

# College of Engineering

## B.S. Mechanical & Energy Engineering



### 2015-2016 Texas Common Course Numbering System Transfer Guide

This four-year plan provides a model for on-time completion of this UNT program using as many TCCNS courses as possible. The four-year plan also shows the first point when no TCCNS options are available for this program. See the current [Undergraduate Catalog](#) for course prerequisites. Course availability at UNT is subject to change, and the plan shown below may change based on updates to UNT's course offerings.

UNT Courses noted (#) do not have TCCNS equivalents, but have approved transferable substitutions.

YEAR	FALL SEMESTER		SPRING SEMESTER	
	UNT Requirement	TCCNS Option	UNT Requirement	TCCNS Option
FRESHMAN	MATH 1710	MATH 2313 or 2413 or 2513	MATH 1720	MATH 2314 or 2414
	*CHEM 1410/1430	CHEM 1411 or 1311/1111	CHEM 1420/1440*	CHEM 1412 or 1312/1112
	UNT Core: American History	See list of approved courses	PHYS 1710/1730	PHYS 2425 or 2325/2125
	ENGL 1310	ENGL 1301	TECM 2700	ENGL 2311
	MEEN 1000	None	UNT Core: American History	See list of approved courses

YEAR	FALL SEMESTER		SPRING SEMESTER	
	UNT Requirement	TCCNS Option	UNT Requirement	TCCNS Option
SOPHOMORE	MATH 2700	MATH 2318 or 2418	MATH 2730	MATH 2315 or 2415
	PHYS 2220/2240	PHYS 2426 or 2326/2126	** MATH 3410	None
	ENGR 1304	ENGR 1204 or 1304	MEEN 2210	
	MEEN 2110	None	MEEN 2240	
	MEEN 2301		MEEN 2302	
		MEEN 2332		

YEAR	FALL SEMESTER		SPRING SEMESTER	
	UNT Requirement	TCCNS Option	UNT Requirement	TCCNS Option
JUNIOR	MEEN 3250	None	MEEN 3230	None
	MEEN 3110		MEEN 3242	
	MEEN 3120		MEEN 3130	
	MEEN 3240		MEEN 3210	
	ENGR 2405 or EENG 2610	ENGR 2307 or ENGR 2305#	ENGR 3450/3451	
	UNT Core: Government/Political Science	See list of approved courses	UNT Core: Government/Political Science	

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YEAR	FALL SEMESTER		SPRING SEMESTER	
	UNT Requirement	TCCNS Option	UNT Requirement	TCCNS Option
<b>S E N I O R</b>	MEEN 4150	None	Capstone: MEEN 4250	None
	Energy Engineering Elective		Energy Engineering Elective	
	MEEN 3100		Technical Elective (advanced)	
	UNT Core: Language, Philosophy and Culture		Technical Elective (advanced)	
	UNT Core: Social & Behavioral Science		UNT Core: Creative Arts	
	See list of approved courses		See list of approved courses	

\* Note: Mechanical & Energy Engineering program requires CHEM 1415/1435 offered at UNT or CHEM 1411 and CHEM 1412 (TCCNS values). The College of Engineering strongly recommends that the student takes CHEM 1415/1435 at UNT.

\*\* Note: prerequisites for MATH 3410 are MATH 2314 or MATH 2414 (TCCNS Values). MATH 2318 or MATH 2418 recommended (TCCNS values).

# College of Engineering

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- Admission to the university does not guarantee admission to the College of Engineering. To be admitted to the College of Engineering, students must meet the requirements listed under "Admission Requirements" on page two.
- To complete the B.S. Mechanical & Energy Engineering degree within four years, students should plan to take Calculus I (MATH 2313 or 2413 or 2513) and MEEN 1000 (available at UNT only) during the first semester of their freshman year. Please refer to the four-year plan on page three for a recommended schedule. Students interested in completing an associate's degree at a community college may consult with a College of Engineering advisor about concurrent enrollment options.

## Courses Recommended for Transfer

The UNT Core requirements, with the exception of American History and Government/Political Science, and the College & Major requirements are shown with Texas Common Course Numbering System values only when UNT offers equivalent courses. There may be other courses in transfer that apply toward the specific degree requirement, but those listed are known to apply.

### UNT Core: Communication

ENGL 1301; and ENGL 1302 or 2311

A grade of 'C' or better is required on courses applied toward this requirement.

*ENGL 2311 is required for all College of Engineering majors.*

### UNT Core: Mathematics

This requirement will be met by fulfilling the Mechanical & Energy Engineering program requirements (see "Other Course Requirements").

### UNT Core: Life & Physical Sciences

This requirement will be met by fulfilling the Mechanical & Energy Engineering program requirements (see "Other Course Requirements").

### UNT Core: American History

Two courses chosen from: HIST 1301, 1302, 2301

### UNT Core: Government/Political Science

GOVT 2305 and 2306

### UNT Core: Creative Arts

One course chosen from: ARTS 1301 or 1304; DRAM 1310; MUSI 1306 or 1307; SPCH 2341

### UNT Core: Language, Philosophy and Culture

One course chosen from: ENGL 2332 or 2333; HIST 2321 or 2322; PHIL 1301, 1304, 2303, 2306, or 2316

### UNT Core: Social & Behavioral Sciences

One course chosen from: ANTH 2346 or 2351; COMM 1307; CRIJ 1301; ECON 2301 or 2302; GEOG 1303; PSYC 2301; SOCI 1301; SPCH 1318; TECA 1354

### UNT Core: Discovery

One course chosen from: ARTS 1301; BIOL/HECO 1322; COMM 1307; MATH 2305 or 2405; SPCH 1311 or 1315; TECA 1303

*MEEN 1000 offered at UNT is a required course for the major and will satisfy the Discovery requirement.*

### UNT Core: Capstone

The Capstone Core requirement is unique to UNT and will be fulfilled by an advanced course at UNT.

*Note: The Core Capstone courses are under review by the Texas Higher Education Coordinating Board, and are subject to change.*

### Mechanical & Energy Engineering: Engineering Fundamentals Requirements

TCCNS options:

- ENGR 1204 or 1304
- ENGR 2307 or ENGR 2305 (substitutes for UNT's ENGR 2405/EENG 2610)

*Courses listed above are TCCNS options and do not include all courses required for the UNT Mechanical & Energy Engineering major.*

### Mechanical & Energy Engineering: Major Requirements

No TCCNS options available.

### Mechanical & Energy Engineering: Other Course Requirements

TCCNS options:

#### Required courses in technical writing:

- ENGL 2311

#### Required courses in mathematics:

- MATH 2313 or 2413 or 2513 (fulfills both Mathematics and major requirements).
- MATH 2314 or 2414
- MATH 2315 or 2415

Math Elective

- MATH 2318 or 2418

# College of Engineering

## B.S. Mechanical & Energy Engineering

### 2015-2016 Texas Common Course Numbering System Transfer Guide



#### Mechanical & Energy Engineering: Other Course Requirements (continued)

##### Required courses in laboratory science:

- CHEM 1411 (or 1311/1111) *and* CHEM 1412 (or 1312/1112)
  - CHEM 1415/1435, only offered at UNT is recommended. It will satisfy the Chemistry requirement.
- PHYS 2425 or 2325/2125
- PHYS 2426 or 2326/2126

CHEM and PHYS courses listed above fulfill both Life and Physical Sciences core and major requirements.

Courses listed above are TCCNS options and do not include all courses required for the UNT Mechanical & Energy Engineering major.

#### College of Engineering: Admission Requirements

Admissions to the College of Engineering is contingent on clear admissions to the university.

Freshman applicants will be admitted to the College of Engineering in an Engineering program if:

- 1) They were in the top 25% of their graduating class and have a math SAT score of 570 or better and a total SAT score of 1070 or better; or a math ACT score of 23 or better and a cumulative ACT score of 23 or better.
- 2) They were in the top 50% of their graduating class or have no graduating class ranking (home schooled, GED, international students, etc) and have a math SAT score of 600 or better and a total SAT score of 1100 or better; or a math ACT score of 24 or better and a cumulative ACT score of 24 or better.
- 3) They have a math SAT score of 630 or better and a total SAT score of 1180 or better; or a math ACT score of 26 or better and a cumulative ACT score of 26 or better.

##### Engineering Technology programs

- Freshman applicants to Engineering Technology programs must have a math SAT score of 540 or better, or a math ACT score of 22 or better.

##### Math courses

- Enrollment in mathematics classes for entering freshmen will be determined in accordance with criteria established by the Department of Mathematics.

##### Transfer, International and Post-Baccularate

- Applicants must be eligible to enroll in MATH 1710 (Calculus I; TCCNS: MATH 2313 or 2413 or 2513) or higher. MATH 1650 (Pre-Calculus; TCCNS: MATH 2312 or 2412) completed with a grade of C or better is a prerequisite to enroll in MATH 1710/Calculus I.

For applicants who do not meet the above requirements, admissions will be granted on entry into MATH 1710 (Calculus I; TCCNS: MATH 2313 or 2413 or 2513) and good academic standing with a cumulative UNT grade point average of 2.0 or higher.

After admission criteria are met by the applicant, the student will be accepted as a major in his or her program of study. The student must adhere to the requirements below in order to be accepted as a full major and to be allowed to enroll in upper-division courses in the College of Engineering.

<http://essc.unt.edu/registrar/articulation/>

#### College of Engineering: Admission Requirements (continued)

##### College of Engineering Foundations Requirements

Students must achieve a minimum GPA of 2.5 or higher in the following courses and laboratories, with only grades of A, B, and C accepted:

**Mathematics:** This course will also fulfill Material Science and Engineering program requirements.  
TCCNS Options: MATH 2313 or 2413 or 2513.

**Science:** Two courses including laboratories chosen from the list of approved courses; these courses will also fulfill Materials Science and Engineering program requirements.  
TCCNS Options: CHEM 1411 or 1311/1111; PHYS 2425 or 2325/2125.

**Technical Written Communication:** This course will also partially fulfill the UNT Core Communication requirement.  
TCCNS Option: ENGL 2311.

#### Special Notes

##### Hours Required and General/College Requirements:

A minimum of 127 semester hours, of which 42 must be advanced, and fulfillment of degree requirements for the Bachelor of Science degree as specified in the [general university requirements](#) section of the UNT catalog and the College of Engineering requirements.

A grade point average of at least 2.0 is required for all major requirement courses and approved electives. Enrollment in the upper-division MEEN courses requires successful completion of all required lower-division MEEN and ENGR prefix courses. Grades of "D" are not accepted.

##### UNT Core Curriculum/Transfer of Core Curriculum:

UNT complies with the [mandates of the 1997 Texas Legislature](#) regarding requirements for state-assisted institutions. Students who successfully complete the common core curriculum (in whole or in part) at a Texas state-assisted institution of higher education are eligible to transfer as "core complete" for those categories in the UNT University Core Curriculum.

Individual academic programs may require courses contained in parts of the University Core Curriculum. Students who wish to take courses that will fulfill both core and major/program requirements simultaneously should check with academic advisors for assistance in selecting core courses.

**Choice of Catalog:** Any student transferring directly from a Texas public community college to UNT shall have the same choice of catalog designating degree requirements as the student would have had if the dates of attendance at the university had been the same as the dates of attendance at the community college.

The College of Engineering required curriculum and policies are located in the [Undergraduate Catalog 2015-2016](#).

For additional program and contact information see the College of Engineering Student Advising website:  
<http://engineering.unt.edu/advising>