

**GEORGE MASON UNIVERSITY
COLLEGE OF SCIENCE**

**B.S. DEGREE IN CHEMISTRY - Concentration in Analytical & Environmental Chemistry
(303 Planetary Hall, 703-993-1071)**

<https://cos.gmu.edu/chemistry/undergraduate-programs/>

2017-2018 CATALOG

	<u>Department(s) & Course #(s)</u>	<u>Completed/ Grade(s)</u>	<u>Needed</u>
<u>MASON CORE REQUIREMENTS (*30)</u>			
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 (78-79 credit hours required)

Chemistry Courses (52 credits)

a. CHEM 211/213, CHEM 212/214 (3/1, 3/1)	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. ___ ___	___ ___
e. CHEM 337 (2)	h. ___ ___	___ ___
f. CHEM 422 (3)	i. ___ ___	___ ___
j. CHEM 423 (2)	j. ___ ___	___ ___
k. CHEM 427 or CHEM 458 (circle choice) (3)	k. ___ ___	___ ___
l. CHEM 438 (3)	l. ___ ___	___ ___
m. CHEM 441 or CHEM 446 (circle choice) (3)	m. ___ ___	___ ___
n. CHEM 463 (4)	n. ___ ___	___ ___
o. CHEM 445 or CHEM 465 (writing intensive course) (circle choice) (2)	o. ___ ___	___ ___

Additional Math and Science Courses (26-27 credits)

p. MATH 113 (4)	p. ___ ___	___ ___
q. MATH 114 (4)	q. ___ ___	___ ___
r. MATH 213 (3)	r. ___ ___	___ ___
s. PHYS 160/161; PHYS 260/261 (3,1; 3,1)	s. ___ ___	___ ___
t. Seven to eight credits from one of the following options (circle choice) (7-8): GEOL 101, GEOL 309 (4,3) or EVPP 110, EVPP 111 (4,4) or CHEM 341 (3) and at least four credits from: CHEM 355, CHEM 451, CHEM 452 (1-3)		

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

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.