

Faculty of Science

University of Peradeniya

Courses offered by the Department of Physics

1. First Year (1000 Level) Physics Courses

Course Code	Name/Title	Credits
PHY 1103	General Physics I	3
PHY 1203	General Physics II	3
PHY 1911	Elementary Physics Laboratory I	1
PHY 1921	Elementary Physics Laboratory I	1

All four courses are compulsory for both B.Sc. and B.Sc. Honours in Physics study programmes.

2. Second Year (200 Level) Physics Courses

Course Code	Course Title	Credits	Prerequisite	Compulsory for	
				B.Sc.	B.Sc. Honours
PH 200	Mechanics and Fluid Dynamics	2	PH 101	Yes	Yes
PH 205	Thermal and Statistical Physics	2	PH 101	Yes	Yes
PH 211	Vibrations and AC Theory	2	PH 101		Yes
PH 230	Quantum Mechanics and Atomic Physics	2	PH 102	Yes	Yes
PH 240	Introductory Solid State Physics	2	PH 102	Yes	Yes
PH 245	Electronics Theory I	2			Yes
PH 261	Medical Physics	2			
PH 262	Energy, Weather and Environment	2			
PH 263	Introductory Astronomy	2			
PH 280	General Physics Laboratory I	1	PH 103, 104	Yes	Yes
PH 281	General Physics Laboratory II	1	PH 103, 104		Yes
PH 285	Electronics Laboratory I	1	PH 245	*	Yes
Total Credits				9	15

3. Third Year (300 Level) Physics Courses

Course code	Course Title	Credits	Prerequisites	Compulsory for	
				B.Sc.	B.Sc. Honours
PH 304	Relativity	2			Yes
PH 313	Physical Optics and Optical instruments	2	PH 101	Yes	Yes
PH 323	EM Waves and Communication	2	PH 102	Yes	Yes
PH 333	Introductory Nuclear Physics	2			Yes
PH 341	Semiconductor Physics and Devices	2			
PH 345	Electronics Theory II	2	PH 245, PH 285		

PH 350	Microstructure and Properties of Materials	2	PH 240		
PH 361	Biophysics	2			
PH 363	Astrophysics	2	PH 263		
PH 365	Modern Particle Physics	2			
PH 366	Physics of Atmosphere, Weather and Climate	2			
PH 370	Mathematical Methods in Physics	2			Yes
PH 373	Computational Physics	2			
PH 374	Experimental Techniques and Material Characterization	2			
PH 375	Nanoscience	2	CH 231/PH 230		
PH 380	General Physics Laboratory III	1	PH 103, PH 104	Yes	Yes
PH 381	General Physics Laboratory IV	1	PH 103, PH 104	*	Yes
PH 383	Advanced Physics Laboratory I	2	PH 280, PH 281		Yes
PH 384	Advanced Physics Laboratory II	2	PH 383		Yes
PH 385	Electronics Laboratory II	1	PH 245, PH 285		
PH 392	Seminar	1			Yes
PH 395	Industrial Training	1			
Total Credits		39		5	17

*A total of 5 credit-units from practical courses offered in Physics are required to complete B.Sc. Study programme.

4. Forth Year (400 Level) Physics Courses

Course Code	Course Title	Credits	Prerequisites	Compulsory for B.Sc. Honours
PH 403	Classical Mechanics	2	PH 200	Yes
PH 406	Statistical Physics	2	PH 205	Yes
PH 414	Lasers	1		
PH 422	Magnetic Materials	2	PH 240	
PH 423	Electromagnetic Theory	2	PH 323	Yes
PH 430	Quantum Mechanics I	3	PH 230	Yes
PH 431	Quantum Mechanics II	2	PH 430	
PH 433	Nuclear and Reactor Physics	3	PH 230, PH 333	
PH 440	Solid State Theory	3	PH 240	
PH 445	Electronics Theory III	2	PH 345	
PH 454	Solid State Ionics & Devices	2		
PH 455	Polymer physics	2		
PH 457	Advanced Nanoscience	2	PH 375	
PH 458	General relativity	2	PH 370	
PH 481	Advanced Physics Laboratory III	4	PH 381, PH 382	Yes
PH 487	Investigation Laboratory	1		Yes
PH 491	Research Project	6		Yes
Total Credits		41		20