

**GEORGE MASON UNIVERSITY**  
**COLLEGE OF SCIENCE**  
**B.A. DEGREE IN CHEMISTRY (343 Planetary Hall, 993-1075)**  
<http://chemistry.gmu.edu/undergrad.html>  
**2013-2014 CATALOG**

	<u>Department(s) &amp; Course #(s)</u>	<u>Completed/ Grade(s)</u>	<u>Needed</u>
<b>GENERAL EDUCATION REQUIREMENTS (*30)</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://provost.gmu.edu/gened/general-education-requirements/> to link to information on general education requirements.

**COLLEGE REQUIREMENTS (\*18)**

- a. Foreign Language: Intermediate level in a single foreign language.
- b. Philosophy or Religious Studies (3) \_\_\_\_\_
- c. Three credits in social & behavioral sciences in addition to the university-wide requirement in social & behavioral science for a total of 6 credits. The two courses used to fulfill the combined college and university requirements must be from different disciplines. This requirement may be fulfilled by completing any course in ANTH, CRIM, ECON, GOVT, HIST (except 100 or 125), LING, PSYC, or SOCI & these courses in GGS: 101, 103, 110, 301, 303, 304, 305, 306, 315, 316, 320, 325, 330, 357, 380  
\_\_\_\_\_
- d. Non-Western Culture (3) \_\_\_\_\_

\*The number of hours needed to fulfill General Ed. requirements may vary; see the University Catalog for information. The two courses used to fulfill the college and university requirements for social & behavioral sciences must be from different disciplines.

**MAJOR REQUIREMENTS (56 hours required)**

a. CHEM 211, CHEM 212 (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, CHEM 336 (writing intensive course) (3,2)	e.	_____	_____
f. CHEM 332, CHEM 337 (3,2)	f.	_____	_____
g. Other chemistry course work (list course #) (5)			
1. CHEM _____	1.	_____	_____
2. CHEM _____	2.	_____	_____
h. MATH 113, MATH 114 (4,4)	h.	_____	_____
i. MATH 213 (3)	i.	_____	_____
j. PHYS 243, 244; PHYS 245, 246 (3,1,3,1)	j.	_____	_____
<b>OR</b>			
PHYS 160/161; PHYS 260/261 (3,1,3,1)		_____	_____

**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 (List courses)**

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

**MINIMUM HOURS TO GRADUATE: 120**

**UPPER DIVISION HOURS (minimum 45):**

# COURSE LISTS (CHEMISTRY, BA)

## University General Education Requirements

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

Oral Communication: COMM 100 or COMM 101

Quantitative Reasoning: **MATH 113**. (The Math Placement Test is required to take MATH 113. See this web site for more information: [http://cos.gmu.edu/academics/undergraduate/math\\_placement\\_testing](http://cos.gmu.edu/academics/undergraduate/math_placement_testing))

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; PHIL 253; RELI 235; RUSS 325, 326, 327; SPAN 325

Arts: ARTH 101, 102, 103, 200, 201, 203, 204, 321, 322, 324, 333, 334, 335, 340, 341, 342, 344, 345, 360, 362, 372, 373, 376; AVT 103, 104, 215, 222, 232, 243, 252, 253, 262, 272; DANC 101, 119, 125, 131, 145, 161, 225, 231, 245, 301, 390, 391; ENGH 370, 372, 396; FAVS 225; GAME 101; MUSI 100, 101, 102, 107, 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, 435, 436, 480; transfer students may substitute the following courses for HIST 125: HIST 202 & 387.

Social and Behavioral Sciences: AFAM 200; ANTH 114, 120, 135, 396; CONF 101; CONS 410; CRIM 100; ECON 100, 103, 104, 105, 110, 111 (110 and 111 must be taken together); EDUC 372; GGS 103; GOVT 101, 103, 367; HEAL 230; HIST 121, 122; LING 306; PSYC 100, 211, 231; SOCI 101, 355; SOM 100; TOUR 311; WMST 200

Natural Sciences: CHEM 211 & 212

Global Understanding: ANTH 302, 304, 306, 307, 308, 309, 311, 312, 313, 316, 331, 332, 385; ARTH 319, 320, 380, 382, 383, 384, 385, 386; CEIE 100; COMM 305, 456; CRIM 405; DANC 118, 318, 418; ECON 360, 361, 362, 380, 390; ENGH 362, 366; GCH 205; GGS 101; GLOA 101; GOVT 132, 133; HIST 130, 251, 252, 261, 262, 271, 272, 281, 282, 328, 329, 356, 358, 360, 364, 365, 387, 460, 462; JAPA 310; MSOM 305; MUSI 103, 431; PHIL 243; PSYC 379; RELI 100, 211, 212, 313, 315, 341, 374; RUSS 354; SOCI 120, 320, 332; SPAN 322; SYST 100; THR 359, TOUR 210; WMST 100

Information Technology: **One of these courses**: ANTH 395, CDS 130, CEIE 117, CHEM 350, GOVT 300, HIST 390, IT 103, MUSI 415 **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: ANTH 400; ARTH 394; AVT 385, 497, 498; BENG 492, 493; BINF 354; BIOL 301; BIS 490; CEIE 490; COMM 326, 362, 454; CONF 490; CONS 490; CRIM 495; CS 306; DANC 490; ECE 447, 492, 493; ECON 309; EDCI 490; ENGH 305; EVPP 335, 480; FAVS 352; FRLN 385; GAME 490; GCH 465; GEOL 420; GGS 303, 304; GOVT 490, 491; HAP 465; HIST 300, 499; IT 492; LAS 499; MATH 400; MUSI 490; NCLC 308; NURS 465; PHIL 309, 343, 377, 378; PHYS 346; PROV 342; PSYC 405, 406, 427; RELI 490; RUSS 353; SOCI 377, 483; SOCW 323, SOM 498; SPAN 388; SYST 495; THR 440, 496; UNIV 442

## Additional Requirements

Foreign Language: Demonstrated intermediate-level proficiency in one foreign language. See this web site for more information: <http://chss.gmu.edu/general-education/foreign-language>

Philosophy or Religious Studies: This can be fulfilled by any course in philosophy or religious studies except for PHIL 323, 324, 427, 428.

Social Sciences: This can be fulfilled by any course in ANTH; CRIM; ECON; GOVT; HIST (except 100 or 125); LING; PSYC; SOC; or GGS 101, 103, 110, 301, 303, 304, 305, 306, 315, 316, 320, 325, 330, 357, 380,.

Non-western Culture: ANTH 114, 300, 301, 302, 304, 305, 306, 307, 308, 309, 311, 313, 314, 316, 323, 330, 332, 381, 396; ARAB 420, 440; ARTH 203, 204, 319, 320, 380, 382, 383, 384, 385, 386, 482; CHIN 318, 320, 325; DANC 118; ECON 361, 362; FREN 451, 454; GGS 101, 316, 325, 330, 399; GOVT 328, 332, 333, 340, 341, 345, 432, 433; HIST 130, 251, 252, 261, 262, 271, 281, 282, 328, 329, 353, 354, 355, 356, 365, 366, 367, 387, 426, 459, 460, 461, 465, 466; JAPA 310; MUSI 103; RELI 211, 212, 272, 313, 314, 315, 337, 374, 375, 490; RUSS 353, 354.

**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 university requirement and a college requirement; a course may fulfill a general education requirement and/or a college requirement and a requirement for the major.**