





















CHEMISTRY, B.S. ACS CERTIFIED













Course Requirements

 - 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/>.

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
CHM 211  	Principles of Chemistry I and Principles of Chem Lab I	5
 & CHM 217 		
	Core II Humanities	3
	Core II Social Science	3
	Core II Fine Arts	3
<i>Additional University Requirements</i>		
	Writing Intensive (CHM 357)	3
	Writing Intensive (CHM 358)	3
	Multicultural or International	3
CHM 491 	Capstone Experience	2-4
Major-Specific		
CHM 211 	Principles of Chemistry I	3
 CHM 217 	Principles of Chem Lab I	2
 CHM 212 	Principles Chemistry II	3
CHM 218 	Principles of Chem Lab II	2
CHM 355 	Organic Chemistry I	3
CHM 356	Organic Chemistry II	3
CHM 361	Intro Organic Chm Lab	3
CHM 305	Research Methods Chem	1
CHM 357	Physical Chemistry: Quantum (WI)	4
CHM 358	Physical Chemistry: Thermo. (WI)	4
CHM 365 	Introductory Biochemistry	3
CHM 411	Modern Instrument Methods	4

CHM 448 	Adv Inorganic Chemistry I	4
Six total hours of CHM 491 must be completed		
CHM 491 	Capstone Experience	
PHY 211  	University Physics I	4
PHY 202 	General Physics I Laboratory	1
PHY 213  	University Physics II	4
PHY 204 	General Physics 2 Laboratory	1
CHM 331	Chemistry Seminar	0
CHM 332	Chemistry Seminar	0
CHM 431	Chemistry Seminar	0
CHM 432	Chemistry Seminar	0
MTH 230  	Calculus/Analytic Geom II	4
MTH 231  	Calculus/Analytic Geom III	4

Electives

Free Elective	3
Free Elective	3
Free Elective	3
Free Elective	3
Free Elective	3
Free Elective	3
Free Elective	3
Free Elective	3

Students interested in careers in technical sales, management, and marketing in the chemical industry are encouraged to take the following courses as electives:


ECN 250	Principles Microeconomics
ECN 253	Principles Macroeconomics
MKT 340	MKT Concepts and Applications
MKT 440	Sales Management
MKT 442	Market Research
MGT 320	Principles of Management

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.
- A Grade Point Average of 2.0 is required

- overall,
- at MU,
- in all required Chemistry courses,
- in all Chemistry courses, and
- in all required Chemistry courses taken at MU.








 - 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.








Semester Plan

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.

First Year







First Semester	Credit Hours
CHM 211  Principles of Chemistry I 	3
CHM 217  Principles of Chem Lab I 	2
MTH 229  Calculus/Analytic Geom I (CT)	5
ENG 101   Beginning Composition	3
FYS 100 First Yr Sem Critical Thinking	3
UNI 100 Freshman First Class	1
Credit Hours	17

Second Semester





ENG 201   Advanced Composition	3
CHM 212  Principles Chemistry II 	3
CHM 218  Principles of Chem Lab II	2
Core I Critical Thinking	3
MTH 230   Calculus/Analytic Geom II	4
Credit Hours	15

Second Year

First Semester

CHM 355  Organic Chemistry I	3
PHY 211   University Physics I	4
PHY 202  General Physics I Laboratory	1
Core II Social Science	3
MTH 231   Calculus/Analytic Geom III	4
Credit Hours	15


Second Semester

CHM 356 Organic Chemistry II	3
CHM 361 Intro Organic Chm Lab	3
PHY 213   University Physics II	4
PHY 204  General Physics 2 Laboratory	1
CMM 103  Fund Speech-Communication	3

Free Elective	3
Credit Hours	17


Third Year

First Semester

CHM 357 Physical Chemistry: Quantum (WI)	4
CHM 305 Research Methods Chem	1
Core II Fine Arts	3
CHM 365  Introductory Biochemistry	3
CHM 331 Chemistry Seminar	0
Free Elective	3

Credit Hours 14



Second Semester

CHM 358 Physical Chemistry: Thermo. (WI)	4
CHM 332 Chemistry Seminar	0
CHM 491  Capstone Experience (C)	2
Core II Humanities	3
Multicultural or International	3
Free Elective	3

Credit Hours 15

Fourth Year

First Semester

CHM 431 Chemistry Seminar	0
CHM 491  Capstone Experience	4
CHM 448  Adv Inorganic Chemistry I	4
Free Elective	3
Free Elective	3

Credit Hours 14

Second Semester

CHM 432 Chemistry Seminar	0
CHM 411 Modern Instrument Methods	4
Free Elective	3
Free Elective	3
Free Elective	3

Credit Hours 13

Total Credit Hours 120