

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.

ASTR 124 and PHYS 122 and 123 are not required. They are included to bring the total credit number to 120. A single 3-credit elective could be substituted for these.

Students who complete a second major can omit PHYS 306 and 412 from this sample schedule.

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 (15)

MATH 114	(4)	Calculus II
PHYS 160	(3)	Physics I
PHYS 161	(1)	Physics I lab
Mason Core	(3)	
Mason Core	(3)	
ASTR 124	(1)	Introduction to Observational Astronomy

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 307	(3)	Thermal Physics
PHYS 308	(3)	Modern 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:

ENGL 302 (3) Advanced Composition

Spring of Year 3 (15)

PHYS 306 (3) Wave Motion and Electromagnetic Radiation

PHYS 402 (3) Introduction to Quantum Mechanics and Atomic Physics

Elective (3)

Elective (3)

Elective (3)

Fall of Year 4 (14)

CDS 303 (3) Scientific Data Mining

PHYS 407 (4) Senior Laboratory

PHYS 410 (3) Computational Physics I

PHYS 416 (1) Special Topics in Modern Physics

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:

ENGL 302 (3) Advanced Composition

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)