



# College of Engineering

## B.S. Biomedical Engineering

### 2024-2025 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.

First Year Fall		First Year Spring	
UNT Requirement	TCCNS Option	UNT Requirement	TCCNS Option
MATH 1710	MATH 2313 or 2413	MATH 1720	MATH 2314 or 2414
CHEM 1430/1430 or 1415/1435	CHEM 1311/1111 or 1411	PHYS 1710/1730	PHYS 2325/2125 or 2425
ENGL 1310	ENGL 1301	TECM 2700	ENGL 2311
PSCI 2305	GOVT 2305	PSCI 2306	GOVT 2306
UNT Core: American History	<a href="#">See list of approved courses</a>	UNT Core: American History	<a href="#">See list of approved courses</a>

Second Year Fall		Second Year Spring	
UNT Requirement	TCCNS Option	UNT Requirement	TCCNS Option
MATH 2700	MATH 2318 or 2418	MATH 3410	MATH 2320 or 2420
MATH 2730 or 3350	MATH 2315 or 2415	BIOL 2301/2311, or CHEM 1420/1440, or PHYS 2220/2240	BIOL 2101/2301 or 2401, or CHEM 1312/1112 or 1412, or PHYS 2326/2126 or 2426
UNT Core: Language, Philosophy & Culture	<a href="#">See list of approved courses</a>	UNT Core: Creative Arts	<a href="#">See list of approved courses</a>
BMEN 1300	N/A	BMEN 1400	N/A
BMEN 2210	N/A	BMEN 2320	N/A

Third Year Fall		Third Year Spring	
UNT Requirement	TCCNS Option	UNT Requirement	TCCNS Option
BMEN 3310	N/A	BMEN 3312	N/A
BMEN 3311	N/A	BMEN 3321	N/A
BMEN 3350	N/A	Track Elective	Consult UNT advisor
Track Elective	Consult UNT advisor	Track Elective	Consult UNT advisor
UNT Core: Social & Behavioral Sciences	<a href="#">See list of approved courses</a>		

Fourth Year Fall		Fourth Year Spring	
UNT Requirement	TCCNS Option	UNT Requirement	TCCNS Option
BMEN 4007	N/A	BMEN 4222	N/A
BMEN 4212	N/A	Advanced BMEN Elective	N/A
Advanced BMEN Elective	N/A	Advanced BMEN Elective or Track Elective	N/A
Advanced BMEN Elective	N/A	Track Elective	Consult UNT advisor
Advance BMEN Elective or Track Elective	N/A		



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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".

Please refer to the four-year plan on page one for a recommended schedule. Students interested in completing an associate's degree at a community college may consult with a College of Engineering advisor at UNT about concurrent enrollment options.

## Courses Recommended for Transfer

The UNT Core 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

One course for this requirement will be met by fulfilling the B.S. Biomedical Engineering major requirements. In addition, complete **ENGL 1301** or **TECM 1700** (at UNT only).

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

### UNT Core: Mathematics

This requirement will be met by fulfilling the B.S. Biomedical Engineering major requirements.

### UNT Core: Life and Physical Sciences

This requirement will be met by fulfilling the B.S. Biomedical Engineering major 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: **ARTS 1303**; **ENGL 2321, 2326, 2331, 2341, or 2351**; **HIST 2321** or **2322**; **PHIL 1301, 1304, 2303, or 2306**

### UNT Core: Social and Behavioral Sciences

One course chosen from: **ANTH 2346, 2351**; **BUSI 1307**; **COMM 1307**; **CRIJ 1301**; **ECON 2301** or **2302**; **GEOG 1303**; **PSYC 2301** or **2330**; **SOCI 1301**; **SOCW 2361**; **SPCH 1318**; **TECA 1354**

### UNT Core: Core Option Courses

This requirement will be met by fulfilling the B.S. Biomedical Engineering major requirements.

### Biomedical Engineering: Major Requirements

No TCCNS options available.

### Biomedical Engineering: Additional Requirements

TCCNS options:

- **ENGL 2311** (also fulfills a portion of the Communication core requirement)
- **MATH 2313** or **2413** (also fulfills the Mathematics core requirement)
- **MATH 2314** or **2414** (also fulfills a portion of the Core Option Course core requirement)
- **MATH 2315** or **2415**
- **MATH 2318** or **2418**
- **MATH 2320** or **2420** (approved substitution)
- **PHYS 2125 & 2325, or 2425** (also fulfills a portion of the Life & Physical Sciences)

Lab Science Options (each option will fulfill 3 hours of the Life & Physical Sciences core requirement):

- **BIOL 2101 & 2301, or 2401**
- **CHEM 1111 & 1311, or 1411**
- **CHEM 1112 & 1312, or 1412**
- **PHYS 2126 & 2326, or 2426**

A GPA of 2.0 or higher is required in all degree major courses including, but not limited to, engineering, math, sciences, laboratory sciences, and technical electives.

*Courses listed above are TCCNS options and do not include all courses required for the B.S. Biomedical Engineering major.*

### Biomedical Engineering: Grad Track Option

The B.S. Biomedical Engineering major has grad track options leading to a M.S. Biomedical Engineering, M.S. Electrical Engineering, and M.S. Materials Science and Engineering. For more information, review the UNT undergraduate catalog and consult a UNT advisor.



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#### Biomedical Engineering: Department Policies

Students in the College of Engineering will conduct themselves in a professional manner in their interaction with their peers, faculty, staff and the community in general. A student may be dismissed from the college for inappropriate conduct (please refer to the Code of Student Conduct).

Each semester, students are required to take engineering foundation courses and/or prerequisites to the engineering foundation courses until all foundation courses are successfully completed. Successful completion is a 2.5 GPA for all engineering foundation courses with a 'C' or higher in each course.

Successful completion of the foundation courses is required for enrollment in all 3000 and 4000 level courses.

A student will graduate with a degree in Biomedical Engineering, provided the following conditions are satisfied:

- The student has an overall GPA  $\geq 2.0$ .
- The student has a GPA of 2.0 in Biomedical Engineering Foundation courses and all have been passed with a grade of 'C' or higher.
- The student has a GPA  $\geq 2.0$  in all degree major courses including but not limited to, engineering, math, sciences, laboratory sciences and technical electives.
- The student has completed all required courses in the student's degree plan.
- The student has satisfied all College of Engineering and UNT criteria for graduation.

A student must maintain good academic standing within the university. Please see "Academic status" and "Regulations governing students under academic suspension" in the Academics section of the UNT catalog.

#### Biomedical Engineering: Track Selection

Students interested in pursuing a Bachelor's Degree in Biomedical Engineering will be able to choose from one of the following tracks:

- Comprehensive Biomedical Engineering: 18 hours in **BMEN** courses
- Biomedical Instrumentation: 18 hours in **EENG** courses
- Biomechanics: 18 hours in **MEEN** courses
- Biocomputing: 18 hours in **CSCE** courses
- Biotechnology: 18 hours in **BIOC/BIOL** courses
- Pre-med: 18 hours in **BIOC/BIOL** courses + additional courses as deemed necessary by the Pre-med program
- Biomaterials: 18 hours in **MTSE** courses
- Computations Epidemiology: 18 hours in **CSCE** courses, including **COSC** 2336 or 2436
- Business Foundations Track: 12 hours in Business Foundations courses\*
- Management: 12 hours in Management courses\*
- Marketing: 12 hours in Marketing courses\*
- Entrepreneurship: 12 hours in Entrepreneurship courses\*

No TCCNS options available for:

- **BMEN**
- **EENG**
- **MEEN**
- **BIOC**
- **MTSE**
- Management
- Marketing
- Entrepreneurship

\*Students choosing Business electives will need to complete 18 hours of Biomedical Engineering (**BMEN**) electives.

#### College of Engineering: Admission Requirements

Admission to the College of Engineering is contingent on clear admission to the university. The College of Engineering has 5 departments.

Applicants will be admitted to the College of Engineering in an engineering program if they meet the requirements below:

	ACT	SAT (Feb '16 or prior)	SAT (March '16 or after)
<b>Top 25%</b>	Math score of 23+ and a cumulative score of 23+	Math score of 570+ and a total score of 1070+	Math score of 590+ and a total score of 1140+
<b>Top 50%</b>	Math score of 24+ and a cumulative score of 24+	Math score of 600+ and a total score of 1100+	Math score of 620+ and a total score of 1170+
<b>Below 50%</b>	Math score of 26+ and a cumulative score of 26+	Math score of 630+ and a total score of 1180+	Math score of 650+ and a total score of 1250+
<b>No Ranking</b>	Math score of 24+ and a cumulative score of 24+	Math score of 600+ and a total score of 1100+	Math score of 620+ and a total score of 1170+

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

Transfer, international and post-baccalaureate (second bachelor's degree) applicants must be eligible to enroll in **MATH** 1710 (Calculus I) or in a higher-level math class and have a grade point average of 2.0 or greater in all prior math, science and engineering coursework.

Students not meeting the admission requirements for the major or applying to change their major into a degree in the College of Engineering will be supported through enrollment as a pre-major in their corresponding program.

Students classified as pre-majors will be reclassified into their respective major with the College of Engineering upon completing the corresponding course listed below with a 'C' or higher and a student in good standing:

Pre-major	Grade of 'C' or higher
Pre-Computer Science	<b>CSCE</b> 1030
Pre-Information Technology	<b>CSCE</b> 1030
Pre-Computer Engineering	<b>CSCE</b> 1030
Pre-Electrical Engineering	<b>MATH</b> 1710
Pre-Mechanical and Energy Engineering	<b>MATH</b> 1710
Pre-Biomedical Engineering	<b>MATH</b> 1710
Pre-Materials Science and Engineering	<b>MATH</b> 1710
Pre-Mechanical Engineering Technology	<b>MATH</b> 1710
Pre-Construction Engineering Technology	<b>MATH</b> 1710



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#### Special Notes

**Hours Required and General/College Requirements:** A minimum of 120 semester hours, of which 36 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.

**UNT Core Curriculum/Transfer of Core Curriculum:** UNT complies with the mandate of the Texas Legislature regarding [Core 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](#) under the corresponding catalog year.

For additional program and contact information, visit the College of Engineering website at <https://engineering.unt.edu/advising>.