

FORENSIC CHEMISTRY

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.

CORE 1: CRITICAL THINKING

CODE	COURSE NAME	HRS	GRADE
FYS 100	First Year Sem Crit Thinking	3	
MTH 229	Critical Thinking Course	3	
	Critical Thinking Course	3	
Additional University Requirements			
CHM 357/358	Writing Intensive	3	
	Writing Intensive	3	
	Multicultural or International	3	
CHM 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	
BSC 120	Principles of Biology I	4	
	Core II Humanities	3	
CJ 200 or 211	Core II Social Science	3	
	Core II Fine Arts	3	

MAJOR-SPECIFIC

All Forensic Chemistry 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 201	College Physics I	3	
CHM 217	Principles of Chemistry I Lab	2		PHY 202	College Physics I Lab	1	
CHM 212	Principles of Chemistry II	3		PHY 203	College Physics II	3	
CHM 218	Principles of Chemistry II Lab	2		PHY 204	College Physics II Lab	1	
CHM 355	Organic Chemistry I	3			Statistics Elective	3	
CHM 356	Organic Chemistry II	3		BSC 121	Principles of Biology II	4	
CHM 361	Organic Chemistry II Lab	3		BSC 322	Cell Biology	4	
CHM 305	Research Methods Chemistry	1		BSC 324	Genetics	4	
CHM 345	Intro Analytical Chemistry	4		CIT 163	Intro to Programming C++	3	
CHM 357	Physical Chemistry: Quantum or 358	4			Restricted Elective	3	
CHM 365	Biochemistry	4			Restricted Elective	3	
CHM 411	Instrumental Methods	4		CJ 314	Crime Scene Investigation	3	
CHM 491	Capstone (C)	2		CJ 323 or 422	Criminal Law or Law of Evidence	3	
CHM 432	Seminar	0			Free Elective	3	
	300/400 CHM 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 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.
- Statistics Elective: Choose from MTH 225 or MTH 345
- Restricted Elective: Choose two courses from BSC 450, CHM 428 or 467. Selection of one of the BSC courses provides a Biological Sciences minor. Chemistry courses may not be counted both as a chemistry elective and in this category.
- Students are strongly encouraged to engage in a Forensic Chemistry related Capstone Experience (CHM 491).
- 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.

FORENSIC CHEMISTRY

This major is intended for students who wish to pursue a career in fields involving forensics. Degrees offered by the Department of Chemistry provide a program of studies that allows the individual to: obtain high quality instruction in chemistry as a scientific discipline, obtain a sound background in preparation for advanced studies, meet the qualifications of professional chemists and accrediting agencies, or prepare for a professional career in medicine, dentistry, pharmacy, medical technology, engineering, nursing and other fields.

YEAR ONE	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	
	BSC 120	Principles of Biology I	4		CHM 218	Principles of Chemistry II Lab	2	
	ENG 101	Beginning Composition	3		BSC 121	Principles of Biology II	4	
	FYS 100	First Year Sem Crit Thinking	3			Statistics Elective	3	
	UNI 100	Freshman First Class	1					
	TOTAL HOURS		16		TOTAL HOURS		15	
	Summer Term (optional):							

YEAR TWO	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	
	MTH 229	Calculus/Analytic Geom I (CT)	5		CHM 361	Organic Chemistry Lab	3	
	PHY 201	College Physics I	3		PHY 203	College Physics II	3	
	PHY 202	College Physics I Lab	1		PHY 204	College Physics II Lab	1	
		Core II Social Science (CJ 200 or 211)	3		CMM 103	Fund Speech-Communication	3	
	BSC 121	Principles of Biology II	4					
	TOTAL HOURS		19		TOTAL HOURS		13	
	Summer Term (optional):							

YEAR THREE	FALL SEMESTER				SPRING SEMESTER			
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
	CHM 365	Biochemistry	4		CHM 358	Physical Chemistry I or (CHM 357 in Fall) (WI)	4	
	CHM 305	Research Methods Chemistry	1			Core II Humanities	3	
		Core II Fine Arts	3			Core I Critical Thinking	3	
	CIT 163	Intro to Programming C++	3		BSC 322	Cell Biology	4	
	CJ 314	Crime Scene Investigation	3		CJ 323 or 422	Criminal Law or Law of Evidence	3	
	TOTAL HOURS		14		TOTAL HOURS		17	
	Summer Term (optional):							

YEAR FOUR	FALL SEMESTER				SPRING SEMESTER			
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
	CHM 345	Intro Analytical Chemistry	4		CHM 432	Chemistry Seminar	0	
	CHM 491	Capstone Experience	2			Free Elective	3	
	BSC 324	Genetics	4			300/400 CHM Elective	3	
		Writing Intensive	3			Restricted Elective	4	
		Restricted Elective	3		CHM 411	Instrumental Methods	4	
						Multicultural or International	3	
	TOTAL HOURS		16		TOTAL HOURS		17	
	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.

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INVOLVEMENT OPPORTUNITIES

- Student Government Association
- Campus Activity Board
- JMELI
- Commuter Student Advisory Board
- Club Sports
- Religious Organizations
- Political Organizations
- Residence Hall Association
- Cultural Organizations
- National Society of Leadership and Success
- Greek Life

RELATED MAJORS

- Biomechanics
- Athletic Training
- Education
- Geology
- Geography
- Environmental Science

GRADUATION REQUIREMENTS


- Have a minimum of 120 credit hours (some colleges or majors require more);
- Have an overall and Marshall Grade Point Average of 2.00 or higher;
- Have an overall Grade Point Average of 2.00 or higher in the major area of study;
- Have earned a grade of C or better in English 201 or 201 H;
- Have met all major(s) and college requirements;
- Have met the requirements of the Core Curriculum;
- Have met the residence requirements of Marshall University, including 12 hours of 300/400 level coursework in the student's college (see section entitled "Residence Requirements" in the undergraduate catalogue);
- Be enrolled at Marshall at least one semester of the senior year;
- Have transferred no more than 72 credit hours from an accredited West Virginia two-year institution of higher education.

Colleges and specific programs may have unique requirements that are more stringent than those noted above. Students are responsible for staying informed about and ensuring that they meet the requirements for graduation.


This academic map is to be used as a guide in planning your coursework toward a degree. Due to the complexities of degree programs, it is unfortunate but inevitable that an error may occur in the creation of this document. The official source of degree requirements at Marshall University is DegreeWorks available in your myMU portal. Always consult regularly with your advisor.

FORENSIC CHEMISTRY – 2019-2020


YEAR ONE




Develop relationships with professors who can serve as future references by attending their office hours.





Stay on the Herd Path and come to class! Class attendance is more important to your success than your high school GPA, your class standing, or your ACT/SAT scores.




Discuss undergraduate research opportunities with faculty in Chemistry right now.




In order to graduate on time, you need to take an average of 15 credits per semester. Are you on track? Take 15 to Finish!



Take a pulse check. Know what you need to do every year to keep your grants, scholarships, or federal financial aid.




Join the Alpha Chi Sigma chemistry professional fraternity.




Apply for a nationally competitive scholarship like Goldwater, Fullbright, Rhodes, or Gates Cambridge. Contact the Office of National Scholarships at Marshall.


YEAR TWO




Did you do really well in a hard course? Become a Tutor or a Supplemental Instructor.





Discuss undergraduate research opportunities with faculty in Chemistry right now.




Present your research at a national or regional American Chemical Society meeting.




Develop relationships with professors who can serve as future references by attending their office hours.



Want to continue your education and increase your opportunities? Talk to a faculty member about whether graduate school fits your career goals.




Apply in the spring semester for Chemistry Department scholarships and summer fellowships.




Apply for a nationally competitive scholarship like Goldwater, Fullbright, Rhodes, or Gates Cambridge. Contact the Office of National Scholarships at Marshall.


YEAR THREE




Apply for a nationally competitive scholarship like Goldwater, Fullbright, Rhodes, or Gates Cambridge. Contact the Office of National Scholarships at Marshall.





Develop relationships with professors who can serve as future references by attending their office hours.




Present your research at a national or regional American Chemical Society meeting.




Apply in the spring semester for Chemistry Department scholarships and summer fellowships.



Want to continue your education and increase your opportunities? Talk to a faculty member about whether graduate school fits your career goals.




Did you do really well in a hard course? Become a Tutor or a Supplemental Instructor.




Discuss undergraduate research opportunities with faculty in Chemistry right now.


YEAR FOUR




This is it! Are you on track to graduate? Meet with your advisor for your Senior Eval to see what requirements you have left.





Present your research at a national or regional American Chemical Society meeting.




Complete admissions exams (GRE, MCAT, PCAT) the summer before your senior year.




Did you do really well in a hard course? Become a Tutor or a Supplemental Instructor.



Be at the top of your professional game! Prepare a final resume and practice your interview skills with a career coach in Career Education.



Want to continue your education and increase your opportunities? Talk to a faculty member about whether graduate school fits your career goals.



Present your research at the College of Science Research Day.

TRANSFERABLE SKILLS ASSOCIATED WITH THIS MAJOR

- Scientific Ability
- Oral and Written Communication Skills
- Ability to Work as Part of a Team
- Technological Literacy
- Adaptability

ASSOCIATED CAREERS

- Product Development
- Process Development
- Analysis
- Quality Assurance/Control
- Environmental Analysis
- Chemical Engineer
- Pharmacist
- Pharmaceutical Sales
- Marketing



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