

PHYSICS AND ASTRONOMY



UNDERGRADUATE COURSES

- ▶ Bachelor of Science
- ▶ Bachelor of Science Advanced (Honours) – Research
- ▶ Bachelor of Science Advanced (Honours) – Global Challenges
- ▶ 11 Double Degrees with a Bachelor of Science
- ▶ Bachelor of Applied Data Science
- ▶ Bachelor of Applied Data Science Advanced (Honours)

PHYSICS



Physics is the study of space and time, matter and energy. By carrying out experiments and developing conceptual models, physicists seek to provide a fundamental understanding of how our physical universe works. Physics ranges from the very practical, such as developing biomedical-imaging and optoelectronic devices, to asking curiosity-driven questions about the nature of reality or how complexity arises from simple constituents. Physics at Monash covers the full spectrum of subjects, from atom optics to X-ray science.

ASTROPHYSICS



Astrophysics aims to understand the universe and its composition through observations and the applications of physical laws. The phenomena we seek to explain include the distribution of matter on the largest scales, and the nature and behaviour of celestial objects; these objects include galaxies and quasars, stars and planets, comets, pulsars and black holes. Astrophysics links the smallest and largest scales in the universe, from The Big Bang to super clusters of galaxies. The subject deals with big questions, such as the ultimate fate of the universe and the possibility of extra-terrestrial life. We address these questions by using theory, observations made with the largest telescopes and calculations done on the world's largest supercomputers. Astronomical observations are made using a multitude of different telescopes located around the globe and in space.



UNIQUE OPPORTUNITIES

Hutton-Westford Observatory

Several optical telescopes to observe galaxies, star clusters and planets.

New Horizons Research Centre

A multi-disciplinary collaborative research environment.

Physics and Astronomy Collaborative Learning Environment (PACE)

A hands-on small group teaching and learning space.

Internships

Apply your skills in the workplace to gain professional experience.

International Experiences

Study overseas through an exchange, study abroad or the Global Immersion Guarantee.

Research Projects

Work closely with an academic supervisor to carry out an independent research project.

Society for Physics, Astro and Maths (SPAM)

Supplement your studies by joining this dedicated student-run club.



EXAMPLE FIRST YEAR COURSE MAP

PHYSICS

Semester 1	PHS1001 OR PHS1011	MTH1020 OR MTH1030 OR MTH1035 (depending on VCE background)	SCI1000 Science communication to influence change	Another science sequence OR Science elective (e.g. ASP1010) OR Non-science elective
Semester 2	PHS1002 (if studied PHS1001) OR PHS1022 (if studied PHS1011)	MTH1030 (if not already taken) OR MTH2010 OR MTH2015 (depending on VCE background)	Science elective	A unit to complete that science sequence OR Science elective (e.g. ASP1022) OR Non-science elective

Other science sequences:


Biology; Chemistry; Computational Science; Earth Atmosphere and Environment; or Psychology.




Scan here for all other first year example course maps.
monash.edu/science/current-students/manage-your-science-studies/example-by-major

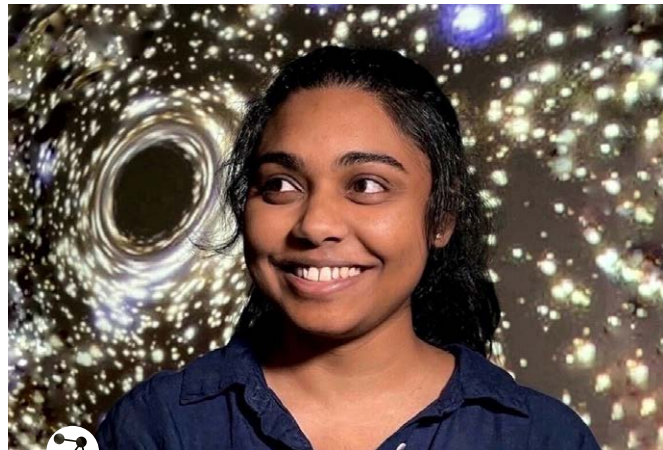
POTENTIAL CAREERS


- ▶ Accelerator physicist
- ▶ Acoustics scientist
- ▶ Applied physicist
- ▶ Astronomer
- ▶ Astrophysicist
- ▶ Atmospheric physicist
- ▶ Biophysicist
- ▶ Data scientist
- ▶ Electron microscopist
- ▶ Energy consultant
- ▶ Financial analyst
- ▶ Forensic physicist
- ▶ Industrial physicist
- ▶ Instrumentation physicist
- ▶ Machine learning scientist
- ▶ Materials scientist
- ▶ Nuclear physicist
- ▶ Optical physicist
- ▶ Particle physicist
- ▶ Patent attorney
- ▶ Physics teacher
- ▶ Radiographer
- ▶ Science journalist
- ▶ Synchrotron scientist
- ▶ Telecommunications specialist





HARRISON
Degree: Bachelor of Science /
 Bachelor of Information Technology
Majors: Astrophysics and Games Development
Job: Software Engineer at Nominal Systems





SHANIKA
Degrees: Bachelor of Science Advanced – Research (Honours)
 and PhD Science
Majors: Astrophysics and Physics
Job: Astrophysicist at Observatoire de la Côte d'Azur, France



Scan here for the full school brochure.



Your Essential Guide to Monash Science
monash.edu/science/future-students/your-essential-guide-domestic-students