



New Horizons Research Centre

## COURSE STRUCTURE

The degree offers a wide choice of advanced coursework units and a research project.

Coursework units can be chosen from:

- Quantum mechanics (compulsory), Advanced quantum mechanics
- Quantum fluids and many body theory
- Quantum field theory I and II, particle physics, classical electrodynamics
- Quantum information and quantum computing
- Condensed matter physics I and II, statistical mechanics
- Advanced statistical mechanics and critical phenomena
- X-ray optics, atom and quantum optics
- General relativity and cosmology, advanced observational astronomy
- Computational astrophysics, Magneto-hydrodynamics I and II
- Exoplanets, stars and stellar processes, high energy astrophysics
- Digital image processing, data science

For more information:  
[monash.edu/study/courses/find-a-course/2019/science-s6000](https://monash.edu/study/courses/find-a-course/2019/science-s6000)

## SCHOLARSHIPS

You may be eligible for a range of scholarships to support you with your Master's studies. The School of Physics and Astronomy offers the J. L. William Master's scholarships – named after a leading scientific instrument maker.

Monash University also provides many scholarship opportunities for students from disadvantaged groups and Indigenous backgrounds.

For more information:  
[monash.edu/study/fees-scholarships](https://monash.edu/study/fees-scholarships)

### Further information

[monash.edu/physics](https://monash.edu/physics)

#### Future student enquiries

Australian citizens, permanent residents and New Zealand citizens  
Tel: 1800 MONASH (666 274)  
Email: [future@monash.edu](mailto:future@monash.edu)  
[monash.edu/study/contact](https://monash.edu/study/contact)

#### International students

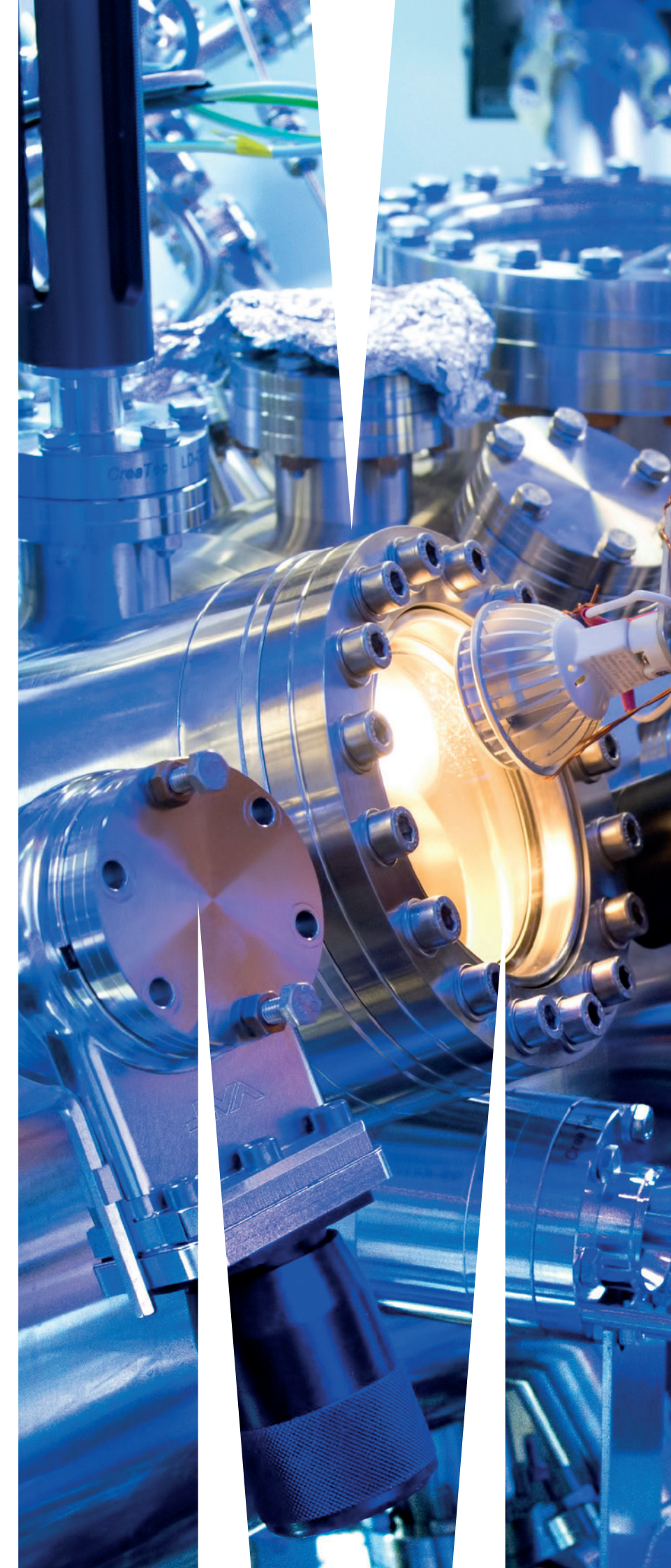
Australia freecall tel: 1800 181 838  
Tel: +61 3 9903 4788 (outside Australia)  
Email: [study@monash.edu](mailto:study@monash.edu)  
Wechat: MonashUniAus  
Youku: Monash 蒙纳士大学

[facebook.com/MonashUniScience](https://facebook.com/MonashUniScience)  
[youtube.com/user/ScienceMonashUni](https://youtube.com/user/ScienceMonashUni)

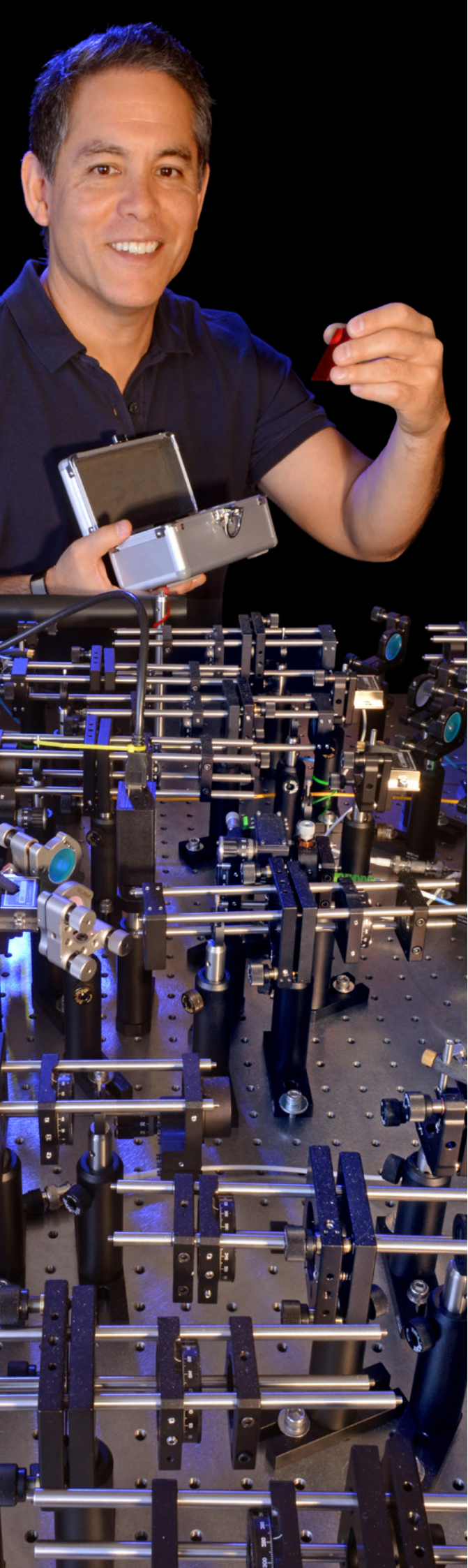


## MONASH MASTER OF SCIENCE IN PHYSICS

[monash.edu/physics](https://monash.edu/physics)







# MASTER OF SCIENCE IN PHYSICS

Physics encompasses both the foundational and the practical. It provides the basis for understanding the Universe and underpins many of our current technologies, e.g., wifi, next generation electronics, medical imaging, quantum computing, and complex systems, to name a few.

From atom to device and from molecule to organism, physics has a critical role to play in 21st century society. With our new specialised Master of Science in Physics degree you will become a highly trained scientist, with the tools and creative insights to make your own discoveries and the adaptability to navigate a rapidly changing technological world.

## COURSE DESCRIPTION

Our two-year program comprises advanced coursework and a research project leading to a major thesis in: observational astronomy, computational astrophysics, experimental physics, computational or theoretical physics.

Physicists use their knowledge and training in diverse careers including: macromolecular biology and drug design, medical imaging, synchrotron science, design of advanced materials, photonics, optoelectronics and lasers, climate modelling and meteorology, medical and scientific instrumentation, the energy industry, solar power, industrial product development, science teaching, and science communication.

## CAREER OPPORTUNITIES

Our graduates find employment in industry, hospitals and scientific organisations; recent examples include: Agilent, Optiscan, the Alfred Hospital, the Australian Synchrotron, the Australian Antarctic Division, CSIRO, the Australian Nuclear Science and Technology Organisation, the EPA, and many other organisations.

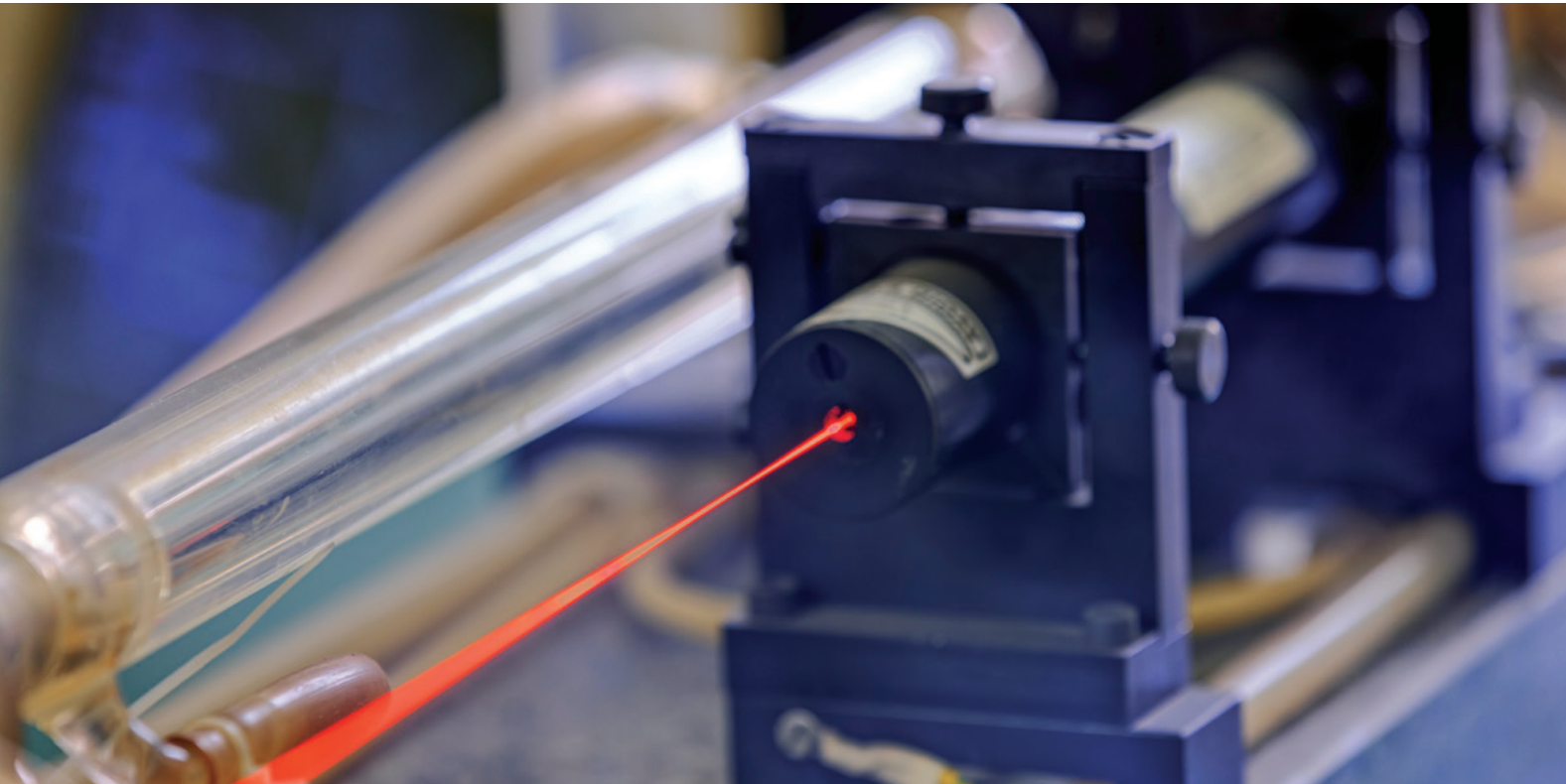
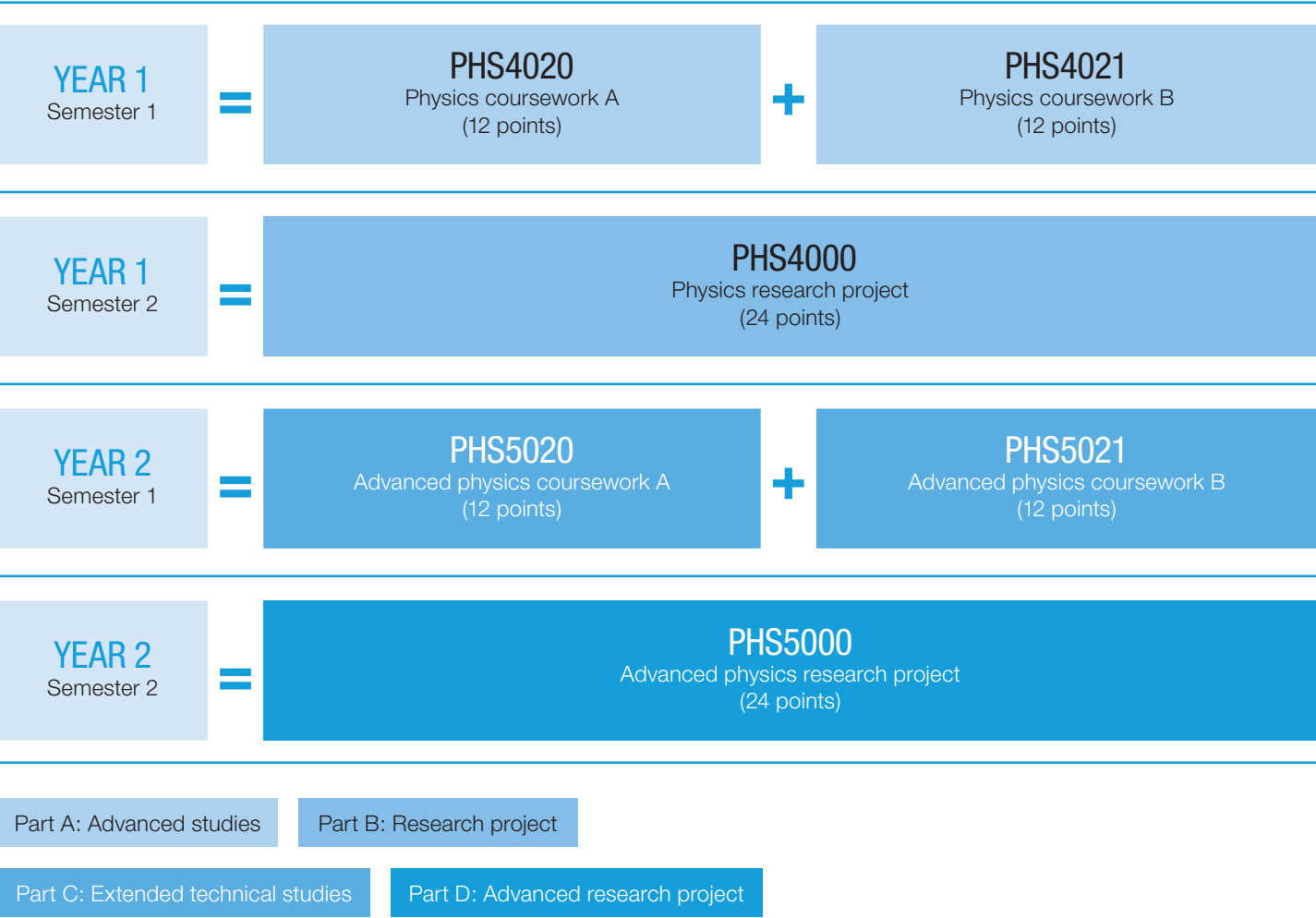
Many of our Master’s graduates proceed to further study, enrolling in a research Doctorate.

## FURTHER STUDY - RESEARCH PROJECTS

An important feature of the Master’s degree is the research project, which extends over two years and is devoted to exploring in-depth a contemporary topic in observational astronomy, computational astrophysics, experimental physics or computational/theoretical physics. For a full list of research projects visit:

[monash.edu/science/schools/physics/masters/masters-project](https://monash.edu/science/schools/physics/masters/masters-project)

# COURSE STRUCTURE



# ENTRY REQUIREMENTS

Entry Level 1  
96 points to complete.  
  
Duration  
2 years full-time, 4 years part-time.

An undergraduate degree (equivalent to an Australian undergraduate degree) with a major in physics or a related discipline with at least a 65% average or qualification/experience that the faculty considers to be equivalent.

Entry Level 2  
48 points to complete.  
  
Duration  
1 year full-time, 2 years part-time.

A four-year Australian honours degree (or equivalent) with a major in physics or a related discipline with at least 65% average or qualification/experience or a satisfactory substitute that the faculty considers to be equivalent.

### English requirements (Domestic)

Applicants must also meet the English language requirements.

### English entry requirements (International)

Level A			
IELTS (Academic English Only)	TOEFL (Internet-based)	Pearsons Test of English (PTE)	Cambridge Certificate of Proficiency in English (CPE) & Cambridge Certificate in Advanced English (CAE)*
6.5 Overall (no band lower than 6.0)	79 Overall Writing: 21 Speaking: 18 Reading: 13 Listening: 12	58 Overall (no band lower than 50)	176 Overall (no band lower than 169)

\*Test taken from January 2015 and onwards

### Fees

**International students**  
[monash.edu/study/courses/find-a-course/2019/science-s6000?international=true#entry-requirements-2](https://monash.edu/study/courses/find-a-course/2019/science-s6000?international=true#entry-requirements-2)

**Domestic students**  
[monash.edu/study/courses/find-a-course/2019/science-s6000?domestic=true#entry-requirements-2](https://monash.edu/study/courses/find-a-course/2019/science-s6000?domestic=true#entry-requirements-2)