

2009-2010  
 Bachelor of Science in Mathematics  
 Math (121 hrs)

Name \_\_\_\_\_

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

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

Course	Course Title	Credits	Grade	✓	Sem
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 &				
4470	Statistics, or Probability &				
4110	Advanced Calculus I	3			
3000/ 4000	Math Elective (If needed for 47 credit hours of Math)	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.

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

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

**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 \_\_\_\_\_

#This course is only required for incoming freshman with less than 12 hours.

\*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	✓	Sem
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 (3 hrs)**

CSC 2100	Intro to Problem Solving & Computer Programming	3			
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**Speech or Professional Communication (3 hrs)**

2410	Fundamentals of Public Speaking, <b>OR</b>	3			
2500	Communicating in the Profession				

**#First-Year Connections (or any other UNIV 1020 course)**

1020	CSC/MATH/PHYS First-Year Connections	1			
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**Electives or Minor (26 hrs)**

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## MATHEMATICS (MATH)

### (Leading to the Bachelor of Science Degree)

Freshman Year		sem. hrs.	Sophomore Year		sem. hrs.
<u>MATH 1910</u>	Calculus I	4	<u>MATH 2010</u>	Elementary Matrix Algebra	2
<u>MATH 1920</u>	Calculus II	4	<u>MATH 2110</u>	Calculus III	4
<u>ENGL 1010</u>	Writing I	3	<u>MATH 2120</u> or <u>3810</u>		3
<u>ENGL 1020</u>	Writing II	3	<u>MATH 3400</u>	Introduction to Concepts of Mathematics	3
<u>BIOL 1110, 1120; CHEM 1110, 1120; or PHYS 2110, 2111, 2120, 2121</u>		8	<u>ENGL 2130, 2230, or 2330</u>		3
Foreign Language <sup>2</sup>		6	Humanities/Fine Arts Elective		3
Humanities/Fine Arts Elective		3	<u>PC 2500</u> or <u>SPCH 2410</u>		3
<u>MATH 1020</u>	First-Year Connections <sup>1</sup>	1	Social/Behavioral Science Electives		6
			<u>CSC 2100</u>	Introduction to Problem Solving and Computer Programming	3
Total		32	Total		30
Junior Year		sem. hrs.	Senior Year		sem. hrs.
<u>MATH 3510</u>	Modern Algebra I	3	<u>MATH 4110</u>	Advanced Calculus I	3
<u>MATH 4530</u>	Linear Algebra I	3	Mathematics <sup>3</sup>		9
<u>MATH 3070, 3470, or 4470</u>		3	Electives or minor		17
<u>MATH 3430, 4410, or 4310</u>		3			
<u>HIST 2010</u>	American History I	3			
<u>HIST 2020</u>	American History II	3			
Mathematics <sup>3</sup>		3			
Electives or minor		9			
Total		30	Total		29

<sup>1</sup> This course not included in 120-hour curriculum.

<sup>2</sup> 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.

<sup>3</sup> Upper-division mathematics courses (3000 or higher). The student must complete three upper-division sequences. The approved sequences are organized into pure mathematics and applied mathematics categories as shown below. The student must complete at least one sequence from each category and students not completing MATH 4470-4480 must complete MATH 4110-4120. Applied Mathematics Sequence List: MATH 4210-4220; 4250-4260; two of the three: 4350, 4360 or 4050; and 4470-4480.

Pure Mathematics Sequence List: MATH 3510-3520, 4110-4120, 4310-4320, and 4530-4540.

A minor of 15 hours, including at least six 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.

To allow students to prepare for different career paths, four optional tracks are available: Actuarial, Applied Mathematics, Pure Mathematics, and Statistics. The following are courses recommended (but not required) for students in each track.

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

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

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