HONORS-IN-DISCIPLINE MATH PROGRAM SHEET

To complete the ETSU Honors-in-Discipline Mathematics Program, a student must complete the 120 semester hours of work required for a B.S. in math. The courses consist of 42 semester hours of general education requirements, 8–10 semester hours of natural science, 34 semester hours of core math classes, 22–24 semester hours of electives, and 12 semester hours of math classes chosen from a specific math track (Mathematical Sciences, Mathematical Statistics, Quantitative Modeling, or Mathematical Education). In addition, at least 18 semester hours of these classes must consist of honors math classes— 12 to 15 hours will be math classes which are "honors enriched" and 3 to 6 hours will be Honors Thesis (MATH 4018). The following check list should help in planning your schedule.

Tennessee Board of Regents General Education Requirements

(42 Semester Hours)

COURSE	CLASS NAME	CREDIT	TERM	GRADE
ENGL 1010	Critical Reading and Expository Writing	3		
ENGL 1020	Critical Thinking and Argumentation	3		
HIST 2010	The United States to 1877	3		
HIST 2020	The United States Since 1877	3		
MATH 1910	Calculus 1	4		

AREA	COURSE	CLASS NAME	CREDIT	TERM	GRADE
Oral Communication			3		
Natural Science 1			4		
Natural Science 2			4		
Humanities/Art 1			3		
Humanities/Art 2			3		
Humanities/Art 3			3		
Social/Behavioral Sciences 1			3		
Social/Behavioral Sciences 2			3		

ETSU Academic Proficiency Requirements

(Classes listed in this category can be listed elsewhere in your program as well.)

Writing-Intensive (4 classes; 2 math classes, 2 3000–4000 level classes)

COURSE	CLASS NAME	CREDIT	TERM	GRADE

Oral-Intensive (2 classes; 1 in math)

COURSE	CLASS NAME	CREDIT	TERM	GRADE

Using Information Technology (Pass proficiency exam or take CSCI 1100 before accumulating 33 hours)

COURSE	CLASS NAME (OR EXAM)	CREDIT	TERM	GRADE

Bachelor of Science Requirements

(8–10 Semester Hours)

COURSE	CLASS NAME	CREDIT	TERM	GRADE
PHYS 2110	Technical Physics 1	5		
PHYS 2120	Technical Physics 2	5		

OR

COURSE	CLASS NAME	CREDIT	TERM	GRADE
BIOL 1110	Biology for Science Majors Lecture 1	4		
BIOL 1111	Biology for Science Majors Lab 1	0		
BIOL 1120	Biology for Science Majors Lecture 2	4		
BIOL 1121	Biology for Science Majors Lab 2	0		

Mathematics Core Requirements

(34 Semester Hours)

COURSE	CLASS NAME	CREDIT	TERM	GRADE
MATH 1920	Calculus 2	4		
MATH 2010	Linear Algebra	3		
MATH 2050	Probability and Statistics—Calculus Based	3		
MATH 2090	Mathematical Computing	2		
MATH 2110	Calculus 3	4		
MATH 2120	Differential Equations	3		
MATH 2800	Mathematical Reasoning	3		
MATH 4010	Undergraduate Research	3		
MATH 4127	Introduction to Modern Algebra	3		
MATH 4217	Analysis 1	3		
MATH 4257 MATH 4267	Numerical Analysis **OR** Numerical Linear Algebra	3		

Electives/Minor

(22–24 Semester Hours—these classes can be listed elsewhere also)

A minor is not mandatory for students majoring in mathematics.

COURSE	CLASS NAME	CREDIT	TERM	GRADE

Honors-in-Discipline Requirements

(At least 18 Semester Hours—these classes can be listed elsewhere also)

COURSE	CLASS NAME	CREDIT	TERM	GRADE
MATH –088				
MATH –088				
MATH –088				
MATH –088				
MATH –088				
MATH 4018–088	Honors Thesis			

Track Requirements
(12 Semester Hours)

A math major must complete the mathematics core requirements and then select one of four tracks: mathematical sciences, mathematical statistics, quantitative modeling, or mathematics education. Students planning to teach mathematics at the secondary level may choose the education track. In addition, such students must complete professional education requirements for secondary education students. Students planning to pursue careers in industry or a field that utilizes statistics should choose the statistics track, while those desiring a job in research or industry utilizing areas of mathematics other than statistics should choose the quantitative modeling track. Those intending to pursue a graduate degree in mathematics should choose the mathematical sciences track.

Mathematical Sciences

COURSE	CLASS NAME	CREDIT	TERM	GRADE
MATH 3340	Applied Combinatorics & Problem Solving	3		
MATH 4137	Modern Algebra 2	3		
MATH 4337	Complex Variables	3		
MATH 4347	Introduction to Graph Theory/Applications	3		

OR

Mathematical Statistics

COURSE	CLASS NAME	CREDIT	TERM	GRADE
MATH 3050	Statistical Modeling	3		
MATH 4047	Mathematical Statistics 1	3		
MATH 4057	Mathematical Statistics 2	3		
MATH 4287	Applications of Statistics	3		

OR

Quantitative Modeling

COURSE	CLASS NAME	CREDIT	TERM	GRADE
MATH 3050	Statistical Modeling	3		
MATH 3150	Mathematical Modeling	3		
MATH 4337	Complex Variables	3		
MATH 4347	Introduction to Graph Theory/Applications	3		

OR

Mathematics Education

COURSE	CLASS NAME	CREDIT	TERM	GRADE
MATH 3040	History of Mathematics	3		
MATH 3150	Mathematical Modeling	3		
MATH 3340	Applied Combinatorics & Problem Solving	3		
MATH 4157	Modern Geometry	3		

In order to complete the requirements for teacher certification, students in the Mathematics Education Track must select a minor in Education which will include: MATH 4416, Teaching Secondary Mathematics.

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