

Physics

Year and Campus:	2016			
Coordinator:	A/Professor Harry Quiney School of Physics			
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Overview:	<p>The Physics major will provide students with a sound basis from which to pursue a broad range of careers in areas including research and development, education, and business. Graduates will gain a deep understanding of the physical world and develop skill in analysis, problem solving and critical thinking that will enable them to adapt to a wide range of tasks in research, teaching and management.</p> <p>This major will integrate knowledge principally from physics and mathematics to provide students with the necessary tools to think critically about the world around them and how it works. Students should develop a range of theoretical and experimental skills that will allow them to make critical assessments, solve problems, and develop new concepts in a broad range of work environments.</p>			
Learning Outcomes:	<p><i>Physics Major Graduates should demonstrate:</i></p> <ul style="list-style-type: none"> # well-developed understanding of the development of physical, mathematical, computational and conceptual models of natural phenomena and a detailed appreciation of the applicability and limitations of these models; # appreciation of the central role played by experimental observation in physics in the development of theoretical, mathematical, computational and conceptual models of natural phenomena; # ability to design an experimental programme and methods of analysis to test fundamental physical theories and to apply established physical principles to the development of new technologies and engineering solutions; # capacity to apply sophisticated mathematical and computational methods to solve a wide range of physical problems, including highly abstract fundamental issues and complex technological and engineering challenges; # recognition of the potential for wide-ranging , international inter-disciplinary collaboration in which the methods of physics are applied to chemical, biological, environmental, technological and engineering problems; # willingness to take a leading role in the application of the experimental , mathematical, computational, analytical and conceptual methods of physics to address complex issues currently facing society; # a collaborative approach to the solution of complex physical problems that recognizes the international character of research in physics; # recognition that physics is primarily dedicated to the unfettered pursuit of knowledge about natural phenomena and that the pursuit of this knowledge is of enduring historical, sociological, technological value that must be communicated in an accessible form to whatever audience requires it. 			
Structure & Available Subjects:	Completion of 50 points of study at Level 3.			
Majors/Minors/Specialisations	<p>There are two specialisations within the Physics major.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Major/Minor/Specialisation</th> </tr> </thead> <tbody> <tr> <td>Physics</td> </tr> <tr> <td>Chemical Physics</td> </tr> </tbody> </table>	Major/Minor/Specialisation	Physics	Chemical Physics
Major/Minor/Specialisation				
Physics				
Chemical Physics				
Notes:	<p>PLEASE NOTE: This major will be undergoing a change to its third year Physics subjects in 2017. Students wishing to undertake this major who have only completed first year Physics subjects must complete PHYC20012 Thermal & Quantum Physics, PHYC20015 Special Relativity & Electromagnetism and PHYC20013 Laboratory & Computational Physics 2 to be prepared for the major in 2017.</p>			

	PHYC20009, PHYC20010 and PHYC20011 should only be taken in 2016 by students who have already completed one or more of these subjects.
Related Course(s):	Bachelor of Science