

# DEPARTMENT OF MATHEMATICS

The Department of Mathematics offers a four-year program in mathematics that leads to the bachelor of science degree and curriculum that leads to a minor in mathematics. The curriculum is designed to meet the needs of three groups of students: (1) those who plan to seek employment in business, industry, or government, (2) those who plan to attend graduate school to continue their study of mathematics or a related field, and (3) those who plan to be secondary school teachers.

Students majoring in mathematics are encouraged to use their elective hours to complete a second major, or at least a concentration of 18 hours or more, in the field of their choice. For example, students interested in computer science are advised to complete the following courses: COMS 1403, 2003, 2103, 2203, 2213, and two additional courses selected from 3213, 3503, 3803, and 4203. Students interested in business electives are advised to complete BUAD 2003, 2033, ACCT 2003, 2013, and ECON 2003 and 2013. For other areas of interest, students should consult their advisor to arrange a plan of study.

Students who plan to attend graduate school in mathematics or a related field are advised to complete additional upper-level mathematics courses beyond the minimal degree requirements.

The curriculum in mathematics for teacher licensure is found in the School of Education section of this catalog.

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Professors:  
Carnahan, Hamm, Keisler,  
Watson  
Associate Professors:  
Amirkhanian, S. Jordan, Shores  
Assistant Professors:  
Finan, Guerra, Pearson, Xie  
Instructors:  
Felkins, Horton,  
S.M. Jordan, Ketkar, Sherrill

## Curriculum in Mathematics

Freshman Year	Hours
Calculus I, II (MATH 2914, 2924)	8
English Composition I, II (ENGL 1013, 1023) <sup>1</sup>	6
Social Sciences <sup>1</sup>	3
Introduction to Biological Science (BIOL 1014) <sup>1</sup>	4
Discrete Mathematics (MATH 2703)	3
Physical Activity <sup>1</sup>	2
Electives	6
<b>Total</b>	<b>32</b>
<b>Sophomore Year</b>	
Calculus III (MATH 2934)	4
Foundations of Number Systems (MATH 3003)	3
General Physics I, II (PHYS 2114, 2124)	8
Foundations of Computer Programming I (COMS 2104)	4
Social Sciences <sup>1</sup>	9
Electives <sup>2</sup>	3
<b>Total</b>	<b>31</b>
<b>Junior Year</b>	
Intro to Analysis (MATH 3203)	3
Applied Statistics I (MATH 3153)	3
Differential Equations I (MATH 3243)	3
Mathematics Electives <sup>3</sup>	3
Fine Arts/Humanities <sup>1</sup>	6
Electives <sup>2</sup>	12
<b>Total</b>	<b>33</b>

## Curriculum in Mathematics

<b>Senior Year</b>	
Abstract Algebra I (MATH 4033)	3
Linear Algebra I (MATH 4003)	3
Math Modeling I (MATH 3163)	3
Mathematics Electives <sup>3</sup>	3
Electives <sup>2</sup>	19
<b>Total</b>	<b>31</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements" on page 72.

<sup>2</sup>At least 40 of the total hours required for graduation must be 3000-4000 level courses.

<sup>3</sup>3000 - 4000 level math elective. MATH 3033, 4703, and 4772 may not be used to satisfy this requirement. MATH 4993 may not be used without prior approval of the department chair.

### **Minor Mathematics**

For several majors, a minor in mathematics is a natural and popular acquisition. The minor in mathematics requires 20 hours of courses:

MATH 2703 Discrete Mathematics  
MATH 2914 Calculus I  
MATH 2924 Calculus II

and 9 hours selected from the following:

MATH 2934 Calculus III  
MATH 3003 Foundations of Number Systems  
MATH 3123 College Geometry  
MATH 3163 Mathematical Modeling I  
MATH 3203 Introduction to Analysis  
MATH 3243 Differential Equations I  
MATH 4003 Linear Algebra I  
MATH 4033 Abstract Algebra I  
MATH 4103 Linear Algebra II  
MATH 4113 History of Mathematics  
MATH 4133 Abstract Algebra II  
MATH 4153 Applied Statistics III  
MATH 4163 Mathematical Modeling II  
MATH 4173 Advanced Biostatistics  
MATH 4243 Differential Equations II  
MATH 4253 Advanced Calculus I  
MATH 4263 Mathematical Statistics  
MATH 4273 Complex Variables  
MATH 4283 Advanced Calculus I  
MATH 4293 Introductory Topology