PHYSICS – SPECIALIZATION (SCIENCE) – BACHELOR OF SCIENCE (HONOURS)

PHYS-P-BSH

Subject: Administered by the Department of Physics, Engineering Physics and Astronomy.
Plan: Consists of 99.00 units as described below.
Program: The Plan, together with sufficient electives to total 120.00 units, will lead to a Bachelor of Science (Honours) Degree.

Code	Title	Units
1. Core		
A. Complete 6.00 units from the following:		**6.00**
PHYS 104	Fundamental Physics	
PHYS 106	General Physics	
B. Complete 6.00 units from the following:		**6.00**
MATH 110	Linear Algebra	
MATH 111	Linear Algebra	
C. Complete 6.00 units from the following:		**6.00**
MATH 120	Differential and Integral Calculus	
MATH 121	Differential and Integral Calculus	
MATH 123 & MATH 124	Differential and Integral Calculus I and Differential and Integral Calculus II	
D. Complete the following:		
CHEM 112	General Chemistry	6.00
E. Complete the following:		
PHYS 206	Dynamics	3.00
PHYS 212	Vibrations and Waves	3.00
PHYS 213	Computational Methods in Physics	3.00
PHYS 239	Electromagnetism	3.00
PHYS 242	Relativity and Quanta	3.00
PHYS 250	Foundations of Experimental Physics	3.00
F. Complete 3.00 units from the following:		**3.00**
MATH 221	Vector Calculus	
MATH 280	Advanced Calculus	
G. Complete 3.00 units from the following:		**3.00**
MATH 225	Ordinary Differential Equations	
MATH 231	Differential Equations	
H. Complete the following:		
PHYS 316	Methods in Mathematical Physics I	3.00
PHYS 317	Methods in Mathematical Physics II	3.00
PHYS 321	Advanced Mechanics	3.00
PHYS 344	Introduction to Quantum Mechanics	3.00
PHYS 345	Quantum Physics of Atoms, Nuclei and Particles	3.00
PHYS 350	General Laboratory	6.00
PHYS 372	Thermodynamics	3.00
I. Complete the following:		
PHYS 432	Electromagnetic Theory	3.00
PHYS 453	Advanced Physics Laboratory	3.00
PHYS 490	Nuclear and Particle Physics	3.00
PHYS 590	Research Thesis	6.00
J. Complete the following:		
PHYS 444	Advanced Quantum Physics	3.00
or PHYS 472	Statistical Mechanics	
K. Complete the following:		
PHYS 480	Solid State Physics	3.00
2. Option		
A. Complete 6.00 units from the following:		**6.00**
PHYS at the 400-level or above		
Electives		
Elective Courses		21.00
Total Units		**120.00**

3. Notes

A. A maximum of 6.00 units from courses offered by other Faculties and Schools may be counted toward the program and/or Plan requirements. This includes courses in BMED, COMM, GLPH, HSCI, LAW, NURS, and courses in the Faculty of Engineering and Applied Science.