

# MATHEMATICS

## REQUIREMENTS

**CORE CURRICULUM** 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 [marshall.edu/gened](http://marshall.edu/gened).

### CORE 1: CRITICAL THINKING

CODE	COURSE NAME	HRS	GRADE
FYS 100	First Year Seminar	● 3	_____
● MTH 229	Critical Thinking Course	● 5	_____
_____	Critical Thinking Course	● 3	_____
<b>Additional University Requirements</b>			
_____	Writing Intensive	3	_____
_____	Writing Intensive	3	_____
_____	Multicultural or International	3	_____
MTH 490 or 491	Capstone	2	_____

### CORE 2:

CODE	COURSE NAME	HRS	GRADE
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	_____

## COLLEGE-SPECIFIC

All Mathematics majors are required to take 7 additional hours in Physical or Natural Sciences beyond the Core II requirement. These hours must be from two different areas:

CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
_____	COS Physical/Natural Science	■ 4	_____	_____	COS Physical/Natural Science	■ 3	_____

## MAJOR-SPECIFIC

Students who wish to major in Mathematics must take the following courses:

CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
CS 110	Computer Science I	♦ 3	_____	MTH 490 or 491	Internship or Sr. Seminar	♦ 2	_____
● MTH 229	Calculus/Analytic Geom I (CT)	♦ 5	_____	STA 445	Probability & Statistics I	♦ 3	_____
● MTH 230	Calculus/Analytic Geom II	♦ 4	_____	_____	300/400 MTH or STA Elective	♦ 3	_____
● MTH 231	Calculus/Analytic Geom III	♦ 4	_____	_____	300/400 MTH or STA Elective	♦ 3	_____
● MTH 300	Intro to Higher Math	♦ 4	_____	_____	300/400 Elective	3	_____
MTH 331	Linear Algebra	♦ 4	_____	_____	Free Elective	3	_____
MTH 335	Ordinary Diff Equations	♦ 3	_____	_____	Free Elective	3	_____
MTH 427	Advanced Calculus I	♦ 3	_____	_____	Free Elective	3	_____
MTH 428	Advanced Calculus II	♦ 3	_____	_____	Free Elective	3	_____
MTH 443	Numerical Analysis	♦ 3	_____	_____	Free Elective	3	_____
MTH 450	Modern Algebra I	♦ 3	_____	_____	Free Elective	3	_____
MTH 452	Modern Algebra II	♦ 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.

● Area of Emphasis

♦ Major Requirement

■ College Requirement

● General Education Requirement

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

# MATHEMATICS

The Marshall University Department of Mathematics prepare students for careers in the mathematical sciences and related disciplines. Graduates of our mathematics programs have had successful careers in government and industry. Our graduates have also earned advanced degrees in mathematics, statistics, engineering, and economics. Our degree programs may also be used to prepare for secondary mathematics certification and for professions such as law or medicine. The department has a dynamic and engaged faculty who focus both on excellent teaching and on many areas of mathematical research.

FALL SEMESTER					SPRING SEMESTER					
CODE	COURSE NAME	HRS	GRADE		CODE	COURSE NAME	HRS	GRADE		
FYS 100	First Year Sem Crit Thinking	3			MTH 230	Calculus/Analytic Geom II	4			
ENG 101	Beginning Composition	3				Core I Critical Thinking	3			
MTH 229	Calculus/Analytic Geom I (CT)	5			CMM 103	Fund Speech-Communication	3			
	Core II Fine Arts	3				Core II Social Science	3			
UNI 100	Freshman First Class	1			CS 110	Computer Science I	3			
<b>TOTAL HOURS</b>				<b>15</b>	<b>TOTAL HOURS</b>				<b>16</b>	
Summer Term (optional):										
FALL SEMESTER					SPRING SEMESTER					
CODE	COURSE NAME	HRS	GRADE		CODE	COURSE NAME	HRS	GRADE		
MTH 300	Intro to Higher Math	4			MTH 331	Linear Algebra	4			
MTH 231	Calculus/Analytic Geom III	4			MTH 335	Ordinary Diff Equations	3			
ENG 201	Advanced Composition	3				COS Physical/Natural Science	4			
	Core II Physical/Natural Science	4				Free Elective	3			
						Free Elective	1			
<b>TOTAL HOURS</b>				<b>15</b>	<b>TOTAL HOURS</b>				<b>15</b>	
Summer Term (optional):										
FALL SEMESTER					SPRING SEMESTER					
CODE	COURSE NAME	HRS	GRADE		CODE	COURSE NAME	HRS	GRADE		
MTH 427	Advanced Calculus I	3			MTH 428	Advanced Calculus II	3			
STA 445	Probability & Statistics I	3				Writing Intensive	3			
	Multicultural or International	3				Core II Humanities	3			
	COS Physical/Natural Science	3				300/400 MTH or STA Elective	3			
	Free Elective	3				Free Elective	3			
<b>TOTAL HOURS</b>				<b>15</b>	<b>TOTAL HOURS</b>				<b>16</b>	
Summer Term (optional):										
FALL SEMESTER					SPRING SEMESTER					
CODE	COURSE NAME	HRS	GRADE		CODE	COURSE NAME	HRS	GRADE		
MTH 443	Numerical Analysis	3			MTH 490	Internship or Sr. Seminar	2			
MTH 450	Modern Algebra I	3			or 491					
	Writing Intensive	3			MTH 452	Modern Algebra II	3			
	300/400 Elective	3				300/400 MTH or STA Elective	3			
	Free Elective	3				Free Elective	3			
						Free Elective	3			
<b>TOTAL HOURS</b>				<b>15</b>	<b>TOTAL HOURS</b>				<b>14</b>	
Summer Term (optional):										

General Education Requirement  
 College Requirement  
 Major Requirement  
 Area of Emphasis

YEAR ONE

YEAR TWO

YEAR THREE

YEAR FOUR

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