

**GEORGE MASON UNIVERSITY  
COLLEGE OF SCIENCE  
B.S. DEGREE IN MATHEMATICS (203 Science and Tech I, 703-993-1460)**

<http://math.gmu.edu/undergraduate/index.html>

**2011-2012 CATALOG**

	<u>Department(s) &amp; Course #(s)</u>	<u>Completed/ Grade(s)</u>	<u>Needed</u>
<b><u>GENERAL EDUCATION 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. Literature (3)    d. Arts (3)	_____	_____	_____
e. Western Civ. (3)    f. Social/Behavioral Science (3)	_____	_____	_____
g. Global Understanding (3)	_____	_____	_____
h. Information Technology (3) (may be satisfied by completion of CS 112 plus the ethics component)	_____	_____	_____
i. Synthesis (3)	_____	_____	_____
(Quantitative Reasoning and Natural Science are satisfied by completion of major requirements.)			
Go to: <a href="http://chss.gmu.edu/general-education/all-requirements">http://chss.gmu.edu/general-education/all-requirements</a> to link to information on general education requirements.			
<b><u>MAJOR REQUIREMENTS (47-56 hours required)</u></b>			
a. MATH 113, MATH 114 (4,4)		a. _____	_____
b. MATH 203; MATH 214 or MATH 216(circle choice) (3,3)		b. _____	_____
c. MATH 213 or MATH 215 (circle choice) (3)		c. _____	_____
d. MATH 290 (writing intensive course), MATH 322 (3,3)		d. _____	_____
e. Twenty-four hours of additional mathematics (24)			
1. MATH 125, MATH 315 (3,3)		1. _____	_____
2. MATH 316; MATH 321 or MATH 431 (circle choice) (3,3)		2. _____	_____
3. Twelve hours of additional mathematics courses; numbered above MATH 300 (list course #) (12)			
a. MATH _____ b. MATH _____ c. MATH _____ d. MATH _____		_____	_____
f. CS 112 (4)		f. _____	_____

**CONCENTRATIONS (Optional)**

Students may select an optional concentration in applied mathematics, actuarial mathematics, or education. Students selecting a concentration take the courses listed below instead of the 24 credits of additional mathematics.

<b>1. Applied Mathematics Concentration (24)</b>			
a. MATH 125, MATH 315, MATH 351(3,3,3)		a. _____	_____
b. MATH 413, MATH 414, MATH 446 (3,3,3)		b. _____	_____
c. Six hours of additional mathematics courses; numbered above MATH 300 (list course #) (6)			
1. MATH _____    2. MATH _____		_____	_____
<b>2. Actuarial Mathematics Concentration (24)</b>			
a. MATH 351, MATH 352 (3,3)		a. _____	_____
b. MATH 441; MATH 442 or MATH 446 (circle choice) (3,3)		b. _____	_____
c. MATH 551, MATH 554 (3,3)		c. _____	_____
d. MATH 555, MATH 556 (3,3)		d. _____	_____
<b>3. Education Concentration (39)</b>			
a. MATH 125, MATH 302, MATH 315, MATH 321, MATH 351 (3,3,3,3,3)		a. _____	_____
b. EDCI 372, EDCI 483 EDUC 372 (satisfies Social Behavioral Sciences) (3,3,3)		b. _____	_____
c. EDUC 422, EDCI 490 (satisfies Synthesis), EDRD 419 (3,6,3)		c. _____	_____
d. One three-credit MATH course above MATH 300 (list course #) (3) MATH _____		d. _____	_____

**OTHER REQUIREMENTS (16-24 hours required)**

<b>a. For All Students:</b> A one-year of laboratory science sequence chosen from the following:			
1. PHYS 160, 161, 260, 261 (3,1, 3,1)		1. _____	_____
2. CHEM 211, 212 (8)		2. _____	_____
3. GEOL 101, 102 (8)		3. _____	_____
<b>b. For Applied Concentration, Education Concentration, or no concentration:</b> One of the following three options:			
1. A second sequence for the list above		1. _____	_____
2. PHYS 262, 263 (3,1)		2. _____	_____
3. 6 credits from more advanced courses in chemistry, geology, or physics (but only courses acceptable for credit toward a natural science major)		3. _____	_____
<b>c. For Actuarial Concentration:</b>			
1. ACCT 203, STAT 362 (3,3)		1. _____	_____
2. ECON 103 & either ECON 306, ECON 310, or FNAN 321 (circle choice) (3,3)		2. _____	_____

No more than six hours of C- or D in MATH permitted in the major.

**GENERAL ELECTIVES (12-23)** (A two-year proficiency in either French, German, or Russian is recommended)

**MINIMUM HOURS TO GRADUATE: 120**

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

This planning form is intended to be used in consultation with your academic advisor and reflects the requirements for the 2011-2012 Catalog; the University Catalog is the official reference for program requirements.

# COURSE LISTS (MATHEMATICS, BS)

## 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 325; 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 372, 396; 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 or 125: HIST 101, 102, 301, 302, 304, 305, 306, 308, 309, 314, 321, 322, 388, 435, 436, 480.

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; HEAL 230; HIST 121, 122; LING 326; PSYC 100, 211, 231; SOCI 101; SOM 100; TOUR 311; WMST 200

Natural Sciences: CHEM 211, 212; GEOL 101,102; PHYS 160/161,260/261

Global Understanding: ANTH 302, 304, 306, 307, 308, 309, 311, 312, 313, 331, 332, 385; ARTH 319, 320, 380, 382, 383, 384, 385, 386; CEIE 100; COMM 305, 456; CRIM 405; DANC 118, 318; 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; 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, CHEM 350, CRIM 300, ENGR 117, GOVT 300, 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, CS 105, ENGR 107, ENGR 401, IT 304, PHIL 112**

Synthesis: ANTH 400; ARTH 394; AVT 497, 498; 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; FAVS 352; FRLN 385; GEOL 420; GGS 303, 304; GOVT 490, 491; HAP 465; HIST 300, 499; IT 492; LAS 499; **MATH 400**; MUSI 490; NCLC 308; PHIL 309, 343, 377, 378; PSYC 405, 406; RELI 490; RUSS 353; SOCI 377, 483; SOCW 323, SOM 498; SPAN 388; SYST 495; THR 440, 496; PROV 342; UNIV 442