



# College of Science

## B.S. Mathematics

### 2023-2024 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
ENGL 1310	ENGL 1301	CSCE 1010 or 1020 or 1030	COSC 1315 or 1336 or 1436
MATH 1710	MATH 2313 or 2413	ENGL 1320 or TECM 2700 (TECM 2700 is recommended)	ENGL 1302 or 2311
MATH 2000	MATH 2305 or 2405	MATH 1720	MATH 2314 or 2414
PSCI 2305	GOVT 2305	B.S. Math: Laboratory Science	<a href="#">See list of approved courses</a>
UNT Core: Creative Arts	<a href="#">See list of approved courses</a>		

SECOND YEAR FALL		SECOND YEAR SPRING	
UNT Requirement	TCCNS Option	UNT Requirement	TCCNS Option
UNT Core: American History	<a href="#">See list of approved courses</a>	UNT Core: American History	<a href="#">See list of approved courses</a>
MATH 2700	MATH 2318 or 2418	MATH 3000	N/A
MATH 2730	MATH 2315 or 2415	MATH Depth Elective (Advanced)	N/A
B.S. Math: Laboratory Science	<a href="#">See list of approved courses</a>	B.S. Math: Laboratory Science	<a href="#">See list of approved courses</a>
Minor	Consult UNT advisor	Minor	Consult UNT advisor

THIRD YEAR FALL		THIRD YEAR SPRING	
UNT Requirement	TCCNS Option	UNT Requirement	TCCNS Option
MATH 3510 or 3610	N/A	MATH Breadth Elective (Advanced)	N/A
Foreign Language Option I or II	Consult UNT advisor	MATH Breadth Elective (Advanced)	N/A
UNT Core: Language, Philosophy, & Culture	<a href="#">See list of approved courses</a>	UNT Core: Social & Behavioral Sciences	<a href="#">See list of approved courses</a>
Minor	Consult UNT advisor	Minor (Advanced)	N/A
Minor	Consult UNT advisor	PSCI 2306	GOVT 2306

FOURTH YEAR FALL		FOURTH YEAR SPRING	
UNT Requirement	TCCNS Option	UNT Requirement	TCCNS Option
MATH Depth Elective (Advanced)	N/A	MATH Breadth Elective (Advanced)	N/A
MATH Elective (3350 or higher)	N/A	MATH Elective (3350 or higher)	N/A
Elective	Consult UNT advisor	Elective (Advanced)	N/A
Elective	Consult UNT advisor	Minor (Advanced)	N/A
Elective	Consult UNT advisor	Foreign Language Option I or II	Consult UNT advisor



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Students may not declare a major within the College of Science until they have completed MATH 1100 (MATH 1314 or 1414), or MATH 1180 (MATH 1324) with a 'C' or better, or have demonstrated proficiency through a math placement exam. Applicants who do not meet the math proficiency requirement will be provisionally admitted as Pre-College of Science (PCOS). PCOS students may visit the College of Science Advising Center for assistance.

## 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

**ENGL** 1301; and **ENGL** 1302 or 2311

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

*ENGL 2311 is recommended.*

### UNT Core: Mathematics

This requirement will be met by fulfilling the B.S. Mathematics program requirement (see next column).

### UNT Core: Life & Physical Sciences

This requirement will be met by fulfilling the B.S. Mathematics laboratory science program requirement (see next column).

### 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, & Culture

One course chosen from: **ARTS** 1303; **ENGL** 2321, 2326, 2331, 2332, 2333, 2341, or 2351; **HIST** 2321 or 2322; **PHIL** 1301, 1304, 2303, or 2306

### 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 or 2330; **SOCI** 1301; **SOCW** 2361; **SPCH** 1318; **TECA** 1354

### UNT Core: Core Option Courses

This requirement may be met by fulfilling the B.S. Mathematics major requirements (see next column).

### B.S. Mathematics: Major Requirements

- MATH 2305 or 2405
- MATH 2313 or 2413
- MATH 2314 or 2414
- MATH 2315 or 2415
- MATH 2318 or 2418

MATH 2313 also fulfills the Mathematics core requirement; MATH 2314 also partially fulfills the Core Option core requirement.

### Advanced Mathematics Courses

No TCCNS options available

Students must achieve a grade point average of at least 2.0 in all mathematics courses numbered 3350 and above that are applied toward the major.

*Courses listed above are TCCNS options and do not include all courses required for the UNT B.A. Mathematics major.*

### B.S. Mathematics: Laboratory Sciences

The College of Science major in mathematics requires students to complete at least 11 hours in laboratory sciences. These may also fulfill the Life & Physical Sciences and part of the Component Area Option core requirements.

### Option I. Biology Emphasis

**\*\* Approved substitution**

- BIOL 1406 or 1306/1106\*\*
- BIOL 1407 or 1307/1107\*\*
- PHYS 2425 or 2325/2125 or CHEM 1411 or 1311/1111

### Option II. Chemistry Emphasis

**\*\* Approved substitution**

- CHEM 1411 or 1311/1111
- CHEM 1412 or 1312/1112
- Any CHEM numbered at least 2000 or one of the following:
  - ANTH 2301
  - ASTR or PHYS 1403
  - ASTR or PHYS 1404
  - BIOL 1306 or 1406
  - BIOL 1307 or 1407
  - BIOL 1308 or 1408
  - BIOL 2301 or 2401
  - BIOL 2302 or 2402
  - BIOL 2306 or 2406
  - GEOL 1401
  - GEOL 1403
  - PHYS 1301 or 1401
  - PHYS 1302 or 1402
  - PHYS 1410
  - PHYS 1415
  - PHYS 2325 or 2425
  - PHYS 2326 or 2426



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##### B.S. Mathematics: Laboratory Sciences (cont.)

###### Option III. Physics Emphasis

\*\* Approved substitution

- PHYS 2425 or 2325/2125
- PHYS 2426 or 2326/2126
- Any PHYS numbered at least 2000 or one of the following:
  - ANTH 2401 or 2301/2101
  - ASTR 1403 or 1303/1103
  - ASTR 1404 or 1304/1104
  - BIOL 1406 or 1306/1106\*\*
  - BIOL 1407 or 1307/1107\*\*
  - BIOL 1408 or 1308/1108
  - BIOL 2401 or 2301/2101
  - BIOL 2402 or 2302/2102
  - BIOL 2406 or 2306/2106
  - CHEM 1411 or 1311/1111
  - CHEM 1412 or 1312/1112
  - GEOL 1401 or 1301/1101
  - GEOL 1403 or 1303/1103
  - PHYS 1401 or 1301/1101
  - PHYS 1402 or 1302/1102
  - PHYS 1403 or 1303/1103
  - PHYS 1404 or 1304/1104
  - PHYS 1410 or 1310/1110
  - PHYS 1415 or 1315/1115

**Option IV.** Students double majoring in mathematics and another discipline (typically biology, chemistry, physics or engineering) that requires at least 12 hours of laboratory science intended for science and engineering majors may use the same laboratory science courses that satisfy the requirements for the other major to satisfy the laboratory science requirement for the mathematics major.

**Option V.** Students with a minor in geography or geology may use GEOL 1401 or 1301/1101 or GEOL 1403 or 1303/1103, and any course listed in Option I, II, or III to satisfy the laboratory science requirement for the mathematics major.

##### B.S. Mathematics: Foreign Language

Students may complete either of two options to satisfy the Mathematics Foreign Language requirement:

**Option I:** Proficiency in a foreign language equivalent to 1412. Students intending to pursue a graduate degree in mathematics are encouraged to study French, German or Russian.

**Option II:** Complete 6 hours of technical writing courses from the following: ENGL 2311 (also partially fulfills the Communication core requirement) and one advanced level TECM course option at UNT from approved list.

##### B.S. Mathematics: Computer Programming

- COSC 1315 or 1336 or 1436

Students taking mathematics courses at the 2000-level or above are expected to be competent in computer programming, using languages such as BASIC, C, C++, Fortran, PASCAL or Java. Students are encouraged to complete the programming requirement during their freshman or sophomore year. Students who have acquired a solid programming competency in a non-academic setting, such as through work experience, may demonstrate their programming competency by passing a departmental exam in place of the COSC 1315 or 1336 or 1436 course requirement.

##### Minor (Required)

**One** of the following is required:

- A minor of at least 18 hours (6 advanced).
- Completion of a second major in addition to mathematics.
- Completion of the certificate program in actuarial science.
- Completion of the certificate program in data analytics.

##### Teacher Certification Option

The College of Science encourages students to explore teaching at the second-year level as a career option. A higher GPA may be required for the certification option. For more information contact your advisor.

##### 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 Science 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 Science 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 Science Advising Center website at [www.cos.unt.edu/advising](http://www.cos.unt.edu/advising).