

# STATISTICS

## 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 490/491	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 electives 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 Statistics must take the following courses:

CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
MTH 229	Calculus/Analytic Geom I (CT)	5	_____	STA 420	Nonparametric Statistics	3	_____
MTH 230	Calculus/Analytic Geom II	4	_____	STA 435	Statistical Data Mining	3	_____
CS 110	Computer Science I	3	_____	_____	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 Level Elective	3	_____
MTH 331	Linear Algebra	4	_____	_____	Free Elective	4	_____
MTH 490 or 491	Internship or Sr. Seminar	2	_____	_____	Free Elective	3	_____
STA 445	Probability & Statistics I	3	_____	_____	Free Elective	3	_____
STA 446	Probability & Statistics II	3	_____	_____	Free Elective	3	_____
STA 412	Regress Analysis	3	_____	_____	Free Elective	3	_____
STA 413	Experiment Design	3	_____	_____	Free Elective	3	_____
MTH 427	Advanced Calculus I	3	_____				

## 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.

# STATISTICS

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			CS 110	Computer Science I	3			
UNI 100	Freshman First Class	1				Core II Social Science	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				300/400 Level Elective	3			
ENG 201	Advanced Composition	3				Physical/Natural Science Elective	4			
	Core II Physical/Natural Science	4				Free Elective	4			
<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				Humanities Elective	3			
STA 445	Probability & Statistics I	3				Writing Intensive	3			
	Physical/Natural Science Elective	3			STA 446	Probability & Statistics II	3			
	Multicultural or International Elective	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>15</b>	
Summer Term (optional):										
FALL SEMESTER					SPRING SEMESTER					
CODE	COURSE NAME	HRS	GRADE		CODE	COURSE NAME	HRS	GRADE		
STA 412	Regress Analysis	3			STA 413	Experiment Design	3			
STA 435	Statistical Data Mining	3			MTH 490	Internship or Sr. Seminar	2			
	300/400 MTH or STA Elective	3			or 491					
	Writing Intensive	3			STA 420	Nonparametric Statistics	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):										

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.