

# Bachelor of Medical & Radiation Physics

CAMPUS	DURATION	ATAR - SR	IB	UAC	CRICOS	STARTS IN
 Wollongong	3yrs/4yrs ADV	80/95 ADV*	28/37 ADV*	757616/757603 ADV	052461C/ 085499J ADV	Session 1 (February) Session 2 (July)

ADV Advanced option available.  
\* This rank is the minimum ATAR - SR or IB required for consideration and does not provide guaranteed entry.

Medical and radiation physicists work in many different fields related to human health in order to improve the quality of life.

Radiation medicine includes various forms of therapeutic radiation oncology, different methods of diagnostic radiation imaging. Medical and radiation physicists are experts in ionising and non-ionising radiation used for radiation medicine. They are also experts in the mechanisms of how such radiation interacts with the human body and radiation protection. In hospitals, their role is to work closely with radiologists, radiation oncologists, nuclear technologists and radiotherapists. They are experts in medical radiation technology for radiation medicine. In industry, they invent exciting new technologies to continually improve hardware and software for the diagnosis and treatment of human diseases.

#### THIS DEGREE

The Bachelor of Medical and Radiation Physics degree is a very hands-on degree, with large practical components within all subjects to complement the underlying theoretical physical principles. Many practicals are completed in a hospital.

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.

#### WHAT YOU WILL STUDY

You will learn where medical physics matters most: in hospitals, clinics and nuclear science research facilities. In this course you will gain knowledge in the following areas:

- Anatomical and nuclear medicine imaging technology and techniques
- Radiation transport physics modelling, and treatment planning
- Medical radiation detection and instrumentation physics
- Critical thinking, programming and data interpretation / analysis
- Radiotherapy physics, radiobiological physics
- Radiation protection

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 the third year, you will also gain practical experience, particularly in electron and X-ray related medical physics at cancer treatment centres and ANSTO.

#### ACCREDITATION

Accredited by the Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM), USA Commission on Accreditation of Medical Physics Education Programs (CAMPEP) and the Australian Institute of Physics (AIP).

For more information visit  
[uow.info/phys-med](http://uow.info/phys-med)



UNIVERSITY  
OF WOLLONGONG  
AUSTRALIA

# Why choose this course

## LEARN FROM THE BEST

When you study at UOW you join a vibrant community made up of leading fundamental physics and medical radiation physics researchers and teachers. You'll be part of the highly regarded UOW School of Physics that is ranked "above world standard performance" by Excellence in Research for Australia (ERA) in Condensed Matter Physics and Medical Radiation Physics.

UOW's Medical Radiation Physics (MRP) program education and training program is the largest in the southern hemisphere. UOW MRP alumni currently practise in clinics all over the world.

## SET UP FOR SUCCESS

Our MRP program is complemented by the UOW Research Powerhouse, the Centre for Medical Radiation Physics and is backed by clinical associations with numerous hospitals. Hundreds of practising medical physicists globally were educated and trained at UOW. Strong ties with industries and government labs ensure you receive industry exposure throughout your degree.

Graduates have a strong background in physics as well as specialist theoretical, practical and programing skills in radiation medicine that are necessary for entry employment in hospital Radiation Therapy, Diagnostic Imaging and Nuclear Medicine departments, as well as medical technology sales and marketing companies.

## ENTRY REQUIREMENTS

Assumed Knowledge: Any 2 units of English, HSC Mathematics (not Mathematics General 2), Physics. (Physics bridging courses held in February each year).

Recommended Studies for Advanced Programs: HSC Mathematics Extension 1, English Advanced.

## CAREERS

- Radiation Oncology Medical Physicist
- Diagnostic Imaging Medical Physicist
- Medical Physics Researcher
- Radiation Oncologist
- Medical Radiation Physics Instrumentation Sales & Marketing
- Radiation Protection Officer
- Radiographer
- Medical Radiation Technologist
- Nuclear Medicine Technologist
- Patent Officer
- Detector & Instrumentation Physicist
- Medical Imager
- Radiation Transport Physics Modeller



My education at UOW provided a strong foundation for me to where I am today. There is a huge advantage in the amount of clinical work that we do as part of our degree. This is the kind of practical experience and knowledge that makes you valuable to employees.

—  
**Nicole**

Product Owner at Thales, Germany  
Bachelor of Medical and Radiation Physics (Honours)

## BELONG TO ONE OF THE BEST

### 1st in NSW

UOW Science and Mathematics ranked number 1 university in NSW for overall quality of educational experience in the Good Universities Guide 2020.

### Top 175

In the 2020 Times Higher Education (THE) World University Rankings, UOW ranked in the 151-175 band for physical sciences.

## Key dates

- UOW Early Admission Apps open **20 Jul - 14 Aug**
- UOW Virtual Open Day **8 Aug**
- UAC Early Bird Applications close **30 Sep**
- UAC December Round 2 offers close **17 Dec**

## Learn more

[uow.info/phys-med](http://uow.info/phys-med)



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