

Bachelor of Science (Photonics)

Testamur Title of Degree:	Bachelor of Science (Photonics)
Abbreviation:	BSc (Photonics)
Duration:	3 years
Credit	120
Delivery Mode:	Online

Overview / Course Aims

Photonics is a rapidly developing area associated with the development of detectors, light sources and optical fibres to support research and development in a wide range of industries including optoelectronics, telecommunications and defence. This degree provides students with training, which combines skills in experimental and theoretical physics and electronics with a strong background in optics, electronics and computing necessary to begin a career in the photonics industry. It is structured around the existing core of Physics subjects.

Course Requirements

All students must complete the required number of credit points, and satisfy all course requirements for the degree. Refer to course structures below.

The Bachelor of Science (Photonics) normally takes three years to complete. All students must take particular notice of the Course Rules regarding minimum rate of progress.

The formal contact hours, methods of teaching and learning and forms of assessment vary from subject to subject. Details will be provided to students at the commencement of each subject by the subject coordinator. Students should attend all classes including lectures, tutorials and laboratory classes.

Honours

Students with a good academic record are encouraged to proceed to an Honours year, a fourth year of study providing training in independent research.

Further Studies Options

Graduates can apply for entry to Honours in Physics, then Master of Science - Research, or PhD.

Career Opportunities

Opportunities exist in teaching, administration, scientific communication, computing and research.

Photonics Course Program

SUBJECT		CREDIT POINTS
Year 1		
PHT101	Introductory Chemistry For Engineers*	5
PHT102	Procedural Programming*	5
PHT103	Mathematics 1A Part 1	5
PHT104	Fundamentals Physics A	5
PHT105	Introduction to Circuits and Devices	5
PHT106	Internet Technology 1*	5
PHT107	Mathematics 1A Part 2	5
PHT108	Fundamentals Physics B	5
* Three electives are required, these are examples		5

Year 2		
PHT201	Multivariate and Vector Calculus	5
PHT202	Linear Algebra	5
PHT203	Advanced Modern Physics	5
PHT204	Mechanics and Thermodynamics	5
PHT205	Differential Equations 2	5
PHT206	Complex Variables and Group Theory	5
PHT207	Electromagnetism and Optoelectronics	5
PHT208	Vibrations and Waves	5
PHT209	Photonics and Communication	5
Year 3		
PHT301	Telecommunications Networks 1	5
PHT302	Quantum Mechanics	5
PHT303	Electromagnetism	5
PHT304	Physics of Detectors and Imaging	5
PHT305	Advanced Photonics	5
PHT306	Statistical Mechanics	5
PHT307	Electronic Materials	5

