**College of Arts & Sciences**

**B.A. Mathematics**

2016-2017 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](http://registrar.unt.edu/transfer-guides) 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.

<table>
<thead>
<tr>
<th>Year</th>
<th>FALL SEMESTER</th>
<th>SPRING SEMESTER</th>
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<tbody>
<tr>
<td></td>
<td>UNT Requirement</td>
<td>TCCNS Option</td>
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<tr>
<td><strong>FRESHMAN</strong></td>
<td></td>
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</tr>
<tr>
<td>ENGL 1310</td>
<td>ENGL 1301</td>
<td>CSCE 1020 or CSCE 1030</td>
</tr>
<tr>
<td>Foreign Language 2040</td>
<td>Foreign Language 2311</td>
<td>Foreign Language 2050</td>
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<tr>
<td>MATH 1710</td>
<td>MATH 2313 or 2413 or 2513</td>
<td>MATH 1720</td>
</tr>
<tr>
<td>UNT Core: Government/Political Science</td>
<td>See list of approved courses</td>
<td>TECM 2700</td>
</tr>
<tr>
<td>UNT Core: Social and Behavioral Sciences</td>
<td>See list of approved courses</td>
<td>B.A. Math Major: Laboratory Science</td>
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<tr>
<td><strong>SOPHOMORE</strong></td>
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<tr>
<td>UNT Core: American History</td>
<td>See list of approved courses</td>
<td>UNT Core: American History</td>
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<tr>
<td>MATH 2700</td>
<td>MATH 2318 or 2418</td>
<td>MATH 3000</td>
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<tr>
<td>MATH 2730</td>
<td>MATH 2315 or 2415</td>
<td>MATH Depth requirement (advanced)</td>
</tr>
<tr>
<td>B.A. Math Major: Laboratory Science</td>
<td>See list of approved courses</td>
<td>MATH 2000 (counts as CAO Category I and Math elective)</td>
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<tr>
<td>UNT Core: Language, Philosophy and Culture</td>
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<tr>
<td><strong>JUNIOR</strong></td>
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<tr>
<td>MATH 3510 or MATH 3610 (Breadth requirement)</td>
<td>None</td>
<td>Minor</td>
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<tr>
<td>Elective (advanced)</td>
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<tr>
<td>Minor</td>
<td>Consult UNT advisor</td>
<td>MATH Depth requirement (advanced)</td>
</tr>
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<tr>
<td>MATH Breadth requirement (advanced)</td>
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http://registrar.unt.edu/transfer-guides

Last Revised: September 20, 2016
The College of Arts and Sciences encourages students to explore teaching at the secondary level as a career option. Students seeking secondary teacher certification should contact the Teach North Texas Program in the College of Arts and Sciences.

The College of Arts and Sciences expects students to have completed the State recommended high school program and be ready to enroll for Language 2040 (TCCNS: Language 2311). If you are not prepared for this level, the necessary prerequisites will either replace electives or increase the hours required for the degree.

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 recommended instead of ENGL 1302.

**UNT Core: Mathematics**

This requirement will be met by fulfilling B.A. Mathematics major requirements (see next column).

**UNT Core: Life & Physical Sciences**

This requirement will be met by fulfilling the B.A. Mathematics laboratory science requirement (see next page).

**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; CRJ 1301; ECON 2301 or 2302; GEOG 1303; PSYC 2301; SOCI 1301; SOCW 2361; SPCH 1318; TECA 1354

**UNT Core: Component Area Option Category I**

This requirement will be met by fulfilling B.A. Mathematics major requirements (see column below).

**UNT Core: Component Area Option Category II**

This requirement will be met by fulfilling B.A. Mathematics major requirements (see column below).

**College of Arts & Sciences Core: Foreign Language**

Any foreign language 2311 and 2312.

Courses must be taken in the same language.

NOTE: Prerequisites for foreign language 2311 and 2312 courses are 1311 and 1312 or 1411 and 1412 or 1511 and 1512. Placement exams may be available; see your community college academic advisor for details.

**B.A. Mathematics: Major Requirements**

- MATH 2313 or 2413 or 2513 (fulfills both university mathematics core and major requirements)
- MATH 2314 or 2414
- MATH 2318 or 2418
- MATH 2315 or 2415
- MATH 2305 or MATH 2405 (can be used to satisfy the UNT Core CAO Category I requirement and may be used toward the 6 hours of required math course electives)

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

Laboratory Sciences
Three laboratory science courses are required as follows (these also fulfill university core Life & Physical Sciences and CAO Category II requirements):

Option I

Group I: Complete the following course:
- BIOL 1406 or 1106/1306**

Group II: Complete one of the following laboratory courses:
- PHYS 2425 or 2325/2125
- CHEM 1411 or 1111/1311

Group III: Complete one of the following Laboratory courses.
- ANTH 2401 or 2101/2301
- ASTR 1403 or 1103/1303
- ASTR 1404 or 1104/1304
- BIOL 1407 or 1107/1307**
- BIOL 1408 or 1108/1308
- BIOL 2401 or 2101/2301
- BIOL 2402 or 2102/2302
- BIOL 2406 or 2106/2306
- CHEM 1411 or 1111/1311
- CHEM 1412 or 1112/1312
- GEOL 1401 or 1101/1301
- GEOL 1403 or 1103/1303
- PHYS 1402 or 1102/1302
- PHYS 1403 or 1103/1303
- PHYS 2425 or 2125/2325
- PHYS 2426 or 2126/2326
- PHYS 2426 or 2126/2326

Mathematics majors with a minor in geography or geology may also choose GEOL 1403 and GEOL 1401.

Option II

Group I: Complete two of the following Laboratory courses.
- CHEM 1411 OR 1311
- CHEM 1412 OR 1312
- PHYS 2425 OR 2325/2125
- PHYS 2426 OR 2326/2146
- ANTH 2401 or 2101/2301
- BIOL 1406 or 1106/1306**
- BIOL 1407 or 1107/1307**
- BIOL 1408 or 1108/1308
- GEOL 1401 or 1101/1301
- GEOL 1403 or 1103/1303

Group II: Complete one of the following Laboratory courses.
** Approved substitution

Option III

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.

B.A. Mathematics: Other Course Requirements (continued)

Computer Programming

COSC 1315 or COSC 1336 is required. 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 1415; or COSC 1336 or 1436 course requirement.

Minor

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. (advanced)

Teacher Certification Option

The College of Arts and Sciences encourages students to explore teaching at the secondary level as a career option. A higher GPA may be required for the certification option. For more information contact the College of Arts and Sciences Office of Student Advising at 940-565-2051.

Special Notes

Hours Required and General/College Requirements:

A minimum of 120 semester hours, of which 42 must be advanced, and fulfillment of degree requirements for the Bachelor of Arts degree as specified in the General University Requirements section of the UNT catalog and the College of Information requirements

UNT Core Curriculum/Transfer of Core Curriculum: Complies with the mandates of the 1997 Texas Legislature regarding requirements for state-assisted institutions. 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 Arts and Sciences 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 Arts and Sciences Student Advising website at www.cas.unt.edu/advising.