Radiographers Registration Board
Criteria and Standards of Proficiency Education and Training Programmes

Contents

Background

The Health and Social Care Professionals Act, 2005 (as amended) (HSCP Act, 2005) provides for the establishment of a Radiographers Registration Board, whose functions include establishing and maintaining a Radiographer/Radiation Therapist Register.

Registration will allow a person to use the title Radiogrpaher/Radiation Therapst. Statutory registration is fundamental to the delivery of quality and accountability in the provision of radiography/radiation therapy and will ensure that members of the public are guided, protected and informed, so that they can be confident that the radiographer/radiation therapist providing services are properly regulated and qualified for the job.

This system of statutory regulation is designed to ensure professional conduct and the maintenance of high standards of professional education and training among radiographers/radiation therapists, regardless of whether they work in the public or private sector or are self-employed.

The object of the Radiographers Registration Board is to protect the public by fostering high standards of professional conduct and professional education, training and competence among radiography/radiation therapy registrants (HSCP Act, 2005: Section 27(1)).

To this end the Act makes provision for the:

1. approval of education and training programmes (HSCP Act, 2005: Section 48)

2. monitoring of continuing suitability of education and training programmes (HSCP Act, 2005: Section 49)

The Radiographers Registration Board sets out the requirements for approval of social work programmes (HSCP Act, 2005: Section 48). An approved programme means that the programme has satisfied the RRB's criteria for approval and that students who successfully complete the programme meet the standards of proficiency for the profession and as a result are eligible to apply to join the Register.

Higher education institutions (HEI) in the Republic of Ireland that offer programmes leading to qualifications recognised for the purpose of registration of radiographers and radiation therapists will be eligible to apply to the Radiographers Registration Board for approval of these programmes. Approved programmes are subject to monitoring on an on-going basis.

Full details about the approval and monitoring of programmes can be found in the document Approval and Monitoring Process.

About this document

This document sets out the criteria for the approval of programmes and the standards of proficiency required of graduates for the safe and effective practice of the profession. These are the criteria and standards of proficiency against which a programme will be assessed. The Registration Board is responsible for conducting approval visits to education providers to ensure that their programmes meet the criteria and standards of proficiency. If a programme meets the required standards it will be granted approval, subject to on-going monitoring and review. The approval and monitoring process is detailed in a separate CORU document.

Section 2 sets out the criteria for the approval of a programme under 8 headings. Each criterion is accompanied by a number of indicators which are used to evaluate if the criterion is being met by the provider.

Section 3 sets out the standards of proficiency for the profession. The standards explain the key obligations and are accompanied by specific indicators which are used in the evaluation process.

Supporting CORU documentation

The following documents are to be read in conjunction with each other:

- Criteria and Standards of Proficiency for Education and Training Programmes - Guidance for Education Providers.

- Approval and Monitoring Process - Procedures and Guidance for Programme Providers.

- Radiographers Registration Board Code of Professional Conduct and Ethics.

Guiding principles

The principles which underpin the work of the Registration Board in relation to the approval and subsequent monitoring of programmes include:

a) The interests of the public need to be safeguarded by fostering high standards of professional education, training and competence in the radiography and radiation therapy professions.

b) Providers of programmes have primary responsibility for the quality of their programmes and their assurance.

c) Institutional autonomy should be respected.

d) Use should be made, wherever possible, of the outcomes of institutions' own internal and external quality assurance processes.

e) Transparency and the use of external expertise in the approval and monitoring of programmes are important.

f) The criteria and standards of proficiency should be developed in consultation with stakeholders.

g) Processes should be fit for purpose and not place an unnecessary burden on institutions.

h) The principle underpinning the approval process is based on self-evaluation by providers.

i) Processes should not stifle diversity and innovation.

Criteria for approval and monitoring of education and training programmes

The role of the Registration Board in relation to the approval of programmes is distinct from academic accreditation which programmes already undergo within their institution. Academic accreditation is based on the suitability of a programme for the award of a degree from the University. Professional accreditation/approval is a judgement as to whether a programme prepares the graduate for entry into that profession. The latter is distinguished by the existence of criteria that are specific to that profession, these having been defined in consultation with members of that profession and other relevant parties.

The criteria for approval of education and training programmes for the purpose of registration are set out in this document under eight headings. They will be explained in more detail in the following pages.

In addition to the eight criteria a number of indicators are given to identify for the provider the evidence that will be required to show that the programme meets the criteria for approval.

The eight headings are:

1   Level of qualifications for entry to the register

2   Admission onto a programme

3   Programme management and resources

4   Learning resources and student support mechanisms

5   Policy and procedures for quality assurance

6   Curriculum design and development

7   The assessment strategy

8   Practice placements

The document **Criteria and Standards of Proficiency for the Approval of Education and Training Programmes – Guidance for Education Providers**, is available to support providers when preparing for their first approval visit and subsequent monitoring of programmes.

1. Level of qualifications for entry to the Register

Criterion:

This criterion is concerned with the academic level that applicants will be required to hold in order to apply to register with the Registration Board.

The Radiographers Registration Board requires that the entry route to the register will be the following:

Radiographer:

- **Bachelor of Science at honours level in Radiography at a National Framework of Qualifications Level 8.**

Radiation Therapist:

- **Bachelor of Science in Radiation Therapy at honours level at a National Framework of Qualifications Level 8.**

2. Admission onto a programme

Criterion:

There should be explicit information regarding the requirements for admission onto a programme, setting out minimum entry requirements, application procedures and selection procedures.

Indicators:

a) Clear and comprehensive information for prospective students about the programme and procedures for admission to the programme, including direct applications, is available.

b) The mechanism for student admissions to the programme ensures that the stated entry requirements are met.

c) Clarity in relation to entry requirements.

d) Procedures for Recognition of Prior Learning (RPL), if applicable.

e) Institutional policy on equal opportunities in relation to applicants and students.

f) Information documenting the collection, analysis and use of relevant information on admissions to the programme.

3. Programme management and resources

Criterion:

Programmes should be well organised, have clear management and operational structures, adequate and appropriate staffing and the physical and monetary resources to support the teaching and learning activities, research activity, professional development etc.

Indicators:

a) Confirmation of the long term security of the programme within the institution.

b) Commitment to adequate financial support for the programme for the five-year approval period.

c) The named person with direct responsibility for the programme has an appropriate professional qualification and experience.

d) The organisational and staffing structure supporting the management of the programme is explicit.

e) Structures are in place to facilitate the participation of staff and students in relevant deliberation and decision making processes.

f) The staff involved with teaching the students have appropriate qualifications, full knowledge and understanding of the subject they are teaching and the skills and experience to transmit their knowledge effectively to students in a range of teaching contexts and can access feedback on their own performance.

g) The core programme team and the practice education team are required to be registered on the radiographers register. Education providers will be required to provide details of the core programme team and the practice education team. This indicator will take effect following the close of the transitional period*.

h) A mechanism for staff development that prepares staff to deliver the educational programme is declared.

i) Appropriate and adequate resources/facilities to meet the teaching and learning needs of the students are available.

j) The process of monitoring student attendance is declared, together with the implications of non-attendance.

k) The institution keeps appropriate records including the conferment of academic awards and students who exit the programme before completion.

*The transitional period runs for two years from the date of opening of the register. The transitional period is necessary to give existing practitioners sufficient opportunity to apply for registration and satisfy the registration board that they meet the requirements.

Learning resources and student support mechanisms

Criterion:

Resources available for the support of student learning are adequate and appropriate for the programme.

Indicators:

a) Adequate and appropriate learning resources are available and accessible to students.

b) Support mechanisms are provided for students, designed with their needs in mind, and responsive to feedback from those who use the student services.

c) A formal complaints procedure is in place for students.

d) Institutions routinely monitor and review the effectiveness of the support services available to students and implement necessary improvements.

e) A student code of conduct is in place.

4. Policy and procedures for quality assurance

Criterion:

Providers should explicitly commit themselves to the development of a culture which recognises the importance of quality assurance and quality improvement of education programmes. The strategy, policy and procedures should have formal status within the institution and be publicly available and they should include a role for students and other stakeholders.

Indicators:

a)   The existence and availability of external and internal reviews of the programme.

b)   An appropriate policy on the provider's internal quality assurance system.

c)   Grievance and appeals procedures are in place for students.

5. Curriculum design and development

Criterion:

Curriculum design should reflect current evidence-informed and research based educational theory and health and social care practice. The curriculum model chosen should be dynamic and flexible to allow for changes in the profession, health and social care delivery and the development of evidence based/informed practice.

Indicators:

a) The curriculum is designed to meet the standards of proficiency (as outlined in Section 3) agreed by the registration board.

b) Curriculum design and development is guided by professional knowledge of the subject that is evidence - based/informed.

c) The curriculum development team comprises of personnel in education and in practice of the profession. The team should consult with relevant stakeholders such as other health and social care professionals, employers, patients, researchers and policy makers.

d) The curriculum utilises a range of teaching and learning strategies to assist in the development of knowledgeable, competent, reflective practitioners who are willing to accept personal and professional accountability for evidenced-informed practice, and who are equipped with life-long skills for problem solving and self-directed learning.

e) The curriculum design reflects a variety of methods of teaching and learning and provides a balance between lectures, tutorials, workshops, small group interactions, demonstrations, practical work and self-directed learning.

f) The curriculum design reflects evidence of inter-professional education and inter-disciplinary co-operation designed to lead to improved collaborative practice between health and social care professionals to achieve better outcomes for patients.

g) The curriculum is planned to demonstrate balanced distribution and integration of theory and practice to achieve the standards of proficiency (as outlined in Section 3).

h) The module descriptors/course outlines identify the aims, learning outcomes, syllabus content, student contact hours, student effort/self-directed learning hours and the assessment strategies.

i) The curriculum articulates how the student is enabled to achieve the expected learning outcomes of the programme.

6.   The assessment strategy

Criterion:

Assessment of learning is a continuous process and demonstrates a balanced and integrated distribution throughout the programme. Students should be assessed using criteria, in adherence with regulations and procedures which are applied consistently.

Indicators:

a)   The assessment strategy and design ensures that the student who successfully completes the programme has met the intended learning outcomes of the programme and the standards of proficiency set out for the profession.

b)   Assessment techniques are appropriate for their purpose, whether formative or summative.

c)   Assessment techniques have clear criteria for marking.

d)   Assessments are undertaken by appropriate individuals who understand the role of assessment in the progression of students towards the achievement of the knowledge, skills and proficiencies associated with their intended qualification.

e)   Assessments are conducted in alignment with the institutional academic regulations. The practice of assessment moderation and dual marking should be incorporated as appropriate within the programme.

f)   There are policies covering student absence, illness and other mitigating circumstances.

g)   Examinations and assessments are conducted securely in accordance with the institution's stated procedures.

h)   The practices and procedures for assessment should follow institutional academic regulations to ensure assessments are subject to academic rigor and accuracy.

i)   Students are fully informed about the assessment strategy used during their programme, in addition to the examinations or other assessment methods that they will be subject to, and the criteria that will be applied to the assessment of clinical practice.

j)   Information is provided on the procedures for obtaining results, viewing scripts, obtaining feedback from lecturers, making an appeal and supplementary examinations.

7.   Practice placements

Criterion:

Practice placement learning enables the student to acquire the standards of proficiency for the profession and become safe, competent practitioners willing to accept personal and professional accountability for their work. Learning initially developed within the academic component of the profession must be integrated into practice through the experience and supervision offered by structured placements within professional settings. A partnership approach between the education provider and the practice placement provider is essential. Practice placement education is an integral component of professional education and training programmes.

Indicators:

a)   **Radiographer:**
Students must spend at least 1,200 hours in practice placements, 280 hours of which must be in one block and full time.

Radiation Therapists:
Students must spend at least 1,200 hours in practice placements, 280 hours of which must be in one block and full time.

b)   **Radiographer:**
The number, duration and range of practice placements are appropriate to support the delivery of the programme and the achievement of the standards of proficiency. This must include a mix of placements in a variety of areas of potential employment for the profession at appropriate stages within the programme of study. The variety of practice placements should include:

1) General radiography
2) Accident & emergency radiography
3) Dental radiography
4) Theatre radiography
5) Ward radiography
6) Fluoroscopy
7) Angiography (to include Cardiovascular)
8) Mammography
9) Computed Tomography (CT)
10) Magnetic Resonance (MR)
11) Ultrasound
12) Nuclear Medicine / Radionuclide Imaging (RNI)
13) Positron Emission Tomography – Computed Tomography (PET/CT)
14) Dual Energy X-ray Absorptiometry (DXA, previously DEXA)
15) Neonatal/Paediatric Radiography
16) Interventional radiology procedures

Radiation Therapists:

The number, duration and range of practice placements are appropriate to support the delivery of the programme and the achievement of the standards of proficiency. This must include a mix of placements in a variety of areas of potential employment for the profession at appropriate stages within the programme of study. The variety of practice placements should include:

1) Pre-treatment
2) Dosimetry
3) Making immobilization devices
4) All treatment
5) CT simulator

c) The selection of practice placements provided by the education provider in conjunction with service agencies reflects the scope of the radiography and radiation therapy settings, in which the Radiographer and Radiation Therapists normally operate.

d) The education provider will have a set of requirements for the selection of placements to ensure quality learning environments for students. The educator will work in partnership with the practice placement provider and will make a formal agreement that clearly set out the responsibilities of both parties and which will be subject to review on a regular basis.

e) On-going reviews of practice placements will ensure that placements provide a safe and supportive environment, high quality professional practice and opportunities for the student to experience direct contact with patients. Students, the practice education team[*] and placement providers will have a role in this review process.

f) Supervision will be provided to students by the practice education team.

g) Students, placement providers and the practice education team will be fully informed and prepared for the practice placements.

h) While on placement, contact should be maintained with the student by the programme providers. To this end, appropriate contact should be maintained between the practice education team and the student on placement.

i) Practice educators will have relevant professional and academic qualifications, practice experience and competence in the area which they are supervising. Practice educators should be qualified a minimum of three years. Practice educators should be fully informed of the expectations, organisation and arrangements for placements. In addition, they will have undertaken appropriate training to enable them to carry out their role effectively and efficiently and will normally be located in the same practice setting as the students.

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[*]The education provider will provide details of who the practice education team are.

j)   Support and training will be available to practice educators to develop their practice education skills in relation to facilitating students on placement.

k)   Student allocation to practice placements is based on the need to integrate theory and practice and to facilitate the progressive development of the standards of proficiency for the profession. The standards of proficiency are the knowledge, skills, competencies and professional qualities that are required of graduates from an approved programme for the safe and appropriate practice of the profession. They are the minimum standards for entry to the profession. The standards and proficiency learnt in this way should be transferable between situations, contexts and institutions.

l)   Pre-placement requirements must be in place.

m)   Policies and procedures are in place for the assessment of students on practice placements, including appeal mechanisms for failed placements.

n)   A code of conduct for students whilst on placement should be in place.

Standards of proficiency

This section sets out the standards of proficiency for the profession. The standards of proficiency are the knowledge, skills, competencies and professional qualities that are required of graduates from an approved programme for the safe and appropriate practice of the profession. They are the minimum standards necessary to protect the public.

The standards of proficiency have specific indicators, which provide more detail for providers.

The standards of proficiency should not be interpreted by providers as being detailed programme specifications. They do not specify the courses of study a learner must take. Rather, they should be seen as a reference for the development of programmes and a framework for the elaboration of intended learning outcomes. A diverse range of potential programmes and programme learning outcomes may be compatible with these standards.

The standards of proficiency will in the first case be used by providers when preparing an application to a Registration Board for approval of a programme. These same standards will be used by the assessment panel during the approval process and they will also be used in the on-going monitoring of programmes to ensure that a programme continues to meet the required standards.

The standards of proficiency are grouped under six domains:

Domain 1:   Professional autonomy and accountability

Domain 2:   Interpersonal and professional relationships

Domain 3:   Effective communication

Domain 4:   Personal and professional development

Domain 5:   Provision of quality services

Domain 6:   Knowledge, understanding and skills

Domain 1: Professional autonomy and accountability

Graduates will:

1) **Practise within the legal and etical boundaries of their profession to the highest standard.**

   a) Act in the best interest of patients at all times and within the boundaries of their profession.

   b) Respect and, in so far as possible, uphold the rights, dignity and autonomy of all patients as they participate in the diagnostic, therapeutic and social care process.

   c) Provide and articulate professional and ethical practice.

   d) Practise in accordance with current legislation applicable to the work of their profession.

   e) Contribute to the development of effective, ethical and equitable policy and practice, regarding issues addressed by their profession.

   f) Understand the implications of their duty of care for patients and professionals.

   g) Understand the principles of professional regulation and the provisions of the **Radiographers Registration Board Code of Professional Conduct and Ethics.**

   h) Manage themselves, their practice and that of others in accordance with the **Radiographers Registration Board Code of Professional Conduct and Ethics.**

Domain 1: Professional autonomy and accountability

Graduates will:

2) Practise in a non-discriminatory way.

   a) Acknowledge and respect the differences in beliefs and cultural practices of individuals or groups.

   b) Promote equality and respect, and practise in a culturally competent, non-discriminatory and inclusive manner.

   c) Assist in the promotion and implementation of policies and systems to protect the health, safety, welfare, equality and dignity of patients, staff and volunteers with particular reference to the grounds of gender, civil status, family status, sexual orientation, religion, age, disability, race and membership of the Traveller community.

3) Understand the importance of and be able to maintain confidentiality.

   a) Respect the confidentiality of patients and use information only for the purpose for which it was given.

   b) Understand confidentiality within a team setting.

   c) Understand the legal and ethical responsibility of maintaining patient confidentiality.

   d) Understand the limits of confidentiality particularly in relation to child protection, vulnerable adults and elder abuse.

   e) Be aware of data protection, freedom of information and other relevant legislation.

   f) Understand the potential conflict that can arise between confidentiality and whistle-blowing.

Domain 1: Professional autonomy and accountability

Graduates will:

4) Understand the importance of and be able to obtain informed consent.

    a) Demonstrate competence in gaining informed consent to carry out assessments or provide treatment/interventions and to understand the legal implications of failing to obtain consent and continuing with the procedure.

    b) Understand issues associated with informed consent for individuals with lack of capacity, children and patients who are unable to communicate.

    c) Maintain accurate records relating to consent.

    d) Respect the rights of the patients.

5) Be able to exercise a professional duty of care/service.

    a) Recognise personal responsibility for one's actions and be able to justify reasons for professional decisions made.

    b) Understand the need to maintain the highest standards of personal/professional conduct.

6) Be able to practise as an autonomous professional, exercising their own professional judgement

    a) Know the limits of their practice and know when to seek advice or refer to another professional.

    b) Recognise the need for consultation and/or supervision.

    c) Be able to assess a situation, determine the nature and severity of the problem and call upon the required knowledge and experience to deal with the situation.

    d) Be able to initiate appropriate resolution of   problems and be able to exercise personal initiative.

Domain 1: Professional autonomy and accountability

Graduates will:

e) Understand the importance of both individual and team work in order to deliver the best patient centred service in line with local and national legislation and guidelines.

f) Recognise that they are personally responsible for their own work and must accept and be legally accountable for their actions.

7) Recognise the need for effective self-management of workload and resources and be able to practise accordingly.

a) Understand the demands that are placed on the professional practitioner in a given field and the skills required to practise effectively with the workload and available resources.

8) Understand the obligation to maintain fitness to practise.

a) Understand the need to practise safely and effectively within their scope of practice.

b) Understand the importance of maintaining their physical and mental health.

c) Understand the importance of being familiar with current and new developments and techniques in the practice of radiography and radiation therapy.

d) Understand the importance of keeping skills and knowledge up to date over a lifetime of practice.

Domain 2: Interpersonal and professional relationships

Graduates will:

1) **Work, in partnership, with patients and their relatives/carers, and other professionals.**

   a) Demonstrate a capacity to build and sustain professional relationships as both an independent practitioner and collaboratively as a member of a team.

   b) Demonstrate a capacity to engage patients and their carers in assessment and understanding the process of treatment preparation, delivery, potential side effects and their management.

   c) Recognise and understand the concepts of power and authority in relationships with patients.

   d) Be able to make appropriate decisions with respect to referrals or follow up through multi-disciplinary discussion.

2) **Contribute effectively to work undertaken as part of teams (multi-disciplinary, inter-professional, multi-service or inter-agency).**

   a) Demonstrate professional collaboration, consultation and decision making in multi-disciplinary, inter-disciplinary, multi-service and inter-agency teams.

   b) Demonstrate an understanding that relationships with professional colleagues can impact on service delivery and therefore should be based on mutual respect and trust.

   c) Demonstrate ability to maintain standards of care in situations of personal differences.

Domain 3: Effective Communication

Graduates will:

1) **Demonstrate effective and appropriate skills in communicating information, listening, giving advice, instruction and professional opinion.**

   a) Be aware of, understand and modify communication to address the characteristics and consequences of verbal and non-verbal communication and how this can be affected by factors such as gender, civil status, family status, sexual orientation, religious belief, age, disability, race or membership of the Traveller community.

   b) Demonstrate the ability to produce clear, concise and objective written communication and reports.

   c) Be able to select, move between and use appropriate forms of verbal and non-verbal communication, including listening skills, with patients and others.

   d) Demonstrate an appropriate use of information technology.

   e) Understand the importance of and demonstrate effective communication with other colleagues (inter-disciplinary communication), multi-disciplinary teams and management.

   f) **Radiographer:**
   Understand the need to provide patients (or people acting on their behalf) with the information necessary, in an appropriate format to enable them to make informed decisions regarding treatment, imaging and side effects.

   Radiation Therapists:
   Understand the need to provide patients (or people acting on their behalf) with the information necessary, in an appropriate format to enable them to make informed decisions regarding treatment and side effects.

   g) Understand the need to use an appropriate interpreter to assist with language and communication difficulties for patients where necessary.

Domain 3: Effective Communication

Graduates will:

2) Understand the need for effective communication throughout the care of the patients.

    a) Recognise the need to use interpersonal skills to facilitate the active participation of patients.

    b) Show effectiveness when communicating with patients and an ability to manage conflict and resistance.

    c) Demonstrate competence in presenting professional judgements and information in a variety of contexts.

Domain 4: Personal and Professional development

Graduates will:

1) **Understand the role of reflective practice in relation to personal and professional development.**

   a) Understand the importance of self-awareness and self-reflection.

   b) Be able to reflect critically on personal practice.

   c) Be aware of the need to ensure that personal life experiences and personal value systems do not impact inappropriately on one's professional decision making or actions.

   d) Understand the role, purpose and function of supervision.

   e) Actively avail of opportunities for feedback, mentoring and support from colleagues in order to continuously improve personal practice.

   f) Take responsibility for personal and professional development.

   g) Develop and critically review a personal development plan which takes account of personal and professional needs.

   h) Identify and avail of opportunities to promote professional development of self, colleagues and teams and the broader development of disciplines.

   i) Understand the role of performance management as part of on-going professional development and effective service delivery.

   j) Understand the role of continuing professional development (CPD) and demonstrate commitment to life long learning.

   k) Understand the necessity to maintain an accurate record and portfolio of all CPD activity.

   l) Recognise the need to contribute to policy and development of the profession.

   m) Recognise the contribution and value of research in developing evidenced/informed practice.

Domain 5: Provision of quality services

Graduates will:

1) Be able to identify and assess patients.

    a) Understand the importance of correct patient identification and adhering to correct departmental policy.

    b) Be able to gather appropriate information.

    c) Select and use appropriate assessment techniques: undertake and record a thorough, sensitive and detailed assessment, using appropriate techniques and equipment.

    d) Undertake or arrange investigations as appropriate.

    e) Understand the importance of incident reporting including near misses and be familiar with relevant policies.

    f) Analyse and critically evaluate the information collected.

2) Contribute to the planning of strategies to meet identified needs of patients.

    a) Contribute to the development and implementation of appropriate plans, interventions and strategies, according to best available evidence, agreed national guidelines, protocols and pathways, where available.

    b) Identify needs and resources required to implement effective management and intervention of plans.

    c) Have ability to work effectively and safely within available resources according to agreed national guidelines.

3) Use research, reasoning and problem solving skills to determine appropriate action.

    a) Recognise the value of research to the systematic evaluation of practice and take part in research where appropriate.

    b) Engage in evidence - based practice, evaluate practice systematically, and participate in audit/review procedures.

    c) Be aware of a range of research and evaluative methodologies, including evidence informed research.

d) Demonstrate sound clinical/professional decision-making, which can be justified even when made on the basis of limited information e.g. imaging of trauma patient.

e) Demonstrate a logical and systematic approach to problem solving.

4) Draw on appropriate knowledge and skills in order to make professional judgements.

a) Understand the need to adjust/adapt their practice as needed to take account of new developments.

b) Demonstrate a level of skill in the use of information technology appropriate to their profession.

5) Understand the need to formulate specific and appropriate management plans including the setting of timescales.

a) Understand the requirement to adapt practice to meet the needs of different groups distinguished by, for example, physical, psychological, environmental, cultural or socio-economic factors.

6) Conduct appropriate assessment/diagnostic or monitoring procedures, treatment, or other actions safely and skilfully.

a) Understand the need to maintain the safety of both patients and those involved in their care.

b) Empower patients to manage their well-being and recognise the need to provide advice to the patient regarding imaging, treatment and side effects, where appropriate.

7) Implement best practice in record management.

a) Keep accurate, legible records and recognise the need to handle these records and all other information in accordance with applicable legislation, protocols and guidelines.

b) Understand the need to use accepted terminology in making records.

8) Monitor and review the on-going effectiveness of planned activity and modify it accordingly.

a) Gather information, including qualitative and quantitative data, that help to evaluate the responses of patients to their interventions.

b) Evaluate intervention plans using tools and recognised performance/outcome measures. Revise the plans as necessary, and where   appropriate, in conjunction with the patients.

c) Recognise the need to monitor and evaluate the quality of practise and the value of contributing to the generation of data for quality assurance and improvement of programmes.

d) Recognise important factors and risk management measures, learn from adverse events and be able to disseminate learning.

e) Make reasoned decisions to initiate, continue, modify or cease interventions/techniques/courses of action and record decisions and reasoning.

f) Communicate reasoned concerns that may initiate modification or cessation of imaging techniques or treatment.

9) Be able to evaluate, audit, and review practice.

a) Understand the principles of quality assurance and quality improvement.

b) Understand the importance of the role of audit and review in quality management, including the use of appropriate outcome measures.

c) Monitor and evaluate performance by participating in regular audits and reviews in accordance with national guidelines/best practice and implement improvements based on the findings of these audits and reviews.

d) Participate in quality assurance programmes and document appropriately.

e) Understand the value of reflective practice and the need to record the outcome of such reflection.

f) Recognise the value of multi-disciplinary clinical case conferences, and other methods of review.

Domain 6: Knowledge, understanding and skills

Graduates will:

1) **Know and understand the key concepts of the bodies of knowledge which are relevant to the profession.**

   a) Demonstrate a critical understanding of relevant biological sciences, human development, social sciences and other related sciences.

   b) Have knowledge of human anatomy (surface, cross-sectional and radiographic), physiology and pathology of the human body.

   c) Understand radiation physics, radiation biology, diagnostic, radiotherapy equipment as appropriate.

   d) Understand the radiological principles on which radiography/radiotherapy is based.

   e) Have knowledge of radiation protection and relevant legislation, understand risks and benefits involved in the practice of imaging.

   f) Understand and have awareness of the importance of the local rules regarding radiation protection and work within their guidelines, using personal monitoring equipment as required.

   g) Adhere to the ALARA (As Low As Reasonably Achievable) Principle at all times.

   h) Understand the need to ensure the physical and radiation safety of all individuals.

   i) Have knowledge of computer skills pertaining to image collection, manipulation and storage of data.

   j) Be familiar with the Irish Institution of Radiography and Radiation Therapy Intravenous Cannulation / Administration guidelines when administrating IV contrast agents, and operate in accordance with the local protocols. Have an awareness of and be able to recognise adverse side effects and take appropriate action.

   k) Know and understand the principles and applications of scientific enquiry, including efficacy, the research process and evidence based practice.

   l) Demonstrate an understanding of the theory, concepts and methods pertaining to practice within their profession.

m) Demonstrate professional collaboration, consultation and decision making skills in multi-disciplinary, inter-disciplinary, multi-service and inter-agency teams.

n) Understand the theoretical basis of and the variety of approaches to assessment, diagnosis, intervention and treatment.

o) Understand the difference between normal and abnormal appearances evident on images. Identify, note and address abnormal appearances appropriately.

p) Have knowledge of physical and psychological side effects and how they are managed and reported appropriately.

q) Demonstrate an understanding of Quality Assurance procedures and how they impact on image quality in clinical practice

Radiographer specific indicators:

a) Have appropriate knowledge of the signs and symptoms of a broad range of pathologies and trauma which are used as clinical indications for referral for imaging procedures and be able to justify the referral and assess its appropriateness.

b) Demonstrate the ability to perform independently all general radiography techniques within all settings including departmental, dental, theatre (inclusive of fluoroscopy), hospital wards and emergency rooms.

c) Demonstrate the ability to adapt techniques and produce diagnostic images facilitating accurate clinical diagnosis in various patient presentations and conditions.

d) Understand the various modalities used in diagnostic imaging. Be familiar with their application to be able to discuss clinical appropriateness and be able to assist with procedures. This will include, but not limited to:

    1) Fluoroscopy
    2) Angiography (to include Cardiovascular)
    3) Mammography,
    4) Computed Tomography (CT)
    5) Magnetic Resonance (MR)
    6) Ultrasound
    7) Nuclear Medicine / Radionuclide Imaging (RNI)
    8) Hybrid Imaging:
       Single Photon Emission Computed Tomography – Computed Tomography (SPECT/CT)
       Positron Emission Tomography - Computed Tomography (PET/CT)

Position Emission Tomography – Magnetic Resonance (PET/MR)

9) Dual Energy X-ray Absorptiometry (DXA, previously DEXA)
10) Neonatal/Paediatric Radiography
11) Interventional radiology procedures
12) Other new techniques

Radiation Therapy specific indicators:

a) Have knowledge of molecular oncology and radiation biology.

b) Have knowledge of aetiology and epidemiology of main cancer sites.

c) Have knowledge of the radiotherapy management of the main cancer sites including techniques, dose and fractionation and (additional) impact on such if drug therapy is added.

d) Have knowledge of other treatment modalities, surgery, chemotherapy, hormone therapy targeted therapies and their interaction with radiation.

e) Demonstrate the ability to select and rationalise the treatment techniques appropriate to the patient's disease management.

f) Understand the need for optimal immobilisation when engaging in all pre-treatment planning and treatment processes as appropriate.

g) Understand the techniques of virtual simulation and the dosimetric impact of different field arrangements to achieve an optimal therapeutic ratio.

h) Be able to obtain, interpret and evaluate images taken as treatment verification.

i) Be able to correctly position patient for all procedures, to ensure accurate delivery of the prescribed treatment.

j) Have knowledge to administer the prescribed treatment in accordance with the treatment plan and ensure that all pre-treatment procedures have been adhered to prior to the administration of treatment.

k) Understand the importance of in-vivo dose measurements and be competent in acquiring and interpreting same by following departmental procedures.

Domain 6: Knowledge, understanding and skills

Graduates will:

2) Have knowledge and understanding of the skills and elements required to maintain patient, self and staff safety.

   a) Understand and be able to manage risk

   b) Be able to identify, prevent and manage appropriately adverse events and near misses. Be familiar with the policy for their evaluation and follow through procedure.

   c) Understand the importance of communication with patients and staff.

   d) Understand the immunisation requirements for staff and the importance of occupational health.

   e) Participate in manual handling training and use aids where appropriate

   f) Participate in CPR training and the use of all basic life support devices.

   g) Be aware of applicable legislation e.g. health and safety legislation, radiation safety legislation, employment legislation and relevant national and local guidelines.

   h) Establish safe environments for practice, which minimise risks to patients, those treating them and others, including the use of hazard and infection control.

   i) Work safely, including being able to select appropriate hazard control and risk management, reduction or elimination techniques in a safe manner in accordance with health and safety legislation.

   j) Undertake appropriate health and safety training as per institutional policy.

Glossary of Terms

Act	The Health and Social Care Professionals Act, 2005(as amended).
Appeal	An application for reconsideration of a decision regarding approval of a programme.
Approval	The status granted to a programme that meets the criteria set by the registration board for approval of education and training programmes.
Approval process	The process that leads to a decision as to whether a programme meets the criteria set for approval of education and training programmes.
Award	An award which is conferred or granted by an awarding body and which records that a learner has acquired a standard of knowledge, skill or competence.
Biennial monitoring	A biennial process where a provider confirms that the approved programme continues to meet the criteria for approval.
Code of Professional Conduct and Ethics	This is a statement of the standards which registrants sign up to and agree to abide by in order to remain on the register.
Council	The Health and Social Care Professionals Council, established under the Health and Social Care Professionals Act, 2005 (as amended).
Criterion	A principle or standard that an education and training programme is judged by.
Curriculum	

A structured plan to provide specific learning to support students' knowledge, skills, behaviours and associated learning experiences. The learning plan is generally organised as a sequence of modules. The curriculum includes the syllabus, teaching guides, an assessment plan and necessary learning resources.

Designated profession

A health or social care profession that is designated under Section 4(1) or Section 4(2) of the Health and Social Care Professionals Act, 2005.

Education Provider (Provider)

The institution that provides, organises and delivers an education and training programme.

Expert panel

A panel of experts, selected from the Panel of Assessors, to carry out the approval process for an education and training programme.

Framework

The broad structure within which Registration Boards will operate in relation to the approval and monitoring of education and training programmes.

Indicators

The means by which a provider shows how a programme satisfies the criteria for approval.

Mapping document

Template document to be completed by education provider.

Major change

A change to a programme of study that significantly alters the way the programme meets the criteria for approval of education and training programmes and therefore how the students will attain the standards of proficiency. Not all changes to a programme are major changes.

Monitoring

The process of ensuring the continuing suitability of approved education and training programmes.

National Framework of Qualifications

The single, nationally and internationally accepted entity, through which all learning achievements may be measured and related to each other in a coherent way and which defines the relationship between all education and training awards.

Panel of Assessors	A panel appointed by a Registration Board comprising academics, practitioners, employers and service users.
Patient	One who receives medical attention, care or treatment from a Radiographer/Radiation Therapist.
Practice placement	A period of clinical or practical experience that forms part of an approved programme.
Practice educator	This is the title given to the individual therapists, on site in the clinical placements, who educate, monitor and mentor students when they are on placement. Practice educators are supported in their role by other members of the practice education team.
Practice education team	Persons who are responsible for a student's education during the period of clinical or practical placement. This includes the practice educator on site in the placement providers.
Practice placement provider	The organisation that provides a period of clinical or practical experience for a student.
Professional qualities	Professional qualities for a health and social care professional are the attitudes and behaviours that are relevant to their role.
Profession specific proficiencies	Proficiencies added by a Registration Board related to a named profession.
Programme	The academic teaching, practice placements, assessment, qualification and other services provided by the education provider, which together forms the programme for approval purposes.
Quality assurance procedures	Formal procedures that are in place in an institution for the purpose of further improving and maintaining the quality of education and training provided by the institution.
Recognition of Prior Learning (RPL)	Refers to recognition of learning that has taken place prior to entering a programme. Such prior learning may have

	been acquired through formal, non-formal or informal routes.
Register	A register established and maintained under Section 36 of the Health and Social Care Professionals Act, 2005.
Registrant	In relation to a designated profession this means an individual whose name is currently on the Register of members for that profession.
Registration Board	A board established under Section 26 of the Health and Social Care Professionals Act, 2005.
Self-study	The process whereby a provider of a programme examines and documents to a Registration Board how that programme meets the criteria for approval of programmes.
Service user	Anyone who uses or is affected by the services of registrants or students.
Standards of Proficiency	The standards of proficiency are the knowledge, skills, competencies and professional qualities that are required of graduates from an approved programme for the safe and appropriate practice of the profession