Key Information

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<tr>
<th>UCAS CODE</th>
<th>TYPICAL OFFER</th>
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<td>B821</td>
<td>ABB-BBC: 32-28</td>
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For further details on all our entry requirements, please see our Radiography pages at www.exeter.ac.uk/undergraduate/degrees/radiography

Streatham Campus, Exeter
Website: www.exeter.ac.uk/radiography
Email: radiography@exeter.ac.uk
Phone: +44 (0)1392 724149

I joined the University of Exeter in August 2009 and have been made very welcome. The course offered here at Exeter aims to combine clinical and academic excellence. We believe that the patient or client is of utmost importance and so we provide extensive clinical experience to ensure our students are truly competent and confident when they graduate and ready to become committed, caring healthcare professionals. The combination of clinical placements, with a sound academic base, ensures that our students have an excellent understanding of the science that underpins medical imaging. This means when you graduate you’ll be equipped to pursue a variety of career options amid a rapidly changing environment.

Sue McAnulla, Programme Lead: BSc (Hons) Medical Imaging (Diagnostic Radiography)
Why study Diagnostic Radiography at Exeter?

Diagnostic Radiographers fulfil an essential role in the modern healthcare setting, using their skills and knowledge to produce detailed, high-quality anatomical and physiological images of what is happening within the human body. These images are used to aid in diagnosis of injury and disease thereby ensuring that prompt, effective treatment is given.

The world of radiography and the role of the radiographer is constantly changing and developing. The equipment used undergoes continual development and so radiographers need to be able to keep up to date with the latest technological advances. The role of the radiographer has expanded to include reporting on the images produced, providing a written interpretation of any abnormalities seen, and administering contrast agents (a type of dye) by means of an intravenous injection. A new career pathway for radiographers was introduced following a government-led initiative, Agenda for Change. This new pathway introduced Advanced Practitioner and Consultant Radiographer roles to reward clinical expertise and knowledge.

Diagnostic radiographers work in many different branches of Medical Imaging including:

- **Radiography**
  Radiography is the production of a ‘radiograph’ using x-rays. It encompasses a wide range of techniques used throughout the hospital. A radiographer uses their skills and knowledge to modify standard techniques to accommodate the variety of patients encountered, for example, in Accident and Emergency, in theatre and on the wards, as well as the Radiology Department.

- **Fluoroscopy**
  Fluoroscopy is an x-ray technique used to produce a combination of dynamic (moving) and static images. It is usually used in combination with a contrast agent (dye) that has been introduced into the body in order to clearly delineate certain structures such as the gastrointestinal tract or blood vessels.

- **Computed Tomography (CT)**
  This technique uses x-rays in conjunction with a specialised computer to produce cross-sectional images of the body. Modern computers enable the manipulation of the data recorded by the scanner, to allow the images to be reformatted in other planes or viewed as a three-dimensional image.

- **Ultrasound**
  Ultrasound uses high frequency sound to look at certain structures within the body. It is most commonly associated with monitoring the development of the embryo throughout pregnancy but it is also used to look at other structures such as the heart, organs within the abdomen and pelvis, and to evaluate blood flow in vessels.

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**7th in the UK for overall satisfaction in Medical Technology in the National Student Survey (2009)**

Programme accredited by the Society and College of Radiographers and the Health Professions Council.

Tuition fees are paid by the NHS for home applicants.

Means-tested NHS bursaries available for students satisfying residency requirements.

Clinical placements in Radiology Departments in 10 hospitals across Cornwall, Devon, Dorset and Somerset.

Inter-professional learning and common foundation course with other allied health professionals.

Based on the average of positive responses for full service universities (ie, excluding specialist colleges).
Nuclear Medicine (Radioisotope Imaging)

This technique uses gamma-rays rather than x-rays. The substance that produces the gamma-rays is called a ‘radio-pharmaceutical’: a radioactive isotope which is usually bound to another pharmaceutical agent and then introduced into the body. The type of pharmaceutical agent used determines which organs in the body will take up the radio-pharmaceutical. Taking images that demonstrate how the radiopharmaceutical has been taken up means that the function of the organ can be assessed. This technique can be used on many different body systems including the renal system, bone and the heart.

Magnetic Resonance Imaging (MRI)

This method requires the patient to lie inside a very strong magnet and utilises the magnetic properties of the individual hydrogen atoms within the body. MRI is used to produce detailed images of soft tissue structures within the body including the brain, spine, joints, and the abdominal-pelvic organs.

Further information on Diagnostic Radiography can be found at:
www.radiographycareers.co.uk
www.sor.org
www.nhscareers.nhs.uk

Radiography at Exeter

Our BSc (Hons) in Medical Imaging (Diagnostic Radiography) aims to ensure that, on graduation, you have the skills required to successfully embark on a career as a Diagnostic Radiographer and to be eligible to apply for registration with the Health Professions Council (HPC). We aim to educate radiographers to be caring professionals, able to empathise with patients and offer high levels of patient care, while being confident in their technical ability through a strong academic foundation and able to work effectively in a multi-professional environment.

The programme is based within the School of Physics on the Streatham Campus. Specialist facilities for radiography include a diagnostic x-ray room with digital imaging facilities (computed radiography) where practical work is undertaken; and laboratories for computing and practical physics work, for putting theory into practice. In addition the University has a research MRI scanner at the St Luke’s Campus in Exeter within the Peninsula Magnetic Resonance Research Centre.

Degree programmes

For up-to-date details of all our programmes and modules, please check
www.exeter.ac.uk/radiography

BSc Medical Imaging (Diagnostic Radiography)

This full-time three-year programme includes clinical placements which stretch into the summer vacation and as such this programme is longer than those in other subjects (please refer to diagram opposite). This enables us to provide both the academic and practical content in sufficient detail to ensure that at the end of three years you are competent to start work as a Diagnostic Radiographer. On graduation you will be eligible to apply for registration as a Diagnostic Radiographer with the Health Professions Council and for membership of the Society and College of Radiographers.

Details of the modules you will study each year can be found at the back of this brochure.

Year 1: This year provides a foundation in the theoretical knowledge and practical skills required for radiography. Academic study provides theoretical knowledge of patient care, anatomy, imaging techniques, professional practice and the science that underpins medical imaging. This academic knowledge is then complemented with a clinical placement that provides practical experience in the safe and effective practice of general and fluoroscopic radiography.
Year 2: Drawing upon the knowledge and skills learnt in year one, year two develops further understanding of anatomical and physiological concepts in contemporary clinical imaging practice. You will develop your knowledge of radiation science and gain an appreciation of safe and optimal use of radiation-based imaging techniques. The year two clinical placement provides further practical experience of the safe and effective practice of general and fluoroscopic imaging and introduces interventional radiography and other imaging modalities.

Year 3: The final year builds upon the knowledge and skills established in the previous two years. You will integrate theory with practice by drawing on your prior experience of imaging modalities, and re-interpreting your knowledge of imaging within a scientific framework. During the third clinical placement you will become an integral member of the multi-professional healthcare team. You will have responsibility for organising your working day and liaising with staff in other departments, and will gain experience of managing an inter-professional team.
Learning and teaching

Our teaching encompasses a range of methods, combining traditional lectures and practical work with tutorials both at the University and on placement. The academic blocks provide you with the underpinning theory, linked to practice. We aim to develop you as an independent learner, equipping you with the skills to support yourself in lifelong learning throughout the entirety of your career.

Inter-professional learning is integrated into the programme. This takes a variety of forms, both on placement and at the University. Our inter-professional partners are the University of Plymouth and the University College Plymouth St Mark and St John, through the Peninsula Allied Health Collaboration. Our aim is to provide you with experiences and insights that will promote an ethos of multi-professional team working within the clinical setting.

Clinical placements
The clinical placements are within Radiology Departments in one of our 10 placement hospitals: Barnstaple, Bournemouth, Plymouth, Dorchester, Poole, Exeter, Taunton, Torbay, Truro and Yeovil. You will spend time at a different placement site each year in order to ensure you get a wide range of clinical experience whilst exploring all that the South West has to offer. During your first placement you will be working from 9.00am until 5.00pm for four and a half days per week. In the second and third years you will undertake some weekend and out-of-hours duties. You will always be supervised by a qualified member of staff. If you are eligible to apply for a NHS bursary you may be able to get financial assistance with travel and accommodation costs during your clinical placements.

Research-led teaching
We believe every student benefits from being part of a research-led culture and being taught by experts – you will discuss the very latest ideas in seminars and tutorials and become actively involved in research yourself.

Research plays an important part in developing patient care and radiography as a whole for the future. You will be taught by staff who are at the cutting edge of their research areas which ensures you receive the most up-to-date knowledge. During your third year you will undertake a research project in which you will investigate a particular aspect of radiography in detail and may have the opportunity to work alongside research staff on current clinical projects.

Facilities
Within the Department we have a fully functional diagnostic x-ray room. As a student you’ll carry out practical work using this equipment, including positioning and radiographing high-tech teaching mannequins and undertaking quality control checks. You’ll also conduct a variety of experiments such as investigating the use of filters and exploring the impact of angulation on image quality and dose. You will also have the opportunity to use the equipment for your third year research project.

The x-ray room also accommodates two ultrasound machines, and a resolution and doppler string phantom which you can use for undertaking your research projects. Other University research and teaching facilities include a magnetic resonance imaging scanner, a dual energy x-ray absorptiometry scanner, and quantitative ultrasound scanners providing researchers and students alike with rich resources for learning and research.

Assessment
Assessment is carried out via a combination of continuous assessment (both academic and clinical) and examinations. The ratio of continuous assessment to examinations is approximately 5:4. You must pass your first year assessment in order to progress to the second year, but the results do not count towards your degree classification. The assessments in the second and third years all contribute to your final degree classification. In your final year you will undertake a research project which will count for 25 per cent of the year’s marks. Projects provide an opportunity for you to link your clinical experience with the world of research and enable you to demonstrate to employers your depth of knowledge underpinning your practical skills.

Academic support
We are strongly committed to offering high levels of student support. You will have a Personal Tutor at the University and during your clinical placements you will be visited fortnightly by a Clinical Tutor who will offer both personal and academic support.
Funding

All students who fulfil residency requirements will have their tuition fees paid by the NHS and are eligible to apply for a means-tested NHS bursary. For more information, contact the NHS Student Grants Unit: www.nhsstudentgrants.co.uk; tel: +44 (0)845 358 6655; email: nhs-sgu@ukonline.co.uk

Careers

A radiography degree is a passport to an interesting job and a fulfilling career. Starting salaries are over £20,000 per year and there is a grading structure that sees an individual’s salary increase as they move up the profession. There are also management opportunities and consultant radiography posts are planned.

Radiographers trained in the UK are recognised as being among the best in the world and the health providers of many foreign countries recruit in the UK.

Entry requirements and applying

You can find a summary of our typical entry requirements on the inside front cover of this brochure.

We expect that applicants will have undertaken a minimum of one week’s work experience in an Imaging Department within a district general hospital or larger hospital. Offers for this degree will be conditional upon students completing a Criminal Records Bureau disclosure, which is deemed satisfactory, and fulfilling health assessment requirements.

I chose to study Diagnostic Radiography after spending some time on work experience at my local hospital. I’ve always had a keen interest in biology, anatomy and physiology and was interested in working with the latest technology in a healthcare setting.

This course teaches you much more than just the practical aspects of radiography. The lecture content is very varied and the clinical placements give you the chance to develop your practical skills and put the theory into practice.

I now work as a Diagnostic Radiographer at the Royal Devon and Exeter Hospital. The University provided employability workshops and lectures on everything from how to fill in application forms to interview techniques to help you to secure your first job. My job is so varied; each day brings a new challenge ensuring that you are always kept on your toes. Developments in new technology mean that radiography is constantly changing and advancing, so there is always something new to learn.

There are also numerous options for me to advance my career. There are opportunities for me to specialise in a particular clinical area, for example Ultrasound, CT or MRI, or go into management. There are also academic routes such as research and teaching. Overall, Diagnostic Radiography is a rewarding and fulfilling career.

KATIE HART, DIAGNOSTIC RADIOGRAPHY GRADUATE
The full and most up-to-date information about Radiography is on our undergraduate website at [www.exeter.ac.uk/undergraduate/degrees/radiography](http://www.exeter.ac.uk/undergraduate/degrees/radiography) and we strongly advise that you check this before attending an open day or making your application. Some courses at the University require prior study of specific subjects and may also have minimum grade requirements at GCSE or equivalent, particularly in English Language and/or Mathematics.

We make every effort to ensure that the entry requirements are as up-to-date as possible in our printed literature. However, since this is printed well in advance of the start of the admissions cycle, in some cases our entry requirements and offers will change.

If you are an international student you should consult our general and subject-specific entry requirements information for A levels and the International Baccalaureate, but the University also recognises a wide range of international qualifications.

You can find further information about academic and English language entry requirements at [www.exeter.ac.uk/undergraduate/international](http://www.exeter.ac.uk/undergraduate/international)

For information on the application, decision, offer and confirmation process, please visit [www.exeter.ac.uk/undergraduate/applications](http://www.exeter.ac.uk/undergraduate/applications)

**International students**

International students appreciate the University’s convenient location close to the historic, student-friendly, city of Exeter, just two and a half hours from London. The University has a thriving international community of some 2,500 students from over 120 countries. In addition to an active International Society, the University has a number of student societies representing different nationality or ethnic groups.

In the Department we pride ourselves on making you feel welcome and at home. Each student has a personal tutor who can offer guidance and support. There is also a central International Student Adviser to help with welfare and visa issues and the University organises a ‘meet and greet’ service and Welcome Week for new international students.

The INTO University of Exeter Centre provides a variety of courses for students who need to improve their academic English or top up their subject knowledge before starting a degree. The nine-month foundation programme for international students is designed for students whose previous academic qualifications do not meet the entrance requirements for direct entry. The INTO Centre also offers five and 10 week pre-sessional English programmes and free in-sessional English language support for students who meet our linguistic requirements. For further information visit [www.intuo.uk.com/exeter](http://www.intuo.uk.com/exeter)

The International Office website contains much more information and can be found at [www.exeter.ac.uk/international](http://www.exeter.ac.uk/international)
## Radiography modules

Full module descriptions are available at www.exeter.ac.uk/radiography

### Year 1

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<th><strong>Foundations of Patient Care</strong></th>
<th>The role of a professional radiographer is high-quality patient care. Radiographers must not just know what professional conduct is, they must behave in this way both instinctively and at all times. This requires appropriately developed interpersonal skills, and an understanding of aspects of sociology and psychology as they apply to the inter-professional clinical context.</th>
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<td><strong>Anatomy and Physiology</strong></td>
<td>This module develops knowledge, understanding and application of human anatomy and physiology. It draws on established-knowledge from the scientific disciplines of anatomy and physiology that underpin sound practice in healthcare.</td>
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<td><strong>Evidence-Based Professional Practice</strong></td>
<td>This module introduces the principles of evidence-based practice and research methodologies that underpin patient/client care. You will be introduced to the principles of professional practice within health and social care. In the context of evidence-based professional practice, you will develop basic problem solving and reasoning skills. Alongside this you will develop an understanding of professional practice.</td>
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<td><strong>Clinical Imaging 1</strong></td>
<td>This module aims to develop knowledge of the technology which supports general and fluoroscopic radiography and its conduct. It also provides knowledge of patient positioning for various parts of the anatomy.</td>
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<td><strong>Introduction to Radiation Physics</strong></td>
<td>Through this module you will develop essential mathematical skills and gain knowledge of the essential science underpinning the various radiation imaging modalities. The module also provides introductory knowledge of radiation biology and physics, sufficient to appreciate the legislative framework of justification, optimisation and limitation in control of ionising radiations.</td>
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<tr>
<td><strong>Radiographic Anatomy</strong></td>
<td>This module develops knowledge, understanding and application of biological concepts in the context of contemporary healthcare practice. It draws on established knowledge from the scientific discipline of anatomy that underpins sound practice in healthcare. The discussion of anatomy emphasises how it is demonstrated in diagnostic images.</td>
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### Practice Placement 1

Professional radiographers must be able to apply their theoretical knowledge and practical skills within an inter-professional clinical context. This placement provides practical experience of the safe and effective practice of general and fluoroscopic radiography. You will develop your patient care skills, and learn to identify professional and management issues and understand how these are inter-related.

### Year 2

| **Clinical Imaging 2** | This module develops knowledge of the science and technology underpinning the x-ray sources, image receptors and supporting facilities used in clinical radiology. The module also provides understanding of the details of a number of advanced 2D x-ray imaging applications now becoming widely available in imaging departments. Encompassed within this module are the example situations of angiography and neurology, utilisation of x-ray interventional procedures and use of x-ray facilities in wards and A&E departments. |
| **Clinical Imaging 3** | This module develops knowledge of the science and technology underpinning 2D and 3D radionuclide imaging, ultrasound and MRI, and of the principles of safe practice in using these various modalities. The module also provides practical training in interpretation of the images that arise from these modalities. |
| **Project Studies 1** | This module develops a sound understanding of research terminology, methods, and principles. It is designed to enable you to understand different research designs, to evaluate the research literature and to prepare you to undertake research at undergraduate level. |
| **Science for Medical Imaging** | This module develops a range of basic mathematical skills and knowledge of the essential science which underpins the various imaging modalities. The module also aims to provide sufficient knowledge of introductory radiation biology and physics to allow an appreciation of safe and optimal use of radiation imaging techniques. |
Radiography modules continued

**Pathology for Radiographers**
This module develops knowledge, understanding and application of anatomical and physiological concepts in the context of contemporary clinical imaging practice. It introduces biological and sociological themes related to health, including their relationship to healthcare practice.

**Digital Image Processing for Radiographers**
In this module, you will develop a level of mathematical skill sufficient to analyse complex waveforms and appreciate the statistical consequences of the information stored in an image. You will develop a knowledge of the underlying algorithms used by image manipulation tools and the extent to which the use of these affect the qualities of the image. Finally, you will learn how each and every component of the imaging chain, from presentation of patient through to the interpretive skills of the radiographer/radiologist can affect the predictive diagnostic capabilities of a method.

**Practice Placement 2**
This placement provides further practical experience of the safe and effective practice of general and fluoroscopic imaging. It introduces interventional radiography and other imaging modalities. You will develop your patient care skills and learn to handle more complex situations.

**Practice Placement 3**
During this third, and final, placement you will become an integral member of the multi-professional healthcare team; competent to deal with a full range of patients using a wide range of modalities. You will have responsibility for organising your working day and liaising with staff in other departments, and will gain experience of managing an inter-professional team.

**Clinical Imaging 4**
In this module, you will develop your knowledge of the legislative and professional framework that governs radiographers together with associated managerial, professional and inter-professional issues encountered in clinical practice. The resulting framework of knowledge and skills supports safe and equitable practice.

**Year 3**

**Project Studies 2**
This module will develop your skills in self-directed and group study. You will plan, undertake and evaluate a research project and write it up in a format suitable for publication.

**Skeletal Image Interpretation**
Advanced radiography requires an understanding of image interpretation and its applications. This module draws on established-knowledge from the scientific disciplines of anatomy, radiographic anatomy and pathophysiology that underpin image interpretation. You will develop the fundamental skills that underpin the writing of image comments.
Experience for life
Studying at the University of Exeter is about more than getting a degree – there’s a wealth of opportunities open to you to develop personally as well as professionally. Exeter offers an exceptionally wide range of opportunities for you to gain the skills employers want – from management training to business placements, volunteering programmes and pre-teacher training, to a world-wide network of study abroad opportunities and careers advice from our own successful graduates.

Great reputation
Exeter is ranked 9th in the UK in The Times Good University Guide 2010, making it the highest ranked South West university. Exeter has one of the highest National Student Survey rankings in the country, being in the top five for the last two years and in the top 10 since the survey began, and in 2009 we scored in the top 10 for teaching, academic support, organisation and management, and overall satisfaction.* We are also in The Times top 10 research-intensive universities: nearly 90 per cent of our research was rated as internationally recognised in the latest (2008) Research Assessment Exercise.

Investing in your future
We have invested over £140 million in the last five years in new buildings and facilities ranging from academic resources to the Students’ Guild building. The University is now looking to the future with a planned £270 million investment in campus facilities over the next three years, including a redevelopment of the centre of the Streatham Campus called the Forum Project. We have also invested £9 million in library facilities and £11 million in sports facilities, making them amongst the best in the country.

Exceptional location and great atmosphere
A safe, student-friendly city, Exeter is rated one of the best places to live in the UK for the quality of its facilities, low crime rate and fantastic countryside. The University has one of the UK’s most active students’ unions, sees some of the top bands in the country perform on campus and is one of the UK’s top sporting universities.

Explore the possibilities
Open Days
Come and visit our beautiful campuses. We hold Open Days twice a year in June and September.

We will consider your application and if successful, we’ll contact you with an invitation to visit us between November and early March. A visit to Exeter will give you the chance to find out more about your course, speak to an academic member of staff, and view the accommodation on offer. While this opportunity to visit includes a campus tour and formal introduction to the School, much emphasis is placed on a more informal period for questions and answers. A number of our current students also take part on these days, leading tours and giving you the opportunity to ask them what studying at Exeter is really like! We will then contact you to make you a formal offer.

Campus Tours
We run Campus Tours at the Streatham Campus every weekday at 2pm during term-time. You’ll be shown round by a current student, who’ll give you a first-hand account of what it’s like to live and study at Exeter.

For full details and to book your place, contact us on:
Website: www.exeter.ac.uk/opendays
Phone: +44 (0)1392 724043
Email: visitus@exeter.ac.uk

* based on the average of positive responses. Full service universities excludes specialist colleges.
The University’s undergraduate prospectus provides more information about the University and the full range of undergraduate degrees offered.

You can obtain a copy from www.exeter.ac.uk/prospectus