# Physics major course requirements

**For a B.A. with a major in Physics (see reverse for B.S.)**

Required in Physics (37 semester hours)
____ Phys 200B - Mechanics and Waves (5) [Fall, Spring]
____ Phys 213 – Thermodynamics and Optics (2) [Spring]
____ Phys 214 – Intermediate Physics Laboratory (1) [Spring]
____ Phys 215 – Special Relativity and Applications (2) [Spring]
____ Phys 218 – Introductory Electromagnetism (5) [Fall]
____ Phys 220 – Modern Physics (5) [Spring]
____ Phys 311 - Classical Mechanics (4) [Fall]
____ Phys 313 – Electronics (2) [Fall]
____ Phys 350 – Advanced Physics Laboratory (1) [Spring]
____ Phys 360 - Junior Seminar (1) [full-year course, meets once a week]
____ Phys 460 - Senior Seminar (1) [full-year course, meets once a week]

plus, 4 semester hours from the following courses:
____ Phys 330 - Statistical and Thermal Physics (4)
____ Phys 332 - Electromagnetism (4)
____ Phys 411 - Quantum Mechanics (4)

plus, 4 additional semester hours taken at the 300 level or above:
____ Phys 312 – Wave Phenomena (4)
____ Phys 314 – Digital Electronics (2)
____ Phys 320 - Computational Physics (2)
____ Phys 321 - Signal Processing (2)
____ Phys 325 - Topics in Contemporary Physics (2)
____ Phys 330 - Statistical and Thermal Physics (4)
____ Phys 332 - Electromagnetism (4)
____ Phys 380 - Topics (1-4)
____ Phys 410 - Mathematical Physics (4)
____ Phys 411 - Quantum Mechanics (4)
____ Phys 490 - Independent Study (variable credit)
____ Phys 491 - Internship (variable credit)
____ Phys 499 - Senior Honors Thesis (variable credit)

Required in Related Departments (17-22 semester hours)
____ Math 201 - Calculus I (4)
____ Math 202 - Calculus II (4)
____ One additional math course. Either
Math 212 - Multivariable Calculus (4) OR
Math 215 - Differential Equations (4)
____ Computer Science or Chemistry. Either
Comp 150 – Computer Programming I (5) OR
Chem 121B - Models of Chemical Systems (5) with Chem 162 – Chemical Structure and Analysis (5) also recommended

*Revised Fall 2013*

**For a B.S. with a major in Physics (see reverse for B.A.)**

Required in Physics (47 semester hours)
__x_ Phys 200B - Mechanics and Waves (5) [Fall, Spring]
_x__ Phys 213 – Thermodynamics and Optics (2) [Spring]
x____ Phys 214 – Intermediate Physics Laboratory (1) [Spring]
_x_ Phys 215 – Special Relativity and Applications (2) [Spring]
_x__ Phys 218 – Introductory Electromagnetism (5) [Fall]
_x__ Phys 220 – Modern Physics (5) [Spring]
_x__ Phys 311 - Classical Mechanics (4) [Fall]
_x__ Phys 313 – Electronics (2) [Fall]
_sp16_ Phys 350 – Advanced Physics Laboratory (1) [Spring]
x Phys 360 - Junior Seminar (1) [full-year course, meets once a week]
sp16 Phys 460 - Senior Seminar (1) [full-year course, meets once a week]

plus, 4 semester hours from the following courses:
____ Phys 330 - Statistical and Thermal Physics (4)
Phys 332 - Electromagnetism (4)
sp16 Phys 411 - Quantum Mechanics (4)

plus, 2 semester hours of research from:
____ Phys 490 - Independent Study (variable credit)
____ Phys 491 - Internship (variable credit)
____ Phys 499 - Senior Honors Thesis (variable credit)

plus, 12 additional semester hours taken at the 300 level or above:
____ Phys 312 – Wave Phenomena (4)
____ Phys 314 – Digital Electronics (2)
Phys 320 - Computational Physics (2)
sp16 Phys 321 - Signal Processing (2)
x____ Phys 325 - Topics in Contemporary Physics (2)
____ Phys 330 - Statistical and Thermal Physics (4)
____ Phys 332 - Electromagnetism (4)
____ Phys 380 - Topics (1-4)
____ Phys 410 - Mathematical Physics (4)
____ Phys 411 - Quantum Mechanics (4)
____ Phys 490 - Independent Study (variable credit)
____ Phys 491 - Internship (variable credit)
____ Phys 499 - Senior Honors Thesis (variable credit)

Required in Related Departments (31 semester hours)
_x__ Math 201 - Calculus I (4)
x____ Math 202 - Calculus II (4)
x ___ Math 212 - Multivariable Calculus (4)
x Math 215 - Differential Equations (4)
_x?_ Comp 150 - Computer Programming I (5)
__x_ Chem 121B – Models of Chemical Systems (5)
__x__ Chem 162B – Chemical Structure and Analysis (5)

*Revised Fall 2013*