



Department of Medical Imaging and Radiation Sciences

Short Course in Imaging for Advanced Radiation Therapy Practice

- Academic units must be studied concurrently or as a pre-requisite to studying clinical units.
- Each course has a total of 4 units, at a cost of \$2000. Participants can choice to study single academic units from any of the listed short courses.
- Each unit has a variety of assessments which may include online exams, written academic submissions (essay form assignments), PowerPoint presentations, peer review, case studies and case appraisals, case logs, e portfolios, self appraisal and action plan, clinical skills assessment (carried out in your clinical centre).

Semester 1 Units (February – June 2012)

Principles of Imaging for Advanced Radiation Therapy Practice 1 (Academic Unit)

Duration	13 weeks
Delivery	February - June Off campus – supported by Moodle (online interactive education delivery platform)and one introductory teleconference
Category	Certificate of completion
Fee	\$500

This unit comprises three modules. The first is designed to assist you to develop advanced skills in the interpretation of CT and MRI based anatomy, and to give you an understanding of ICRU requirements in relation to patient volume delineation. Much of this information may be revision for you, but it should give you a framework on which to apply your anatomical knowledge to clinical practice. You will also need to be self-directed to access information that may not be included in the module that you may need to revise, such as general anatomy and body structures. The second module contains an overview of the physics behind imaging equipment as relevant to the role of the imaging advanced practitioner, such as CT, MRI, PET and Ultrasound, and more recent advances such as cone beam CT. The final module consists of a critical review of contemporary applications of imaging equipment in radiation therapy planning and treatment, with multiple clinical examples.

This academic unit ideally should be studied in conjunction with the clinical unit, Advanced Clinical Practice: Imaging for Advanced Radiation Therapy Practice 1. The academic unit is designed to provide you with the underpinning knowledge to support your clinical skills development in advanced radiation therapy practice and procedures.

By the end of this unit you will be able to:

1. Identify a range of key anatomical structures and pathologies on CT & MRI images
2. Evaluate contemporary approaches to volume delineation and image matching
3. Appraise and reflect on the clinical significance of target volume delineation in relation to International Commission on Radiation Units and Measurements (ICRU) guidelines
4. Describe in detail the imaging equipment used in pre-treatment localisation and planning
5. Critique the imaging techniques used during pre-treatment localisation and planning
6. Describe in detail the imaging equipment and critique the rationale and techniques used in treatment verification

Clinical application of Imaging Modalities in Advanced Radiation Therapy Practice 1 (Clinical Unit)

Duration	13 weeks
Delivery	February - June Off campus supported by Moodle (online interactive education delivery platform) and one introductory teleconference Clinical competencies undertaken in the clinical centre where the practitioner is employed
Category	Certificate of completion
Fee	\$500

This unit comprises two elements, a clinical framework to help guide you in the development of advanced skills in the area of image interpretation and decision making, and supporting academic topics to encourage you to critically reflect and evaluate your practice in this area. This clinical unit should be studied in conjunction with the academic unit, Principles of Imaging for Advanced Radiation Therapy Practice 1. The clinical component is designed to provide you with a framework upon which you can develop and demonstrate competence in the procedures involved for advanced radiation therapy practice.

By the end of this unit you will be able to:

1. Situate practice within the legal and ethical framework of “The Advanced Practitioner”
2. Outline the importance of reflective practice and portfolio development and apply these in your role
3. Describe the application of advanced imaging modalities in your organisation with respect to one of the following regions: the head and neck, thorax or pelvis
4. Describe from an informed perspective a range of patient case notes and histories, identifying any contra-indications which may affect volume delineation, planning and treatment verification processes
5. Apply ICRU recommendations to individual patient cases and describe the rationale for delineation of tumour volumes and critical structures, demonstrating an **Advanced Beginner** level of competence in anatomical delineation

Semester 2 Units

Principles of Imaging for Advanced Radiation Therapy Practice 2

Duration	13 weeks
Delivery	July - November Off campus – supported by Moodle (online interactive education delivery platform) and one introductory teleconference
Category	Certificate of completion
Fee	\$500

Clinical application of Imaging Modalities in Advanced Radiation Therapy Practice 2

Duration	13 weeks
Delivery	July – November Off campus supported by Moodle (online interactive education delivery platform) and one introductory teleconference Clinical competencies undertaken in the clinical centre where the practitioner is employed
Category	Certificate of completion
Fee	\$500

If you would like further information please contact Catherine Osborne

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