# 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](http://math.gmu.edu/undergraduate/index.html)

## 2010-2011 CATALOG

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<th>Department(s) &amp; Course # (s)</th>
<th>Grade(s)</th>
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### GENERAL EDUCATION REQUIREMENTS (30)

a. Composition: ENGL 101 (100), 302 (C or better) (3,3)  
   b. Communication 100 or 101 (please circle choice) (3)  
   c. Literature (3)  
   d. Fine 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: [http://chss.gmu.edu/gened](http://chss.gmu.edu/gened) to link to information on general education requirements.

### MAJOR REQUIREMENTS (47-56 hours required)

a. MATH 113, 114 (4,4)  
   b. MATH 203; MATH 214 or 216 (3,3)  
   c. MATH 213 or 215 (circle choice) (3)  
   d. MATH 290, 322 (3,3)  
   e. Twenty-four hours of additional mathematics (24)  
      1. MATH 125, 315 (3,3)  
      2. MATH 316; MATH 321 or 431 (circle choice) (3,3)  
      3. Twelve hours of additional mathematics courses; numbered above MATH 300 (list course #) (12)  
         a. MATH______  
         b. MATH______  
         c. MATH______  
         d. MATH______  

### 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.

1. **Applied Mathematics Concentration (24)**
   a. MATH 125, 315, 351(3,3,3)  
   b. MATH 413, 414, 446 (3,3,3)  
   c. Six hours of additional mathematics courses; numbered above MATH 300 (list course #) (6)  
      1. MATH______  
      2. MATH______

2. **Actuarial Mathematics Concentration (24)**
   a. MATH 351, 352 (3,3)  
   b. MATH 441; MATH 442 or 446 (3,3)  
   c. MATH 551, 554 (3,3)  
   d. MATH 555, 556 (3,3)

3. **Education Concentration (39)**
   a. MATH 125, 302, 315, 321, 351 (3,3,3,3,3)  
   b. EDCI 372, 483 EDUC 372 (3,3,3)  
   c. EDUC 422, EDCI 490, EDRD 419 (3,6,3)  
   d. One three-credit MATH course above MATH 300 (list course #) (3) MATH_______

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

a. For All Students: A one-year of laboratory science sequence chosen from the following:  
   1. PHYS 160, 161, 260, 261 (3,1,3,1)  
   2. BIOL 213 and BIOL 303 or 304 (8)  
   3. CHEM 211, 212 (8)  
   4. GEOL 101, 102 (8)

b. For Applied Concentration or no concentration: One of the following three options:  
   1. A second sequence for the list above  
   2. PHYS 262, 263 (3,1)  
   3. 6 credits from more advanced courses in biology, chemistry, geology, or physics (but only courses acceptable for credit toward a natural science major)  

   a. ACCT 203, STAT 362 (3,3)  
   b. ECON 103 & either ECON 306, ECON 310, or FNAN 321 (circle choice) (3,3)

   d. All Concentrations: CS 112 (4)

   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 2010-2011 Catalog; the University Catalog is the official reference for program requirements.
COURSE LISTS (MATHEMATICS, BS)

University General Education Requirements

Written Communication: ENGL 101 (or 100) and ENGL 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

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


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: BIOL 213, 303, 304; 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, 333, 385; ARTH 319, 320, 380, 382, 383, 384, 385, 386; CEIE 100; COMM 305, 456; CRIM 405; DANC 118, 118; ECON 360, 361, 362, 380, 390; ENGL 349, 350; 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; 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); 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 303; CS 306; DANC 490; ECE 447, 492, 493; ECON 309; EDML 490; ENGL 325; EVPP 35; FAVS 352; FRLN 385; GEOL 420; GGS 303, 304; GOVT 490, 491; HHS 465; HIST 300, 499; IT 492; LAS 499; MATH 400; MUSI 490; NCLC 308; PHIL 309, 343, 377, 378; PSYC 405; RELI 490; RUSS 353; SOCI 377, 483; SOCW 323, SOM 498; SPAN 388; SYST 495; THR 440, 496; UNIV 342, 442