UCD School of Medicine
and Medical Science
www.ucd.ie/medicine

GRADUATE COURSES
PROSPECTUS 2013/2014

DIAGNOSTIC IMAGING

Technological Advancement. Clinical Excellence. Opportunity.

Diagnostic Imaging at UCD School of Medicine and Medical Science offers an internationally renowned portfolio of graduate opportunities for radiographers and for a broad spectrum of healthcare professionals including: midwives, medical doctors, clinical scientists, dentists and workers associated with both medical and industrial radiation sources.

UCD is the national centre for training radiographers to BSc Honours Degree qualification. Our expertise and commitment to excellence in education, training and research underpins everything that we do.

All programmes are led by expert UCD academics with specialist knowledge in a broad range of imaging-focused subjects and issues. Many programmes feature innovative, flexible teaching methods such as e-learning, enabling time-poor clinicians and healthcare professionals to engage with further training in a way that is manageable and sustainable.

Most other institutions focus only on theory-based graduate imaging programmes. At UCD, many of our programmes confer clinical competence in specialist imaging areas which will enhance your skills and your career, as well as your understanding and knowledge.

In addition to the taught programmes, the research reputation of Diagnostic Imaging within UCD has expanded significantly over the past decade both nationally and internationally, with over 20 students currently studying Diagnostic Imaging at PhD Level.

I look forward to welcoming you to one of our world-class programmes.

Dr. Louise Rainford
Head of Diagnostic Imaging

SECTION 1:
DIAGNOSTIC IMAGING

Master of Science

Master of Science	**Magnetic Resonance Imaging (MRI)**
Master of Science	**Ultrasound (US)**
Master of Science	**Computed Tomography (CT)**
Master of Science	**Mammography**
Master of Science	**Medical Imaging**

Graduate Diploma/Certificate

Graduate Diploma	**Magnetic Resonance Imaging (MRI)**
Graduate Diploma	**Computed Tomography (CT)**
Graduate Certificate	**Mammography**
Graduate Certificate	**Obstetric Ultrasound**
Graduate Certificate	**Fertility Ultrasound**
Graduate Certificate	**Radiology Information Systems and Picture Archiving and Communications Systems**

Professional Certificate

Professional Certificate	**IV Cannulation and Administration**
Professional Certificate	**Forensic Radiography**
Professional Certificate	**Radiation Safety**
Professional Certificate	**Intra Orbital Foreign Body Screening**
Professional Certificate	**Dual Energy X-ray Absorptionmetry**

MSc Magnetic Resonance Imaging (MRI)

COURSE FEATURES

Accredited by the Irish Institute of Radiography and Radiation Therapy (IIRRT).

Addresses theory and clinical practice issues in Magnetic Resonance Imaging.

Develops specialist clinical and critical thinking skills

Delivered by national and international experts.

Confers clinical competence in MRI scanning on successful graduates.

Accommodates working professionals through flexible programme delivery.

WHO SHOULD TAKE THIS COURSE?

The MSc MRI course is designed for radiographers who wish to provide high quality healthcare by deepening and broadening their knowledge and expertise in the field of Magnetic Resonance Imaging.

Applicants should normally have at least one year post-qualification experience as a radiographer, and be working in an MRI department over the duration of the course.

COURSE DETAILS

Major code	X076
Duration	16 months
Schedule	Full-Time
Next intake	September 2013

"The MSc MRI programme at UCD helped me to improve my technological knowledge of MRI and also to gain an understanding of the advanced features of MR imaging through its broad content, varied delivery style and approachable lecturers, who encouraged and actively considered student feedback."

- Bridget Furlong, Student.

COURSE DESCRIPTION

PRINCIPLES AND APPLICATIONS

Technological advances in MRI have led to a greater range of clinical applications, and MRI now plays a critical role in contemporary diagnostic healthcare. This course, validated by the Irish Institute of Radiography & Radiation Therapy (IIRRT), integrates the physical principles of MRI with practical clinical applications.

The course critically examines standard and advanced MR technology and scanning techniques and practice issues. Through collaborative and self-directed learning opportunities, students will broaden their knowledge and develop their reflective, evaluative and communication skills to foster high-quality clinical MR service provision.

SKILLED GRADUATES

During the course students are provided with a solid foundation in the principles, theory and practice of MRI. Understanding the physical principles underpinning MR image generation will enable graduates to appropriately select and manipulate MR equipment and pulse sequences within the clinical setting.Practice of MRI-based modules address the spectrum of routine and advanced applications of MRI in the central nervous, musculoskeletal and cardiovascular systems, together with applications in the abdomen and pelvis. This provides the knowledge-base for students to evaluate MR scanning protocols and resultant image appearances for diverse clinical indications, and to justify clinical decision-making.

Upon graduation, students will have developed a critically questioning approach to MR imaging technology and practice and will be equipped to actively contribute to clinical decision-making, problem-solving and the advancement of research within the clinical practice environment.

STEPWISE PROGRESSION

Stepwise progression enables students who have successfully completed five core modules to exit after 12 months with a Graduate Diploma in MRI.

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine

Conferring at O'Reilly Hall

COURSE MODULES

As part of this course, students will undertake a combination of modules that includes:

- Technology of MRI
- Practice of MRI
- Clinical practice of MRI
- Advanced MRI imaging

ENTRY REQUIREMENTS

Radiographers holding a BSc or equivalent in Diagnostic Radiography; with at least one year post-qualification experience, and normally a minimum of four months clinical experience in MR scanning. Candidates must arrange their own clinical placement and provide evidence of an agreement to spend a minimum of 900 hours in a MRI department over the duration of the MSc programme

International applicants should contact the course administrator for information regarding specific additional eligibility criteria including English language requirements and clinical placement arrangements during the course.

FEES 2013/2014

EU Students	€7,000
Non-EU Students	€19,000

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

MSc Ultrasound (US)

COURSE FEATURES

Develops professional competencies by integrating clinical skills and specialist theoretical knowledge.

Teaches skills including teamwork, problem solving, leadership, communication, self-directed learning, information literacy, self-evaluation and applied research.

Immersive, innovative problem-based learning curriculum based on continuous assessment.

COURSE DETAILS

Major code	X073
Duration	16 months
Schedule	Full-Time
Next intake	September 2013

WHO SHOULD TAKE THIS COURSE?

The aim of this course, which is targeted towards radiographers and midwives, is to develop ultrasonographers who can respond to the dynamic needs of the profession, the health service and its users.

To this end the programme will develop professional competencies by integrating the following domains: high level clinical skills; specialist theoretical knowledge; and advanced key skills. These embedded advanced key skills include teamwork, problem solving, leadership, communication, self- directed learning, information literacy, self evaluation and applied research.

"The course provides wonderful learning opportunities through a supportive, well executed and administrated process. The wealth of knowledge that awaits you if you have the determination for the challenge will be astonishing, I assure you."

- Deirdre Wisniewski, Student 09/10 Rotunda Hospital

COURSE DESCRIPTION

PROBLEM-BASED LEARNING

This problem-based learning (PBL) curriculum consists of carefully selected and designed ultrasound problems that demand from the learner acquisition of critical knowledge, clinical reasoning, problem solving proficiency, self-directed learning strategies and teamwork skills.

The PBL process replicates the commonly used systematic approach to resolving problems and meeting challenges in professional ultrasonography practice.

Students work in small facilitated groups to tease out elements of defined problems and determine what they need to learn in order to solve the problem.

Students then work individually on these identified issues. Subsequently, students return to their facilitated groups and apply their new knowledge to the problem.

CASE STUDIES

Resource sessions will be scheduled to expose students to case studies and opportunities to discuss their practice with experts in the field.

COURSE MODULES

As part of this course, students will undertake a combination of modules that includes:

- Technology of ultrasound
- Abdominal & gynaecological ultrasound
- Vascular ultrasound
- Ultrasonography of superficial structures
- Obstertic & gynaecological ultrasound

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine

Swimming Pool at UCD Student Centre

ENTRY REQUIREMENTS

Candidates must be employed by or attached to a clinical ultrasound department.

Students will be required to provide evidence that they are in a position to gain a minimum of 1000 hours clinical ultrasound experience, divided proportionately between the specialisms selected during the Programme.

FEES 2013/2014	
EU Students	€7,000
Non-EU Students	€19,000

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

MSc Computed Tomography (CT)

COURSE FEATURES

Accredited by Irish Institute of Radiography & Radiation Therapy (pending).

Confers clinical competence in Computed Tomography (CT) on radiography graduates.

Develops specialist clinical and critical thinking skills.

Accommodates professionals in full time employment through flexible programme delivery.

COURSE DETAILS

Major code	X075
Duration	16 Months
Schedule	Full-Time
Next intake	September 2013

WHO SHOULD TAKE THIS COURSE?

This MSc Computed Tomography (CT) course is designed for radiographers with at least one year's post-qualification experience. Applicants must be working in a CT department.

The course will develop the expertise of radiographers working in the field of CT and will broaden knowledge of routine and advanced applications, communication skills and analytical thinking.

The MSc programme builds on the Graduate Diploma in CT, focusing on advanced CT applications, research and state-of the-art technological developments.

"Hands on vendor sessions were very helpful in exploring new concepts and applications relating to CT and workstations."

- Student feedback 2011/2012

COURSE DESCRIPTION

BUILDING EXPERTISE

Developments in CT scanning have opened up new clinical applications and have led to improvements in the diagnosis of disease. The MSc CT builds on appropriate undergraduate level study and existing clinical practice skills to enable radiographers to become experts in CT imaging.

This course confers clinical competence and thus there is an emphasis on the development of clinical skills and integration of theory and practice. During the course, students must undertake 1,000 clinical hours to gain the necessary specialist clinical skills in CT scanning.

CRITICAL THINKING SKILLS

This course prepares radiographers to apply a critically questioning approach to CT practice and fosters the skills necessary to apply knowledge in relation to complex decision-making. It also encourages radiographers to advance research in the field of CT.

BLENDED LEARNING

Blended learning is delivered through a combination of debates and class discussions, lectures, tutorials, image appraisal, eLearning and practical tasks. Hands-on workshops enable radiographers to refine their skills relating to the newest CT applications.

COURSE MODULES

As part of this course, students will undertake a combination of modules that includes:

- Technology of computed tomography
- Practice of computed tomography
- Clinical practice of computed tomography
- Advanced computed tomography imaging

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine

Conferring at O'Reilly Hall

ENTRY REQUIREMENTS

Candidates must be qualified radiographers with approval to practise radiography in Ireland. Candidates must have a minimum of one year's post-qualification experience and must arrange their own clinical placement in CT (1,000 hours during 16 months).

International candidates should contact the course administrator for information regarding specific additional eligibility criteria including English language requirements and clinical placement arrangements during the course.

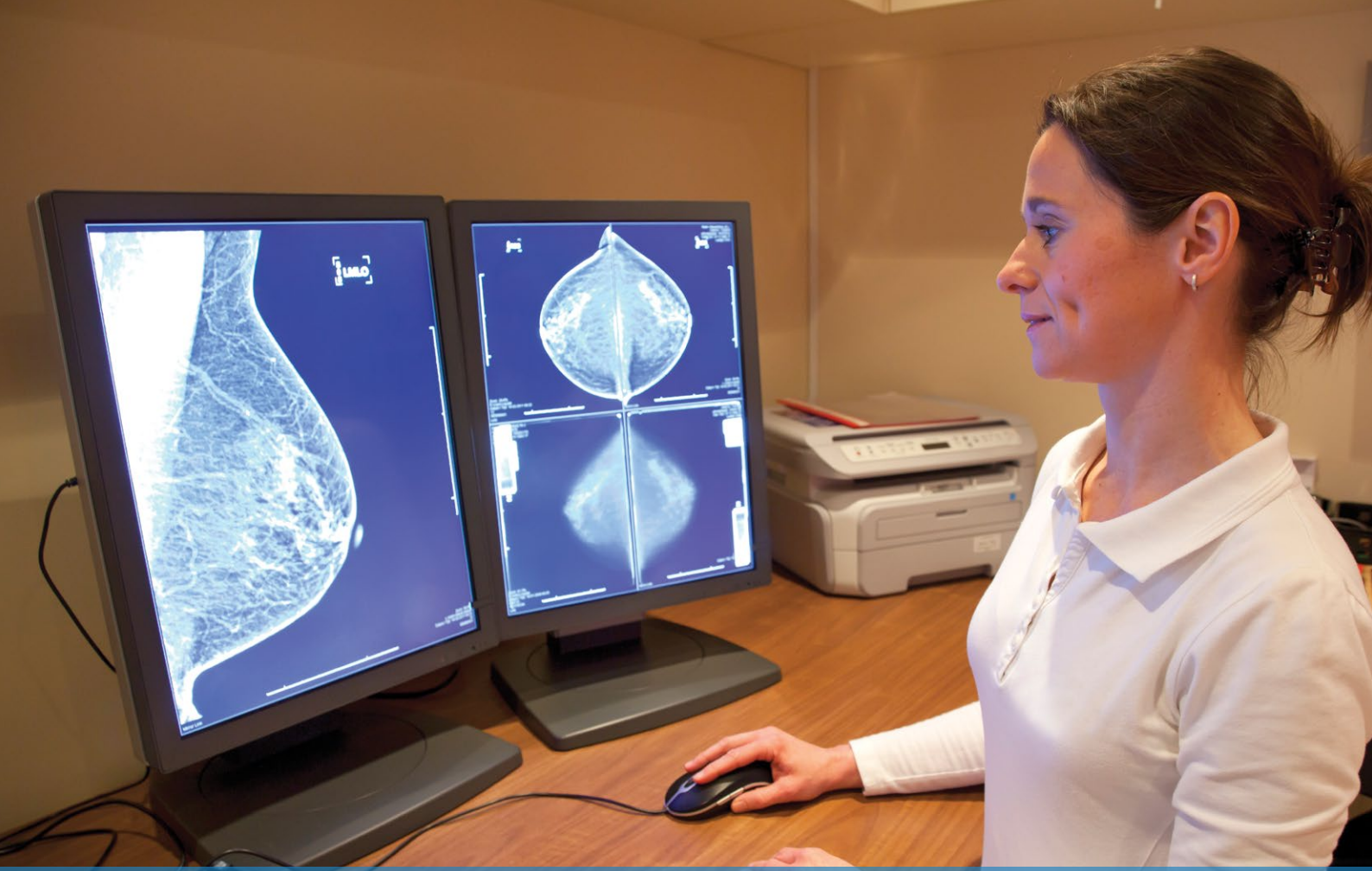
FEES 2013/2014	
EU Students	€7,000
Non-EU Students	€19,000

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply



MSc Mammography

COURSE FEATURES

Enhances professional competence and expertise in practice of mammograpy and related research.

Builds capacity for independent work, inquiry and problem solving.

Student can either enter the programme via the Graduate Certificate in Mammography with progression to MSc thesis, or can undertake mammography related research to progress to the MSc thesis component.

COURSE DETAILS

Major code	X136
Duration	12 - 24 months
Schedule	Full / Part-Time
Next intake	September 2013

WHO SHOULD TAKE THIS COURSE?

This Masters course is intended for radiographers practicing mammography in multi-disciplinary breast screening/health services.

"The lectures were brilliant and the course materials included topics to provide a foundation for qualitative or quantitative research."

- Zaina Al Maskari, Student

COURSE DESCRIPTION

MULTIPLE PATHWAYS

Students can enter the MSc Mammography via one of two pathways. The first pathway is for students who have completed the Graduate Certificate in Mammography or an equivalent programme/number of credits from a breast imaging focused course.

Students who enter via this pathway undertake a research methods course and will complete a research project within breast imaging.

Research supervision will be provided by a suitable expert in the field of breast imaging to guide the student through the research process.

RESEARCH

The second pathway will require students to undertake a module in research methods and statistics and the specified research in breast imaging will guided by a suitable expert in the subject. This piece of research will be presented via a written thesis and an oral viva voce.

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine

UCD Health Sciences Library

ENTRY REQUIREMENTS

Students who intend to enter via pathway one should consult the entry requirements for the Graduate Certificate in Mammography.

Students who intend to enter via pathway two should contact the programme coordinator

International applicants should contact the course administrator for information regarding specific additional eligibility criteria including English language requirements and clinical placement arrangements during the course.

FEES 2013/2014	
EU Students	€7,500
Non-EU Students	€17,500

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

MSc Medical Imaging (European Masters Programme in Medical Imaging)

COURSE FEATURES

Joint Masters (MSc) developed by a consortium of six partner Universities from the Netherlands, Ireland, Lithuania, Malta and the United Kingdom.

Students can tailor the course content to meet their own professional needs or interests.

Educates and trains students using innovative and multidisciplinary approaches, combining research and advanced practice in medical imaging with an overriding European focus.

COURSE DETAILS

Major code	X435
Duration	24 months
Schedule	Part-Time
Next intake	September 2013

WHO SHOULD TAKE THIS COURSE?

EMPIMI is a Joint Masters aimed at practicing radiographers or radiation therapists, along with other professionals working in the field of medical imaging. This course provides an alternative to the modality specific Masters programmes and allows students to tailor a programme to their specific needs and interests.

"This programme offers an opportunity for students to tailor a structured Masters Degree to meet their own personal and professional requirements."

- Mr. Jonathan McNulty
Academic Course Coordinator

COURSE DESCRIPTION

BUILDS EXPERTISE

The EMPIMI course allows students to acquire knowledge and advanced practical skills in relevant fields of medical imaging. Graduates will be equipped with analytical, research and critical reflection skills, in order to drive improvements in medical imaging healthcare services or in industry.

EMPIMI aims to educate and train graduates in an innovative multidisciplinary approach, combining research, European aspects (legislation, cultural and social diversity) and advanced practice in medical imaging.

FUTURE CHALLENGES

The programme will focus on key issues that determine the future challenges of medical imaging throughout Europe: improved quality, attractiveness and accessibility of the lifelong learning opportunities available within EU member states, and increased transparency and compatibility between higher education and advanced vocational education qualifications gained in Europe.

COURSE MODULES

As part of this course, students will undertake a combination of modules that includes:

Research methods

Statistics

Research dissertation

Medical imaging in a European context

Students may also tailor the course to their own individual needs/ interests by selecting elective modules from UCD and partner institutions. This flexible approach facilitates travel to partner universities in the European Union. It also caters to students who wish to remain in Ireland for the duration of the course through the provision of distance learning options.

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine

UCD Health Sciences Centre

ENTRY REQUIREMENTS

BSc Radiography, Radiation Therapy or equivalent.

Applicants not in possession of the above may also be considered for admission, provided that they are in possession of academic or professional qualifications and experience that together are deemed to be comparable to the level of a Bachelor Degree.

All applicants will be required to demonstrate that their standard of English language is satisfactory.

Applicants may seek transfer credit for previously accredited learning. This may allow exemption for some part of the programme under the policies of the partner institution with which the student is registered.

FEES 2013/2014

EU Students	€5,000
Non-EU Students	€10,000

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

Graduate Diploma
Magnetic Resonance Imaging (MRI)

COURSE FEATURES

Accredited by the Irish Institute of Radiography and Radiation Therapy (IIRRT).

Addresses theory and clinical practice issues in Magnetic Resonance Imaging.

Delivered by national and international experts.

Accommodates working professionals through flexible programme delivery.

WHO SHOULD TAKE THIS COURSE?

Technological advances in Magnetic Resonance Imaging (MRI) have led to a greater range of clinical applications, such that MRI is now a core imaging modality in contemporary healthcare. This course encompasses current technological developments in MRI, providing a platform for discussion of physical principles, scanning techniques and clinical practice issues.

This course aims to foster the personal and professional development of the postgraduate radiographer by encouraging students to build on appropriate undergraduate study and existing clinical skills in MRI further their knowledge and practical expertise in this area.

COURSE DETAILS

Major code	X022
Duration	12 months
Schedule	Full-Time
Next intake	September 2013

"The MSc MRI programme at UCD met my expectations, providing an interesting and challenging academic programme, supported by concurrent clinical placement in an MRI department."

- Zaina Al Maskari, Student

COURSE DESCRIPTION

PRINCIPLES AND APPLICATIONS

Technological advances in MRI have led to a greater range of clinical applications, and MRI now plays a critical role in contemporary diagnostic healthcare. This course, validated by the Irish Institute of Radiography & Radiation Therapy (IIRRT), integrates the physical principles of MRI with practical clinical applications.

The course critically examines standard MR technology and scanning techniques and practice issues. Through collaborative and self-directed learning opportunities, students will broaden their knowledge and develop their reflective, evaluative and communication skills to foster high-quality clinical MR service provision.

SKILLED GRADUATES

During the course students are provided with a solid foundation in the principles, theory and practice of MRI.

Understanding the physical principles underpinning MR image generation will enable graduates to appropriately select and manipulate MR equipment and pulse sequences within the clinical setting.Practice of MRI-based modules address the spectrum of routine applications of MRI in the central nervous, musculoskeletal and vascular systems, together with applications in the abdomen and pelvis. This provides the knowledge-base for students to evaluate MR scanning protocols and resultant image appearances for diverse clinical indications, and to justify clinical decision-making.

Upon graduation, students will have developed a critically questioning approach to MR imaging technology and practice and will be equipped to actively contribute to clinical decision-making, problem-solving within the clinical practice environment

STEPWISE PROGRESSION

Stepwise progression enables students who have successfully completed five core modules to continue their studies towards an MSc in MRI by taking the 30-credit Advanced MR Imaging module over an additional semester.

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine

Magnetic Resonance Imaging

COURSE MODULES

As part of this course, students will undertake a combination of modules that includes:

Technology of MRI

Practice of MRI

Clinical practice of MRI

ENTRY REQUIREMENTS

Radiographers holding a BSc or equivalent in Diagnostic Radiography; with at least one year post-qualification experience, and normally a minimum of four months clinical experience in MR scanning. Candidates must arrange their own clinical placement and provide evidence of an agreement to spend a minimum of 700 hours in a MRI department over the duration of the MSc programme

International applicants should contact the Academic Programme Director for information regarding specific additional eligibility criteria including English language requirements and clinical placement arrangements during the course.

FEES 2013/2014	
EU Students	€4,800
Non-EU Students	€12,600

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

Graduate Diploma
Computed Tomography (CT)

COURSE FEATURES

Integrates current technological advances in Multidetector Computed Tomography.

Provides platform for discussion of clinical and evidence based computed tomography (CT) practice.

Fosters individual, personal and professional development of the postgraduate radiographer.

Accredited by Irish Institute of Radiographers and Radiation Therapists (pending).

WHO SHOULD TAKE THIS COURSE?

This course is designed for radiographers with at least one year's post-qualification experience. Applicants must be working in a CT department.

The course will develop the expertise of radiographers working in the field of CT and will broaden knowledge of routine and advanced applications, communication skills and analytical thinking.

Students have the option to continue their studies towards an MSc in CT by taking a further 30 credits over four months.

COURSE DETAILS

Major code	X021
Duration	12 months
Schedule	Full-Time
Next intake	September 2013

"eLearning, quizzes and image appraisal sessions helped test my integration of knowledge"

- Student feedback 2010

COURSE DESCRIPTION

BUILDS EXPERTISE

This course builds on appropriate undergraduate study and existing clinical practice skills to enable radiographers to manage CT service provision and perform specialist CT examinations.

CLINICAL COMPETENCE

This graduate diploma confers clinical competence and thus there is an emphasis on development of clinical skills and integration of theory and practice.

Students must undertake 750 clinical hours during the course of the programme to gain the necessary specialist clinical skills in CT scanning.

PRINCIPLES AND APPLICATION

Students are provided with a solid foundation in the principles, theory and practice of CT.

Students will sharpen their reflective and evaluative skills and will develop essential skills to provide high quality care and positive outcomes in clinical practice.

This programme enables radiographers to partake in collaborative learning and self-directed/autonomous study.

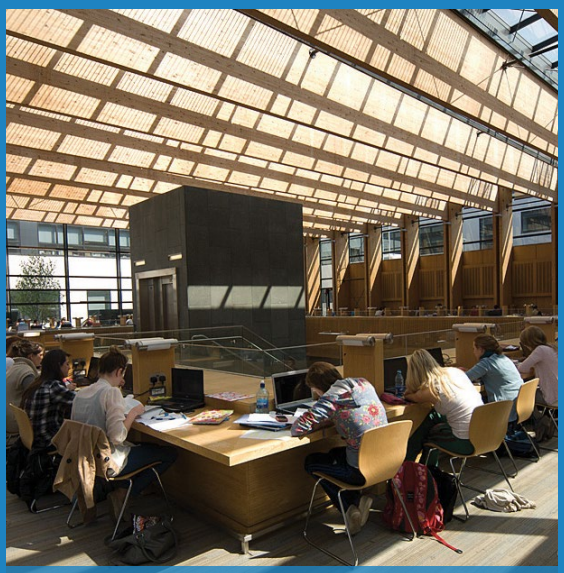
COURSE MODULES

As part of this course, students will undertake a combination of modules that includes:

- Technology of computed tomography
- Practice of computed tomography
- Clinical practice of computed tomography

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine



UCD Health Sciences Library

ENTRY REQUIREMENTS

Interested candidates must be qualified radiographers with at least one year's post qualification experience, with Department of Health approval to practise radiography in Ireland, or have Health Professions Council approval for Northern Ireland, or equivalent.

Interested candidates must arrange their own clinical placement and provide evidence of an agreement to spend a minimum of 750 hours in a CT department during the graduate diploma.

Interested candidates must have completed a minimum of three months clinical experience prior to commencing the programme.

International applicants must have an IELTS score above 7 and should contact the course administrator for information regarding specific additional eligibility criteria.

FEES 2013/2014

EU Students	€4,800
Non-EU Students	€12,600

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

Graduate Certificate Mammography

COURSE FEATURES

Provides a coherent programme of education for radiographers within the symptomatic breast services and/or the screening breast services.

Extends professionalism and enhances professional practice within mammography.

Focuses on both clinical and theoretical elements of mammography.

COURSE DETAILS

Major code	X091
Duration	12 months
Schedule	Part-Time
Next intake	September 2013

WHO SHOULD TAKE THIS COURSE?

This course is for radiographers within the breast imaging services.

It is not suited to those who do not have access to clinical mammography centres.

"The course is very focused and although it requires lots of critical thinking, it is also very enjoyable"

- Student feedback 2011/2012

COURSE DESCRIPTION

THEORY AND PRACTICE

The Graduate Certificate in Mammography is delivered in two modules, one theoretical module and one clinical practice module.

The course has been designed to enhance compliance with the professional skills required by the National Breast Screening guidelines, the Health Information Quality Agency (HIQA) guidelines and the Irish Institute of Radiography and Radiation Therapy (IIRRT) guidelines on mammography.

MODULES

The theoretical module encompasses all aspects of breast imaging technique (including ancillary imaging modalities), quality assurance and breast screening and health promotion.

CLINICAL COMPONENT

The development of communication skills is fostered throughout the course, in both the theoretical and clinical modules.

Hands-on teaching and learning is nurtured not only through didactic teaching but also through seminars, self-directed group sessions and online discussion fora.

The clinical component includes one-to-one and individualised clinical teaching as well as directed learning outcomes and self-study units.

Assessment is based on the professional requirements of the various guideline documents and is thus completely relevant to the practicing professional, promoting life-long learning.

UCD Health Sciences Library

ENTRY REQUIREMENTS

Students must have specified engagement with ongoing clinical practice within the mammography unit of their designated hospital. All students must provide written commitment from their departmental manager to the availability of at least the minimum amount of clinical experience when returning the registration form.

All candidates must have a license to practice as a diagnostic radiographer in Ireland in order to undertake this programme or must have UCD insurance and indemnity to undertake clinical practice in a recognised teaching hospital.

International applicants should contact the course administrator for information regarding specific additional eligibility criteria including English language requirements and clinical placement arrangements.

FEES 2013/2014	
EU Students	€3,000
Non-EU Students	€6,000

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

Graduate Certificate
Obstetric Ultrasound

COURSE FEATURES

Develops the knowledge and skills necessary to practice obstetric ultrasound to an introductory level.

Flexible modular structure to suit participants who access clinical facilities on a part-time basis.

Includes major emphasis on clinical experience.

Stepwise progression enables participants to complete each module individually.

COURSE DETAILS

Major code	X530
Duration	18 months
Schedule	Part-Time
Next intake	January 2013

WHO SHOULD TAKE THIS COURSE?

This course is directed towards doctors specialising in obstetrics and gynaecology, midwives providing antenatal care, radiographers who perform obstetric ultrasound and general practitioners who provide antenatal care and perform ultrasound scans in their surgery.

Ultrasound is now an integral component of antenatal care, a dominant technology in the daily practice of obstetrics, and is also essential in the management of high-risk pregnancies.

- Key fact

COURSE DESCRIPTION

BUILDS EXPERTISE

This course equips participants with the necessary skills to understand the indications for ultrasound examinations, perform scans safely and competently, report on scan findings in the clinical context and when to refer patients for a more detailed assessment.

There is a major emphasis on achieving a high level of clinical expertise and participants will gain the majority of their clinical experience in their chosen hospital, under the guidance of a clinical supervisor.

CLINICAL COMPETENCE

Students will be assessed on their clinical competence at the end of each module by their clinical supervisor. Case-based discussions, completed with the clinical supervisor throughout each module will assess understanding of the relevant theory.

FLEXIBLE APPROACH

The programme is designed to work around a busy clinical workload. Lectures covering the theoretical components will predominately be delivered on-line, with a 'hands on' training day at the start of the first two modules. Participants will gain their clinical experience in their chosen hospital setting.

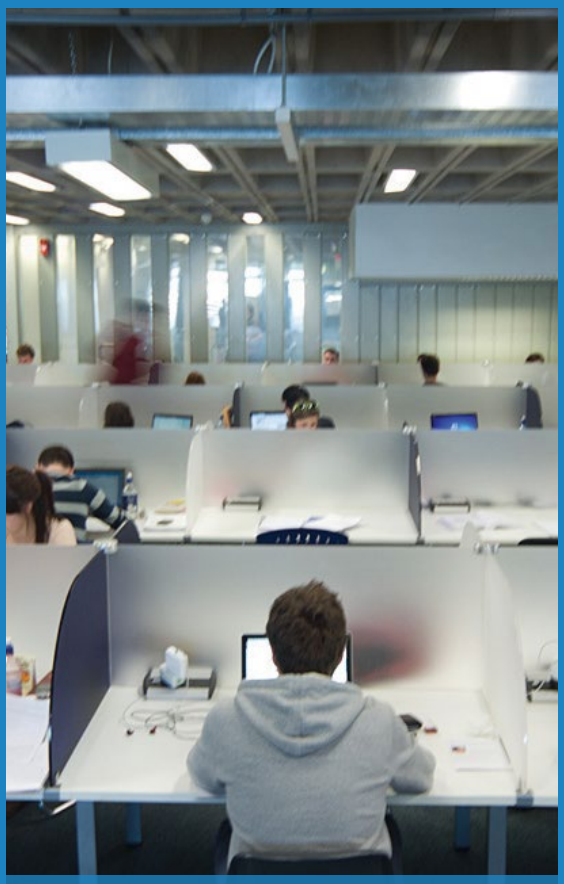
COURSE MODULES

As part of this course, students will undertake a combination of modules that includes:

- Early pregnancy ultrasound
- Fetal biometry, liquor & placenta
- Fetal well-being ultrasound
- Gynaecological ultrasound

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine



Study Area at UCD Library

ENTRY REQUIREMENTS

Doctors must be registered with the Irish Medical Council or equivalent. Midwives must be registered with An Bord Altranais or equivalent. Radiographers must have approval to practice Radiography in Ireland or Northern Ireland, or possess approval from an equivalent international body.

Participants must provide evidence of an agreement to spend a minimum of 250 hours practicing clinical obstetric ultrasound.

FEES 2013/2014

EU Students	€1,500 (€500 per module)
Non-EU Students	€6,000

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

Graduate Certificate
Fertility Ultrasound

COURSE FEATURES

Confers competence to practice ultrasound in the management of the patient with infertility.

Provides both theoretical and practical training, with a significant emphasis on clinical experience.

Facilitates busy professionals by delivering the majority of lectures through an e-learning structure.

COURSE DETAILS

Major code	X471
Duration	7 months
Schedule	Part-Time
Next intake	January 2013

WHO SHOULD TAKE THIS COURSE?

This course is directed towards doctors specialising in obstetrics and gynaecology, midwives providing antenatal care, radiographers who perform obstetric ultrasound and general practitioners who provide antenatal care and perform ultrasound scans in their surgery.

"I found that my confidence in scanning has improved immensely. I can also now write more comprehensive reports based on scan findings"

- Student feedback 2011/2012

COURSE DESCRIPTION

BUILDS EXPERTISE

This course equips participants with the skills necessary to understand the indications for ultrasound examinations, perform scans safely and competently, report on scan findings in the clinical context and when to refer patients for a more detailed assessment.

COURSE CONTENT

Topics covered include image optimization, anatomy, physiology and pathology, fertility management focussing on the role of ultrasound in the investigation of fertility problems, and monitoring of women undergoing treatment, protocols and guidelines, communication, ethical and social implications.

Ultrasound assessment of both normal and abnormal early pregnancy is also included.

FLEXIBLE APPROACH

The course is designed to work around a busy clinical workload. Lectures covering the theoretical components will predominately be delivered on-line. Participants will gain their clinical experience in their chosen clinic setting.

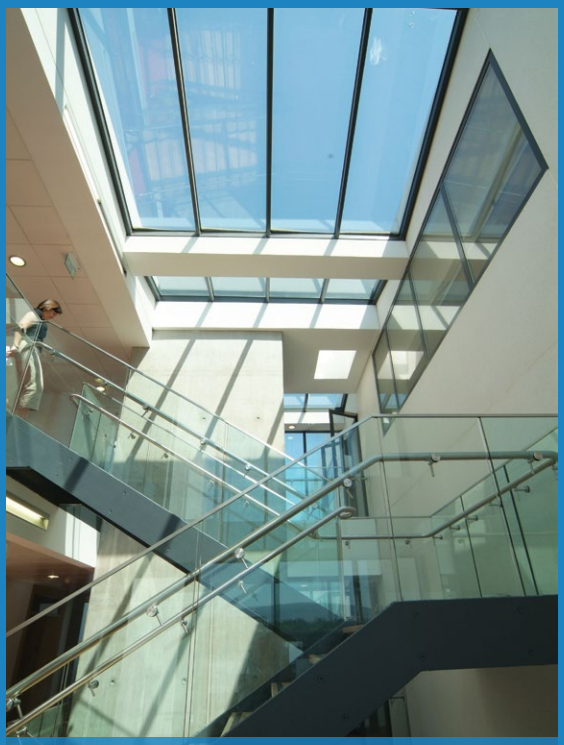
COURSE MODULES

As part of this course, students will undertake a combination of modules that includes:

- Theory of fertility ultrasound
- Clinical practice of fertility ultrasound
- Technology of fertility ultrasound

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine



Interior at UCD Health Sciences Centre

ENTRY REQUIREMENTS

Applicants should be qualified Nurses or Midwives registered with An Bord Altranais or equivalent, radiographers must have approval to practice Radiography in Ireland or Northern Ireland, or equivalent, with a minimum of one year of general experience in nursing, midwifery of radiography.

Participants must be actively scanning in a fertility clinic and will be expected to attain a high-level of experience in clinical practice. To ensure this is achieved, students must arrange a clinical placement and provide evidence of an agreement to spend a minimum of 300 hours practicing ultrasound in a fertility clinic while undertaking this programme.

FEES 2013/2014	
EU Students	€3,000
Non-EU Students	€6,000

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

Graduate Certificate Radiology Information Systems and Picture Archiving and Communications Systems

COURSE FEATURES

Designed by experts in the field with input from RSMs, Vendors, IT, Radiography and Administration professionals.

Course unique to Ireland and UK at graduate level.

Caters for new and evolving clinical specialty.

Accommodates professionals in full time employment through flexible course delivery.

COURSE DETAILS

Major code	X392
Duration	12-24 Months
Schedule	Part-Time
Next intake	September 2013

WHO SHOULD TAKE THIS COURSE?

The course is targeted towards radiographers, radiation therapists, information communication technology (ICT) professionals and personnel working within or around the radiology information systems and picture archiving and communications systems of an imaging department.

"I would have no hesitation in recommending this course. The course content was comprehensive and applicable to all aspects of my own role as a RIS/PACS Administrator in a busy Radiology Department."

- John Keane,
UPMC Beacon Hospital

COURSE DESCRIPTION

PATIENT DATA

Management of RIS/PACS systems is essential to ensure that their benefits are maximised and patient data is controlled in a responsible and legislatively compliant way.

MODULES

The first module acts as a primer for the system administration level of operation.

It delivers advanced information on modern image acquisition, storage and display systems in radiology.

RIS/PACS administration is explored, including current regulatory requirements.

The second module aims to build on the RIS/PACS frontline skill-sets, to develop specialised knowledge and understanding of the RIS/PACS manager role and to prepare the student for overall system management.

This will cover skill sets required through an entire project lifecycle from initial specification, system procurement, implementation & go-live management, service level agreement management and active staff & documentation management.

SPECIALIST KNOWLEDGE

This final module aims to build on the RIS/PACS I & II skill sets to apply specialised knowledge and understanding in a practical clinical context.

It is particularly developed to infer professional competence in RIS/PACS administration in both an overall system management role and a frontline support role.

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine

Charles Institute, UCD Health Sciences

ENTRY REQUIREMENTS

Candidates should possess an appropriate undergraduate degree qualification or equivalent.

Radiographers, radiation therapists must have a BSc Radiography, radiation therapy, therapeutic radiography, Diploma of the College of Radiographers (London) or equivalent AND with access to a clinical site with RIS PACS system.

ICT professionals must have a primary degree in ICT and/or clinical experience of working in the subject area AND with access to a clinical site with RIS PACS system.

FEES 2013/2014

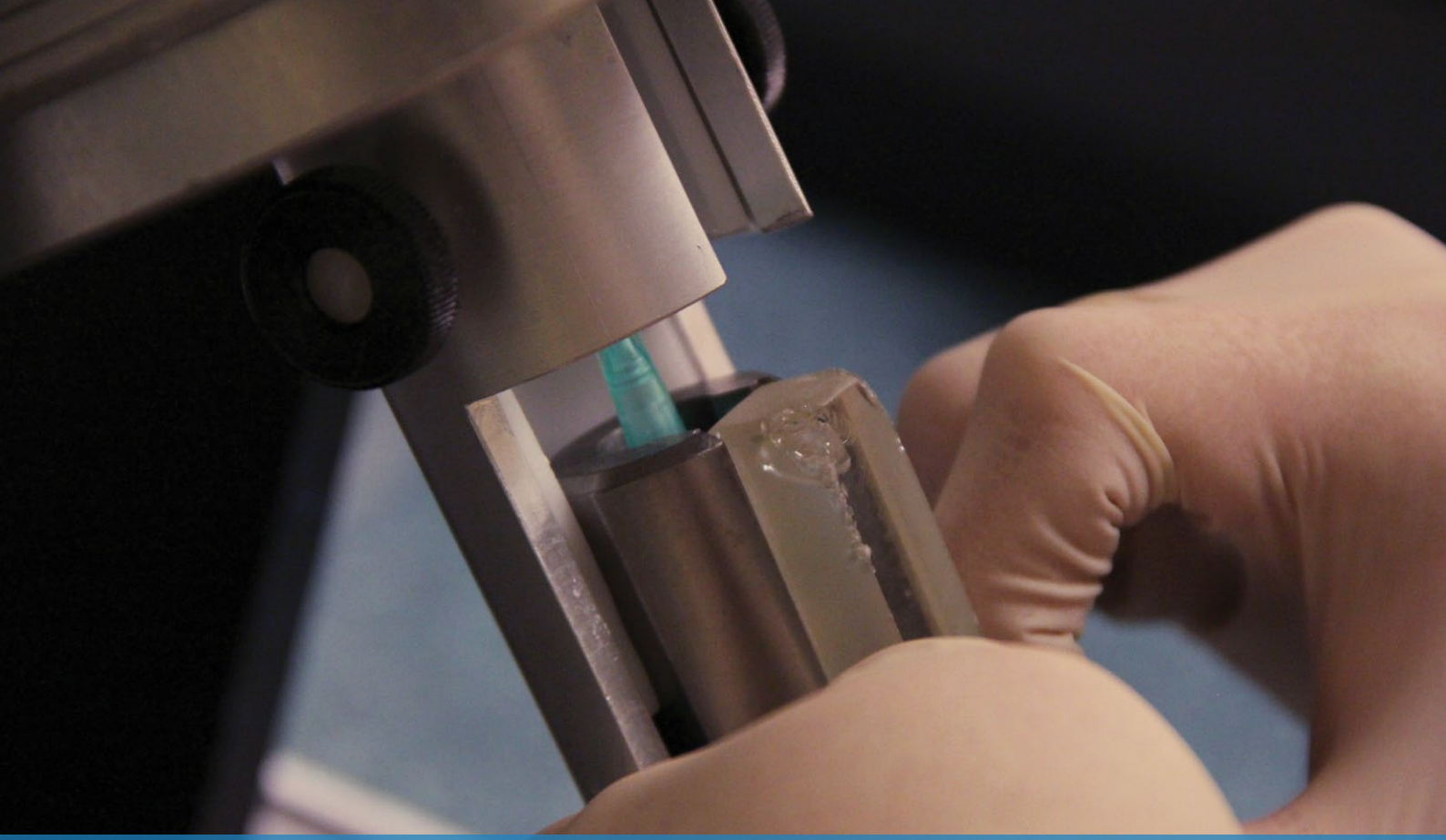
EU Students	€2,500
Non-EU Students	€5,000

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply



Professional Certificate
IV Cannulation and Administration

COURSE FEATURES

Equips participants with practical ability in intravenous administration.

Provides theoretical training for radiographers and radiation therapists undertaking intravenous administration in imaging departments.

Provides training on automatic injectors, dealing with adverse incidents, delegation of prescribing responsibilities, and administration protocols.

COURSE DETAILS

Major code	X572 (Sept.) X573 (Apr.)
Duration	6 - 12 Months (Incl. Clinical Competence Period)
Schedule	Part-Time
Next intake	April 2013

WHO SHOULD TAKE THIS COURSE?

This course is intended primarily for radiographers and radiation therapists.

More than 500 students have now successfully completed this module, and we continue to adapt it to meet the needs of students and the clinical healthcare environment.

- Key Fact

COURSE DESCRIPTION

THEORY AND PRACTICE

This course provides a theoretical background for radiographers and radiation therapists undertaking intravenous administration in an imaging department. In conjunction with a supervised schedule of administered injections, the course facilitates practical ability in intravenous administration.

FLEXIBLE APPROACH

Study can take place through a combination of lecture, practicals, and on-line learning, at a time and place convenient to the participant.

COURSE CONTENT

All candidates study intravenous agents used across imaging. Further aspects of practical administration such as using automatic injectors, dealing with adverse incidents, delegation of prescribing responsibilities, and administration protocols are included.

A practical training session with an IV radiographer trainer will feature as part of the course. Delegates will be asked to enrol online and attend both days of the course. There is also an opportunity to have the CPR skills update.

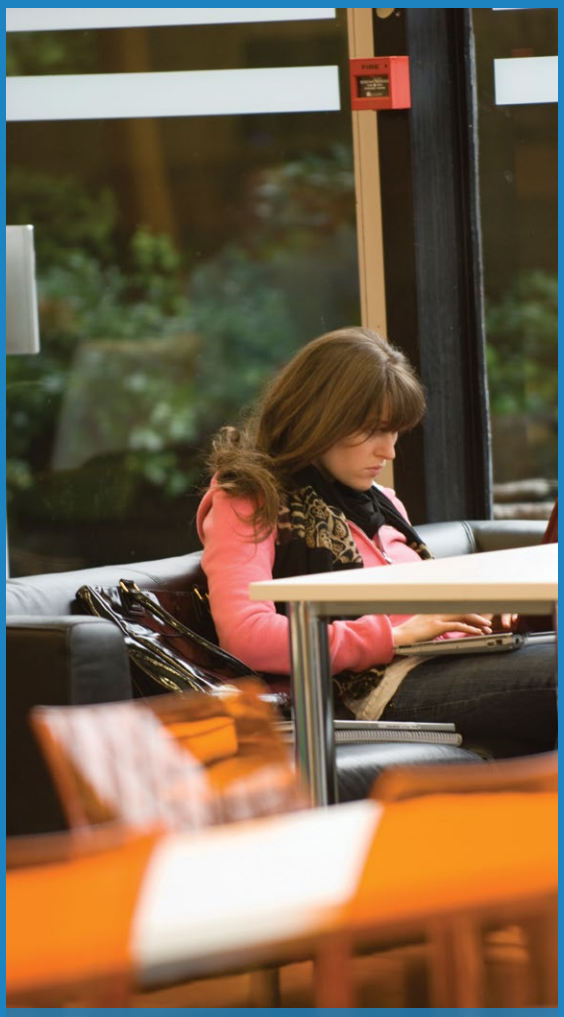
COURSE ELEMENTS

As part of this course, students will undertake a combination of elements that includes:

- Taught lectures
- Practical demonstrations on IV arms
- Submission of record of clinical practice
- Submission written piece of coursework
- Student-led recommendations on amendments to their departmental IV protocol

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine



Relaxing at UCD Restaurant

ENTRY REQUIREMENTS

The course is open to radiographers and radiation therapists. candidates are required to arrange for a suitably qualified supervisor to oversee their clinical experience [radiologist, physician, IV qualified radiographer, etc.]. All candidates must have access to a broadband internet connection to study the online material.

FEES 2013/2014	
EU Students	€400
Non-EU Students	€800

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

Professional Certificate
Forensic Radiography

COURSE FEATURES

Enables radiographers and forensic professionals to develop the knowledge and skills necessary to optimise the use of radiography in forensic investigations.

Blended learning approach combining theoretical sessions with hands-on practical sessions and small group discussion sessions.

Sessions facilitated by specialists in the field of forensics, demonstrating the multidisciplinary nature of forensic practice.

COURSE DETAILS

Major code	X386
Duration	4 months
Schedule	Part-Time
Next intake	January 2013

WHO SHOULD TAKE THIS COURSE?

This course is aimed at practising radiographers with varying levels of forensic radiography experience, as well as non-radiography forensic professionals who wish to broaden their knowledge and understanding of forensic radiography and related issues.

It may also act as an entry level module for further studies up to Masters level or for research in forensic imaging.

An excellent concise overview of important aspects associated with providing a forensic imaging service.

- Edel Dempsey
Radiographer, Tallaght Hospital

COURSE DESCRIPTION

BUILDS EXPERTISE

This course develops knowledge, expertise and skills in the practice – legal and professional - of forensic radiography.

The focus will be on the history and role of forensic radiography in forensic medicine and science, an introduction to medico-legal aspects of forensic radiography, practical approaches and issues in forensic radiography, roles and responsibilities, injury processes and pathologies, and an introduction to developments in forensic radiography.

PRACTICAL APPLICATION

The role and responsibilities of the radiographer, together with evidence-based, safe and legal practice is emphasised throughout.

Students are provided with a set of skills that will allow them to develop or to enhance an existing forensic imaging service.

COURSE ELEMENTS

As part of this course, students will undertake a combination of elements that includes:

- Lecture attendance
- Practical demonstrations
- Small group sessions
- Online learning
- Practical workshops

This certificate course is taught over five days, spread over three separate weeks.

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine

Communal Area at UCD Restaurant

ENTRY REQUIREMENTS

BSc in Radiography/Diagnostic Imaging or equivalent

One year of post-qualification experience in Radiography/Diagnostic Imaging or other forensic discipline is required

FEES 2013/2014

EU Students	€500
Non-EU Students	€1,000

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

Professional Certificate Radiation Safety

COURSE FEATURES

Covers contemporary radiation safety issues for industry, medical and biomedical applications.

Introduces radiation workers to the principles of the physics of radiation safety and the application of these principles.

Provides the necessary tools for those who will become trainers in radiation protection and in the safe use of radiation sources in their profession.

WHO SHOULD TAKE THIS COURSE?

This course will attract participants from a variety of backgrounds and training. Radiation safety officers are employed in the medical, biomedical and industrial sectors and professional training is required by law.

At present, UCD is the only institution to offer this training online in Ireland.

COURSE DETAILS

Major code	X403
Duration	4 months
Schedule	Part-Time
Next intake	January 2013

Medical use accounts for the largest man-made source of radiation and more than 13 per cent of the average annual radiation dose to a person in Ireland.

- Key Fact

COURSE DESCRIPTION

PRINCIPLES AND APPLICATIONS

This course covers all broad aspects of radiation safety for industry, medical and biomedical applications. It aims to introduce radiation workers to the fundamental principles of the physics of radiation safety and applications of these principles in their particular field.

BUILDS EXPERTISE

The course will provide the necessary basic tools for those who will become trainers in radiation protection and in the safe use of radiation sources in their profession. The course will provide both theoretical and practical training.

Each student chooses a specialty from diagnostic radiography, radiation therapy or industrial applications of ionising radiation depending on their area of interest. The provision of an e-learning structure allows students to complete training at home, at convenient times.

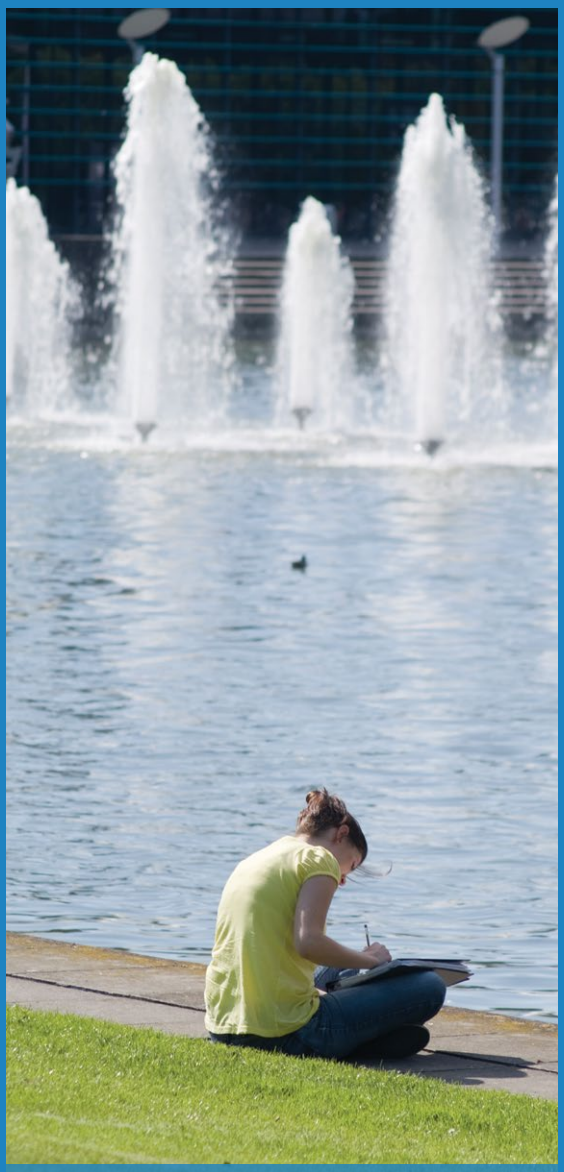
COURSE ELEMENTS

As part of this course, students will undertake a combination of elements that includes:

- Introduction to fundamental concepts
- Units of radiation exposure and dose
- Biological effects of ionising radiation
- Radiation detection and measurement
- Protection against occupational exposure
- Legal issues and international framework in radiation safety
- Assessment of internal and external exposures
- Emergency planning; non-ionising radiation

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine



Studying in the Sun at UCD

ENTRY REQUIREMENTS

Entry requirements comprise an undergraduate degree in a related field, however those with sufficient work experience will be considered for the course.

FEES 2013/2014	
EU Students	€700
Non-EU Students	€1,400

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

Professional Certificate
Intra-Orbital Foreign Body Screening

COURSE FEATURES

Designed for radiographers working in the MR environment.

Includes theoretical and practical components.

Accommodates professionals in full-time employment through distance-learning approach.

COURSE DETAILS

Major code	X563
Duration	4 months
Schedule	Part-Time
Next intake	September 2013

WHO SHOULD TAKE THIS COURSE?

This course is directed towards radiographers working in the magnetic resonance environment, and especially those involved in screening for intra-orbital foreign bodies.

Most of the course material is delivered by distance learning in order to facilitate radiographers in full-time employment and their employers.

The course aims to increase awareness and efficiency in IOFB screening.

- Key Fact

COURSE DESCRIPTION

CONTEXT

Metallic foreign bodies in the eye are common ophthalmic injuries.

Due to the potential risk associated with introducing a patient with metallic material in the orbit to a strong magnetic field, it is necessary to screen at-risk individuals for the presence of intra-orbital metallic foreign bodies prior to entering the MRI suite.

Written and verbal screening is undertaken in the first instance; however, imaging is sometimes indicated for further screening.

BUILDS EXPERTISE

This course will equip radiographers working in the MRI environment, who currently undertake verbal and written screening of patients for intra-orbital foreign bodies (IOFBs), with the skills and expertise necessary to:

- Make clear judgements about the appropriate screening methods for individual patients and clinical sites
- Select appropriate imaging when required
- Perform projection radiographs to screen for IOFBs and make diagnostic decisions.

FLEXIBLE APPROACH

The majority of this course is delivered online.

Students will develop practical image interpretation skills over time through building up a clinical portfolio.

Summer Scene at UCD Belfield

ENTRY REQUIREMENTS

Applicants are required to:

hold a primary degree in Radiography (or equivalent)

have access to computing facilities for online content

provide evidence that they will receive the support required to complete a practical portfolio in their workplace

FEES 2013/2014	
EU Students	€500
Non-EU Students	€1,000

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

Professional Certificate Dual Energy X-ray Absorptiometry (DEXA)

COURSE FEATURES

Targeted towards health care professionals currently involved in the practice technique and reporting of DEXA.

Material is primarily delivered online, providing a flexible approach to accommodate busy health care professionals and clinical site planning.

COURSE DETAILS

Major code	X579 (Jan) X569 (Sep)
Duration	4 months
Schedule	Part-Time
Next intake	January 2013 September 2013

WHO SHOULD TAKE THIS COURSE?

This course is directed towards healthcare professionals currently involved in the practice technique of DEXA, and especially those involved in the reporting of DEXA examinations.

This academic qualification has been designed to enhance patient outcomes and DEXA service provision.

- Key Fact

COURSE DESCRIPTION

CONTEXT

With an ageing population, the use of DEXA examinations to detect signs of osteoporotic changes will play a pivotal role in diagnosis of this condition, including recommendations on its management.

DEXA examinations are extremely operator dependant and very sensitive to discrepancies in technique in particular.

BUILDS EXPERTISE

This course will equip healthcare professionals currently involved in DEXA examinations with the skills and expertise necessary to:

- Develop their understanding of the operational and technical skills required to produce optimal scan results in addition to providing preliminary reports prior to radiologist approval
- Critically evaluate their own examination techniques and compare against standard practice to ensure optimal standards of operation
- Develop a detailed knowledge and understanding of the treatment and care pathways involved for patients diagnosed with osteopenia or osteoporosis

FLEXIBLE APPROACH

The course structure had been specifically designed to accommodate both students and employers through use of e-learning and minimal contact hours, thus allowing great flexibility and autonomous learning to maximise student engagement.

Students

ENTRY REQUIREMENTS

Applicants are required to:

Hold a primary degree in radiography, nursing, physiotherapy or equivalent

Have access to computing facilities for online content

Provide evidence of available clinical support for completion of the practical portfolio requirements

FEES 2013/2014	
EU Students	€700
Non-EU Students	€1,400

ABOUT UCD DIAGNOSTIC IMAGING

UCD is an internationally recognised centre of excellence for Diagnostic Imaging. The School of Medicine & Medical Science offers an extensive portfolio of graduate taught courses, which cater to a diverse range of healthcare professionals.
For more information visit www.ucd.ie/medicine

CONTACT

Ms. Anne Hegarty
Administrator – Diagnostic Imaging
Email: anne.hegarty@ucd.ie
Tel: + 353 1 716 6545

More information on this course:
www.ucd.ie/medicine

Apply for this course:
www.ucd.ie/apply

UCD School of Medicine and Medical Science
University College Dublin
Health Science Centre
Belfield, Dublin 4

E: school.medicine@ucd.ie
T: + 353 1 716 6603
W: www.ucd.ie/medicine