

## Academic Study Plan for Doctorate Pholosphoy in Science in Physics

### First Year

First Level			
Code	Course Name	# Hrs	Required
7000phys	Physics Research Seminar	1	
7001phy	Quantum Mechanics Advanced	3	
7002phys	Electrodynamics Advanced	3	
7		Total	

Second Level			
Code	Course Name	# Hrs	Required
7005phy	Lab Safety	1	
7006phys	Statistical Physics Advanced	3	
	Specialized Compulsory Course	3	
7		Total	

### Second year

Third Level			
Code	Course Name	# Hrs	Required
	courses 1 Elective Specialized	3	
	Specialized courses 2 Elective	3	
6		Total	

Fourth Level			
Code	Course Name	# Hrs	Required
7501phys	Research Topics	3	
7500phys	Examination Comprehensive	0	
4		Total	

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## Compulsory Specialized Course

Code	Course Name	Hrs
Phys7101	Matter Physics Advanced Condensed	3
Phys7301	Molecules Physics of Atoms and	3
Phys7201	Advanced Nuclear Physics	3
Phys7305	Plasma Physics	3
Phys7306	Fluid Mechanics	3

### Elective Specialized courses

Code	Course Name	Hrs
Phys7102	Semiconductors Advanced	3
Phys7103	Physics and Interface Surface	3
Phys7104	Optoelectronics	3
Phys7105	of Nanomaterials Physics	3
Phys7106	of Crystalline State Physics	3
Phys7107	of Composite Materials Physics	3
Phys7108	Biophysics	3
Phys7109	Physics Computational	3
Phys7110	Theory Group	3
Phys7111	Topics in Condensed Matter Physics Selected	3
Phys7401	Optics Nonlinear	3
Phys7402	Quantum Optics Advanced	3
Phys7403	Spectroscopy Laser	3
Phys7209	Theory Scattering	3
Phys7708	to Quantum Computation and Quantum Information Introduction	3

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Phys7302	and Optical Physics Atomic	3
Phys7404	Interaction Laser-Matter	3
Phys7405	Lasers and Photonics Ultra-Fast	3
Phys7303	Atomic and Molecular Structure Advanced	3
Phys7304	Topics in Atomic, Molecular, and Optical Physics Selected	3
Phys7307	Plasma Physics Advanced	3
Phys7308	Fluid Mechanics Advanced	3
Phys7309	Magnetohydrodynamics	3
Phys7310	Topics in Plasma Physics Selected	3
Phys7202	Reactions Nuclear	3
Phys7203	Physics and Detectors Radiation	3
Phys7204	QM and QFT Relativistic	3
Phys7205	Forces and Nuclear Structure Nuclear	3
Phys7206	Protection Radiation	3
Phys7207	Energy Physics High	3
Phys7208	Topics in Nuclear and Particle Physics Selected	3

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