

**GEORGE MASON UNIVERSITY**  
**COLLEGE OF SCIENCE**  
**B.S. DEGREE IN PHYSICS (203 Planetary Hall, 703-993-3815)**  
<http://spacs.gmu.edu/bs-physics/>  
**2016-2017 CATALOG**

	<u>Department(s) &amp; Course #(s)</u>	<u>Completed/ Grade(s)</u>	<u>Needed</u>
<b><u>MASON CORE REQUIREMENTS (*30)</u></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://masoncore.gmu.edu/> to link to information on Mason Core requirements.

<b><u>MAJOR REQUIREMENTS (65)</u></b>			
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. _____	_____
g. One of the following: MATH 313 <b>or</b> MATH 413 <b>or</b> PHYS 301 (circle choice) (3)		g. _____	_____
h. Six hours chosen from the following: (6) (list courses) PHYS 251 (3); 306 (3); 307(3); 405 (3) <b>or</b> 406 (3); 408 (2-3) <b>or</b> 409 (3); 416 (1); ASTR 328 (3) <b>or</b> PHYS 428 (3)			
1. _____ 2. _____		_____	_____
3. _____		_____	_____
i. Twelve hours chosen from the following: (12) (list courses) No more than five credits from the following: PHYS 121 (1), 122 (1), 123 (1), 124 (1), ASTR 210 (3); At least seven credits from the following: CS 112 (4), or any approved upper level physics, astronomy, chemistry, elect. eng., or mathematics courses.			
1. _____ 2. _____		_____	_____
3. _____ 4. _____		_____	_____
5. _____		_____	_____
j. Twenty hours of Mathematics as follows: (17)			
1. MATH 113, MATH 114 (4,4)		1. _____	_____
2. MATH 213, MATH 214, MATH 203 (3,3,3)		2. _____	_____

**Areas of Emphasis:** In meeting requirement i. 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=29&pooid=28482](http://catalog.gmu.edu/preview_program.php?catoid=29&pooid=28482)

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

<b><u>GENERAL ELECTIVES</u></b> (List courses)			

**MINIMUM HOURS TO GRADUATE: 120**

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

# COURSE LISTS (PHYSICS)

## 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](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; KORE 311; 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, 370, 372, 373, 376; AVT 103, 104, 215, 222, 232, 243, 252, 253, 262, 272, 385; DANC 101, 119, 125, 131, 145, 161, 225, 231, 245, 301, 325, 331, 345, 425, 445, 390, 391; ENGH 370, 372, 396; FAVS 225; GAME 101; MUSI 100, 101, 102, 107, 280, 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, 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 203, 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: 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; MBUS 305; 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: **One of these courses**: 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; EDCI 490; EVPP 480; FAVS 352; FRLN 385; GAME 490; GCH 465; GEOL 420; GGS 303, 304; GOVT 490, 491; HAP 465; HDFS 400; HIST 300, 499; INTS 308; IT 492; LAS 499; MATH 400; MUSI 490; 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