

Accelerated Physics B.A./M.S. B.S./M.S. program

149 credits

Required Undergraduate Courses (B.A. Applied option) (44 credits)			
Number	Title	Credits	Perspectives
Phys 145.4	Principles of Physics I	4	AoK: NS
Phys 145.1	Principles of Physics I Laboratory	1	AoK: NS-L
Phys 146.4	Principles of Physics II	4	AoK: NS
Phys 146.1	Principles of Physics II Laboratory	1	AoK: NS-L
Phys 233	Intermediate Methods of Math Physics I	3	
Phys 225	Solid State Electronics	4	Elective for B.S. candidates
Phys 235	Classical Physics Laboratory	2	
Phys 237	Mechanics	4	
Phys 242 (243)	Thermodynamics (and Statistical Mechanics)	3(4)	243 is mandatory for B.S. students
Phys 260	Introduction to Modern Physics	4	
Phys 310	Electromagnetism I	4	
Phys 377	Modern Physics Laboratory	2	
B.A. candidates shall also take the courses below			
Phys 637	Modern Optics	3	Replaces 222
Phys 234	Intermediate Methods of Math Physics II	3	
Phys 365	Principles of Quantum Mechanics	4	
B.S. candidate must take all courses listed above and the following			
Phys 616	Electromagnetism 2	4	Replaces 311
Phys 345	Solid State Physics	4	
Elective Courses (B.A. Applied option students can choose 4 courses from physics at 200 level or above, biology (105 and above), chemistry 113 or above, Math 200 or above, SCCI 1111 or above)			
Phys 225	Solid State Electronics	4	
Phys 265	Electrical Circuits	3	
Phys 275	Computational Methods in Physics	4	Replaced by 661
Phys 320W	Research and Writing in the Sciences	3	
Phys 383	Special Topics	3	
Phys 390	Internship	3	
Phys 395W	Senior Research Project	3	Strongly advised
Graduate Courses That Can Be Taken at The Undergraduate Level (these courses will be credited toward both B.A./B.S. and M.S. degrees) 12 credits			

AoK = Area of Knowledge

NS = Natural Science

NS-L = Natural Science with Lab (only if including the 4 credit related lecture course)

Phys 616	Applied Electrodynamics	4	Replaces Phys. 311
Phys 637	Modern Optics	4	Replaces Phys. 222
Phys 661	Computational Methods in Physics	4	Replaces Phys. 275

Required Graduate Courses (43 credits)			
Theoretical courses (20 credits)			
Number	Title	Credits	Comments
Phys 616	Applied Electrodynamics	4	Can be taken at the undergraduate level
Phys 637	Modern Optics	4	Can be taken at the undergraduate level
Phys 661	Computational Methods in Physics	4	Can be taken at the undergraduate level
Phys 621	Optoelectronics	4	
Phys 646	Physics of semiconductors	4	
Technology and laboratory courses 17 credits			
Phys 699	Introduction to Management of Scientific and Engineering Projects	3	
Phys 672	Photonics Laboratory	2	
Phys 623	Principles of Telecommunications	4	
Phys 675	Microfabrication and growth techniques	4	
Phys 674	Laboratory in laser and fiber optics technology	2	
Phys 771-773	Graduate Physics Laboratory	2	Must be taken in preparation for the final project
Experiential learning courses 6 credits			
Phys 680/681	Internship	2	
Phys. 798	Final Project	4	

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