

The Department of Mathematics & Statistics

BS Mathematics Requirements

Student Name: _____

Advisor Name: _____

Students should use this worksheet in consultation with their advisor to develop an appropriate program of courses to meet the requirements for a BA degree in Mathematics.

Required courses for the BS in mathematics are divided into:

- Required mathematics courses 31 Credits
- Core mathematics course electives 12 Credits
- 400 level MAT or STS course electives 9 Credits
- MAT 401 - Capstone in Mathematics 3 Credits

The courses outlined in the student's program below must be completed with a C or better.

Required Courses 31 Credits	Credit Hours	Semester & Year Completed	Grade
MAT 126 Calculus I	4		
MAT 127 Calculus II	4		
MAT 228 Calculus III	4		
MAT 259 Differential Equations	3		
MAT 261 Introduction to Abstract Mathematics	3		
MAT 262 Linear Algebra	3		
MAT 425 Introduction to Real Analysis	3		
MAT 463 Introduction to Abstract Algebra	3		
STS 434 Introduction to Statistics	4		

Capstone 3 Credits	MAT 401 Capstone in Mathematics	3		
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Core Electives: 12 Credits from the following list of courses.

At the department chair's discretion, 500-level alternatives to these electives may be substituted.

Students must choose at least one of MAT 426 and MAT 464, so as to guarantee a year-long experience of one of these two subareas

- **MAT 426** Introduction to Real Analysis II 3 Credits
- **MAT 451** Dynamical Systems 3 Credits
- **MAT 452** Complex Analysis 3 Credits
- **MAT 453** Partial Differential Equations I 3 Credits
- **MAT 464** Introduction to Abstract Algebra II 3 Credits
- **MAT 465** Theory of Numbers 3 Credits
- **MAT 471** Differential Geometry 3 Credits
- **MAT 487** Numerical Analysis 3 Credits

Core Elective Course 12 Credits	Credit Hours	Semester & Year Completed	Grade

Electives: 9 Credits from the list of MAT or STS courses at the 400 level or other approved courses.

Students are restricted to taking at most 6 credits of statistics courses.

- **MAT 445** History of Mathematics 3 Credits
- **MAT 454** Partial Differential Equations II 3 Credits
- **MAT 475** Higher Geometry 3 Credits
- **MAT 481** Discrete Mathematics 3 Credits
- **MAT 486** Biological Modeling & Simulation 3 Credits
- **STS 435** Introduction to Mathematical Statistics 3 Credits
- **STS 436** Nonparametric Statistics 3 Credits
- **STS 437** Statistical Methods for Research 3 Credits

Elective Course 9 Credits	Credit Hours	Semester & Year Completed	Grade