

Study plan of the Doctor of Philosophy in Physics program
(Number of program hours = 32)

First year

Level 1				Level 2			
Code	Course Name	Hr	Requisite	Code	Course Name	Hr	Requisite
7000 Phys	Physics Research Seminar	1	-	7005 phy	Lab Safety	1	-
7001 Phys	Advanced Quantum Mechanics	3	-	7006 phys	Advanced Statistical Physics	3	-
7002 Phys	Advanced Electrodynamics	3	-	-	Elective course	3	-
Total		7		Total		7	

Second year

Level 3				Level 4			
Code	Course Name	Hr	Requisite	Code	Course Name	Hr	Requisite
-	Elective course	3	-	7500 phys	Comprehensive Examination	-	-
-	Elective course	3	-	7501 phys	Advanced research Topics	-	-
-	Elective course	3	-	Total		-	
Total		9		Total		-	

Third year

Level 5			
Code	Course Name	Hr	Requisite
7502 Phys	Ph.D. Dissertation	9	Completion of courses and comprehensive examination
Total		9	

Compulsory Specialized Course

Code	Hr	Course Name
Phys 7101	3	Advanced Condensed Matter Physics
Phys 7301	3	Physics of Atoms and Molecules
Phys 7201	3	Advanced Nuclear Physics
Phys 7305	3	Plasma Physics
Phys 7306	3	Fluid Mechanics

Elective courses

Code	Hr	Course Name
Phys 7102	3	Advanced Semiconductors
Phys 7103	3	Surface Physics and Interface
Phys 7104	3	Optoelectronics
Phys 7105	3	Physics of Nanomaterials
Phys 7106	3	Physics of Crystalline State
Phys 7107	3	Physics of Composite Materials
Phys 7108	3	Biophysics
Phys 7109	3	Computational Physics
Phys 7110	3	Group Theory
Phys 7111	3	Selected Topics in Condensed Matter Physics
Phys 7401	3	Nonlinear Optics
Phys 7402	3	Advanced Quantum Optics
Phys 7403	3	Laser Spectroscopy
Phys 7209	3	Scattering Theory
Phys 7208	3	Introduction to Quantum Computation and Quantum Information
Phys 7302	3	Atomic and Optical Physics
Phys 7404	3	Laser-Matter Interaction
Phys 7405	3	Ultra-Fast Lasers and Photonics
Phys 7303	3	Advanced Atomic and Molecular Structure
Phys 7304	3	Selected Topics in Atomic, Molecular, and Optical Physics
Phys 7307	3	Advanced Plasma Physics
Phys 7308	3	Advanced Fluid Mechanics
Phys 7309	3	Magnetohydrodynamics
Phys 7310	3	Selected Topics in Plasma Physics
Phys 7202	3	Nuclear Reactions
Phys 7203	3	Radiation Physics and Detectors
Phys 7204	3	Relativistic QM and QFT
Phys 7205	3	Nuclear Forces and Nuclear Structure
Phys 7206	3	Radiation Protection
Phys 7207	3	High Energy Physics
Phys 7208	3	Selected Topics in Nuclear and Particle Physics