of 4: CSCE 1030
- ❑ AP Computer Science Principles score of 3: CSCE 1010
- ❑ IB Computer Science: CSCE 1030, 1040
- ❑ Community College COSC 1336: CSCE 1030
- ❑ Community College COSC 1337: CSCE 1040
- ❑ Community College COSC 1436: CSCE 1030
- ❑ Community College COSC 1437: CSCE 1040
- ❑ Community College COSC 2325: CSCE 2610
- ❑ Community College COSC 2425: CSCE 2610

ENGINEERING

- ❑ Community College ENGR 1201: May substitute for EENG 1910, ENGR 1030, MEEN 1000, or MTSE 1100 depending on student's intended major
- ❑ Community College ENGR 1204: ENGR 1304
- ❑ Community College ENGR 1304: ENGR 1304
- ❑ Community College ENGR 2105: ENGR 2415
- ❑ Community College ENGR 2107: ENGR 2415
- ❑ Community College ENGR 2301: ENGR 2301
- ❑ Community College ENGR 2302: ENGR 2302
- ❑ Community College ENGR 2332: ENGR 2332
- ❑ Community College ENGR 2305: ENGR 2305
- ❑ Community College ENGR 2307: ENGR 2405
- ❑ Community College ENGR 2405: ENGR 2405

BIOLOGY

- ❑ AP Biology score of 3: BIOL 1112, 1122
- ❑ AP Biology score of 4, 5: BIOL 1710, 1720, 1760
- ❑ IB Biology: BIOL 1710, 1720, 1760
- ❑ CLEP Biology: BIOL 1710, 1720
- ❑ Community College BIOL 1108: BIOL 1***
- ❑ Community College BIOL 1109: BIOL 1***
- ❑ Community College BIOL 1306: BIOL 1710
- ❑ Community College BIOL 1307, BIOL 1720
- ❑ Community College BIOL 1308: BIOL 1***
- ❑ Community College BIOL 1309: BIOL 1***
- ❑ Community College BIOL 1406: BIOL 1710, 1760
- ❑ Community College BIOL 1407: BIOL 1720, 1760
- ❑ Community College BIOL 1408: BIOL 1***
- ❑ Community College BIOL 1409: BIOL 1***
- ❑ Community College BIOL 2101: BIOL 2311
- ❑ Community College BIOL 2301: BIOL 2301
- ❑ Community College BIOL 2401: BIOL 2301, 2311

CHEMISTRY

- ❑ AP Chemistry score of 3: CHEM 1360
- ❑ AP Chemistry score of 4: CHEM 1410, 1430
- ❑ AP Chemistry score of 5: CHEM 1410, 1430, and 1420, 1440
- ❑ CLEP General Chemistry: CHEM 1410, 1420
- ❑ IB Chemistry: CHEM 1410, 1430, and 1420, 1440
- ❑ Community College CHEM 1111: CHEM 1430
- ❑ Community College CHEM 1112: CHEM 1440
- ❑ Community College CHEM 1305: CHEM 1***
- ❑ Community College CHEM 1307: CHEM 1***
- ❑ Community College CHEM 1311: CHEM 1410
- ❑ Community College CHEM 1312: CHEM 1420
- ❑ Community College CHEM 1405: CHEM 1***
- ❑ Community College CHEM 1407: CHEM 1***
- ❑ Community College CHEM 1411: CHEM 1410, 1430
- ❑ Community College CHEM 1412: CHEM 1420, 1440

PHYSICS

- ❑ AP Physics 1 score of 3: PHYS 1210
- ❑ AP Physics 1 score of 4: PHYS 1410, 1430
- ❑ AP Physics 2 score of 3: PHYS 1315
- ❑ AP Physics 2 score of 4: PHYS 1420, 1440
- ❑ AP Physics C (Mechanics) score of 3: PHYS 1410, 1430
- ❑ AP Physics C (Mechanics) score of 4: PHYS 1710, 1730
- ❑ PHYS Physics C (Electricity and Magnetism) score of 3: PHYS 1420, 1440
- ❑ PHYS Physics C (Electricity and Magnetism) score of 4: PHYS 2220, 2240
- ❑ Community College PHYS 1101: PHYS 1430
- ❑ Community College PHYS 1102: PHYS 1440
- ❑ Community College PHYS 1301: PHYS 1410
- ❑ Community College PHYS 1302: PHYS 1420
- ❑ Community College PHYS 1401: PHYS 1410, 1430
- ❑ Community College PHYS 1402: PHYS 1420, 1440
- ❑ Community College PHYS 2125: PHYS 1730
- ❑ Community College PHYS 2126: PHYS 2240
- ❑ Community College PHYS 2325: PHYS 1710
- ❑ Community College PHYS 2326: PHYS 2220
- ❑ Community College PHYS 2425: PHYS 1710, 1730
- ❑ Community College PHYS 2426: PHYS 2220, 2240

MATHEMATICS

- ❑ AP Statistics score of 3: MATH 1680
- ❑ AP Calculus AB score of 3: MATH 1710
- ❑ AP Calculus BC score of 3: MATH 1710, 1720
- ❑ AP Calculus AB sub score of BC Exam score 3: MATH 1710
- ❑ CLEP Mathematics: Elective
- ❑ CLEP College Algebra: MATH 1100
- ❑ CLEP Pre-calculus: MATH 1650
- ❑ CLEP Calculus: MATH 1710
- ❑ IB Mathematic Studies: Elective
- ❑ IB Mathematics – Calculus: MATH 1710
- ❑ IB Mathematics Unspecified: MATH 1***
- ❑ Community College MATH 1314: MATH 1100
- ❑ Community College MATH 1316, MATH 1600, Prerequisite for Pre-Calculus
- ❑ Community College MATH 1325, MATH 1190, Prerequisite for Pre-Calculus
- ❑ Community College MATH 1425: MATH 1190, Prerequisite for Pre-Calculus
- ❑ Community College MATH 1342: MATH 1680
- ❑ Community College MATH 1414: MATH 1100
- ❑ Community College MATH 1442: MATH 1680
- ❑ Community College MATH 2312: MATH 1650
- ❑ Community College MATH 2412: MATH 1650
- ❑ Community College MATH 2313: MATH 1710
- ❑ Community College MATH 2314: MATH 1720
- ❑ Community College MATH 2315: MATH 2730
- ❑ Community College MATH 2318: MATH 2700
- ❑ Community College MATH 2320: May substitute for MATH 3410
- ❑ Community College MATH 2342: MATH 1680
- ❑ Community College MATH 2413: MATH 1710
- ❑ Community College MATH 2414: MATH 1720
- ❑ Community College MATH 2415: MATH 2730
- ❑ Community College MATH 2418: MATH 2700
- ❑ Community College MATH 2420: May substitute for MATH 3410
- ❑ Community College MATH 2442: MATH 1680
- ❑ Community College MATH 2513: MATH 1710

Preparation You Need to Secure a Full-Time Job

Get an Internship

Your Career Center advisor can assist you with applying for paid internships prior to graduation. Internships provide hands-on experience which employers in all engineering fields want when considering you for a full-time position after you have graduated. The Career Center hosts 2 career fairs each year and offers services in resume writing, interviewing skills, and printing free business card.

Assist with Research

Research opportunities exist within engineering departments as well as national and international team competitions mentored by organizations or industry. Enrollment in zero credit research course(s) reflect your research experience but require no cost or grade documentation.

Earn a Graduate Degree

UNT offers graduate degrees in most engineering disciplines. You can pursue the Grad Track program while completing your bachelor's degree to accelerate the time required to earn a Master of Science (MS) or a Doctor of Philosophy (PhD) degree. Students are allowed to count courses toward both their bachelor's and master's degrees or doctorate degrees, saving both time and money.

Eligibility: Students should apply for the Grad Track Program the semester before their Senior Design or Capstone rotation begins. Successful applications typically have a GPA of 3.5 or better. Students may only earn an MS or PhD in the same program for which they have earned a bachelor's degree. For example, a student who earns a BS in Computer Science degree is only eligible for the Grad Track Program if he/she applies for the MS in Computer Science program. Additionally, students have to enroll full-time in the MS or PhD program in the first long semester after completing their BS degree in order for the completed graduate-level classes to count toward the graduate degree.

To Apply: Each department has its own application for Grad Track. You may also have to submit unofficial transcripts and letters of recommendation. Please visit your department's website and/or contact your department for more information.

Masters of Science (MS) Programs	Total Hours Required (MS)	Hours Earned During BS	Total Hours Required (PhD)	Hours Earned During BS
Biomedical Engineering	Thesis: 30 Non-Thesis: 33	9	Concentration Available – See Department for Information	12
Computer Engineering	Thesis: 30 Non-Thesis: 36	9	Approximately 72	12
Computer Science	Thesis: 30 Non-Thesis: 36	9	Approximately 72	12
Electrical Engineering	Thesis: 30 Non-Thesis: 33	9	Approximately 72	12
Engineering Technology	Thesis: 30 Non-Thesis: 33	9	N/A	N/A
Mechanical and Energy Engineering	Thesis: 30 Non-Thesis: 33	9	Approximately 72	12
Materials Science and Engineering	Thesis: 30 Non-Thesis: 35	9	Approximately 72	12

Get Licensed:

Fundamentals of Engineering (FE) Exam: is not required in order to earn your engineering degree but it is generally your first step in the process to becoming a professionally licensed engineer. It is designed for recent graduates and students who are close to finishing an undergraduate engineering degree. Passing this exam legally certifies the candidate as an "engineer in training" (EIT) or an "engineer intern" (EI). UNT tutoring options for the exam can be found at engineering.unt.edu/engineering-exam.

Principles and Practices of Engineering (PE) exam: PE licensure is the engineering profession's highest standard of competence. EITs and EIs are permitted to attempt the exam after completing a minimum of 4 years of professional work experience under the supervisor of a PE. Passing the PE exam qualifies the candidate as a licensed professional engineer.

Resource Information

Catalog	Catalog.unt.edu
Computer Access Labs	Gacl.unt.edu
Counseling, Health, Testing Services:	Coe.unt.edu/child-and-family-resource-clinic
Child and Family Resource Clinic	Coe.unt.edu/counseling-and-human-development-center
Counseling and Human Development Center	Unt.edu/cat
Counseling and Testing Service	Healthcenter.unt.edu
Health and Wellness Center	Psychology.unt.edu/clinic
Psychology Clinic	Untwell.unt.edu
WELL Clinic (personal and career counseling)	
Deadlines (Registration, Drop, Withdrawal, Payment, etc.)	Registrar.unt.edu/registration-guides-by-semester
Dean of Students (Withdrawal Process, Complaints, etc.)	Deanofstudents.unt.edu
Email Account (EagleConnect)	It.unt.edu/eagleconnect
Engineering Student Organizations and Honor Societies	Engineering.unt.edu/students/organizations
Employment, Internships, and Job Skills:	
Career Center	Careercenter.unt.edu
InRoads Internships	Inroads.org
InternMatch	Internmatch.com
Texas Internships	Texasinternships.jobs
Financial Assistance:	
Financial Aid and Scholarships Office	Financialaid.unt.edu
Financial Services (Student Accounting)	Essc.unt.edu/saucs
Money Management Center	Moneymanagement.unt.edu
Housing	Housing.unt.edu
Libraries	Library.unt.edu
Office of Disability Access	Disability.unt.edu
Registrar	
Drop, Excessive Hours, Registration, Transcripts	
Verification of Enrollment	Essc.unt.edu/registrar
Registration	Registration.unt.edu
Scholarships	Engineering.unt.edu/students/scholarships Financialaid.unt.edu
Student Activities and Organizations	Studentactivities.unt.edu
Student Government Association	Sga.unt.edu
Student Legal Services	Studentlegal.unt.edu
Texas Success Initiative (TSI): Learning Center	Learningcenter.unt.edu
Tutoring and Academic Improvement Services:	
Business Labs (ACCT, BCIS, etc.)	Cob.unt.edu/lab
Chemistry Resource Center	Chemistry.unt.edu
Chegg (online)	Chegg.com
Computer Class Help Lab	Cse.unt.edu
Coursera (online)	Coursera.org
Economics Help Center	Economics.unt.edu/undergraduate/help-center
Educator (online)	Educator.com
Edx (online)	Edx.org
Khan Academy (online)	Khanacademy.org
Learning Center	Learningcenter.unt.edu
LyndaCampus (online)	It.unt.edu/Lynda
Math Lab and Private Tutor List	Math.unt.edu/mathlab
Mathway (online)	Mathway.com
Physics Instructional Center	Phys.unt.edu/PIC
Quizlet (online)	Quizlet.com
That Tutor Guy (online)	Thattorguy.com
Thinkwell (online)	Thinkwell.com
Wolf Ram Alpha (online)	Wolframalpha.com
Writing Lab	Ltc.unt.edu/labs
Veteran Center and Services	Veteranscenter.unt.edu or unt.edu/veterans and registrar.unt.edu