

Requirements to complete a B.S. degree in Physics (1995-2006)

Course No.	Hrs.	Course Name	Prerequisites
CHEM 200	3	Introduction to Chemical Principles	high school algebra and chemistry
CHEM 201	1	General Chemistry Laboratory I	CHEM 200 or concurrent enrollment
CHEM 210	3	General and Inorganic Chemistry	CHEM 200, 201
CHEM 211	1	General Chemistry Laboratory II	CHEM 210 or concurrent enrollment
MATH 150	4	Calculus I	MATH 111 or equivalent
MATH 250	4	Calculus II	MATH 150
MATH 251	3	Calculus III	MATH 250
MATH 305	3	Intro to Ordinary Differential Equat I	MATH 250

One of the following 4 math courses (a 400-level math completes a Mathematics minor if all grades are C or better):

MATH 306	3	Intro to Ordinary Differential Equat II	MATH 305
MATH 406	3	Eigenfunction Analysis	MATH 221, 305
MATH 407	3	Intro to Partial Differential Equations	MATH 251, 305
MATH 409	3	Introduction to Fourier Analysis	MATH 221, 305

PHYS 205A,B,C	3,3,3	University Physics	MATH 150 for A, MATH 250 for B
PHYS 255A,B,C	1,1,1	University Physics Laboratory	PHYS 205 or concurrent enrollment
PHYS 301	3	Theoretical Methods in Physics	PHYS 205A, MATH 250
PHYS 310	3	Mechanics I	PHYS 205A,B; PHYS 301 or MATH 305
PHYS 320	3	Electricity and Magnetism I	PHYS 205A,B, Math 251; PHYS 301 or MATH 305
PHYS 345	3	Thermodynamics and Statistical Phys	PHYS 301, MATH 251
PHYS 410	3	Mechanics II	PHYS 310
PHYS 420	3	Electricity and Magnetism II	PHYS 320
PHYS 430	3	Quantum Mechanics I	PHYS 205C, 310, 320; 410 & 420 recommended

Plus 16 hours chosen from the following list and approved by the department advisor:

PHYS 100	1	Undergraduate Seminar	
PHYS 328	2	Light	PHYS 203B or 205B
PHYS 390	1-4	Undergraduate Research	consent of instructor
PHYS 424	3	Electronics for Scientists	PHYS 203B or 205B; MATH 111
PHYS 425	3	Solid State Physics	PHYS 310, 320, 345, 430
PHYS 428	3	Modern Optics and Lasers	PHYS 420
PHYS 431	3	Atomic and Molecular Physics I	PHYS 430
PHYS 432	2	Nuclear Physics I	PHYS 430
PHYS 445	3	Statistical Mechanics I	PHYS 345
PHYS 450	1	Modern Physics Laboratory	PHYS 205C
PHYS 458	2	Laser and Optical Physics Laboratory	PHYS 428
PHYS 470	1-3	Special Projects	PHYS 310, 320, consent of instructor
PHYS 490	1-4	Advanced Undergraduate Research	PHYS 310, 320 or consent

Total hours = 74

***** STUDENTS MUST EARN GRADES OF C OR BETTER IN ALL PREREQUISITE CHEMISTRY, MATHEMATICS, AND PHYSICS COURSES. *****

Supportive Skills requirement - at least 6 credit hours chosen from: CS 105 or 200B or 201 or 202; Engl 290 or 291; 1 or 2 semesters in foreign language offered at SIUC.

Physics majors must see their department advisor before registering for EACH semester. The Physics Department is located in Neckers A483, phone 618-453-2643, fax 618-453-1056, email address physics@physics.siu.edu The Physics Department faculty advisor is Dr. J. Thomas Masden in Neckers A429, phone 618-536-2062.

The College of Science Advisement office is located in Neckers A185, phone 618-536-5537, fax 618-453-7067, email us at advise@cos.siu.edu or see our web site at <http://www.science.siu.edu/advisement/index.html> The College of Science advisors are Dana McKenzie, Jean McPherson, and Becky Reed.

Updated 5/16/05