

**GEORGE MASON UNIVERSITY**  
**COLLEGE OF SCIENCE**  
**B.S. DEGREE IN CHEMISTRY - Concentration in Chemistry Education**  
**(303 Planetary Hall, 703-993-1071)**  
<https://cos.gmu.edu/chemistry/undergraduate-programs/>  
**2017-2018 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 (86 hours required)**

Chemistry Courses (38 credits)			
a. CHEM 211/213, CHEM 212/214 (3/1,3/1)		a. _____	_____
b. CHEM 313, CHEM 314 (3,3)		b. _____	_____
c. CHEM 315 (2)		c. _____	_____
d. CHEM 321 (4)		d. _____	_____
e. CHEM 331 (3)		e. _____	_____
f. CHEM 446 (3)		f. _____	_____
e. CHEM 463 (4)		g. _____	_____
f. CHEM 470 (3)		h. _____	_____
i. CHEM 336 (writing intensive course) or CHEM 465 (writing intensive course) (2)		i. _____	_____
j. One three-credit upper-level CHEM course (list course #) (3)		j. _____	_____
CHEM _____			
Additional Math and General Science Courses (27 credits)			
k. BIOL 103 or BIOL 213 (circle choice) (4)		k. _____	_____
l. GEOL 101 (4)		l. _____	_____
m. MATH 113 (4)		m. _____	_____
n. MATH 114 (4)		n. _____	_____
o. STAT 250 (3)		o. _____	_____
p. PHYS 243, 244; PHYS 245, 246 (3,1;3,1)		p. _____	_____
OR			
PHYS 160/161; PHYS 260/261 (3,1; 3, 1)		_____	_____
q. Teacher Licensure Requirement (21 credits):			
EDUC 372, EDUC 422 (3,3)		_____	_____
EDCI 473, EDCI 483 (3,3)		_____	_____
EDCI 490, EDRD 419 (3,3)		_____	_____

**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 2017-2018 Catalog; the University Catalog is the official reference for program requirements.

## **COURSE LISTS (CHEMISTRY, BS)**

### **Mason Core Requirements**

**Written Communication:** ENGH 101 (or 100) and ENGH 302

**Oral Communication:** COMM 100 or COMM 101

**Quantitative Reasoning:** MATH 106, 108, 110, 111, 113, 115, 123 and 124, 125; SOCI 313; STAT 250. The Math Placement Test is required to take MATH 108, 113, 115, 123, and 125. See this web site for more information: [http://math.gmu.edu/placement\\_test.php](http://math.gmu.edu/placement_test.php)

**Literature:** ARAB 325; CHIN 310, 311, 325, 328; CLAS 250, 260, 340, 350, 360, 380; ENGH 201, 202, 203, 204; FREN 325, 329; FRLN 330; GERM 325; ITAL 320, 325; JAPA 340; KORE 311; PHIL 253; RELI 235, 333; RUSS 325, 326, 327; SPAN 325

**Arts:** ARTH 101, 102, 103, 200, 201, 203, 204, 206, 321, 322, 324, 333, 334, 335, 340, 341, 342, 344, 345, 360, 362, 370, 372, 373, 376; AVT 103, 104, 215, 222, 232, 243, 252, 253, 262, 272, 385; DANC 101, 119, 125, 131, 145, 161, 225, 231, 245, 301, 325, 331, 345, 425, 445, 390, 391; ENGH 370, 371, 372, 396; FAVS 225; GAME 101; MUSI 100, 101, 102, 107, 280, 301, 302, 380, 381, 382, 383, 384, 385, 387, 389, 485; PHIL 156; THR 101, 150, 151, 210, 230, 395, 411, 412.

**Western Civilization:** HIST 100 or 125; transfer students may substitute: the following courses for HIST 100: HIST 101, 102, 301, 302, 304, 305, 306, 308, 309, 312, 314, 322, 388, 436, 480; and the following courses for HIST 125: HIST 202, 387.

**Social and Behavioral Sciences:** AFAM 200; ANTH 114, 120, 135, 363, 372, 396; BUS 100; CONF 101; CONS 410; CRIM 100; ECON 100, 103, 104, 105, 367; EDUC 203, 372; GCH 325; GGS 103; GOVT 101, 103, 367; HEAL 230; HIST 121, 122; LING 306; PSYC 100, 211, 231; SOCI 101, 352, 355; TOUR 311; WMST 200

**Natural Sciences:** CHEM 211/213, 212/214

**Global Understanding:** ANTH 302, 306, 307, 308, 309, 312, 313, 316, 331, 332, 382; ARTH 319, 320, 382, 383, 384, 385, 386; BUS 200; CEIE 100; COMM 305, 456; CRIM 405; DANC 118, 318, 418; ECON 360, 361, 362, 380, 390; ENGH 362, 366; FAVS 300; FRLN 331; GCH 205; GGS 101; GLOA 101; GOVT 132, 133; HIST 251, 252, 261, 262, 271, 272, 281, 282, 328, 329, 356, 357, 358, 360, 364, 365, 387, 460, 462; JAPA 310; MBUS 305; MUSI 103, 431; PHIL 243; PROV 105; PSYC 379; RELI 100, 211, 212, 313, 315, 320, 322, 341, 374; RUSS 354; SOCI 120, 320, 332; SPAN 322, 466; SYST 202; THR 359, TOUR 210; WMST 100

**Information Technology: One of these courses:** ANTH 395, CDS 130, CS 100, GOVT 300, HIST 390, IT 104, MIS 303, MUSI 259 **or Course(s) from a) and one course from b):** a) AVT 180; CS 112; PHYS 251; PSYC 300, 301, & 372 (all three must be taken and in sequence); SOCI 410 b) CDS 151, CEIE 409, CS 105, ENGR 107, IT 304, PHIL 112

**Synthesis/Capstone:** ANTH 400; ARAB 351, 440; ARTH 394; ASTR 402; ATEP 441; AVT 385, 497, 498; BAS 491; BENG 492, 493; BINF 354; BIOL 301, 379; BIS 490; BUS 498; CEIE 490; CHIN 318, 355, 475; COMM 326, 362, 454; CONF 490; CONS 490, 491; CRIM 495; CS 306; CYSE 493; DANC 490; ECE 492, 493; ECON 309; EDCI 490; ENGH 401, 417, 458, 470, 484, 486, 495; EVPP 378, 480; FAVS 352, 496, 497, 499; FRLN 385; GAME 490; GCH 465; GEOL 420; GLOA 400; GGS 303, 304; GOVT 490, 491; HAP 465, 489, 498; HDFS 400; HIST 300, 499; INTS 308; IT 492, 493; KINE 490; LAS 499; MATH 400; ME 444; MUSI 324, 424, 490, 491, 495; NURS 465; PHED 415; PHIL 309, 343, 377, 378, 379, 421, 422; PHYS 346, 407; PRLS 490; PROV 342; PSYC 405, 406, 427; RELI 490; RHBS 499; RUSS 353; SOCI 377, 483, 485; SOCW 375, 472; SPAN 388; SPMT 490; STAT 490; SYST 495; THR 440, 496; TOUR 490

**Note: Students do not have to meet each requirement with a separate course; i.e. it is possible that a single course may be used to fulfill more than one college requirement; a single course may fulfill a Mason Core requirement and a college requirement; a course may fulfill a Mason Core requirement and/or a college requirement and a requirement for the major.**