GEORGE MASON UNIVERSITY
COLLEGE OF SCIENCE
B.S. DEGREE IN MATHEMATICS (4400 Exploratory Hall, 703-993-1485)
http://math.gmu.edu/degree-programs.php
2015-2016 CATALOG

MAJOR REQUIREMENTS (47-56 hours required)
a. MATH 113, MATH 114 (4,4)  
b. MATH 203; MATH 214 or MATH 216 (circle choice) (3,3)  
c. MATH 213 or MATH 215 (circle choice) (3)  
d. MATH 290 (writing intensive course), MATH 322 (3,3)  
e. Twenty-four hours of additional mathematics for Traditional Mathematics (24)  
   1. MATH 125, MATH 315 (3,3)  
   2. MATH 316; MATH 321 or MATH 431 (circle choice) (3,3)  
   3. Twelve hours of additional mathematics courses; numbered above MATH 300 (excluding MATH 400) (list course #s) (12)  
      a. MATH_____ b. MATH_____ c. MATH_____ d. MATH_____  
f. CS 112 (4)  

CONCENTRATIONS (Optional)
Students may select an optional concentration in applied mathematics, actuarial mathematics, mathematical statistics, or education. Students selecting a concentration take the courses listed below instead of the 24 credits for Traditional Mathematics.

1. Applied Mathematics Concentration (24)
   a. MATH 125 (3), MATH 315 (3), MATH 351 (3), MATH 413 (3), MATH 414 (3), MATH 446 (3)  
   b. Six hours of additional mathematics courses; numbered above MATH 300 (excluding MATH 400) (list course #s) (6)  
      1. MATH_____ 2. MATH_____  

2. Actuarial Mathematics Concentration (36)
   a. MATH 351 (3); MATH 352 (3); MATH 551 (3); MATH 554 (3); MATH 555 (3); MATH 556 (3); two chosen from: MATH 441 (3), MATH 442 (3), MATH 446 (3) (circle choices); ACCT 203 (3); ECON 103 (3), ECON 306 or ECON 310 or FNAN 321 (3); STAT 362 (3)  
   b. EDCI 375 (3); EDCI 472 (3), EDUC 372 (satisfies Social Behavioral Sciences) (3), EDUC 422 (3), EDCI 490 (satisfies Synthesis) (6), EDRD 419 (3)  
   c. One 3-credit MATH course above MATH 300 (not 400) (list course #) (3) MATH_____  

3. Mathematical Statistics (27)
   a. MATH 125 (3), MATH 315 (3), MATH 351 (3), MATH 352 (3), MATH 453 (3), MATH 551 (3), STAT 362 (3)  
   b. Two of the following (circle choices): STAT 455 (3), STAT 463 (3), STAT 474 (3)  

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. CHEM 211, 212 (8)  
   3. GEOL 101, 102 (8)  

b. For Applied Concentration, Education Concentration, Mathematical Statistics 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 chemistry, geology, or physics (but only courses acceptable for credit toward a natural science major)  

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

GENERAL ELECTIVES (12-23) (The department recommends proficiency in French, German, or Russian.)

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 2015-2016 Catalog; the University Catalog is the official reference for program requirements.
COURSE LISTS (MATHEMATICS, BS)

Mason Core 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://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; 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: HIST 101, 102, 301, 302, 304, 305, 306, 308, 309, 312, 314, 322, 388, 435, 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 372; 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, 212; GEOL 101, 102; PHYS 160/161, 260/261

Global Understanding: ANTH 302, 306, 307, 308, 309, 311, 312, 313, 316, 331, 332; ARTH 319, 320, 380, 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; MUSI 103, 431; PHIL 243; 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: 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: ANTH 400; ARTH 394; AVT 385, 497, 498; BENG 492, 493; BINF 354; BIOL 301; BIS 490; BUS 498; CEIE 490; COMM 326, 362, 454; CONF 490; CONS 490, 491; CRIM 495; CS 306; DANC 490; ECE 492, 493; ECON 309; EDIC 490; EVPP 335, 480; FAVS 352; FRLN 385; GAME 490; GCH 465; GEOL 420; GGS 303, 304; GOVT 490, 491; HAP 465; HDFS 400; HIST 300, 499; IT 492; LAS 499; MATH 400; MUSI 490; NCLC 308; NURS 465; PHIL 309, 343, 377, 378, 379; PHYS 346; PROV 342; PSYC 405, 406, 427; RELI 490; RUSS 353; SOCI 377, 483; SOCW 375; SPAN 388; SYST 495; THR 440, 496