

2005-2006  
Bachelor of Science  
Mathematics  
Math (120 hrs)

Name \_\_\_\_\_

SS# \_\_\_\_\_

**Mathematics (47 hrs)\*\***

Course	Course Title	Credits	Grade	√
1910	Calculus I	4		
1920	Calculus II	4		
2010	Elem. Matrix Algebra.	2		
2110	Calculus III	4		
2120	Differential Equations	3		
3810	or Complex Variables			
3400	Intro Concepts Math	3		
3510	Modern Algebra I	3		
3430	College Geometry or	3		
4410	Differential Geometry			
4310	or Intro. Topology I			
4530	Linear Algebra	3		
3070	Statistical Methods I,	3		
3470	Intro. Probability & Statistics, or			
4470	Probability & Statistics I			
4110	Advanced Calculus I	3		
3000/ 4000	Higher Math Elective	3		

One Sequence from 3510-3520, 4110-4120, 4310-4320, or 4530-4540

†One Sequence from 4210-4220, 4250-4260, 4470-4480, or any two from 4050, 4350, and 4360

One additional sequence from either list above.

**History (6 hrs)**

2010	American History	3		
2020	American History	3		

**\*Humanities/Fine Arts (6 hrs)**

**\*Social Science (6 hrs)**

College Base Exam \_\_\_\_\_  
English Qualifying Exam \_\_\_\_\_

\*\*The student must complete at least 30 mathematics credit hours numbered 3000 and above.

†Students not completing Math 4470-4480 must complete Math 4120.

\*See catalog [http://www.tntech.edu/ugcat/html/general\\_ed\\_core.asp](http://www.tntech.edu/ugcat/html/general_ed_core.asp)

**English (9 hrs)**

Course	Course Title	Credits	Grade	√
1010	Writing I	3		
1020	Writing II	3		
2130	American Literature,	3		
2230	British Literature, or			
2330	World Literature			

**Foreign Language (6 hrs)**

Courses should be chosen from 1010, 1020, 2010, and 2020 in a single language. This requirement may also be satisfied by demonstrating proficiency at the level of 2020.

**Science Sequence (8 hrs)**

Courses to be selected from the list below.

**Biology**

BIOL 1110 General Zoology and  
BIOL 1120 General Botany 8  
or

**Chemistry**

CHEM 1110 General Chemistry and  
CHEM 1120 General Chemistry 8  
or

**Physics**

PHYS 2110-2111 General Physics/Lab  
PHYS 2120-2121 General Physics/Lab 8

**Computer Science (4 hrs)**

CSC 2010 & 2011	Intro CSC & Lab <b>OR</b>	4		
ENGR 1120 ENGR 2121	Prog. for Engineers Engineering	2		
MATH 2011	Applications in C Matrix Algebra Computer Lab	1 1		

**Speech or Professional Communication (3 hrs)**

2410	Fundamentals of Public Speaking Or	3		
2500	Communicating in the Profession			

**Electives or Minor (25 hrs)**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**120 hour curriculum for the B.S. in Mathematics effective Fall 2005**  
[Approved by UCC on April 28, 2005]

**NOTE: For a complete listing of new TBR General Ed Core requirements go to**  
[http://www.tntech.edu/ugcat/html/general\\_ed\\_core.asp](http://www.tntech.edu/ugcat/html/general_ed_core.asp)

**Freshman Year**

- MATH 1910,1920 Calculus I-II (8 credits)
- ENGL 1010,1020 Writing I-II (6 credits)
- BIOL 1110-1120 General Zoology/Botany,  
or CHEM 1110-1120 General Chemistry I-II,  
or PHYS 2110-2111,2120-2121 Calculus-based Physics I-II (8 credits)
- Foreign Language Elementary/Intermediate Courses(\*) (6 credits)
- Humanities/Fine Arts (3 credits)

**Total: 31 credits**

**Sophomore Year**

- MATH 2010 Elementary Matrix Algebra (2 credits)
- MATH 2110 Calculus III (4 credits)
- MATH 2120 Differential Eqs.,  
or MATH 3810 Complex Variables (3 credits)
- MATH 3400 Intro. to Concepts of Mathematics (3 credits)
- ENGL 2130/2230/2330 Literature (3 credits)
- Humanities/Fine Arts (3 credits)
- SPCH 2410 Intro. to Speech Communication,  
or PC 2500 Professional Communication (3 credits)
- Social Science (6 credits)
- CSC 2010-2011 Intro. to Computer Science (4 credits)  
or ENGR 1120, ENGR 2121, and MATH 2011 (4 credits)

**Total: 31 credits**

**Junior Year**

- MATH 3510 Modern Algebra I (3 credits)
- MATH 4530 Linear Algebra I (3 credits)
- MATH 3430 College Geometry, **NEW!**  
or MATH 4410 Differential Geometry, **NEW!**  
or MATH 4310 Intro. Topology I (3 credits) **NEW!**
- MATH 3070 Statistical Methods I,

or MATH 3470 Introduction to Probability and Statistics,  
or MATH 4470 Probability and Statistics I (3 credits)

- HIST 2010-2020 American History I-II (6 credits)
- #Mathematics (3 credits)
- Electives/Minor (8-9 credits)

**Total: 29-30 credits**

### **Senior Year**

- MATH 4110 Advanced Calculus I (3 credits)
- #Mathematics (9 credits)
- Electives/Minor (17-18 credits)

**Total: 29-30 credits**

\* Courses should be chosen from 1010, 1020, 2010, and 2020 in a single language. This requirement may also be satisfied by demonstrating proficiency at the level of 2020.

# Upper division mathematics courses (3000 or higher). The student must complete one sequence from MATH 3510-3520, 4110-4120, 4310-4320, and 4530-4540, one sequence from MATH 4210-4220, 4250-4260, 4470-4480, or any two from MATH 4050, 4350, and 4360 **NEW!** and one additional sequence from either list. Students not completing MATH 4470-4480 must complete MATH 4120. The student must complete at least 30 mathematics credit hours numbered 3000 and above.

A minor of 15 hours, including at least 6 upper division hours must be completed in a coherent program of study. The criterion for coherence may be met (1) by taking all minor courses in a single discipline (i.e., courses with the same prefix) or (2) by taking the courses prescribed in an approved interdisciplinary minor.

The Department offers courses to meet the needs of the students with varying career objectives. Four options, actuarial, applied mathematics, pure mathematics, and statistics, are available. The following courses are recommended (but not required) for students in each option.

**Actuarial:** MATH 3070-3080, 4210-4220, 4470-4480, 4540, ECON 2010-2020, ACCT 2110-2120, FIN 2000, 3610, DS 2810, 3620. Students who wish to prepare for the second Actuarial Exam should obtain permission from the Graduate School to take MATH 6270.

**Applied Mathematics:** MATH 2120, 3810, 4120, 4510, 4540. The sequence requirement should be met by choosing two sequences from the second group. It is recommended that the student minor in Computer Science.

**Pure Mathematics:** MATH 3520, 4120, 4310, 4350-4360, 4540.

**Statistics:** MATH 3070-3080, 4210, 4470-4480, 4540.