Sample schedule for BS in physics (computational physics concentration)

Number of credits in parentheses.

Courses designated “Elective” are entirely at the student's discretion.

At least 45 credits must be upper-level (300 or above). This sample schedule satisfies this requirement, assuming at least one elective is upper-level.

Students who are not completing a second major take 9 credits of physics and astronomy electives. In this sample schedule, ASTR 210 PHYS 306, and PHYS 412 are selected. Other options are possible, but note that most physics and astronomy courses are offered only in fall or only in spring (and sometimes only every other year). The tentative course offering schedule for future semesters can be found here: http://physics.gmu.edu/~joe/course-schedule.pdf

Fall of Year 1 (15)

MATH 113	(4)	Calculus I
ENGH 101	(3)	Composition
Mason Core	(3)	
Mason Core	(3)	
PHYS 122	(1)	Inside Relativity
PHYS 123	(1)	Inside the Quantum World

Spring of Year 1 (14)

MATH 114	(4)	Calculus II
PHYS 160	(3)	Physics I
PHYS 161	(1)	Physics I lab
Mason Core	(3)	
Mason Core	(3)	

Fall of Year 2 (16)

MATH 213	(3)	Calculus III
PHYS 260	(3)	Physics II
PHYS 261	(1)	Physics II lab
PHYS 251	(3)	Intro to Computer Techniques in Physics (satisfies Mason Core IT)
Mason Core	(3)	
Mason Core	(3)	

Spring of Year 2 (15)

MATH 203	(3)	Linear Algebra
MATH 214	(3)	Differential Equations
PHYS 262	(3)	University Physics III
PHYS 325	(3)	Intermediate Computer Methods in Physics
ASTR 210	(3)	Introduction to Astrophysics

Fall of Year 3 (15)

PHYS 301	(3)	Analytical Methods of Physics
PHYS 303	(3)	Classical Mechanics
PHYS 305	(3)	Electromagnetic Theory
PHYS 311	(3)	Instrumentation
if fall of year 3 is an odd year:		
ASTR 401	(3)	Computer Simulation in Astronomy
if fall of year 3 is an even year:		
ENGH 302	(3)	Advanced Composition

Spring of Year 3 (15)

PHYS 306	(3)	Wave Motion and Electromagnetic Radiation
PHYS 307	(3)	Thermal Physics
PHYS 402	(3)	Introduction to Quantum Mechanics and Atomic Physics
Elective	(3)	
Elective	(3)	

Fall of Year 4 (16)

CDS 303	(3)	Scientific Data Mining
PHYS 410	(4)	Computational Physics Capstone
if fall of year 4 is an odd year:		
ASTR 401	(3)	Computer Simulation in Astronomy
if fall of year 4 is an even year:		
ENGH 302	(3)	Advanced Composition
Elective	(3)	
Elective	(3)	

Spring of Year 4 (15)

PHYS 408 or 409	(3)	Senior Research or Physics Internship
PHYS 412	(3)	Solid State Physics and Applications
Elective	(3)	
Elective	(3)	
Elective	(3)	