

**GEORGE MASON UNIVERSITY  
COLLEGE OF SCIENCE  
B.S. DEGREE IN CHEMISTRY  
WITH CONCENTRATION IN ENVIRONMENTAL CHEMISTRY  
(303 Planetary Hall, 703-993-1071)  
<https://cos.gmu.edu/chemistry/undergraduate-programs/>  
2018 - 2019 CATALOG**

	<u>Department(s) &amp; Course #(s)</u>	<u>Completed/ Grade(s)</u>	<u>Needed</u>
<b><u>MASON CORE REQUIREMENTS (*30)</u></b>			
a. Written Communication: ENGH 101 (100), ENGH 302 (C or better) (3,3)		_____	_____
b. Oral Communication: COMM 100 or 101 (please circle choice) (3)		_____	_____
c. Quantitative Reasoning (satisfied by completion of major requirements)			
d. Literature (3)			
e. Arts (3)	_____	_____	_____
f. Western Civilization (3)	_____	_____	_____
g. Social & Behavioral Science (3)	_____	_____	_____
h. Natural Science (satisfied by completion of major requirements)			
i. Global Understanding (3)	_____	_____	_____
j. Information Technology (3)	_____	_____	_____
k. Synthesis (3)	_____	_____	_____

Go to: <http://catalog.gmu.edu/mason-core/> to link to information on Mason Core requirements.

**MAJOR REQUIREMENTS (71 credit hours required)**

**Chemistry Courses (52 credits)**

a. CHEM 211/213, CHEM 212/214 (4, 4)	a.	_____	_____
b. CHEM 313, CHEM 314 (3,3)	b.	_____	_____
c. CHEM 315, CHEM 318 (2,2)	c.	_____	_____
d. CHEM 321 (4)	d.	_____	_____
e. CHEM 331 (3)	e.	_____	_____
f. CHEM 332 (3)	f.	_____	_____
g. CHEM 336 (writing intensive course) (2)	g.	_____	_____
h. CHEM 337 (2)	h.	_____	_____
i. CHEM 422 (3)	i.	_____	_____
j. CHEM 423 (2)	j.	_____	_____
k. CHEM 427 (3)	k.	_____	_____
l. CHEM 438 (2)	l.	_____	_____
m. CHEM 441 or 466 (3)	m.	_____	_____
n. <b>Select 3 credits of chemistry electives</b> (any lecture or research course) (3) CHEM _____	n.	_____	_____

**Mathematics & Physics Courses (19 credits)**

o. MATH 113 (4)	o.	_____	_____
p. MATH 114 (4)	p.	_____	_____
q. MATH 213 or STAT 250(3)	q.	_____	_____
r. PHYS 243, 244; PHYS 245, 246 (3,1,3,1) OR PHYS 160/161; PHYS 260/261 (4, 4)	r.	_____	_____

**Science Core Courses and Supporting Science Electives (17 -19 credits)**

1. GEOL 101 (4)	1.	_____	_____
2. GEOL 306 (3)	2.	_____	_____
3. EVPP 210 or BIOL 213 (4)	3.	_____	_____
4. <b>Select two from the following:</b> CHEM 458 or BIOL 309 or EVPP 309 or GEOL 309, EVPP 301, EVPP 445, GEOL 305, GEOL 313, BIOL 305/306 or EVPP 305/306, GGS 302			

**Students majoring in chemistry must complete the chemistry program requirements with a minimum GPA of 2.30 and present no more than two courses with a grade of D (1.00) in CHEM coursework at graduation.**

**GENERAL ELECTIVES:** Maximum 2 credits of PHED, PRLS, and RECR coursework toward a COS degree.

Only MLSC 400 and MLSC 402 may be used for credit towards a COS degree. (List courses)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**MINIMUM 120 HOURS (including Minimum 45 UPPER DIVISION HOURS) to GRADUATE**

This planning form is intended to be used in consultation with your academic advisor and reflects the requirements for the 2018 – 2019 Catalog; the University Catalog is the official reference for program requirements.

## B.S. Chemistry

2018 - 2019

FALL YEAR 1		CREDITS	SPRING YEAR 1		CREDITS	NOTES
CHEM 211	3		CHEM 212	3		
CHEM 213	1		CHEM 214	1		
MATH 113	4		MATH 114	4		
HIST Req.	3		BIOL 213 OR	4		
ENGH 101	3		EVPP 210	4		
UNIV 100	1		COMM Req.	3		
Total:	15 credits		Total:	15 credits		
FALL YEAR 2		CREDITS	SPRING YEAR 2		CREDITS	NOTES
CHEM 313	3		CHEM 314	3		
CHEM 315	2		CHEM 318	2		
PHYS 160	3		CHEM 321	4		
PHYS 161	1		PHYS 260	3		
MATH 213	3		PHYS 261	1		
IT Req.	3		LIT Req.	3		
Total:	15		Total:	16 credits		
FALL YEAR 3		CREDITS	SPRING YEAR 3		CREDITS	NOTES
CHEM 331	3		CHEM 322	3		
CHEM 336	2		CHEM 337	2		
CHEM 438	3		CHEM 427	3		
GEOG 101	4		GEOG 306	3		
ENGH 302	3		Fine Art Req.	3		
Total:	15 credits		Total:	14 credits		
FALL YEAR 4		CREDITS	SPRING YEAR 4		CREDITS	NOTES
CHEM 441 OR 446	3		CHEM Elective	3		*G.U. = Global
CHEM 422	3		CHEM 423	2		Understanding
G.U. Req.	3		Synthesis Req.	3		*S.B.S. = Social
S.B.S. Req.	3		Science Elective	3-4		and Behavioral
Science Elective	3-4		Electives	3-5		Science
Total:	15 or 16 credits		Total:	14 to 17 credits		

\*Students must earn 120 credits for graduation; 45 credits must be upper-level (courses 300+).

\*Mason Core courses and Electives can generally be taken during any semester. The major degree requirements are shown in the order in which they should be taken so that pre- and co-requisites are satisfied. Students may choose any combination of courses from the environmental Science Electives category. However, some combinations may provide a particular focus in the concentration. For example:

Ecotoxicology and/or Biochemical Toxicology: EVPP 210 or BIOL 213, EVPP 445, CHEM 463

Hydrogeochemistry: EVPP 309 or CHEM 458, GEOL 305, GEOL 313

Chemical Ecology: EVPP 301, EVPP 305/306, GGS 302