

DEGREE REQUIREMENTS

The College of Natural Sciences and Mathematics offers both Bachelor of Arts and Bachelor of Science degrees. Requirements differ based on degree as indicated below.

A. Grade Point Averages

A cumulative grade point average (GPA) reflects all grades earned, including grades of F and grades in repeated courses. Candidates must earn a minimum overall cumulative GPA of C (that is, a 2.0 GPA on a 4.0 scale) for all UT course work. In addition, candidates must earn a minimum cumulative GPA of C in the major, minors (optional) and UT General Education, with the grades of all courses attempted at all institutions included in the GPA calculation. Some programs require a higher GPA in the major. For example, BS Chemistry, BS Biochemistry, and BS Geology require a 2.5 GPA. *Criteria governing this policy are given in the Undergraduate Policy 3364-71-07: GPA Recalculation: <http://www.utoledo.edu/policies/academic/undergraduate/pdfs/3364-71-07> (<http://www.utoledo.edu/policies/academic/undergraduate/pdfs/3364-71-07%20%20Repeating%20a%20course%20and%20recalculation%20of%20GPA.pdf>) Repeating a course and recalculation of GPA.pdf (<http://www.utoledo.edu/policies/academic/undergraduate/pdfs/3364-71-07%20%20Repeating%20a%20course%20and%20recalculation%20of%20GPA.pdf>).*

B. Residency Requirement

Students transferring from other institutions must earn at least 30 hours of credit at The University of Toledo; at least 12 of these must be in the major area, and for students pursuing a minor, at least 9 hours must be earned at The University of Toledo. Full-time students must take their last semester, and part-time students their last 12 hours, in residence, unless alternative arrangements have been made in advance with the Dean of the College of Natural Sciences and Mathematics.

C. Credit Hours and Levels

1. Students must complete a minimum of 120 hours of course work that must include the University General Education and college skill area and distributive requirements, and either major and course work related to the major, or an interdisciplinary program. Individual programs may require more than 120 hours of coursework to complete.
2. In all baccalaureate programs, a minimum of 64 hours must be taken at the 2000 to 4000 levels; of these a minimum of 32 hours must be taken at the 3000 to 4000 levels.
3. Students are cautioned to make use of their degree audit and review remaining requirements with their adviser before every registration in order to make progress toward completion of their requirements in an orderly, timely manner. Insofar as a student can complete the basic courses and the courses required for a chosen major (as outlined in sections E - J below) in fewer than the 120 hours required for a degree, the student must choose elective courses to complete the total of 120 hours, subject to the restrictions outlined below.

D. Credit Restrictions

Total earned hours shown on a student's transcript may not all be applicable to the minimum 120 credits required for a degree, as follows:

1. Students with entrance deficiencies in mathematics and other students who are required or choose to take developmental course work will need to complete additional hours.
2. No courses in typing, shorthand or keyboarding will apply toward the degree.
3. No more than two hours in skill courses in physical education or recreation courses at the 1000 level will apply toward the degree.
4. No more than two hours in Student Leadership Development I and II will apply toward the degree.
5. Duplicate credit – except for courses identified as repeatable courses, students will not receive credit for repeated courses (taking the same course twice), whether taken at The University of Toledo or elsewhere.
6. The college reserves the right to deny credit for other specific courses (including most SKLS courses) and for blanket technical credit not applicable to a student's specific program.

E. University General Education Requirements

Students earning baccalaureates in all colleges and programs are required to complete 36 credit hours of courses that comprise the General Education Curriculum. Those courses are distributed in the areas of English composition, humanities/fine arts, social sciences, natural sciences and mathematics, and multicultural studies courses. Students should view their Degree Audit Report or contact their academic department or college office for specific details.

F. Natural Sciences and Mathematics Skill Area Requirements

Students are placed into mathematics courses by ACT scores or placement tests in those subjects. Students are placed into foreign language courses through placement testing.

Code	Title	Hours
1. Orientation		
NSM 1000	Natural Sciences & Mathematics ¹	2
2. English Composition ²		
Select one of the following tracks:		6
<i>a. Native speakers track (for students for whom English is a first language)</i>		
ENGL 1110	College Composition I or ENGL 101 College Composition 1 Co-Requisite	
Select one of the following:		
ENGL 1130	College Composition II: Academic Disciplines And Discourse	
ENGL 2950	Science And Technical Report Writing	
ENGL 2960	Professional and Business Writing	
<i>b. Non-native speakers track (for students for whom English is a second language) ³</i>		

ENGL 1020	Writing And Grammar For Students Of English As A Second Language	
ENGL 1110	College Composition I (ESL section)	
Select one of the following:		
ENGL 1130	College Composition II: Academic Disciplines And Discourse	
ENGL 2950	Science And Technical Report Writing	
ENGL 2960	Professional and Business Writing	
3. Mathematics ⁴		
Select one of the following tracks:		3-8
<i>a. Bachelor of Arts (BA)</i>		
Select one of the following:		
MATH 1320	College Algebra	
MATH 1340	College Algebra And Trigonometry	
MATH 2600	Introduction To Statistics	
MATH 2640	Statistics for Applied Science (or higher Math)	
<i>b. Bachelor of Science (BS)</i>		
Select one of the following calculus sequences:		
MATH 1750 & MATH 1760	Calculus For The Life Sciences With Applications I and Calculus For The Life Sciences With Applications II	
MATH 1830 & MATH 1840	Calculus I For Mathematicians, Scientists And Educators and Calculus II For Mathematicians, Scientists And Educators	
MATH 1850 & MATH 1860	Single Variable Calculus I and Single Variable Calculus II	
4. Writing Across the Curriculum (WAC) Requirement		
Select two writing intensive courses approved by adviser ⁵		6
5. Natural Sciences/Mathematics		
Select 2-3 courses based on degree as indicated: ⁶		6-9
<i>a. Bachelor of Arts (BA)</i>		
Select two science/mathematics courses from two different departments outside of the student's major ⁷		
<i>b. Bachelor of Science (BS)</i>		
Select three science/mathematics courses from three different departments outside of the student's major ⁷		
6. Cultural Experience (BA Requirement Only)		
Select 0 to 8 hours foreign language or one semester of Study Abroad ⁸		0-8
Total Hours		23-39

¹ All new first-year students are required to take NSM 1000. The course is optional for transfer students.

² University of Toledo General Education and College of Natural Sciences and Mathematics requirement - 6 hours. To earn a degree in the College of Natural Sciences and Mathematics, students must pass both Composition I and II with a C or better. The College of Natural Sciences and Mathematics recommends that these requirements be met before completing 45 credit hours.

³ Students will take an English placement test to determine appropriate starting level.

⁴ UT General Education and College of Natural Sciences and Mathematics requirement.

⁵ Students must pass two writing intensive courses approved by their adviser. Many courses will require completion of Composition I and II as pre-requisites. The College of Natural Sciences and Mathematics recommends that the first of these writing intensive courses be completed within the first 65 and the second within the first 90 hours. At least one of these courses must be taken within the student's major. In consultation with their advisers, students with dual or interdisciplinary majors will meet this requirement by selecting a course within one of their chosen majors.

Transfer students from institutions that have required writing intensive courses should have their former institution certify that they have completed a series of writing intensive courses comparable to those required in the College of Natural Sciences and Mathematics. Transfer students who have not taken writing intensive courses must meet the College of Natural Sciences and Mathematics Writing Across the Curriculum requirements.

⁶ UT General Education requirement is two courses for 6 hours; College of Natural Sciences and Mathematics requirement differs based on degree as indicated.

⁷ Students may select courses from biology, chemistry, environmental sciences, mathematics, and physics and astronomy. Courses must be major-level. See DAR for more information.

⁸ Bachelor of Arts (BA) requirement only, not required for Bachelor of Science (BS) - 0 to 8 hours (foreign languages 1110 and 1120 (or 1500) or one semester of Study Abroad).

Every student enrolled in a BA degree program in the College of Natural Sciences and Mathematics is required to demonstrate proficiency in a single foreign language (Arabic, Chinese, French, German, Japanese, Latin, Spanish, or American Sign Language) through the elementary (foreign languages 1120) level by successfully completing a foreign language course at this level or by achieving an appropriate score on a proficiency/placement test administered by the department of foreign languages that reflects the equivalent. Students beginning a foreign language should enroll in their chosen language at the elementary 1110 level and will take two semesters of foreign language. Those continuing a foreign language or attempting to demonstrate competency by examination should take a proficiency/placement test. Alternatively, students may satisfy the cultural experience requirement by studying abroad for at least once semester in an approved study abroad/exchange program for academic credit.

G. Natural Sciences and Mathematics Distributive Requirements

(Bachelor of Arts (BA) requirement only, not required for Bachelor of Science (BS))

Students should consult with their advisors in selecting courses that will meet distributive requirements. With their advisor's approval, students may select higher-level courses for which they have the prerequisites. With careful planning, students will be able to satisfy UT General Education Curriculum and College of Natural Sciences and Mathematics requirements by taking the minimum required hours. A student may take

no more than two courses under each departmental code in satisfying the distributive requirements.

Code	Title	Hours
1. Humanities and Fine Arts Required Courses ¹		
<i>English Literature</i>		
Select 3 hours of English Literature		3
<i>History</i>		
Select 3 hours of history		3
<i>Fine Arts</i>		
Select 3 hours of Fine Arts from appreciation or theory courses, not studio or skills courses		3
<i>Electives</i>		
Select 6 hours of electives. Among the courses with minimal or no prerequisites are as follows: ²		6
ARTH 1500	Art In History	
CLC 1010	Classical Humanities	
COMM 1010	Comm Principles And Practices	
COMM 2000	Mass Communication And Society	
ENGL 2710	Reading Fiction	
ENGL 2720	Reading Drama	
ENGL 2730	Reading Poetry	
FILM 1310	Introduction To Film	
FREN 1080	Culture And Commerce In The French-Speaking World	
FREN 1090	French & Francophone Culture In The Modern World	
GERM 1080	German Culture And Commerce	
GERM 1090	Introduction To Modern German Culture	
HIST 1000 - HIST 1200		
JAPN 1080	Japanese Culture And Commerce	
JAPN 1090	Introduction To Japanese Culture	
MUS 2200	Music Theory For The Non-Major	
MUS 2210	Introduction To Music	
MUS 2220	History Of Jazz	
MUS 2240	History Of Rock And Roll	
MUS 2250	Musical Diversity In The United States	
MUS 2420	Cultures And Music Of Non-Western Styles	
PHIL 1010	Introduction To Logic	
PHIL 1020	Critical Thinking	
PHIL 2200	Introduction To Philosophy	
PHIL 2400	Contemporary Moral Problems	
REL 1220	World Religions	
REL 2000	Introduction To Religion	
SPAN 1080	Culture & Commerce In The Spanish-Speaking World	
SPAN 1090	Culture Of Latin America	
SPAN 1100	Culture Of Spain	
THR 1010	Acting for Non Majors	
THR 1100	Introduction To Theatre	

2. Social Sciences

Select 9 hours of social science courses. Among the courses with minimal or no prerequisites are as follows: ³ 9

ANTH 1020	Introduction To Anthropology
ANTH 2020	Introduction To Archaeology
ANTH 2800	Cultural Anthropology
ANTH 2900	African American Culture
ECON 1010	Introduction To Economic Issues
ECON 1150	Principles Of Macroeconomics
ECON 1200	Principles Of Microeconomics
GEPL 1010	Human Geography
GEPL 1100	Environmental Geography
PSC 1200	American National Government
PSC 1710	Current International Problems
PSY 1010	Principles Of Psychology
SOC 1010	Introduction To Sociology

Total Hours 24

¹ UT General Education requirement is two courses for six hours; students enrolled in a BA degree program in the College of Natural Sciences and Mathematics are required to take an additional 9 hours. Students will take five courses (15 hours) in the humanities in addition to those taken to meet the English composition and foreign language requirements. Students may select humanities courses that also will satisfy a UT General Education humanities or multicultural requirement.

² Students may select courses from art, art history, communication, English, film, foreign languages (courses higher than 1120/1500 or culture courses 1080 and 1090, or a second foreign language), history, humanities, music, philosophy, religious studies and theatre. Higher-level humanities courses will satisfy these requirements and may be taken if student has met the prerequisites.

³ UT General Education requirement is two courses for six hours; Students in a BA degree program in the College of Natural Sciences and Mathematics are required to take one additional course for a total of nine hours.

Students may select social science courses that also will meet a UT General Education social science requirement and one multicultural requirement. Students may select courses from anthropology, economics, geography, political science, psychology, and sociology. No more than two courses can be from a single discipline.

H. Major Area

Every student must complete either a departmental major or an interdisciplinary major. Courses given in other colleges of the University may be credited to the major only with the approval of the Dean of the College of Natural Sciences and Mathematics upon recommendation of the department Chair. Waiver of a required course or the substitution of a course from another department does not necessarily reduce the minimum credits required in the major.

1. Departmental Major

- See the complete list of departmental majors under "Degrees Offered" in the College of Natural Sciences and Mathematics section of this catalog.

- The minimum number of semester hours a student must complete for a departmental major is 34 hours. A student may have two majors from two different departments provided the requirements of both programs are satisfied. Work in the second major may be accepted as fulfilling the related course requirement upon the approval of the advisers in both departments. A student cannot use courses from the first major to satisfy the second and vice-versa. See section on “Earning a Second Degree (<http://utoledo-public.courseleaf.com/undergraduate/natural-sciences-mathematics/admission-policies/>)” for statement on requirements when two or more desired major programs are offered as different degrees.

2. Interdisciplinary Majors

- The College of Natural Sciences and Mathematics offers an interdisciplinary major in that leads to a Bachelor of Science in General Studies. General studies is an interdisciplinary program that allows students to select an area of concentration and related course work not offered in traditional majors. Students who plan to pursue graduate or professional degree programs or enter certain employment areas that require established curricular backgrounds may find it to their advantage to consider existing majors offered within the college rather than the general studies option. Students seeking admission to this program will be interviewed by an advisor in the College Student Services Office and must have sound reasons for their choice. Once accepted into the program, students must have their programs approved by the general studies advisor. Under this program, the University and college general education requirements specified in the Degree Requirements section of this catalog must be fulfilled, and an area of concentration in the natural sciences, social sciences or humanities must be identified for the purpose of determining education requirements. In lieu of a major, students must take at least 16, but not more than 24 hours, of course work in a single department and 26 to 34 hours of cognate or related course work for a total of 50 hours. The transcript will identify the major as General Studies. A student completing a departmental major and a second major in an interdisciplinary or interdepartmental major cannot use courses from the first major to satisfy the second or vice-versa. See the complete list of interdisciplinary majors under “Degrees Offered” in the College of Natural Sciences and Mathematics section of this catalog.

I. Related Courses

Every student who chooses a departmental major and students in some interdisciplinary majors also must complete courses related to the major. These courses must be in addition to courses taken to fulfill the basic requirements listed above. For BA degree programs the minimum number of major and related area courses is 58 hours. For BS degree programs the minimum number of major and related area courses is 64 hours. Each department defines the areas from which courses may be chosen by its majors, and these listings are given in the later sections of this catalog under Programs of Study. For most programs, related courses must be chosen from courses acceptable for credit in a College of Natural Sciences and Mathematics major. Generally, these are upper-level courses.

Courses given in other colleges of the University may be credited to the major or to related courses only if indicated in later sections of the this catalog under Programs of Study or with the approval of the Dean of the College of Natural Sciences and Mathematics upon recommendation of the department Chair.

J. Minors

Many College of Natural Sciences and Mathematics departments offer minors. Departmental requirements for particular minors are given in later sections of the catalog under Programs of Study. Students wishing to pursue minors should consult with their primary program advisor and then with an advisor in Student Services office. Not all minors can be added to all degree programs. Courses selected for the minor must be chosen from courses acceptable for credit toward a major in that department. In meeting requirements for some majors, work in the minor may be accepted as fulfilling the required hours of related courses, but only with the approval of the student’s major advisor. Students completing a minor must be sure that at least 12 credit hours of the minor requirements are unique to that minor, and are not being used to satisfy requirements in the major or another minor. No more than six hours of courses taken for minor credit may be applied to the total College of Natural Sciences and Mathematics distributive requirements. A minimum GPA of 2.0 is required in the minor. Students must complete a minimum of 21 hours for a minor; at least nine of those hours must be completed at The University of Toledo.