

## SUMMARY OF COURSES OFFERED

### PRINCIPAL SUBJECT AREA

### PHYSICS

100 LEVEL – PHYSICS					
Course Number	Course Title	No. of credits	Prerequisites	Compulsory for	
				General Degree	Special Degree
PH 101	General Physics I	3		√	√
PH 102	General Physics II	3		√	√
PH 103	Elementary Physics Laboratory I	1		√	√
PH 104	Elementary Physics Laboratory II	1		√	√
	<b>Total</b>	<b>8</b>			

200 LEVEL – PHYSICS					
Course Number	Course Title	No. of credits	Prerequisites	Compulsory for	
				General Degree	Special Degree
PH 200	Mechanics and Fluid Dynamics	2		√	√
PH 205	Thermal and Statistical Physics	2		√	√
PH 211	Vibrations and AC Theory	2			
PH 230	Quantum Mechanics and Atomic Physics	2		√	√
PH 240	Introductory Solid State Physics	2		√	√
PH 245	Electronics Theory I	2			√
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, PH 104	√	√
PH 281	General Physics Laboratory II	1	PH 103, PH 104		√
PH 285	Electronics Laboratory I	1	PH 245	*	√
	<b>Total</b>	<b>21</b>			

**300 LEVEL – PHYSICS**

Course Number	Course Title	No. of credits	Prerequisites	Compulsory for	
				General Degree	Special Degree
PH 304	Relativity	2			√
PH 313	Physical Optics and Optical instruments	2		√	√
PH 323	EM Waves and Communication	2		√	√
PH 333	Introductory Nuclear Physics	2			√
PH 334	Introductory Particle Physics	1			
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	1			
PH 364	Physics of Weather and Climate	1			
PH 370	Mathematical Methods in Physics	2			√
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	√	√
PH 381	General Physics Laboratory IV	1	PH 103, PH 104	†	√
PH 383	Advanced Physics Laboratory I	2	PH 280, PH 281		√
PH 384	Advanced Physics Laboratory II	2	PH 383		√
PH 385	Electronics Laboratory II	1	PH 245, PH 285		
PH 392	Seminar	1			√
PH 395	Industrial Training	1			√
	<b>Total</b>	<b>36</b>			

† Only one of these course unit is compulsory

**400 LEVEL – PHYSICS**

Course Number	Course Title	No. of credits	Prerequisites	Compulsory for	
				General Degree	Special Degree
PH 403	Classical Mechanics	2	PH 200		√
PH 406	Statistical Physics	2	PH 205		√
PH 414	Lasers	1			
PH 422	Magnetic Materials	2	PH 240		
PH 423	Electromagnetic Theory	2	PH 323		√
PH 430	Quantum Mechanics I	3	PH 230		√
PH 431	Quantum Mechanics II	2	PH 430		
PH 433	Nuclear and Reactor Physics	3	PH 230, PH 333		
PH 436	Radiation Detection and Measurement	2	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 456	Nuclear Magnetic Resonance (NMR)	2			
PH 457	Advanced Nanoscience	2	PH 375		
PH 481	Advanced Physics Laboratory III	4	PH 381, PH 382		√
PH 486	Nuclear Physics Laboratory	2	PH 436		
PH 487	Investigation Laboratory	1			√
PH 491	Research Project	6			√
PH 493	Independent Study	1			
PH 496	Laboratory Teaching course	1			
	<b>Total</b>	<b>47</b>			