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:

- Computational astrophysics (compulsory)
- Exoplanets, stars and stellar processes, high energy astrophysics
- General relativity and cosmology, advanced observational astronomy
- Magneto-hydrodynamics I and II
- Digital image processing, data science
- Quantum mechanics, 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

For more information:
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

MONASH University

Further information

monash.edu/physics

Future student enquiries
Australian citizens, permanent residents and New Zealand citizens
Tel: 1800 MONASH (666 274)
Email: future@monash.edu
monash.edu/study/contact

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

facebook.com/MonashUniScience
youtube.com/user/ScienceMonashUni

THE PLEIADES AWARDS Bronze 2016

Athena SWAN Member

The information in this brochure was correct at the time of publication (August 2018). Monash University reserves the right to alter this information should the need arise. You should always check with the relevant Faculty office when considering a course Produced by the Faculty of Science. Designed by SMC Monash.

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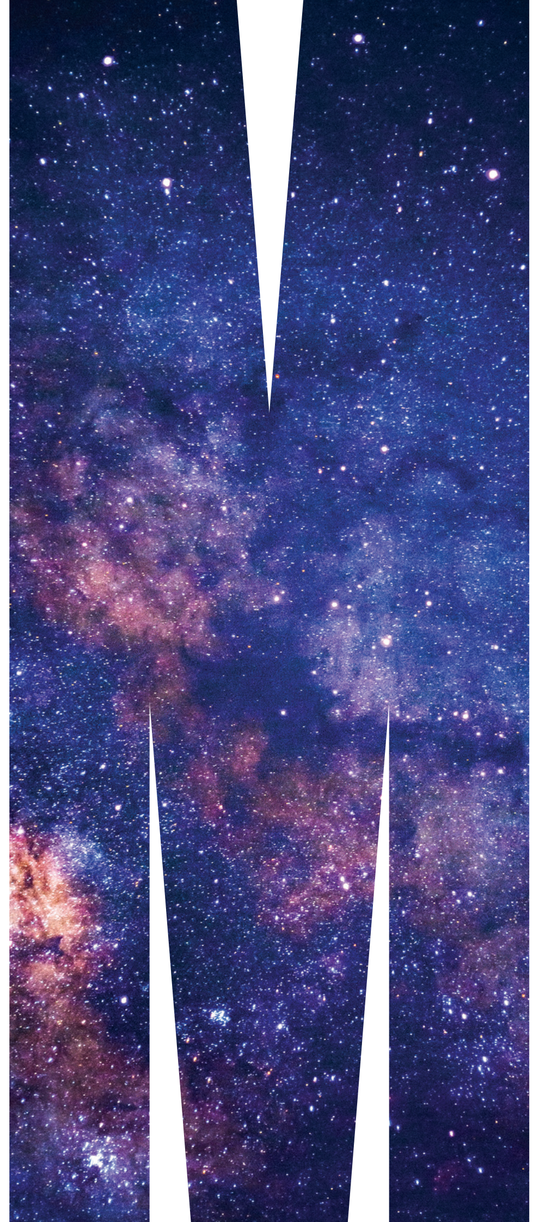
MONASH
PHYSICS

MONASH University

MONASH MASTER OF SCIENCE IN ASTROPHYSICS

monash.edu/physics

GROUP OF EIGHT AUSTRALIA



MASTER OF SCIENCE IN ASTROPHYSICS

Follow your passion for understanding the Universe with our new, specialised Master of Science in Astrophysics degree. This 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.

Future proof your career - graduates with a Master's degree in astrophysics are skilled in empirical reasoning, computational and theoretical modelling, problem-solving, analytical thinking, information handling, and written and spoken communication. They have advanced knowledge of AI/machine learning, scientific visualisation and big data analytics. These skills are highly sought by employers in a broad range of areas - from fundamental research to the industry sector, and even as far afield as banking, finance and patent law.

Astrophysicists use their knowledge and training in diverse careers including: medical imaging, synchrotron science, design of advanced photonic devices, managing astronomical observatories, 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, managing astronomical observatories, 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

COURSE STRUCTURE

YEAR 1 Semester 1	=	ASP4020 Astrophysics coursework A (12 points)	+	ASP4021 Astrophysics coursework B (12 points)
YEAR 1 Semester 2	=	ASP4000 Astrophysics research project (24 points)		
YEAR 2 Semester 1	=	ASP5020 Advanced astrophysics coursework A (12 points)	+	ASP5021 Advanced astrophysics coursework B (12 points)
YEAR 2 Semester 2	=	ASP5000 Advanced astrophysics research project (24 points)		

Part A: Advanced studies

Part B: Research project

Part C: Extended technical studies

Part D: Advanced research project

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 astronomy, astrophysics 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 astronomy, astrophysics 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

Domestic students
monash.edu/study/courses/find-a-course/2019/science-s6000?domestic=true#entry-requirements-2