

**GEORGE MASON UNIVERSITY  
COLLEGE OF SCIENCE**

**B.S. DEGREE IN PHYSICS (359 Planetary Hall, 703-993-3815)**

[http://catalog.gmu.edu/preview\\_program.php?catoid=19&poid=17983](http://catalog.gmu.edu/preview_program.php?catoid=19&poid=17983)

**2012-2013 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 (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://chss.gmu.edu/general-education/all-requirements> to link to information on general education requirements.

**MAJOR REQUIREMENTS (65)**

a. PHYS 160, PHYS 161 (3,1)	a.	_____	____
b. PHYS 260, PHYS 261 (3,1)	b.	_____	____
c. PHYS 262, PHYS 263 (3,1)	c.	_____	____
d. PHYS 303, PHYS 305 (3,3)	d.	_____	____
e. PHYS 308, PHYS 402 (3,3)	e.	_____	____
f. PHYS 407 (writing intensive course) (3)	f.	_____	____
i. Six hours chosen from the following: (6) (list courses) PHYS 251 (3), 306 (3), 307(3), 405 (3) or 406 (3), 408 (2-3) or 409 (3), 416 (1), ASTR 328 (3) or 428 (3).			
1. _____ 2. _____		_____	____
3. _____		_____	____
j. Twelve hours chosen from the following: (12) (list courses) PHYS 121 (1), 122 (1), 123 (1), 124 (1), CS 112 (4), or any approved upper level physics, astronomy, chemistry, electrical engineering, or mathematics courses.			
1. _____ 2. _____		_____	____
3. _____ 4. _____		_____	____
5. _____		_____	____
k. Twenty hours of Mathematics as follows: (20)			
1. MATH 113, MATH 114 (4,4)	1.	_____	____
2. MATH 213, MATH 214, MATH 203 (3,3,3)	2.	_____	____
3. MATH 313 or MATH 413 (circle choice) (3)	3.	_____	____

**Areas of Emphasis:** In meeting requirement j. above, students have the option of electing an emphasis. Students who wish to complete an emphasis should plan a program of study in consultation with their advisor. See the University Catalog for more information: [http://catalog.gmu.edu/preview\\_program.php?catoid=19&poid=17983](http://catalog.gmu.edu/preview_program.php?catoid=19&poid=17983)

**A GPA of 2.0 or better is required in all major course work.**

**GENERAL ELECTIVES (List courses)**

_____	_____	_____	____
_____	_____	_____	____
_____	_____	_____	____
_____	_____	_____	____
_____	_____	_____	____

**MINIMUM HOURS TO GRADUATE: 120**

<b>UPPER DIVISION HOURS (minimum 45):</b>
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This planning form is intended to be used in consultation with your academic advisor and reflects the requirements for the 2012-2013 Catalog; the University Catalog is the official reference for program requirements.

# COURSE LISTS (PHYSICS)

## 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 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 or 125: HIST 101, 102, 202, 301, 302, 304, 305, 306, 308, 309, 314, 322, 387, 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, 367; HEAL 230; HIST 121, 122; LING 306; PSYC 100, 211, 231; SOCI 101; SOM 100; TOUR 311; WMST 200

Natural Sciences: **PHYS 160/161, 260/261**

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, CHEM 350, CEIE 117, 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 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; NURS 265; 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