



MEDI3100

Clinical Anatomy and Medical Imaging

Session 2, In person-scheduled-weekday, North Ryde 2022

Macquarie Medical School

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Disclaimer

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General Information

Unit convenor and teaching staff

Unit Convenor

Ian Johnson

ian.johnson@mq.edu.au

Contact via email

Consultation by appointment

Credit points

10

Prerequisites

130cp including (HLTH108 or ANAT1001) and 20cp from (MEDI204 or MEDI2300 or MEDI203 or MEDI2100 or HLTH213 or ANAT2003 or BIOL247 or BIOL2220)

Corequisites

Co-badged status

Unit description

This is the final unit in the Anatomy and Physiology major where you will synthesise knowledge to appreciate the structural and functional relationships of the human body and enable a better understanding of the features of health and disease. Delivered as a series of lectures, small group learning, presentations and practicals, it will cover the regions of the body routinely examined clinically as part of an initial patient assessment. Clinically applied anatomy of the head and neck, nervous system, thorax, abdomen, pelvis and limbs will be emphasised, and reinforced by examination of cadavers, surface anatomy, imaging and clinical testing. The course will be useful for students considering medicine or paramedical careers where initial patient assessment is mandatory.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Review the clinically-relevant anatomy of the major body systems and the changes characterising common system disorders.

ULO2: Recognize and explain the major components of a basic functional assessment

of the major body systems.

ULO3: Explain the principles of clinical imaging for plain film radiography, CT, MRI, sonography and SPECT, and the risk-benefit rationale underlying referral protocols.

ULO4: Identify clinically relevant structures in medical images.

General Assessment Information

Grade descriptors and other information concerning grading are contained in the Macquarie University [Assessment Policy](#).

All final grades are determined by a grading committee, in accordance with the Macquarie University Assessment Policy, and are not the sole responsibility of the Unit Convenors.

Students will be awarded a final grade and a mark which must correspond to the grade descriptors specified in the [Assessment Procedure](#) (clause 128).

To pass this unit, students must demonstrate sufficient evidence of achievement of the learning outcomes, meet any ungraded requirements, and achieve a final mark of 50 or better.

Further details for each assessment task will be available on iLearn.

Late Submission

Unless a Special Consideration request has been submitted and approved, a 5% penalty (OF THE TOTAL POSSIBLE MARK) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11.55pm. A one-hour grace period is provided to students who experience a technical concern.

For example:

Number of days (hours) late	Total possible marks	Deduction	Raw mark	Final mark
1 day (1-24 hours)	100	5	75	70
2 days (24-48 hours)	100	10	75	65
3 days (48-72 hours)	100	15	75	60
7 days (144-168 hours)	100	35	75	40
>7 days (>168 hours)	100	-	75	0

For any late submissions of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, students need to submit an application for Special Consideration.

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Weekly quiz</u>	30%	No	Weeks 2-5 and 8-12
<u>Mid session assessment</u>	20%	No	Week 7
<u>End of session assessment</u>	50%	No	End of session university exam period

Weekly quiz

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 20 hours

Due: **Weeks 2-5 and 8-12**

Weighting: **30%**

Weekly individual quizzes conducted online. Highest 7 scores to be used for final mark.

On successful completion you will be able to:

- Review the clinically-relevant anatomy of the major body systems and the changes characterising common system disorders.
- Explain the principles of clinical imaging for plain film radiography, CT, MRI, sonography and SPECT, and the risk-benefit rationale underlying referral protocols.
- Identify clinically relevant structures in medical images.

Mid session assessment

Assessment Type ¹: Examination

Indicative Time on Task ²: 10 hours

Due: **Week 7**

Weighting: **20%**

Text and image-based multiple choice and short answer questions, testing understanding of clinical anatomy and medical imaging, together with the synthesis of functional anatomy to interpret and explain normal and abnormal structure and function.

On successful completion you will be able to:

- Review the clinically-relevant anatomy of the major body systems and the changes characterising common system disorders.
- Recognize and explain the major components of a basic functional assessment of the major body systems.
- Explain the principles of clinical imaging for plain film radiography, CT, MRI, sonography and SPECT, and the risk-benefit rationale underlying referral protocols.
- Identify clinically relevant structures in medical images.

End of session assessment

Assessment Type ¹: Examination

Indicative Time on Task ²: 20 hours

Due: **End of session university exam period**

Weighting: **50%**

Text and image-based multiple choice and short answer questions, testing understanding of clinical anatomy and medical imaging, together with the synthesis of functional anatomy to interpret and explain normal and abnormal structure and function.

On successful completion you will be able to:

- Review the clinically-relevant anatomy of the major body systems and the changes characterising common system disorders.
- Recognize and explain the major components of a basic functional assessment of the major body systems.
- Explain the principles of clinical imaging for plain film radiography, CT, MRI, sonography and SPECT, and the risk-benefit rationale underlying referral protocols.
- Identify clinically relevant structures in medical images.

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

As a student enrolled in this unit, you will engage in a range of online and face-to-face learning activities, including lectures, practicals, regular assessments and tutorials. It will be assessed by regular short quizzes, followed by a discussion of the answers, by a mid-session assessment and by an end-of-session assessment. Details can be found on the iLearn site for this unit.

Lectures will be delivered online. You should pay attention to the study focusing questions in each lecture as these, together with the questions in the anatomy practical guides, will form the basis of your assessments. For the medical imaging lectures, you will be guided through image stacks and then directed to websites where you can navigate through the same image stacks at your own pace.

The short quizzes that occur most weeks, will allow you to accumulate marks towards your final mark and will provide you with an opportunity to discuss areas of difficulty with your peers and staff.

The anatomy practicals are designed as revision practicals that focus on clinically relevant topics. They assume that you have a working knowledge of all the body regions and will have read the practical notes and attempted the questions before the practical.

The applied anatomy practicals in the clinical skills unit provide you with an opportunity to practice elements of clinical skills so that you can recognise these and explain their purpose in assessments. You will not be assessed on your ability to perform the examinations and there will be no diagnosis.

Recommended readings

- Lumley, J., Craven, J., Abrahams, P. & Tunstall, R. (2019). *Bailey & Love's Essential Clinical Anatomy*. CRC press ISBN: 978-1-138-29518-6
- (for reference). Spratt, J.D., Salkowski, L.R., Loukas, M., Turmezei, T., Weir, J. & Abrahams, P. (2021). *Weir & Abrahams' Imaging atlas of human anatomy*. Elsevier: ISBN: 978-0-7020-7926-6
- (for reference) Talley, N.J. & O'Connor, S. (2017). *Talley & O'Connor's Clinical Examination*. Elsevier. ISBN: 9780729542869

The library also has a series of narrated anatomy using dissections in [Ackland's video atlas of human anatomy](#) which is good. You may also find the Complete Anatomy App (https://multisearch.mq.edu.au/permalink/61MACQUARIE_INST/1c87tk9/alma99245164374402171) and the open-access medical imaging site radiopaedia (<https://radiopaedia.org/>). useful.

Technology Used

Active participation in the learning activities throughout the unit will require students to have access to a tablet, laptop or similar device. Students who do not own their own laptop computer may borrow one from the university library.

Unit Schedule

Unit Schedule

MEDI 3100 Clinical anatomy and medical imaging: Weekly schedule

WEEK 1

- | | |
|---|----------------------------|
| 1. Lectures (online): | Thorax anatomy and imaging |
| 2. Anatomy laboratory (Weds or Thurs): | Thorax and abdomen |
| 3. Clinical skills laboratory (Thurs): | none |
| 4. Weekly online assessment/tutorial (Fri): | none |

WEEK 2

- | | |
|---|--|
| 1. Lectures (online): | Abdomen and pelvis anatomy and imaging |
| 2. Anatomy laboratory (Weds or Thurs): | none |
| 3. Clinical skills laboratory (Thurs): | Thorax, abdomen, pelvis |
| 4. Weekly online assessment/tutorial (Fri): | Weeks 1 & 2 content |

WEEK 3

- | | |
|---|----------------------------|
| 1. Lectures (online): | Abdomen and pelvis imaging |
| 2. Anatomy laboratory (Weds or Thurs): | none |
| 3. Clinical skills laboratory (Thurs): | none |
| 4. Weekly online assessment/tutorial (Fri): | Week 3 content |

WEEK 4

- | | |
|---|---------------------------|
| 1. Lectures (online): | Spine anatomy and imaging |
| 2. Anatomy laboratory (Weds or Thurs): | Pelvis and spine |
| 3. Clinical skills laboratory (Thurs): | none |
| 4. Weekly online assessment/tutorial (Fri): | Weeks 3 & 4 content |

WEEK 5

- | | |
|---|-------------------|
| 1. Lectures (online): | none |
| 2. Anatomy laboratory (Weds or Thurs): | none |
| 3. Clinical skills laboratory (Thurs): | none |
| 4. Weekly online assessment/tutorial (Fri): | Weeks 1-5 content |

WEEK 6 (Revision)

- | | |
|--|------|
| 1. Lectures (online): | none |
| 2. Anatomy laboratory (Weds or Thurs): | none |

3. Clinical skills laboratory (Thurs): none
4. Weekly online assessment/tutorial (Fri): none

WEEK 7 (Mid-session assessment)

1. Lectures (online): none
2. Anatomy laboratory (Weds or Thurs): none
3. Clinical skills laboratory (Thurs): none
4. Weekly assessment/tutorial (Fri): none
5. **MID SESSION ASSESSMENT** (Wednesday 5-6pm 23WW, PG Price Theatre)

WEEK 8

1. Lectures (online): Upper limb anatomy and imaging
2. Anatomy laboratory (Weds or Thurs): none
3. Clinical skills laboratory (Thurs): none
4. Weekly online assessment/tutorial (Fri): Week 8 content

WEEK 9

1. Lectures (online): Lower limb anatomy and imaging
2. Anatomy laboratory (Weds or Thurs): Upper and lower limbs
3. Clinical skills laboratory (Thurs): none
4. Weekly online assessment/tutorial (Fri): Week 9 content

WEEK 10

1. Lectures (online): Head, neck and brain anatomy and imaging
2. Anatomy laboratory (Weds or Thurs): none
3. Clinical skills laboratory (Thurs): Upper and lower limbs
4. Weekly online assessment/tutorial (Fri): Week 10 content

WEEK 11

1. Lectures (online): Brain anatomy and imaging
2. Anatomy laboratory (Weds or Thurs): Head, neck and brain
3. Clinical skills laboratory (Thurs): none
4. Weekly online assessment/tutorial (Fri): Week 11 content

WEEK 12

1. Lectures (online): none
2. Anatomy laboratory (Weds or Thurs): none

3. Clinical skills laboratory (Thurs): Head, neck and cranial nerves
4. Weekly online assessment/tutorial (Fri): Weeks 1-12 content

WEEK 13 (Revision)

1. Lectures (online): none
2. Anatomy laboratory (Weds or Thurs): none
3. Clinical skills laboratory(Thurs): none
4. Weekly online assessment/tutorial (Fri): none

5. **APPROVED SUPPLEMENTARIES**

END OF SESSION ASSESSMENT (Details via University Examinations Office)

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://policies.mq.edu.au) (<https://policies.mq.edu.au>). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies](https://students.mq.edu.au/support/study/policies) (<https://students.mq.edu.au/support/study/policies>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central](https://policies.mq.edu.au) (<https://policies.mq.edu.au>) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

The Writing Centre

[The Writing Centre](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)

Student Enquiries

Got a question? Ask us via [AskMQ](#), or contact [Service Connect](#).

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Changes from Previous Offering

The assessment tasks have been amalgamated, reducing them from 5 to 3, and short answer questions added.

The mid- and end of- session assessment tasks are now on campus.

Inclusion and diversity

Social inclusion at Macquarie University is about giving everyone who has the potential to benefit from higher education the opportunity to study at university, participate in campus life and flourish in their chosen field. The University has made significant moves to promote an equitable, diverse and exciting campus community for the benefit of staff and students. It is your responsibility to contribute towards the development of an inclusive culture and practice in the areas of learning and teaching, research, and service orientation and delivery. As a member of the Macquarie University community, you must not discriminate against or harass others based on their sex, gender, race, marital status, carers' responsibilities, disability, sexual orientation, age, political conviction or religious belief. All staff and students are expected to display appropriate behaviour that is conducive to a healthy learning environment for everyone.

Professionalism

In the Faculty of Medicine, Health and Human Sciences, professionalism is a key capability embedded in all our courses.

As part of developing professionalism, students are expected to attend all small group interactive sessions including clinical, practical, laboratory, work-integrated learning (e.g., PACE placements), and team-based learning activities. Some learning activities are recorded (e.g., face-to-face lectures), however you are encouraged to avoid relying upon such material as they do not recreate the whole learning experience and technical issues can and do occur. As an adult learner, we respect your decision to choose how you engage with your learning, but we would remind you that the learning opportunities we create for you have been done so to enable your success, and that by not engaging you may impact your ability to successfully complete this unit. We equally expect that you show respect for the academic staff who have worked hard to develop meaningful activities and prioritise your learning by communicating with them in advance if you are unable to attend a small group interactive session.

Another dimension of professionalism is having respect for your peers. It is the right of every student to learn in an environment that is free of disruption and distraction. Please arrive to all learning activities on time, and if you are unavoidably detained, please join activity as quietly as possible to minimise disruption. Phones and other electronic devices that produce noise and

other distractions must be turned off prior to entering class. Where your own device (e.g., laptop) is being used for class-related activities, you are asked to close down all other applications to avoid distraction to you and others. Please treat your fellow students with the utmost respect. If you are uncomfortable participating in any specific activity, please let the relevant academic know.