

# CHEMISTRY (ACS CERTIFIED)

## 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	_____

#### Additional University Requirements

CHM 357	Writing Intensive	4	_____
CHM 358	Writing Intensive	4	_____
_____	Multicultural or International	3	_____
CHM 491	Capstone	6	_____

#### 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	_____
CHM 211 & 217	Principles of Chemistry I & Lab	● ♦ 5	_____
_____	Core II Humanities	● 3	_____
_____	Core II Social Science	● 3	_____
_____	Core II Fine Arts	● 3	_____

### MAJOR-SPECIFIC

All Chemistry (ACS Certified) majors are required to take the following courses:

CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
CHM 211	Principles of Chemistry I	♦ 3	_____	PHY 202	General Physics I Laboratory	♦ 1	_____
CHM 217	Principles of Chemistry I Lab	♦ 2	_____	PHY 204	General Physics II Laboratory	♦ 1	_____
CHM 212	Principles of Chemistry II	♦ 3	_____	CHM 331	Chemistry Seminar	♦ 0	_____
CHM 218	Principles of Chemistry II Lab	♦ 2	_____	CHM 332	Chemistry Seminar	♦ 0	_____
CHM 355	Organic Chemistry I	♦ 3	_____	CHM 431	Chemistry Seminar	♦ 0	_____
CHM 356	Organic Chemistry II	♦ 3	_____	CHM 432	Chemistry Seminar	♦ 0	_____
CHM 361	Organic Chemistry II Lab	♦ 3	_____	MTH 229	Calculus/Analytic Geom I (CT)	● ♦ 5	_____
CHM 305	Research Methods Chemistry	♦ 1	_____	MTH 230	Calculus/Analytic Geom II	♦ 4	_____
CHM 357	Physical Chemistry: Quantum (WI)	♦ 4	_____	MTH 231	Calculus/Analytic Geom III	♦ 4	_____
CHM 358	Physical Chemistry: Thermo (WI)	♦ 4	_____	_____	Free Elective	3	_____
CHM 365	Biochemistry	♦ 3	_____	_____	Free Elective	3	_____
CHM 411	Instrumental Methods	♦ 4	_____	_____	Free Elective	3	_____
CHM 448	Adv. Inorganic	♦ 4	_____	_____	Free Elective	3	_____
CHM 491	Capstone	● ♦ 6	_____	_____	Free Elective	3	_____
PHY 211	University Physics I	♦ 4	_____	_____	Free Elective	3	_____
PHY 213	University Physics II	♦ 4	_____	_____	Free Elective	3	_____
				_____	Free Elective	3	_____

### MAJOR INFORMATION

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- In addition to the Core General Education requirements, the College of Science requires 3 hours of Calculus, and 40 hours of upper level credit.
- Coursework listed as "elective" may vary for each student. Students are encouraged to use elective hours toward a minor or toward prerequisites.
- Students are strongly encouraged to select courses that meet two or more Core or College requirements. For example, a writing intensive literature course could satisfy the Core II Humanities requirement as well as the University writing intensive requirement.
- Course offerings and course attributes are subject to change semesters. Please consult each semesters schedule of courses for availability and attributes.
- Math is based on an ACT Mathematics score of 27 or higher. Students with an ACT Mathematics score less than 27 will be placed in the appropriate mathematics and science courses.
- Students interested in careers in technical sales, management, and marketing in the chemical industry are encouraged to take the following courses as electives: Economics 250, 253, Marketing 340, 440 or 442; Management 320.
- A Grade Point Average of 2.0 is required 1) overall, 2) at MU, 3) in all required Chemistry courses, 4) in all Chemistry courses, and 5) in all required Chemistry courses taken at MU.
- Double majors within the Department of Chemistry may include any majors other than the B.S., Major in Chemical Sciences.

● 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 the importance of this course in your plan of study.

# CHEMISTRY (ACS CERTIFIED)

This curriculum meets the standards of the American Chemical Society and is recommended for students intending to enter the chemical profession or intending to pursue graduate work in chemistry. Students who successfully complete the requirements for the B.S. in Chemistry degree will receive a certificate from the American Chemical Society indicating that their degree meets the standards of the Committee on Professional Training.

FALL SEMESTER					SPRING SEMESTER					
CODE	COURSE NAME	HRS	GRADE		CODE	COURSE NAME	HRS	GRADE		
 CHM 211	Principles of Chemistry I	3		_____	 ENG 201	Advanced Composition	3	_____		
 CHM 217	Principles of Chemistry I Lab	2		_____	 CHM 212	Principles of Chemistry II	3		_____	
MTH 229	Calculus/Analytic Geom I (CT)	5		_____	CHM 218	Principles of Chemistry II Lab	2		_____	
 ENG 101	Beginning Composition	3		_____	_____	Core I Critical Thinking	3		_____	
FYS 100	First Year Sem Crit Thinking	3		_____	 MTH 230	Calculus/Analytic Geom II	4		_____	
UNI 100	Freshman First Class	1		_____					_____	
<b>TOTAL HOURS</b>				<b>17</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		
 CHM 355	Organic Chemistry I	3		_____	CHM 356	Organic Chemistry II	3		_____	
 PHY 211	University Physics I	4		_____	CHM 361	Organic Chemistry Lab	3		_____	
PHY 202	General Physics I Laboratory	1		_____	 PHY 213	University Physics II	4		_____	
_____	Core II Social Science	3		_____	PHY 204	General Physics II Laboratory	1		_____	
 MTH 231	Calculus/Analytic Geom III	4		_____	CMM 103	Fund Speech-Communication	3		_____	
				_____	_____	Free Elective	3		_____	
<b>TOTAL HOURS</b>				<b>15</b>	<b>TOTAL HOURS</b>				<b>17</b>	
Summer Term (optional):										
FALL SEMESTER					SPRING SEMESTER					
CODE	COURSE NAME	HRS	GRADE		CODE	COURSE NAME	HRS	GRADE		
CHM 357	Physical Chemistry: Quantum (WI)	4		_____	CHM 358	Physical Chemistry: Thermo (WI)	4		_____	
CHM 305	Research Methods Chemistry	1		_____	CHM 332	Chemistry Seminar	0		_____	
_____	Core II Fine Arts	3		_____	CHM 491	Capstone Experience	2		_____	
 CHM 365	Biochemistry	3		_____	_____	Core II Humanities	3		_____	
CHM 331	Chemistry Seminar	0		_____	_____	Multicultural or International	3		_____	
_____	Free Elective	3		_____	_____	Free Elective	3		_____	
<b>TOTAL HOURS</b>				<b>14</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		
CHM 431	Chemistry Seminar	0		_____	CHM 432	Chemistry Seminar	0		_____	
CHM 491	Capstone Experience	4		_____	CHM 411	Instrumental Methods	4		_____	
 CHM 448	Adv. Inorganic	4		_____	_____	Free Elective	3		_____	
_____	Free Elective	3		_____	_____	Free Elective	3		_____	
_____	Free Elective	3		_____	_____	Free Elective	3		_____	
<b>TOTAL HOURS</b>				<b>14</b>	<b>TOTAL HOURS</b>				<b>13</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 the importance of this course in your plan of study.