

## MRSC3220: Radiation Therapy Professional Practice 3A

Callaghan

Semester 1 - 2024



THE UNIVERSITY OF  
NEWCASTLE  
AUSTRALIA

## OVERVIEW

### Course Description

This course allows students to refine their basic to advanced professional skills by participating in skill labs at university and by attending a professional placement at an accredited clinical centre. The labs and professional placement will increase confidence and competence in undertaking and participating in professional procedures of increasing difficulty or complexity. The labs must be passed to be allowed to attend professional placement and pass the course.

This Course recognises the Professional Capabilities developed by the Medical Radiation Practice Board of Australia. The document 'Professional Capabilities for Medical Radiation Practice' outlines via Domains the requirements of a Competent Practitioner:

Domain 1: Medical radiation practitioner, 1C: Radiation Therapist  
Domain 2: Professional and ethical practice  
Domain 3: Communication and collaboration  
Domain 4: Evidence-informed practice  
Domain 5: Radiation safety & risk management

### Review of Progress Requirements

This course is a compulsory program requirement for students in the Bachelor of Medical Radiation Science (Honours) (Radiation Therapy) program

In addition to meeting the University's overall requirements for academic progression, students enrolled in this program must satisfactorily complete this course in order to progress in their program.

### Requisites

Students must be concurrently enrolled in MRSC3205, have successfully completed MRSC2250 and MRSC2270, and be active in the Bachelor of Medical Radiation Science (Honours) (Radiation Therapy) [40010] program to enrol in this course.

### Assumed Knowledge

MRSC2250 Radiation Therapy Methods IIB  
MRSC2270 Radiation Therapy Professional Placement IIB

# COURSE OUTLINE

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**Contact Hours****Callaghan****Clinical \***

Face to Face off Campus  
5 days per week for 6 week(s)

**Laboratory \***

Face to Face on Campus  
4 hour(s) per week(s) for 8 week(s)  
This is 2 hours of supervised labs & 2 x independent lab time  
(unsupervised).

**Lecture \***

Face to Face on Campus  
1 hour(s) per week(s) for 2 week(s)

\* This contact type has a compulsory requirement.

**Unit Weighting**

10

**Workload**

Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10-unit course.

## CONTACTS

**Course Coordinator****Callaghan**

Ms Laura Feighan

[Laura.Feighan@newcastle.edu.au](mailto:Laura.Feighan@newcastle.edu.au)

Office: ICT310, HERB (ICT)

Consultation: Please email or call to arrange an appointment.

**Teaching Staff**

Other teaching staff will be advised on the course Canvas site.

**School Office****School of Health Sciences**

Room 302, ICT Building

Callaghan

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# SYLLABUS

## Course Content

1. 3DCRT, IMRT and VMAT immobilisation, simulation, planning and treatment approaches to radiation therapy.
2. Radiation Therapy and Oncology of the Thorax
3. Radiation Therapy and Oncology of the Abdomen
4. Radiation Therapy and Oncology of the Head & Neck
5. Radiation Therapy and Oncology of the Brain
6. Dosing techniques and plan evaluation, including visual assessment, statistical assessment, dose-volume histogram assessment, and biological models of dosing.
7. Patient assessment with regard to quality of life, living with illness, and treatment toxicity criteria.
8. Imaging for oncology and radiation therapy

## Course Learning Outcomes

### On successful completion of this course, students will be able to:

1. Compare and contrast, and describe and apply, 3D conformal radiation therapy, Intensity Modulated Radiation Therapy (IMRT), and Volumetric Arc Therapy (VMAT) approaches to radiation therapy including: immobilization strategies and techniques; CT/MRI/PET simulation data acquisition; plane design and development of patient data sets, dose calculation, plan evaluation and quality assurance; and treatment implementation
2. Evaluate plans against ICRU and protocol criteria and ensure that they meet recognized and accepted criteria (ICRU 50/62, 83)
3. Demonstrate their transition from an advanced beginning practitioner to a competent practitioner by actively participating in mid-level to high-level radiation therapy treatment, planning and simulation procedures
4. Demonstrate a professional attitude towards members of the public and other health care workers, and demonstrate effective communication with members of the public and other health care workers
5. Demonstrate clinical reasoning and reflective thinking skills with regard to safe, ethical and effective patient management; patient quality of life assessment; technology assessment and implementation
6. Apply the skills and knowledge necessary to employ an evidenced-based approach to decision-making in healthcare practice
7. Reflect upon, and evaluate and critique, their professional experience during placement to inform their learning and development into the future

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# COMPULSORY REQUIREMENTS

To pass this course, each student must complete ALL the following compulsory requirements:

## Important Placement Information

- Placement is a mandatory component of your degree
- You will not graduate if you cannot satisfactorily complete placement
- You will not be able to enter a NSW Health facility unless you have completed the pre-placement requirements.

## Contact Hour Requirements:

- Clinical Attendance Requirement: Students must attend a minimum number of these sessions. 100% attendance required
- Laboratory Attendance Requirement: Students must attend a minimum number of these sessions. 100% attendance required
- Lecture Attendance Requirement: Students must attend a minimum number of these sessions. 100% attendance required

## Course Assessment Requirements:

- Assessment 1 - Tutorial / Laboratory Exercises: Pass Requirement - Students must pass this assessment item to pass the course.
- Assessment 2 - Portfolio: Pass Requirement - Students must pass this assessment item to pass the course.
- Assessment 3 - Professional Task: Pass Requirement - Students must pass this assessment item to pass the course.

## Pre-Placement Requirements:

- First Aid Certificate - students must complete a First Aid Certificate issued by an approved provider.
- NSW Health Verification Requirements - Students must complete NSW Health Department requirements for students to attend placements in NSW Health facilities.

## Essential Criteria:

- Attendance and participation at labs must be assessed as satisfactory (100%) (pre-placement competence)
- Students must obtain 50% or more in the Professional Placement Workbook (professional practice)
- Students must meet the attendance requirements for professional placement (professional practice)

Students will be allocated a clinical placement. Students cannot change their clinical placement site due to not being able to demonstrate the above requirements. Any student excluded from placement **because they are unable** to demonstrate the above requirements will not be able to pass this course and will be given a failed grade (FF) for the course. Any student not able to fulfil the above requirements, or who are unwilling to meet these requirements, need to make an appointment with the course coordinator to discuss their progress in this course and the degree.

**This course has block placements. The final date that a student may withdraw without penalty from this course is 1 week prior to commencement of placement.**

# ASSESSMENTS

This course has 3 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Laboratory Exercises*	5pm Friday via Canvas. (Weeks to be advised via Canvas)	Individual	30%	1, 2, 3, 4, 5, 6, 7
2	Professional Skills / Clinical Competence Portfolio*	Friday 3 <sup>rd</sup> May at 5pm (Week 8)	Individual	30%	1, 2, 3, 4, 5, 6, 7
3	Practicum/Placement*	Friday 3 <sup>rd</sup> May at 5pm (Week 8)	Individual	40%	1, 2, 3, 4, 5, 6, 7

\* This assessment has a compulsory requirement.

## Late Submissions

The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

## Reminder

- 1) Reusing one's own work, or part thereof, that has been submitted previously and counted towards another course without permission from the relevant Course Coordinator; and
- 2) making contact or colluding with another person, contrary to instructions, during an examination, in-term test, quiz or other individual assessment item are considered forms of Academic Fraud within the [Student Academic Integrity Policy](#). This information is located in the policy [glossary](#) under *academic fraud*, the [Academic Integrity Module](#) and/or details in HLSC1000 content on Academic Integrity

## Assessment 1 - Laboratory Exercises

**Compulsory Course Component:** The Laboratory Exercises and assessments are a Compulsory Course Component, i.e. you must pass all case submissions to pass the course and must attend 100% of the labs. Students who receive less than a satisfactory for all cases and/or who do not attend all laboratories will not meet the compulsory course component requirements and will be given a fail grade (FF) for the course. No opportunity for remediation in the lab exercises will be allowed unless accompanied by the appropriate Adverse Circumstance documentation.

All critique and simulation report components of laboratory cases are required to be submitted to Turnitin for plagiarism checking.

Laboratory Exercises will be **due by 5:00 PM Friday** via Canvas (Weeks to be advised via Canvas).

## Assessment 2 - Professional Skills / Clinical Competence Portfolio

**Compulsory Course Component:** The Professional Placement Workbook and completion of all parts of the workbook are a Compulsory Course Component, i.e. you must complete and pass all submissions as per the criteria outlined within these to pass the course. Students who receive less than a pass for all areas in the workbook and/or who do not submit the workbook by the due date, will not meet the compulsory course component requirements for this course and will be given a fail grade (FF) for the course. No opportunity for remediation for the workbook and reports will be allowed unless accompanied by the appropriate Adverse Circumstance documentation.

**Due Date:** Friday 3<sup>rd</sup> May at 5pm (Week 8)

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## Assessment 3 - Practicum/Placement

Completion of all parts of the Professional Placement Workbook. The Workbook outlines the work to be completed during the Professional Placement and includes:

1. Written Reports
2. Clinical Skills/Competence Evaluation
3. Clinical Supervisor Reports
4. Clinical Contact Hours (attendance)

**Due Date:** Friday 3<sup>rd</sup> May at 5pm (Week 8)

## Attendance and/or Other Class Requirements

### 1. Laboratory Exercises:

Laboratory exercises are a component of Professional Placement. Students are assessed as having the required skills to practice safely, effectively, and ethically on placement (objectives 1-3, 6-8). Students will be allowed to re-submit only 1 unsatisfactory lab exercise throughout the semester. More than 1 unsatisfactory submission will lead to an unsatisfactory assessment for the assessment item. Students who receive an unsatisfactory assessment for the lab exercises will not meet the essential criteria requirements for the assessment item and will be given a fail grade (FF) for the course.

No opportunity for remediation in the lab exercises will be allowed unless accompanied by the appropriate Adverse Circumstances documentation.

### 2. Professional Placement Workbook:

**2.1 Professional skill attainment:** The Radiation Therapy program has a list of competencies (Professional skills) that all students of the program should be able to attain. Students have 6 weeks of Professional Placement and during this time should be able demonstrate Professional Skill attainment. Where students have not attained the required skills during the placement, the Clinical Supervisor of the Placement will be contacted to advise of the reasons (e.g. lack of procedures or opportunity during the placement, or lack of skill by the student). Where the Clinical Supervisor indicates that the opportunity was available for the student to gain the necessary skill, those students not able to demonstrate the attainment of the required skills will be assessed as Unsatisfactory for the assessment item and will not meet the essential criteria requirements for the assessment item, and will be given a fail grade (FF) for the course.

**2.2 Radiation Therapy Clinical Supervisors assessment:** This report assesses the student against a series of skill-based and attitudinal indicators undertaken on their rotation through-out the department. The assessment report contains both weekly formative feedback, and a final summative assessment. Students failing to meet the essential criteria will not meet the essential criteria requirements for the assessment item and will be given a failed grade (FF) for the course.

**2.3 Professional Placement Hours or Shifts:** Students are expected to meet the attendance requirements for Professional Placement. Students not meeting the attendance requirements for Professional Placement will not meet the essential criteria requirements for the assessment item and will be given a failed grade (FF) for the course.

**No opportunity for remediation for the Professional Placement will be allowed unless accompanied by appropriate Adverse Circumstances documentation.**

# ADDITIONAL INFORMATION

## Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

\*Skills are those identified for the purposes of assessment task(s).

## Communication Methods

Communication methods used in this course include:

- Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.
- Email: Students will receive communications via their student email account.
- Face to Face: Communication will be provided via face-to-face meetings or supervision

## Course Evaluation

Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.

## Oral Interviews (Vivas)

As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the [Oral Examination \(viva\) Procedure](#). In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the [Student Conduct Rule](#).

## Academic Misconduct

All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students at the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to <https://policies.newcastle.edu.au/document/view-current.php?id=35>.

## Adverse Circumstances

The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where:

1. the assessment item is a major assessment item; or
2. the assessment item is a minor assessment item, and the Course Co-ordinator has

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specified in the Course Outline that students may apply the online Adverse Circumstances system;

3. you are requesting a change of placement; or

4. the course has a compulsory attendance requirement.

Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at:

<https://policies.newcastle.edu.au/document/view-current.php?id=236>

### **Important Policy Information**

The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at <https://www.newcastle.edu.au/current-students/respect-at-uni/policies-and-procedures> that support a safe and respectful environment at the University.

*This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.*

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