



# MEDI8203

## Critical Care, Patient Safety and Quality, and Research

Medicine and Health Sciences MDB, Weekday attendance, North Ryde 2020

*Medicine, Health and Human Sciences Faculty level units*

### Contents

<a href="#"><u>General Information</u></a>	2
<a href="#"><u>Learning Outcomes</u></a>	3
<a href="#"><u>General Assessment Information</u></a>	3
<a href="#"><u>Assessment Tasks</u></a>	5
<a href="#"><u>Delivery and Resources</u></a>	8
<a href="#"><u>Policies and Procedures</u></a>	10
<a href="#"><u>Changes from Previous Offering</u></a>	12

#### Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

#### Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group learning activities on campus for the second half-year, while keeping an online version available for those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face and online activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

## General Information

Unit convenor and teaching staff

Unit Convenor

Grant Shalaby

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Contact via Email

Joy Kennedy

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Credit points

10

Prerequisites

(MEDI8200 or MEDI920) and (MEDI8201 or MEDI921) and (MEDI8202 or MEDI922)

Corequisites

Co-badged status

Unit description

This 8 week unit provides you with focused learning on the patient safety and quality aspects of health systems, framed within the clinical context of critical care and anaesthetics. You will explore evaluation of system-wide safety interventions and high-quality care; medical error; open disclosure and incident management; digital technology in healthcare, and the role of systems, people and services in the development and delivery of resilient healthcare. The unit incorporates an experiential learning component contextually focused on patient-centred health care delivered in the clinical disciplines of critical care and anaesthetics. The unit includes weekly lectures/seminars, case based learning sessions, clinical bedside tutorials, clinical simulation sessions, as well as clinical placements to ensure you are prepared for Stage 2 of the Macquarie MD. Your learning is integrated with advanced learning about research methodologies to prepare you for your Research Project which you will complete in Stage 2. You are expected to use these learning opportunities to demonstrate significant progress toward the development of the 4 Macquarie MD Graduate Capabilities: Scientist and Scholar, Clinical Practitioner, Engaged Global Citizen and Professional, and the Entrustable Professional Activities, at a standard appropriate to end of Stage 1 of the Macquarie MD.

## 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:** Apply knowledge of relevant medical sciences, clinical presentations, scientific principles and mechanisms of disease to explain a variety of common or clinically-significant disease states, as well as how drugs and other treatments are used to manage or prevent disease in various population sub-groups (Capability 1: Scientist and Scholar)

**ULO2:** Identify questions and learning needs arising from clinical cases, and work individually or as part of a group to create appropriate responses to clinical scenarios, relevant to critical care, by evaluating evidence from a range of sources, including medical scientific literature (Capability 1: Scientist and Scholar)

**ULO3:** Construct appropriate research questions and critique methodologies that might be applied to address research questions (Capability 1: Scientist and Scholar)

**ULO4:** Apply basic research methodology and information search strategies to identify evidence to answer relevant clinical research questions (Capability 1: Scientist and Scholar)

**ULO5:** Perform clinical interviews and examinations efficiently with patients presenting with health conditions covered in Stage 1; and employ sound clinical reasoning skills in deriving diagnoses and management plans that encompass the multiple aspects of the given health issue (Capability 2: Clinical Practitioner)

**ULO6:** Evaluate system-wide safety interventions and high-quality care, including evaluation of the importance of patient safety and quality, the measurement and assessment of patient safety and quality, and the role of technology, systems, people and services (Capability 3: Engaged Global Citizen)

**ULO7:** Discuss factors affecting and promoting patient safety and quality in private and public healthcare settings, including medical error, open disclosure and incident management, use of technology in healthcare, and patient management and transference (Capability 3: Engaged Global Citizen)

**ULO8:** Recognise patient safety measures and the impact adverse events have on health service delivery and patient outcomes (Capability 4: Professional)

**ULO9:** Use feedback from teachers, clinicians, peers and patients, to inform self-evaluation and critical reflection (Capability 4: Professional)

## General Assessment Information

Detailed information regarding the assessment for the Macquarie MD is available on

the **Macquarie MD Assessment 2019 Intake** iLearn site. Further details for each assessment task can be found there.

## **GRADING**

In this unit two types of grading will be used, and a supervision recommendation will be given where a clinical assessment relates to a Stage 1 Entrustable Professional Activity (EPA). The clinical quiz will be graded numerically with a standardised mark out of 100, while other assessments will be coarse graded. Coarse grades (P+, P, P-, F) will be assigned to the focused and generic MD Capability Aspects as well as overall task performance. The numeric marks for the examinations and overall coarse grade for the assessment task weighted according to their contribution will be used to calculate the overall unit aggregate. Unit outcomes, based on the unit aggregate, will be reported to the University using the standard Macquarie grades (High Distinction, Distinction, Credit, Pass, Fail). Because most assessment tasks in the unit are coarse graded, a **single numerical grade (SNG)** equivalent will be reported for each University grade. Both the numeric equivalents for the coarse grades used in the calculation of the unit aggregate and the conversion of the aggregate to a single SNG are available in the Macquarie MD Rules of Assessment and Progression document posted in the Policies and Guidelines section of the **MDCU Doctor of Medicine Community** iLearn site.

All final grades in the Macquarie MD are reviewed by the MD Course Board and Faculty Assessment Committee and ratified by the FMHHS Faculty Board so therefore are not the sole responsibility of the Unit Convenor.

To pass this unit, students must demonstrate sufficient evidence of achievement of the learning outcomes, attempt all assessment tasks, meet any ungraded requirements which include professionalism, and achieve a unit aggregate of 50% or better.

## **EXTENSIONS FOR ASSESSMENT TASKS**

Applications for assessment task extensions must be submitted via [www.ask.mq.edu.au](http://www.ask.mq.edu.au). For further details please refer to the Special Consideration Policy available at <https://students.mq.edu.au/study/my-study-program/special-consideration>.

## **PROFESSIONAL EXPECTATIONS**

Professionalism is a key capability embedded in the Macquarie MD. Professional Behaviour Notifications (PBN) which can be a breach (PBNB) or a commendation (PBNC) may be awarded. PBNs will be recorded in the student's portfolio. As part of developing professionalism, Macquarie MD students are expected to attend all small group interactive sessions including clinical, practical, laboratory and team-based learning activities. If attendance is deemed to be of concern, the student will be referred to the Lead (Student Professionalism) for remediation, subsequent monitoring, and recording in the portfolio. Similarly, as part of developing professionalism, Macquarie MD students are expected to submit all work by the due date. Late submission without prior approved extension will result in a professional behaviour notification-breach (PBNB) in the portfolio.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Research Project Plan</a>	20%	Yes	MDB Week 4
<a href="#">Clinical Quiz</a>	20%	No	MDB Week 5
<a href="#">Bedside tutor report and logbook</a>	0%	No	MDB Week 6
<a href="#">Objective Structured Clinical Examination (OSCE)</a>	60%	Yes	MDB Week 7

### Research Project Plan

Assessment Type <sup>1</sup>: Report

Indicative Time on Task <sup>2</sup>: 24 hours

Due: **MDB Week 4**

Weighting: **20%**

**This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)**

Submit a draft research proposal that includes the research question (s), aim (s) and objective (s) for the project to be completed in Stage 2. Overall performance and capability aspects will be assessed and recorded in your Macquarie Assessment Portfolio.

On successful completion you will be able to:

- Construct appropriate research questions and critique methodologies that might be applied to address research questions (Capability 1: Scientist and Scholar)
- Apply basic research methodology and information search strategies to identify evidence to answer relevant clinical research questions (Capability 1: Scientist and Scholar)
- Evaluate system-wide safety interventions and high-quality care, including evaluation of the importance of patient safety and quality, the measurement and assessment of patient safety and quality, and the role of technology, systems, people and services (Capability 3: Engaged Global Citizen)
- Discuss factors affecting and promoting patient safety and quality in private and public healthcare settings, including medical error, open disclosure and incident management, use of technology in healthcare, and patient management and transference (Capability 3: Engaged Global Citizen)
- Recognise patient safety measures and the impact adverse events have on health service delivery and patient outcomes (Capability 4: Professional)
- Use feedback from teachers, clinicians, peers and patients, to inform self-evaluation and

critical reflection (Capability 4: Professional)

## Clinical Quiz

Assessment Type <sup>1</sup>: Examination

Indicative Time on Task <sup>2</sup>: 12 hours

Due: **MDB Week 5**

Weighting: **20%**

The Clinical Quiz is a written examination consisting of mainly multiple choice and some short answer questions which will be mapped to capability aspects. Overall and capability aspects performance will be recorded in your Macquarie Assessment Portfolio.

On successful completion you will be able to:

- Apply knowledge of relevant medical sciences, clinical presentations, scientific principles and mechanisms of disease to explain a variety of common or clinically-significant disease states, as well as how drugs and other treatments are used to manage or prevent disease in various population sub-groups (Capability 1: Scientist and Scholar)
- Identify questions and learning needs arising from clinical cases, and work individually or as part of a group to create appropriate responses to clinical scenarios, relevant to critical care, by evaluating evidence from a range of sources, including medical scientific literature (Capability 1: Scientist and Scholar)
- Evaluate system-wide safety interventions and high-quality care, including evaluation of the importance of patient safety and quality, the measurement and assessment of patient safety and quality, and the role of technology, systems, people and services (Capability 3: Engaged Global Citizen)
- Discuss factors affecting and promoting patient safety and quality in private and public healthcare settings, including medical error, open disclosure and incident management, use of technology in healthcare, and patient management and transference (Capability 3: Engaged Global Citizen)
- Recognise patient safety measures and the impact adverse events have on health service delivery and patient outcomes (Capability 4: Professional)

## Bedside tutor report and logbook

Assessment Type <sup>1</sup>: Clinical performance evaluation

Indicative Time on Task <sup>2</sup>: 4 hours

Due: **MDB Week 6**

Weighting: **0%**

The bedside tutor will provide a supervision rating on the Stage 1 Entrustable Professional Activities and review your logbook and provide an assessment of capability aspect. The results

which will be recorded in your Macquarie Assessment Portfolio.

On successful completion you will be able to:

- Apply knowledge of relevant medical sciences, clinical presentations, scientific principles and mechanisms of disease to explain a variety of common or clinically-significant disease states, as well as how drugs and other treatments are used to manage or prevent disease in various population sub-groups (Capability 1: Scientist and Scholar)
- Identify questions and learning needs arising from clinical cases, and work individually or as part of a group to create appropriate responses to clinical scenarios, relevant to critical care, by evaluating evidence from a range of sources, including medical scientific literature (Capability 1: Scientist and Scholar)
- Evaluate system-wide safety interventions and high-quality care, including evaluation of the importance of patient safety and quality, the measurement and assessment of patient safety and quality, and the role of technology, systems, people and services (Capability 3: Engaged Global Citizen)
- Discuss factors affecting and promoting patient safety and quality in private and public healthcare settings, including medical error, open disclosure and incident management, use of technology in healthcare, and patient management and transference (Capability 3: Engaged Global Citizen)
- Recognise patient safety measures and the impact adverse events have on health service delivery and patient outcomes (Capability 4: Professional)
- Use feedback from teachers, clinicians, peers and patients, to inform self-evaluation and critical reflection (Capability 4: Professional)

## Objective Structured Clinical Examination (OSCE)

Assessment Type <sup>1</sup>: Clinical performance evaluation

Indicative Time on Task <sup>2</sup>: 35 hours

Due: **MDB Week 7**

Weighting: **60%**

**This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)**

The OSCE will have numerous stations and cover all of Stage 1 content. For each station, overall performance, capability aspects and Stage 1 Entrustable Professional Activities will be assessed and recorded in your Macquarie Assessment Portfolio.

On successful completion you will be able to:

- Apply knowledge of relevant medical sciences, clinical presentations, scientific principles



and mechanisms of disease to explain a variety of common or clinically-significant disease states, as well as how drugs and other treatments are used to manage or prevent disease in various population sub-groups (Capability 1: Scientist and Scholar)

- Identify questions and learning needs arising from clinical cases, and work individually or as part of a group to create appropriate responses to clinical scenarios, relevant to critical care, by evaluating evidence from a range of sources, including medical scientific literature (Capability 1: Scientist and Scholar)
- Perform clinical interviews and examinations efficiently with patients presenting with health conditions covered in Stage 1; and employ sound clinical reasoning skills in deriving diagnoses and management plans that encompass the multiple aspects of the given health issue (Capability 2: Clinical Practitioner)
- Evaluate system-wide safety interventions and high-quality care, including evaluation of the importance of patient safety and quality, the measurement and assessment of patient safety and quality, and the role of technology, systems, people and services (Capability 3: Engaged Global Citizen)
- Discuss factors affecting and promoting patient safety and quality in private and public healthcare settings, including medical error, open disclosure and incident management, use of technology in healthcare, and patient management and transference (Capability 3: Engaged Global Citizen)
- Recognise patient safety measures and the impact adverse events have on health service delivery and patient outcomes (Capability 4: Professional)
- Use feedback from teachers, clinicians, peers and patients, to inform self-evaluation and critical reflection (Capability 4: Professional)

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<sup>1</sup> 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.

<sup>2</sup> 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

### TEACHING AND LEARNING STRATEGY

This unit will be delivered over a 5-week block, followed by a 3-week assessment period. Each week will consist of 2-3 hours longitudinal lecture series, 2 hours unit-specific tutorials, 2 hours



case-based tutorials, 2 hours bedside tutorials and 8 hours of immersive clinical experience and clinical simulation in critical care to enhance knowledge and skill development. 4 hours of lectures are assigned to the research component of the unit.

### **MACQUARIE MD TEXTBOOK LIST - YEAR 2 2020**

#### *Primary Texts:*

- **Medicine:** Davidson's principles and practice of medicine (22nd edition). Colledge et al (2014). ISBN: 9780702050350.
- **Surgery:** Davidson's Principles and Practice of Surgery. 7th Ed (2017). Garden OJ, Bradbury AW, Forsythe JLR, Parks RW editors. Philadelphia: Churchill Livingstone Elsevier.

#### *Additional Optional Texts:*

- **Surgery:** Henry MM, Thompson JN, editors. Clinical Surgery. 3rd Edition. Edinburgh: Saunders; 2012
- **Microbiology:** Goering et al (2013). Mims' medical microbiology (5th edition). ISBN: 9780723436010.
- **Pathology:** Kumar et al. Robbins and Cotran pathologic basis of disease (9th edition). ISBN: 9781455726134.
- **Pharmacology:** Rang et al (2016). Rang and Dale's pharmacology (8th edition). ISBN: 9780702053627
- **Clinical Skills:** Talley, N., O'Connor, S. (2017) Clinical examination. A systematic guide to physical diagnosis (8th ed.) Elsevier. ISBN 9780729542869.
- **Procedural Skills:** Dehn, R & Asprey, D. (2013). Essential Clinical Procedures (3rd ed.) Elsevier Saunders. ISBN 9781455707812.

#### *MEDI8203 Critical Care, Patient Safety and Quality, and Research*

- **Critical Care:** Bersten, A., (Ed.). (2013). Oh's Intensive Care Manual (7th ed.). Elsevier Health Sciences
- **Research Methodology:** Harris, M., & Taylor, G. (2014). Medical Statistics Made Easy: 3rd Edition. Scion Publications.

### **TECHNOLOGY AND EQUIPMENT**

Maquarie is a BYOD environment where students are encouraged to bring their personally owned devices (laptops, tablets, etc.) to learning activities and to use these devices to access information and study.

#### *On-campus*

Teaching rooms are equipped with state of the art audio-visual and ICT equipment including

iPads, internet connection and multiple LCD screens. Students will use a range of specific equipment typically used in the assessment and management of people with a range of health conditions.

### *Off-campus*

To study optimally when off campus you will need to have access to a reliable internet connection to retrieve unit information, and at times to submit assessment tasks via iLearn.

## **CONSULTATION WITH STAFF**

Staff will be available for individual consultations, please see iLearn site for information on staff availability for consultation.

## **iLEARN**

- Unit specific content will be located on the **MEDI8203** iLearn site.
- The longitudinal lecture series will be located on the **Macquarie MD Year 2 - 2019 Intake** iLearn site.
- Assessment information will be available on the **Macquarie MD Assessment 2019 Intake** iLearn site.
- Logistical and organisational information specific to the cohort will be located on the **Macquarie MD 2019 Intake Noticeboard** iLearn Site.
- Policy and Guidelines for the Macquarie MD will be located on the **MDCU Doctor of Medicine Community** iLearn site.

## **Policies and Procedures**

Macquarie University policies and procedures are accessible from **Policy Central** (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>). 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](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Students seeking more policy resources can visit the **Student Policy Gateway** (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you

need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/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](http://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## Student Support

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

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [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

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](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

Based on staff and student feedback, teaching blocks have been reduced by 1 week in 2020 and beyond to enable a recess period to be inserted between unit rotations in session MDA.