

## The Radiographer (Medical Imaging Technologist)

### General Information

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### What is a Radiographer?

A radiographer or medical imaging technologist is a trained health professional who performs medical imaging by producing high quality X-ray pictures or images used to diagnose and treat injury or disease. It is an important part of medicine and a patient's diagnosis and treatment is often dependent on the X-ray images produced.

### What does a Radiographer do?

A radiographer is an important member of the diagnostic health care team. They are responsible for producing high quality medical images that assist medical specialists and doctors to diagnose or monitor a patient's injury or illness.

They operate extremely technologically advanced equipment such as CT (computed tomography), MRI (magnetic resonance imaging) and mobile X-ray machines. Their roles are diverse and challenging, as radiographers are often trained in several specialist areas such as:

- *Trauma radiography* - challenging examinations on injured individuals.
- *Mobile radiography* - for patients too sick to travel to the X-ray department.
- *Computed tomography* - three dimensional X-ray imaging test.
- *Magnetic resonance imaging* - three dimensional imaging test powered by a large magnet.
- *Fluoroscopy* – X-ray test that examines the internal body and shows moving images on a screen like a movie.
- *Angiography* - imaging of blood vessels and the heart.
- *Operating theatre* - assisting surgeons during operations with special X-ray equipment.

Radiographers need to show care, compassion and empathy to their patients. Whilst the role is highly technical, radiographers focus their efforts on patient care and welfare to ensure positive patient experiences. The radiographer works in a highly advanced technical profession that also requires excellent people skills. It is an exciting and rewarding profession to be a part of.

Radiographers have an extremely thorough understanding of the structure of the body, how the body can be affected by injury, and causes and effects of disease when taking X-ray images. However, they are not responsible for interpreting the images they produce. This is the role of a radiologist, who is a specialist doctor with a medical degree, and who has also completed clinical training and then specialised in interpreting images and writing a diagnostic report for referring doctors. Radiologists rely on the input of radiographers and there is a very close working relationship.

Radiographers work in a variety of situations including radiography/medical imaging departments of large public hospitals with busy emergency departments, private hospitals and large and small private radiology practices, sometimes with only a couple of rooms and a few staff.

Radiology or medical imaging departments are extremely safe places to work and to spend time in. There are state and federal regulations governing safe work practices and radiation safety within all X-ray departments and private imaging clinics. See [Radiation Risk of Medical Imaging in Adults and Children](#) for more information.

### Why become a Radiographer?

A radiographer's role is challenging, rewarding and highly skilled. Radiographers become part of a vital group of medical professionals with specialist training and highly developed skills. There is significant patient contact and a radiographer plays an important part in improving patient outcomes and experiences. The profession offers excellent career prospects with qualified staff in high demand. There are many benefits in becoming a radiographer such as:

- Excellent job prospects in a highly skilled and rewarding job.
- The opportunity to work in a diverse range of specialist areas, e.g. CT, MRI, etc.
- Using cutting edge technology.
- On-going training (radiographers are constantly improving their knowledge and skills).
- Great travelling opportunities (radiographers are in high demand both nationally and internationally).
- A financially rewarding career.
- Flexible working arrangements (full-time, part-time and locum work is available).

### How do you become a Radiographer?

A radiographer must become a graduate of a Medical Imaging Degree program. There are several courses throughout Australia available to prospective radiography students. The admission requirements vary between universities. Generally there are options available for school leavers, non-

school leavers, mature students and overseas students.

All courses demand a high degree of academic study, as well as clinical expertise in routine and advanced medical imaging procedures. Most courses are three years in duration with a graduate needing to undertake one year of mentored clinical experience to complement their university studies (called an intern year). This intern year may vary in duration, structure and name depending on the State and university.

The [Australian Institute of Radiography](#) website has more information about radiographers.

## Where does a Radiographer study?

Diagnostic radiography courses are available in most states in Australia. The Universities currently running the courses are:

### NSW:

- The University of Newcastle:  
([www.newcastle.edu.au/](http://www.newcastle.edu.au/))
- The University of Sydney:  
([www.fhs.usyd.edu.au/mrs/](http://www.fhs.usyd.edu.au/mrs/))
- Charles Sturt University:  
([www.csu.edu.au/faculty/science/](http://www.csu.edu.au/faculty/science/))

### VIC:

- RMIT University:  
([www.rmit.edu.au/medical-sciences](http://www.rmit.edu.au/medical-sciences))
- Monash University:  
([www.med.monash.edu.au/radiography/](http://www.med.monash.edu.au/radiography/))

### QLD:

- Queensland University of Technology:  
([www.sci.qut.edu.au/](http://www.sci.qut.edu.au/))

### SA:

- University of South Australia:  
([www.unisa.edu.au/hls/](http://www.unisa.edu.au/hls/))

### WA:

- Curtin University of Technology:  
([www.medicalimaging.curtin.edu.au/](http://www.medicalimaging.curtin.edu.au/))

## What else can a Radiographer do?

One of the greatest benefits in this profession is the variety and scope for progression. Apart from performing plain examinations like chest X-rays, radiographers have the opportunity to become expert in areas like CT, MRI, angiography, fluoroscopy, trauma (injury) radiography, mobile radiography, and operating theatre radiography. Radiographers also have the opportunity to take on roles in the following areas:

- *Clinical leadership* - within most environments there are supervisory positions and clinical education (tutoring) careers for experienced staff.
- *Corporate management* - Radiographers are recruited to management roles.
- *Education* - university lecturing (see section above on *Where does a Radiographer study?*).
- *Research* - advanced qualifications in research such as graduate diplomas, masters degrees, and PhDs can be pursued by radiographers or medical imaging technologists.
- *Corporate applications* - Radiographers are recruited by radiographic equipment companies to train users in clinical practice.
- *Corporate sales* - X-ray equipment companies require radiographers to sell their equipment to private radiology groups and hospitals.
- *Sonography* - many radiographers choose a career in sonography (a person who performs diagnostic ultrasound procedures). This does require further training and the completion of a graduate diploma.
- Some radiographers run their own business in partnership with other imaging professionals like radiologists.

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