PHYSICS

UOW COURSES IN
MEDICAL AND RADIATION PHYSICS / NUCLEAR SCIENCE AND TECHNOLOGY / FUNDAMENTAL PHYSICS
PHYSICS TAKES YOU TO THE UNIVERSE AND BEYOND

You'll learn useful, transferable general skills like how to analyse problems within abstract frameworks and develop methods to solve them. Studying physics is a passport to work anywhere in the world.

FIVE REASONS TO STUDY PHYSICS AT UOW

1. PHYSICS TAKES YOU TO THE UNIVERSE AND BEYOND

Physics teaches you highly transferable skills that enable analysis and optimisation across many industries. You'll learn problem-solving, critical thinking and analytical skills that are in demand across all government and private sectors. We have a range of physics degrees, all fully accredited by the Australian Institute of Physics.

2. PROBLEM-SOLVING FOR ALL INDUSTRIES AND SECTORS

Physics teaches you how to think critically and solve problems across various industries and sectors. You'll develop analytical skills that are in high demand.

3. CLOSE INDUSTRY TIES MEANS STRONG EMPLOYABILITY

Our Medical and Radiation Physics (MRP) program is backed by clinical associations with local and Sydney hospitals—over 50% of current practising medical physicists in NSW were educated and trained at UOW. Our strong ties with industries and government labs such as ANSTO and CSIRO ensure you receive industry exposure throughout your degree.

4. ACCESS TO OPPORTUNITIES

High achieving students receive financial rewards as well as accelerated and more independent learning opportunities such as summer scholarships where you get to work on real research projects. You can access advanced degrees and double degrees that will open up a world of opportunities.

5. LEARN FROM WORLD LEADING ACADEMICS

When you study at UOW you join a community made up of leading researchers and teachers in fundamental physics, medical and radiation physics, and nuclear science and technology. You will work alongside these world-class academics and learn about the very latest developments in the field of physics.
THE PHYSICS PROGRAM AT UOW

The School of Physics offers mainstream and advanced degrees in fundamental physics, medical radiation physics and nuclear science and technology.

Double degrees with a large variety of science and non-science disciplines are also offered to prepare students for multidisciplinary careers. Our core physics lecture content is delivered by academics who are internationally recognised in many fields of physics research including medical and radiation physics, solid state physics, photonics and education.

All subjects include a major practical component to complement and reinforce what you learn in lectures, and ensure you gain hands-on skills to prepare you for real-life activities within your future career path.

We offer high-performing students opportunities to embark upon focused research projects throughout your degree at the University of Wollongong main campus, Innovation Campus, as well as with national and international industrial and clinical collaborators. This first-hand exposure and direct contact with active researchers in these areas ensure you will have a wealth of positive experiences prior to graduating.

BACHELOR OF MEDICAL AND RADIATION PHYSICS

go.uow.edu.au/bmrphys

ATAR: 80
DURATION: 3 years
STARTS: Autumn (February), Spring (July)
LOCATION: Wollongong
UAC: 757806
CRICOS: 052461G

BACHELOR OF MEDICAL AND RADIATION PHYSICS ADVANCED (HONOURS)

go.uow.edu.au/bmrphys-adv

ATAR: 95
DURATION: 4 years
STARTS: Autumn (February), Spring (July)
LOCATION: Wollongong
UAC: 757803
CRICOS: 032584F

WHAT YOU STUDY

When you study to become a medical physicist at UOW, we will make sure you get much more than a theoretical education. You’ll learn where medical physics matters most: in hospitals, clinics and nuclear science research facilities. Learn about nuclear medicine, radiotherapy physics, radiation transport physics modelling, detector and instrumentation physics, and data analysis.

If you continue your studies to an Honours or Master degree, you will learn about nuclear medicine, radiobiology and radiation protection in hospitals.

To ensure the highest level of industry engagement, professional medical physicists from major hospitals and keynote speakers from industry will deliver key lectures and practical work as well as co-supervise research projects.

In second year, you will gain hands-on experience in photon, neutron and charged particle physics in the undergraduate physics laboratories, as well as make field trips to accelerator facilities such as the Australian Nuclear Science and Technology Organisation (ANSTO). In third year, you will have further lectures and practical experience, particularly in electron and X-ray related medical physics at cancer treatment centres and ANSTO.

Our Medical and Radiation Physics (MRP) program is backed by clinical associations with local and Sydney hospitals—over 50% of current practising medical physicists in NSW were educated and trained at UOW. Our strong ties with industries and government labs such as ANSTO and CSIRO ensure you receive industry exposure throughout your degree.

ACCREDITATION

The Bachelor of Medical and Radiation Physics degree conforms to the requirements for membership of the Australian Institute of Physics and the Australasian College of Physical Scientists and Engineers in Medicine.

“I am a beamline scientist at the Australian Synchrotron’s Imaging and Medical Beamline (IMBL) in Melbourne. My main role is leading IMBL’s microbeam radiation therapy (MRT) project. MRT is an experimental radiotherapy technique which has demonstrated reduced toxicity to healthy tissues compared to conventional radiotherapy.

“My degree at UOW gave me many opportunities to gain insight into the world of research through hands on practical work, external facility visits, research projects and summer research programs. During both my undergraduate and postgraduate degrees I had opportunities to be involved in local and international collaborations, conduct research at state-of-the-art international facilities and attend conferences to present my research and network with professionals in the field.”

JAYDE LIVINGSTONE
Scientist, Australian Synchrotron
Doctor of Philosophy
Bachelor of Medical and Radiation Physics Advanced Honours

Medical and radiation physicists work in many different fields of health care. You could be using X-rays, ultrasound, light in various frequencies, magnetic resonance imaging and nuclear medicine to look at or measure what is happening in the body. You could develop and administer new treatments for patients using new therapies such as ultraviolet radiation or photo stimulated cytotoxic.

Medical and radiation physicists work in many different fields of health care. You could be using X-rays, ultrasound, light in various frequencies, magnetic resonance imaging and nuclear medicine to look at or measure what is happening in the body. You could develop and administer new treatments for patients using new therapies such as ultraviolet radiation or photo stimulated cytotoxic.
PHYSICS

BACHELOR OF SCIENCE

BACHELOR OF SCIENCE
ADVANCED (HONOURS) (PHYSICS)

going.uow.edu.au/bsci-phys

PHYSICS

MAJORS

NUCLEAR SCIENCE AND TECHNOLOGY

going.uow.edu.au/bsci-rntech

ADVANCED DEGREES

The Advanced Science degrees are designed to provide an enriched education experience and to encourage high achievers to continue on to studies in Honours and research. Advanced degree students receive the following privileges:
- Access to the Summer Scholarship program where you get paid to work on a specific research project for 10 weeks and are paid as a research assistant
- Access to a wider range of subjects
- $500 annual study grant

All Advanced Degree students must maintain an average mark of 80 in every session to remain in the degree.

SCHOLARSHIPS

- Vice-Chancellor’s Academic Excellence Scholarship $3,000 for first year
- Engineering and Information Sciences Academic Achievement Scholarship $3,000 for first year
- Engineering and Information Sciences Academic Excellence Scholarship $3,000 p.a. for 2 years
- Advanced Degrees $500 annually* unlimited
- Women in Engineering and Information Sciences Scholarship $3,000 varies

*grant is for the duration of degree, and includes summer scholarships and extended building access.

Evan Constable
Postdoctoral Research Fellow, Institut Néel, France
Bachelor of Science Advanced (Honours) (Physics) 2010
Doctor of Philosophy 2015

"I’ve always had a desire to understand why things are the way they are, and studying Physics at UOW helped me discover how the universe works.

“The teaching staff were always available to give one-on-one guidance, and the education quality was world class. The fundamentals I learnt in my undergraduate degree and the practical skills I learnt in my postgraduate degree have been essential to my role as a scientist.

“Now I’m living in France and being paid to do the science I really enjoy. What more could I ask for?”

"The teaching staff were always available to give one-on-one guidance, and the education quality was world class. The fundamentals I learnt in my undergraduate degree and the practical skills I learnt in my postgraduate degree have been essential to my role as a scientist.

“Now I’m living in France and being paid to do the science I really enjoy. What more could I ask for?”
SEE US FOR YOURSELF

This book is just a part of who we are and what we do. Come and meet us face to face, and we’ll show you why UOW is the place for you.

2015 UOW OPEN DAY Saturday 15 August
FREE CAMPUS TOURS Every Friday, 10am and 3pm

GET IN BRIGHT AND EARLY

Would you like to secure your place at UOW before you sit your HSC exams? Our Early Admission program can help you get there.

uow.edu.au/future/early-admission

ENGINEERING AND INFORMATION SCIENCES

+61 2 4221 3491
eis@uow.edu.au
uow.edu.au/study/physics
eis.uow.edu.au

GENERAL ENQUIRIES

uow.edu.au/future
Within Australia: 1300 367 869
International: +61 2 4221 3218
futurestudents@uow.edu.au
facebook.com/uowfuture