

# Therapeutic Radiography and Oncology

BSc (Hons)

## COURSE DETAILS

- A level requirements: [BBB](#)
- UCAS code: B822
- Study mode: Full-time
- Length: 3 years

## KEY DATES

- Apply by: [31 January 2024](#)
- Starts: 23 September 2024

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## Course overview

Our Therapeutic Radiography and Oncology programme allows students the traditional academic and clinical learning opportunities to develop into competent and resilient radiographers, equipped with the necessary skills to flourish in a wide array of professional environments.

## INTRODUCTION

With an integrated case based approach enabling you to study all aspects of the radiotherapy patient pathway, through connecting your academic lectures, clinical placement experience and clinical simulation.

This programme aims to produce competent, reflective, research active, caring, safe, proactive and progressive Therapeutic Radiographers, through an innovative and authentic teaching and assessment strategy encompassing real world radiotherapy research and radiotherapy clinical simulation.

### Programme in detail

The programme has been designed using a case based approach, this means that a cancer patient case will bring to life the radiotherapy patient journey and provide a framework to connect content delivered. The programme content is organised into four key themes:

- Radiotherapy physics, technology and radiobiology
- Radiation oncology and patient care
- Preparation for practice and professionalism
- Research methods in radiotherapy.

You will study a range of profession specific modules, engage in interprofessional learning through activities with fellow allied health professional students in the School of Health Sciences and attend clinical placement during academic terms. The clinical placements increase in length from year one through to year three. All placements are arranged in a variety of Radiotherapy Cancer Centres and there is an opportunity to spend an elective period in a radiotherapy department of your choice.

## **WHAT YOU'LL LEARN**

- Research gathering techniques
  - Critical thinking skills
  - Communication skills
  - Self-directed learning techniques
  - Patient care
  - Physics, radiobiology and technology skills relating to Radiotherapy
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# Course content

Discover what you'll learn, what you'll study, and how you'll be taught and assessed.

## YEAR ONE

Year one of the programme is concerned primarily with the acquisition of knowledge, with some integration and application of this knowledge to clinical practice. It provides a comprehensive introduction to the fundamental concepts and principles that underpin therapeutic radiography and its role in the management of cancer.

## COMPULSORY MODULES

### **FOUNDATIONS OF RADIOTHERAPY, ONCOLOGY AND PATIENT CARE 1 (RADT118)**

**Credits: 30 / Semester: semester 1**

Using a blended approach, this module will enable students to develop the skills-base needed for safe and effective radiotherapy practice. It will also develop their basic operating skills of a linear accelerator for clinical practice. In addition the students will be introduced to the fundamentals of oncology. The student will be taught and assessed in both University and placement sites in the radonc modules.

### **FOUNDATIONS OF RADIATION ONCOLOGY AND PATIENT CARE 2 (BREAST) (RADT121)**

**Credits: 30 / Semester: semester 2**

To provide learners with knowledge and understanding of breast cancer management and holistic care.

### **RADIOTHERAPY PRACTICE 1 (RADIOTHERAPY CLINICAL LEARNING AND FOUNDATIONS OF PROFESSIONALISM) (RADT123)**

**Credits: 15 / Semester: whole session**

The module aim is to provide learners with a range of opportunities to develop foundation level clinical skills and professional knowledge relevant to the therapeutic radiographer.

### **RADIOTHERAPY PHYSICS, TECHNOLOGY AND RADIOBIOLOGY 1 (RADT114)**

**Credits: 15 / Semester: semester 1**

This module aims to equip learners with the necessary understanding to enable them to use radiation safely. It provides learners with understanding of fundamental terminology, radiobiology, physical concepts and technology relevant to radiotherapy. The module also aims to prepare learners for more advanced application of these physical principles in subsequent radiation physics, technology and radiobiology modules.

## **RADIOTHERAPY PHYSICS, TECHNOLOGY AND RADIOBIOLOGY 2 (RADT151)**

**Credits: 15 / Semester: semester 2**

This module develops further the physics concepts introduced in the first semester physics module (RADT114) with specific focus on the clinical application of these concepts. The module will cover physical principles, key components, design, safe use of and clinical application of radiotherapy equipment for localisation, planning and treatment delivery of both radical and palliative pathways. Module learning outcomes are assessed using a written unseen exam.

## **RESEARCH METHODS IN RADIOTHERAPY (RADT134)**

**Credits: 15 / Semester: semester 2**

This module introduces learners to the philosophy, principles and methods of radiotherapy research. Learners will gain understanding of the importance of research in modern radiotherapy within the context of evidence-based practice.

*Programme details and modules listed are illustrative only and subject to change.*

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## **YEAR TWO**

Year two of the programme expands the previously acquired knowledge with an increasing emphasis on the understanding and application of principles to clinical practice. You are encouraged to develop the skills of interpretation and evaluation and to relate them to all areas of the programme.

## **COMPULSORY MODULES**

### **APPLIED RESEARCH METHODS IN RADIOTHERAPY (RADT221)**

**Credits: 15 / Semester: semester 2**

This module aims to support learners as they formulate and articulate a research question relevant to radiotherapy practice and plan a research project to answer the question.

### **RADIOTHERAPY PRACTICE 2 (RADIOTHERAPY CLINICAL LEARNING AND DEVELOPING PROFESSIONALISM) (RADT234)**

**Credits: 30 / Semester: whole session**

The module aim is to provide learners with a range of opportunities to develop academic, clinical and professional knowledge and skills relevant to the therapeutic radiographer.

### **PRINCIPLES OF RADIATION ONCOLOGY AND PATIENT CARE 3 (PELVIS) (RADT210)**

**Credits: 30 / Semester: semester 1**

To provide learners with knowledge, understanding and skills in the field of pelvic cancer management and the associated holistic care.

## **PRINCIPLES OF RADIATION ONCOLOGY AND PATIENT CARE 4 (HEAD, NECK AND THORAX) (RADT220)**

**Credits: 30 / Semester: semester 2**

To provide students with knowledge and understanding of the diagnosis, treatment and care pathway for patients diagnosed with cancers of the head, neck and thorax .

## **RADIOTHERAPY PHYSICS, TECHNOLOGY AND RADIOBIOLOGY 3 (RADT214)**

**Credits: 15 / Semester: semester 1**

This module aims to equip students with the necessary physics and radiobiology knowledge and understanding of how radiation dose to the patient is standardised and measured, and the biological effects of treatment. The module also aims to prepare students for more advanced radiotherapy practices, such as particle beam therapy

*Programme details and modules listed are illustrative only and subject to change.*

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## **YEAR THREE**

Year three of the programme enables you to develop critical analysis of the impact of innovation and technological advances on practice. The greater part of this year is spent in the clinical environment allowing you to consolidate and develop skills enabling you to become clinically competent and safe to practice.

## **COMPULSORY MODULES**

### **ADVANCED RADIATION ONCOLOGY AND PATIENT CARE 5 (RADT317)**

**Credits: 30 / Semester: semester 1**

To provide learners with knowledge and understanding of the management and care involved in treating patients with rare, complex, or challenging cancers including paediatrics and young adults.

### **RADIOTHERAPY PRACTICE 3 (RADIOTHERAPY CLINICAL LEARNING AND ADVANCING PROFESSIONALISM) (RADT334)**

**Credits: 30 / Semester: whole session**

The module aim is to provide learners with a range of opportunities to develop the clinical skills and professional knowledge required to practice as a Therapeutic Radiographer.

### **RADIOTHERAPY PHYSICS, TECHNOLOGY AND RADIOBIOLOGY 4 (RADT318)**

**Credits: 30 / Semester: semester 1**

This module aims to enable students to appraise new radiotherapy technological systems and processes and justify clinical decision making in treatment planning and image-guided radiotherapy.

## **RADIOTHERAPY RESEARCH DISSERTATION (RADT312)**

**Credits: 30 / Semester: whole session**

To enable learners to study, in depth, a chosen area of radiotherapy through the application and development of research skills, academic writing and critical appraisal of literature.

*Programme details and modules listed are illustrative only and subject to change.*

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### **HOW YOU'LL LEARN**

Learning is promoted through a wide variety of activities that enable students to become autonomous and continuous learners. Interactive lectures, practical and clinical skills group work, simulation, directed study, role play, problem based learning, small group work, student-led seminars, collaborative project work and interactive tutorials are key learning strategies for this programme.

Practical work using our imaging suite digital equipment, 3D virtual reality radiotherapy facility, Clinical Skills Resource Room and the Human Anatomy Resource Centre complement teaching activities.

Face-to-face interactions between all students will occur at shared lectures, tutorials and group work and online interaction will be encouraged and facilitated as are inter-professional education and learning opportunities across all healthcare professions programmes.

### **HOW YOU'RE ASSESSED**

Using a mixture of coursework and examination, a range of assessment methods can be seen across this programme. These include seen and unseen written examinations, essay assignments with specific word lengths, multiple choice questions, case study presentations and interactive practical examinations.

Assessment of the work-based learning element of all programmes will be an important aspect of your studies. You will be required to communicate your views orally and in written form; analyse, implement and evaluate your practice; and to extend the research and evidence base of your chosen profession.

The various methods of assessments have been chosen to provide a balance that will permit the undergraduates to demonstrate their intellectual abilities in all areas to the full.

### **LIVERPOOL HALLMARKS**

We have a distinctive approach to education, the Liverpool Curriculum Framework, which focuses on research-connected teaching, active learning, and authentic assessment to ensure our students graduate as digitally fluent and confident global citizens.

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# Careers and employability

With an ageing population and improved cancer detection techniques, there is a high demand for suitably qualified healthcare professionals to support cancer patients.

As a graduate of the School of Health Sciences you'll be eligible to apply for registration with the Health and Care Professions Council (HCPC) and you will become a member of the Society of Radiographers.

You can look to explore careers in:

- National Health Service
- Social Services
- Private sector.

**99%** OF HEALTH SCIENCES STUDENTS FIND THEIR MAIN ACTIVITY AFTER GRADUATION MEANINGFUL.

*Graduate Outcomes, 2018-19.*

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# Fees and funding

Your tuition fees, funding your studies, and other costs to consider.

## TUITION FEES

<b>UK fees (applies to Channel Islands, Isle of Man and Republic of Ireland)</b>	
Full-time place, per year	£9,250

<b>International fees</b>	
Full-time place, per year	£27,200

*Fees are correct for the academic year 2024/25*

Tuition fees cover the cost of your teaching and assessment, operating facilities such as libraries, IT equipment, and access to academic and personal support. [Learn more about tuition fees, funding and student finance.](#)

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## ADDITIONAL COSTS

We understand that budgeting for your time at university is important, and we want to make sure you understand any course-related costs that are not covered by your tuition fee. This may include a laptop, books, or stationery. Additional costs for this course could include professional association fees and travel to placements.

Find out more about the [additional study costs](#) that may apply to this course.

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## SCHOLARSHIPS AND BURSARIES

We offer a range of scholarships and bursaries to provide tuition fee discounts and help with living expenses while at university.

Check out our [Undergraduate Global Advancement Scholarship](#). This offers a tuition fee discount of up to £5,000 for eligible students starting an undergraduate degree from September 2024. There's also [the Liverpool Bursary](#) which is worth £2,000 per year for eligible students.



[Discover our full range of undergraduate scholarships and bursaries](#)

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# Entry requirements

The qualifications and exam results you'll need to apply for this course.

NHS Values will be assessed in all areas of an application including UCAS Personal Statement and at interview. For more details, please download our explanation of [Value Based Recruitment](#).

<b>Your qualification</b>	<b>Requirements</b> <a href="#">About our typical entry requirements</a>
A levels	<p>A2 Level at BBB from three A2 Levels with at least one Science subject.</p> <p>Applied Science will only be considered when accompanied by another Science A-Level, not Applied.</p> <p>Higher grades may be required from resit students.</p> <p>You may automatically qualify for reduced entry requirements through our <a href="#">contextual offers scheme</a>.</p> <p>If you don't meet the entry requirements, you may be able to complete a foundation year which would allow you to progress to this course.</p> <p>Available foundation years:</p> <ul style="list-style-type: none"><li>• <a href="#">Foundation to Human and Animal Health Professions (Therapeutic Radiography &amp; Oncology) (Year 0)</a> BSc (Hons)</li></ul>
GCSE	<p>5 GCSEs at Grades A* - C which must include English Language, Mathematics and Science. Where numerical grading is introduced these subject me be offered at a minimum of Grade 5. English Language, Biology/Human Biology, Mathematics or Physics MUST be offered at Grade C. (Science Dual Award is acceptable). Applied GCSEs will not be considered.</p>
Subject requirements	<p>For applicants from England: Where a science has been taken at A level (Chemistry, Biology or Physics), a pass in the Science practical of each subject will be required.</p>

<b>Your qualification</b>	<b>Requirements</b> <a href="#">About our typical entry requirements</a>
BTEC Level 3 National Extended Diploma	<p>BTEC nationals are considered in addition to 5 GCSEs grades A* – C, which must include English Language, Maths and a Science. Where numerical grading has been introduced, English Language, Maths and a Science will be required at Grade 5 or above. Please note that Science dual award is acceptable but Core Science and Applied GCSEs will not be considered.</p> <p>We will accept one BTEC Level 3 National Extended Certificate at a minimum of Distinction. This must be accompanied by two A2 at Grade B, of which one subject should include Biology/Human Biology, Physics, Maths or Chemistry. Three separate subjects must be taken between the two qualifications.</p> <p>BTEC National Diploma in Health and Social Care or Applied Science/ Medical Science graded at DD will be accepted. This must be accompanied by one A Level at grade B. In total, between the two qualifications; two separate subjects must be taken.</p> <p>BTEC National Extended Diploma (180 credits) in Health and Social Care or Applied Science/Medical Science at DDD. The student is required to achieve 120 credits out of 180 at Distinction by the end of their second year. The BTEC Level 3 National Extended Diploma and National Diploma must be the 2016 specification. We do not accept the BTEC Nationals (2010, QCF).</p>
International Baccalaureate	<p>Applicants should normally present with 30 points including 3 Higher Level subjects at minimum Grade 5.</p> <p>Higher Level subjects must include Mathematics and Biology or Physics.</p>
European Baccalaureate	<p>74% overall with a minimum mark of 8 in Biology and no other subject less than a 6.</p>
Irish Leaving Certificate	<p>2 subjects at H2 or above to include a science subject (Maths, Physics, Biology, Chemistry) and 4 subjects at H3 or above to include a further science subject and/or Maths.</p>

<b>Your qualification</b>	<b>Requirements</b> <a href="#">About our typical entry requirements</a>
Scottish Higher/Advanced Higher	<b>Scottish Certificate of Education</b> <b>Advanced Higher/Higher Level</b> Accepted in addition to five national 5's graded upper A –C, which must include English Language, Mathematics and a Science subject. A minimum of five B's from any combination of Advanced Higher/Higher Level. Consideration will only be given to Advanced Highers in different subjects to those of Highers level subjects offered.
Welsh Baccalaureate Advanced	Accepted
Cambridge Pre-U Diploma	Will be considered
Graduate application	We welcome applications from graduates holding a minimum of a 2:2 classification. If your degree is not in a Science related subject please contact the admission unit for further information. If it is 5 years or more since you last studied you may be advised to study an A level in Biology / Human Biology. The degree qualification should be supported by a strong academic background, with a minimum of 5 GCSEs A* – C to include English Language, Mathematics and a Science subject.
Access	Essential: 45 credits at Level 3 (all should be new learning, ie. GCSE awards cannot be APL'd against the Diploma). 30 credits passed at distinction (which must include a minimum of 15 credits in modules relating to Biology, Maths and Physics). The remaining 15 credits must be passed at merit or higher. 5 GCSE subjects graded A*-C and must include: English Language, Mathematics and Science
Academic Reference	An academic reference must be included within the UCAS application. If the applicant is a graduate and has been

<b>Your qualification</b>	<b>Requirements</b> <a href="#">About our typical entry requirements</a>
	<p>working since graduating (within three years), an employer reference is acceptable.</p>
<p>Profession-specific knowledge and skills required</p>	<p>The UCAS Personal Statement, must demonstrate an understanding of the Therapeutic Radiography &amp; Oncology role. Applicants should also consider visiting a Diagnostic Radiography Department to give them an awareness of the differences between the Diagnostic and Therapeutic Radiography professions. Applicants should have an appreciation of the demands of the programme and a realistic understanding of what is required when on clinical placement.</p> <p>Having experience of working with the general public, children, the elderly or people with disabilities, in a paid or voluntary capacity will strengthen an application.</p>
<p>Declaration of criminal background</p>	<p>You will understand that as a health sciences student, and when you qualify, you will be asked to treat children and other vulnerable people. We therefore need information about any criminal offences of which you may have been convicted, or with which you have been charged. The information you provide may later be checked with the police.</p> <p>If selected for interview you will be provided with the appropriate form to complete.</p>
<p>Health screening</p>	<p>The University and the School of Health Sciences has an obligation to undertake health screening on all prospective healthcare students. Any offer of a place to study is conditional on completion of a health questionnaire and a satisfactory assessment of fitness to train from the University's Occupational Health Service. This will include some obligatory immunisations and blood tests.</p>
<p>International qualifications</p>	<p>The IELTS requirement is an overall score of 7.0 with no component less than 6.5.</p>

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## ALTERNATIVE ENTRY REQUIREMENTS

- If your qualification isn't listed here, or you're taking a combination of qualifications, [contact us](#) for advice
- [Applications from mature students](#) are welcome.

**THE ORIGINAL**

**REDBRICK**