

The Department of Mathematical Sciences offers Bachelor of Science degree in Mathematics with the following options:

1. General Mathematics option
2. Applied Mathematics option
3. Statistics option
4. Secondary Mathematics Teacher option.

Each Mathematics major is required to declare an option and it can be changed.

The curriculum for a Bachelor of Science degree in Mathematics consists of a minimum of 120 credit hours, of which at least 42 credit hours must be at the 3000 and 4000 level. A major in Mathematics requires the mathematics core of 26 credit hours, 15 credit hours of each option core (18 credit hours for secondary mathematics teacher option) and minimum of 8 credit hours (except secondary teacher option) of supporting courses. In addition student must complete 6 credit hours of Mathematics or Statistics electives at the 3000 and 4000 level as the major core courses (except secondary teacher option). The support and the elective coursework must complement the student's option and be approved by the mathematics advisor. No Mathematics or Statistics course in which a grade below C is earned will be counted towards meeting the Mathematics major core requirements.

General Education Core	44 credit hours
1. Communication	9 credit hours
2. Humanities and/or Fine Arts	9 credit hours
3. Social and Behavioral Sciences	6 credit hours
4. History	6 credit hours
5. Natural Sciences	10 credit hours
6. Computer Science	3 credit hours
7. Orientation	1 credit hour

Major in Mathematics Core	32 credit hours (26 for secondary teacher option)
1. MATH 1910 Calculus I	4 credit hours
2. MATH 1920 Calculus II	4 credit hours
3. MATH 2110 Calculus III	4 credit hours
4. MATH 3120 Ordinary Differential Equations	3 credit hours
5. MATH 3510 Intermediate Analysis	3 credit hours
6. MATH 3610 Linear Algebra	3 credit hours
7. MATH 3640 Abstract Algebra	3 credit hours
8. Senior Seminar	2 credit hour
9. Electives (MATH and STAT 3000/4000 level)	6 credit hours



### **Bachelor of Science degree in Mathematics – Applied Mathematics Option**

Specialization Core	15 credit hours
1. MATH 2050 Probability and Statistics	3 credit hours
2. MATH 3150 Mathematical Modeling	3 credit hours
3. MATH 3900 Introduction to Numerical Analysis	3 credit hours
4. MATH 4200 Methods in Applied Mathematics	3 credit hours
5. MATH 4570 Introduction to Partial Differential Equations	3 credit hours

Support Courses	Minimum of 8 credit hours
Choose 3 of the following	
• MATH 3130 Introduction to Scientific Computation	3 credit hours
• MATH 3620 Linear Algebra II	3 credit hours
• STAT 4110 Introduction to Probability Theory	3 credit hours
• MATH 4500 Senior Project	2 credit hours

### **Bachelor of Science degree in Mathematics – Statistics Option**

Specialization Core	15 credit hours
1. MATH 2050 Probability and Statistics	3 credit hours
2. STAT 4110 Introduction to Probability Theory	3 credit hours
3. STAT 4120 Introduction to Statistical Theory	3 credit hours
4. STAT 4210 Statistical Methods I	3 credit hours
5. STAT 4220 Statistical Methods II	3 credit hours

Support Courses	Minimum of 8 credit hours
Choose 3 of the following	
• MATH 3130 Introduction to Scientific Computation	3 credit hours
• MATH 3620 Linear Algebra II	3 credit hours
• STAT 3700 Introduction to Statistical Computing and Data Management	3 credit hours
• STAT 4360 Introduction to Data Mining	3 credit hours
• MATH 4500 Senior Project	2 credit hours

All new or redesigned courses are highlighted.