

**GEORGE MASON UNIVERSITY**  
**COLLEGE OF SCIENCE**  
**B.S. DEGREE IN PHYSICS**  
**Concentration in Computational Physics**  
**(203 Planetary Hall, 703-993-3815)**  
<http://spacs.gmu.edu/bs-physics/>  
**2017-2018 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 <b>MATH 113</b> )		_____	_____
d. Literature (3)	_____	_____	_____
e. Arts (3)	_____	_____	_____
f. Western Civilization (3)	_____	_____	_____
g. Social & Behavioral Science (3)	_____	_____	_____
h. Natural Science ( <b>PHYS 160/161 and 260/261</b> )	_____	_____	_____
i. Global Understanding (3)	_____	_____	_____
j. Information Technology (3)	_____	_____	_____
k. <b>ASTR 402 OR PHYS 407</b>	_____	_____	_____

Go to: <http://catalog.gmu.edu/mason-core/> to link to information on Mason Core requirements.

**MAJOR REQUIREMENTS (74-78 total credits)**

Physics Core and Capstone (33 credits)

a. PHYS 160, PHYS 161 (3,1)		a. _____		_____
b. PHYS 260, PHYS 261 (3,1)		b. _____		_____
c. PHYS 251, PHYS 301 (3,3)		c. _____		_____
d. PHYS 303, PHYS 305 (3,3)		d. _____		_____
e. PHYS 307, PHYS 308 (3,3)		e. _____		_____
f. PHYS 402, PHYS 416 (3,1)		f. _____		_____
g. ASTR 402 or PHYS 407 (writing intensive course) (4)		g. _____		_____

**Mathematics Course Requirements (11 credits)**

1. MATH 113, MATH 114 (4,4)		1. _____		_____
2. MATH 213		2. _____		_____

**Computational Physics Concentration Requirements (28-34 credits)**

h. PHYS 410 (3)		h. _____		_____
i. MATH 203, 214 (3, 3)		i. _____		_____
j. PHYS 311 (3)		j. _____		_____
k. One of the following: PHYS 326, 405, 406, 408, 409		k. _____		_____
l. Six credits of the following: ASTR 401, CDS 302, CDS 303, MATH 446, MATH 447		l. _____		_____

Students who are not completing a second major must select 9 credits of the following. Students who are completing a second major must select 3 credits from the following: ASTR 210, ASTR 328, ASTR 403, PHYS 306, PHYS 412

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

**GENERAL ELECTIVES:** Maximum 2 credits of PHED, PRLS, and RECR coursework toward a COS degree. Only MLSC 400 and MLSC 402 may be used for credit towards a COS degree. (List courses)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**MINIMUM 120 HOURS (including Minimum 45 UPPER DIVISION HOURS) to GRADUATE**

This planning form is intended to be used in consultation with your academic advisor and reflects the requirements for the 2017-2018 Catalog; the University Catalog is the official reference for program requirements.

## COURSE LISTS (PHYSICS)

**Written Communication:** ENGH 101 (or 100) and ENGH 302

**Oral Communication:** COMM 100 or COMM 101

**Quantitative Reasoning:** 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, 333; RUSS 325, 326, 327; SPAN 325

**Arts:** ARTH 101, 102, 103, 200, 201, 203, 204, 206, 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, 371, 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; GCH 325; 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, 312, 313, 316, 331, 332, 382; ARTH 319, 320, 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; PROV 105; 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/Capstone:** ASTR 402 or PHYS 407