

MRSC1350: Nuclear Medicine Methods 1

Callaghan

Semester 2 - 2023



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

OVERVIEW

Course Description

This is the foundation professional methods course for the Bachelor Medical Radiation Science (Nuclear Medicine). This course covers the following areas: basic nuclear medicine concepts, overview of routine procedures, introductory radiopharmacy, nuclear medicine image acquisition, nuclear medicine quality control, and nuclear medicine skeletal imaging techniques.

Requisites

Students must be concurrently enrolled in MRSC1330, have successfully completed MRSC1010 and HUBS1105, and be active in the Bachelor of Medical Radiation Science (Honours) (Nuclear Medicine) program to enrol in this course.

Assumed Knowledge

MRSC1010, HLSC1000, HUBS1105, HUBS1401

Contact Hours

Callaghan Lecture

Face to Face on Campus
2 hour(s) per Week for 10 Weeks

Tutorial

Face to Face on Campus
2 hour(s) per Week for 8 Weeks

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.

COURSE OUTLINE

www.newcastle.edu.au

CRICOS Provider 00109J

CONTACTS

Course Coordinator	Callaghan Mrs Melissa Shields Melissa.Shields@newcastle.edu.au (02) 4921 6335 Consultation: Please email for 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 SchoolHealthSciences@newcastle.edu.au +61 2 4921 7053

SYLLABUS

Course Content	<ol style="list-style-type: none">1. Basic Nuclear Medicine concepts2. Overview of routine Nuclear Medicine procedures3. Introductory radiopharmacy4. Nuclear Medicine image acquisition5. Nuclear Medicine quality control6. Nuclear Medicine skeletal imaging
Course Learning Outcomes	<p>On successful completion of this course, students will be able to:</p> <ol style="list-style-type: none">1. Describe basic Nuclear Medicine concepts2. Describe the range of routine Nuclear Medicine procedures3. Identify fundamental concepts of radiopharmacy4. Explain Nuclear Medicine imaging acquisition5. Discuss Nuclear Medicine quality control6. Describe Nuclear Medicine skeletal imaging procedures7. Demonstrate basic clinical reasoning skills so as to provide optimal patient management and outcomes, based on clinical history, patient presentation and differential diagnosis to ensure the appropriate imaging pathway8. Explain the mechanisms of injury and/or the causes of disease9. Demonstrate pattern recognition and image interpretation skills so as to identify and describe imaging anatomy and pathology10. Develop academic skills for data base searching and retrieving and synthesising relevant clinical information
Course Materials	<p>All course materials will be provided on the MRSC1350 Canvas site.</p> <p>Recommended Texts (all available via the UON Library):</p> <ul style="list-style-type: none">- Waterstram-Rich, K., Gilmore, D. (2016). Nuclear Medicine and PET/CT Technology and Techniques (8th Ed.)- Mettler, F., Guiberteau, M. (2019) Essentials of Nuclear Medicine and Molecular Imaging (7th Ed.)- O'Malley, J., Ziessman, H. (2021) Nuclear Medicine and Molecular Imaging: the requisites (5th Ed.)- Saha, G.B (2018) Fundamentals of Nuclear Pharmacy (7th Ed.)

COMPULSORY REQUIREMENTS

In order to pass this course, each student must complete ALL of the following compulsory requirements:

Course Assessment Requirements:

- Assessment 2 - Formal Examination: Minimum Grade / Mark Requirement.
- Students must obtain a specified minimum grade / mark in this assessment item to pass the course.
- Students must achieve 50% or more in the formal examination to pass the course.

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	Essays / Written Assignments	Part A – 4pm, 11 th August (Week 4) Part B – 4pm, 13 th October (Week 11)	Individual	40%	1, 3, 4, 6, 9, 10
2	Formal Examination*	In exam period	Individual	40%	1, 2, 3, 4, 5, 6, 7, 8, 9
3	Online Quiz	Week 5 – open 16 th -18 th August	Individual	20%	1, 2, 3, 4

* 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.

Assessment 1 - Essays / Written Assignments

Assessment Type	Written Assignment
Description	This assignment is completed in two (2) parts: Part A: Medline database search Part B: 1200-word written assignment
Weighting	Part A: 10% Part B: 30%
Due Date	Part A: 11 th August by 4pm (Week 4) Part B: 13 th October by 4pm (Week 11)
Submission Method	Online through Canvas via Turnitin
Assessment Criteria	See MRSC1350 Canvas site
Return Method	Online with feedback after each submission
Feedback Provided	Written feedback

Assessment 2 - Formal Examination

Assessment Type	Formal Examination
Description	Written examination
Weighting	40%
Compulsory Requirements	Minimum Grade / Mark Requirement - Students must obtain a specified minimum grade / mark in this assessment item to pass the course. Students must gain 50% in this assessment to pass the course.
Due Date	In exam period
Return Method	Not returned

Feedback Provided Opportunity to Reattempt	Feedback will be given to students who request it Students WILL NOT be given the opportunity to reattempt this assessment without the appropriate Adverse Circumstances application.
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Assessment 3 - Online Quiz

Assessment Type	Quiz
Description	Online quiz
Weighting	20%
Due Date	Week 5 – open 16 th -18 th August (See Canvas for opening and closing times)
Submission Method	Online via Canvas
Assessment Criteria	See Canvas
Return Method	Online
Feedback Provided	In class and via quiz submission

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:

- Face to face during lectures at tutorials
- Online through Canvas via announcements and email
- Through personal emails (using UON email address)

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 of 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>.

The use of live-response (“homework helper”) websites or applications during assessment items may be considered to be academic misconduct, and will be referred to the Student Academic Conduct Officer (SACO) under the University’s [Student Conduct Rule](#).

The submission of generative AI chatbot (e.g. ChatGPT) products or materials, in whole or in part, and represented as a student’s own original work, could be considered “dishonest or reckless conduct by a student to gain an advantage”. This may be considered Academic Misconduct under the University’s [Student Conduct Rule](#).

The use of websites or applications during assessment items (“Tabbing” or “Alt-Tabbing”) may be considered to be academic misconduct, and will be referred to the Student Academic Conduct Officer (SACO) under the University’s [Student Conduct Rule](#). In all cases, unless your Course Co-Ordinator has explicitly allowed a resource, then you must assume that a resource (text, website and/or application) is not to be used during an assessment item.

Academic Misconduct has the potential for serious consequences, including failing the course, or being suspended or excluded from the University.

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 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/no-room-for/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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