



2018 MAJOR – Physics

(Qualifying Major for Bachelor of Advanced Science)

Physics is the quantitative study of Nature at all scales, from elementary particles to the large space-time structure of the Universe. It encompasses both the search for the most fundamental laws of Nature down to the subatomic level, and the emergent phenomena in complex systems, such as material or biological systems. Physics is one of the oldest academic disciplines, and it remains today both an exciting field at the frontier of knowledge and a fundamental underpinning of all science and technology. An undergraduate degree in physics is generally recognised to be good training for a broad range of careers. It not only prepares students for graduate studies in physics and astrophysics, but when combined with appropriate courses in other disciplines it provides excellent preparation for a career, including biophysics, chemistry, engineering, geophysics, industrial research, finance, teaching and education, policy, medicine or law. Our program provides a solid foundation in physics and mathematics and introduces to the current research. It is taught by the leading experts in biophysics, condensed matter, mathematical physics, relativity and quantum information.



The table below is a suggested first year program guide to support your enrolment. Please make your selection of units after reviewing the requirements of your award in the 2018 Handbook:

www.handbook.mq.edu.au/2018/DegreesDiplomas/Degree/Bachelor+of+Advanced+Science

Suggested First Year			
Session 1, 2018		Session 2, 2018	
Unit Code	Unit Name	Unit Code	Unit Name
PHYS188 ~	Advanced Physics I		
PHYS107 *	Modern Mechanics	PHYS106	Electric and Magnetic Interactions
MATH132 or MATH135 *	Mathematics IA (Advanced) Mathematics 1A	MATH133 or MATH136	Mathematics IB (Advanced) Mathematics IB
Elective	CBMS or ENGG unit at 100 level	Elective	COMP or GEOS unit at 100 level
Elective	Choose a People or a Planet unit		

- You must also meet the general requirements for the degree for which you will qualify.
- ~ Note that PHYS188 is a full year 3 credit point unit, with a majority of the workload in Session 2.
- It may be possible to satisfy the requirements of your degree by taking a different selection of units in your first year from those suggested above. Other popular electives for Physics students include computing [COMP115, ISYS114], engineering [ENGG141], chemistry [CBMS172, CBMS108], and geology [GEOS112, GEOS126].
- * PHYS107 and MATH135 require HSC Mathematics Band 4 or higher. If you do not meet this prerequisite please seek academic advice by lodging a "Program Advice" enquiry via <http://ask.mq.edu.au>.



FIND OUT MORE
CONTACT: STUDENT CONNECT
LEVEL 2, MUSE C7A PHONE: 9850 6410
Macquarie University NSW 2109 Australia
Handbook.mq.edu.au

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- Consider what units you will want to study in second and third year. Prerequisite requirements for those units must be completed prior to enrolment in the higher-level unit. In the second year of the Physics major, students must complete PHYS201, PHYS202, PHYS246, MATH235, (MATH236 or MATH232) and it is this core set of units that forms the prerequisite units for 300-level Physics study. It is important to check the prerequisites for any planned 200- or 300-level elective units carefully, as they may require additional 100-level elective units.
- Bridging courses in Mathematics are available in February and are recommended for those without recent HSC study: <http://web.science.mq.edu.au/bridging-courses>
- For a double major complete required units for both majors where possible in the first year. If considering a double major consult the criteria found at www.handbook.mq.edu.au/2018/Majors.
- All students must complete one People unit and one Planet unit. Criteria and available units can be viewed at www.handbook.mq.edu.au/2018/Units/Planet and www.handbook.mq.edu.au/2018/Units/People.
- You can receive specific program advice from the faculty at any stage in your degree by lodging a “Program Advice” enquiry via <http://ask.mq.edu.au>.



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