

MATHEMATICS, B.S.

- General Education Course

- Milestone course: a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

Course Requirements

| Code | Title | Credit Hours |
|---|----------------------------------|--------------|
| Core Curriculum | | |
| <i>Core 1: Critical Thinking</i> | | |
| FYS 100 | First Yr Sem Critical Thinking | 3 |
| MTH 229 | Calculus/Analytic Geom I (CT) | 5 |
| | Critical Thinking Course | 3 |
| <i>Core 2</i> | | |
| ENG 101 | Beginning Composition | 3 |
| ENG 201 | Advanced Composition | 3 |
| CMM 103 | Fund Speech-Communication | 3 |
| MTH 229 | Calculus/Analytic Geom I (CT) | 5 |
| | Core II Natural/Physical Science | 4 |
| | Core II Humanities | 3 |
| | Core II Social Science | 3 |
| | Core II Fine Arts | 3 |
| <i>Additional University Requirements</i> | | |
| | Writing Intensive | 3 |
| | Writing Intensive | 3 |
| | Multicultural or International | 3 |
| MTH 490 | Internship in Mathematics | 2 |
| or MTH 491 | Senior Seminar | |
| College-Specific | | |
| | COS Physical/Natural Science | 4 |
| | COS Physical/Natural Science | 3 |
| Major-Specific | | |
| CS 110 | Computer Science I | 3 |
| MTH 229 | Calculus/Analytic Geom I (CT) | 5 |
| MTH 230 | Calculus/Analytic Geom II | 4 |
| MTH 231 | Calculus/Analytic Geom III | 4 |
| MTH 300 | Intro to Higher Math | 4 |
| MTH 331 | Linear Algebra | 4 |
| MTH 335 | Ordinary Diff Equations | 3 |
| MTH 427 | Advanced Calculus I | 3 |
| MTH 428 | Advanced Calculus II | 3 |
| MTH 443 | Numerical Analysis | 3 |
| STA 445 | Probability & Statistics I | 3 |
| MTH 450 | Modern Algebra I | 3 |
| MTH 452 | Modern Algebra II | 3 |

| | | |
|------------|-----------------------------|------|
| MTH 490 | Internship in Mathematics | 2-12 |
| or MTH 491 | Senior Seminar | |
| | 300/400 MTH or STA Elective | 3 |
| | 300/400 MTH or STA Elective | 3 |
| | 300/400 Elective | 3 |
| | Free Elective | 3 |
| | Free Elective | 3 |
| | Free Elective | 3 |
| | Free Elective | 3 |
| | Free Elective | 3 |
| | Free Elective | 3 |
| | Free Elective | 3 |
| | Free Elective | 2 |

Major Information

- Students who double-major in both Mathematics and Statistics may have an opportunity to double-count electives toward the respective majors. Please contact the director of undergraduate studies in the Mathematics department for more details.
- Please check with advisor about course offerings. Not all classes will be offered every semester.
- Forty (40) hours must be earned in courses numbered 300-499.

Four Year Plan

- General Education Course

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Semester Plan

First Year


| First Semester | | Credit Hours |
|---------------------|--------------------------------|--------------|
| FYS 100 | First Yr Sem Critical Thinking | 3 |
| ENG 101 | Beginning Composition | 3 |
| MTH 229 | Calculus/Analytic Geom I (CT) | 5 |
| | Core II Fine Arts | 3 |
| | UNI 100 | 1 |
| Credit Hours | | 15 |

Second Semester

| | | |
|---------------------|---------------------------|-----------|
| CS 110 | Computer Science I | 3 |
| MTH 230 | Calculus/Analytic Geom II | 4 |
| | Core I Critical Thinking | 3 |
| CMM 103 | Fund Speech-Communication | 3 |
| | Core II Social Science | 3 |
| Credit Hours | | 16 |

Second Year

| First Semester | | Credit Hours |
|----------------|----------------------------|--------------|
| MTH 231 | Calculus/Analytic Geom III | 4 |

| | | |
|----------------------------------|--|---|
| MTH 300 | Intro to Higher Math | 4 |
| ENG 201 |  Advanced Composition | 3 |
| Core II Physical/Natural Science | | 4 |

Credit Hours **15**

Second Semester

| | | |
|------------------------------|-------------------------|---|
| MTH 331 | Linear Algebra | 4 |
| MTH 335 | Ordinary Diff Equations | 3 |
| COS Physical/Natural Science | | 4 |
| Free Elective | | 3 |
| Free Elective | | 1 |

Credit Hours **15**

Third Year**First Semester**

| | | |
|--------------------------------|----------------------------|---|
| MTH 427 | Advanced Calculus I | 3 |
| STA 445 | Probability & Statistics I | 3 |
| Multicultural or International | | 3 |
| COS Physical/Natural Science | | 3 |
| Free Elective | | 3 |

Credit Hours **15**

Second Semester

| | | |
|-----------------------------|----------------------|---|
| MTH 428 | Advanced Calculus II | 3 |
| Writing Intensive | | 3 |
| Core II Humanities | | 3 |
| 300/400 MTH or STA Elective | | 3 |
| Free Elective | | 3 |



Credit Hours **15**

Fourth Year**First Semester**

| | | |
|------------------------|--------------------|---|
| MTH 443 | Numerical Analysis | 3 |
| MTH 450 | Modern Algebra I | 3 |
| Writing Intensive | | 3 |
| 300/400 Level Elective | | 3 |
| Free Elective | | 3 |

Credit Hours **15**

Second Semester

| | | |
|---|---|---|
| MTH 452 | Modern Algebra II | 3 |
| MTH 490 |  Internship in Mathematics | 2 |
| or MTH 491 | or Senior Seminar | |
|  | | |
| 300/400 MTH or STA Elective | | 3 |
| Free Elective | | 3 |
| Free Elective | | 3 |

Credit Hours **14**

Total Credit Hours **120**