HSYP8105

Systems Science in Healthcare

Session 2, In person-scheduled-weekday, North Ryde 2024

Department of Health Sciences

Contents

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General Information

Unit convenor and teaching staff
Unit convenor
Colleen Cheek
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Unit convenor
Tim Jackson
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Credit points
10

Prerequisites
Admission to MPH or MPH(Res)

Corequisites

Co-badged status

Unit description
This unit provides you with a new way of looking at how health systems work together. Health care systems are complex consisting of many interacting components, people and perspectives. You will learn about systems theories (for example, resilience, consumer participation, and sociotechnical perspectives) and apply them to examine policy and practice underpinning public health problems. The unit is delivered by experts in health systems, including digital health informatics, safe systems and systems evaluation methods. You will learn through guest lectures, tutorials, online activities and assessments requiring you to analyse real-life case studies and evaluate health interventions.

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:** Demonstrate an understanding of the current discipline of systems thinking and how it underpins healthcare
>
> **ULO2:** Discuss the rationale for adopting a systems approach to address population

health issues

ULO3: Examine the role of digital health and health informatics in systems thinking

ULO4: Analyse and apply a range of theoretical concepts related to systems thinking including resilience, sociotechnical systems, safe systems, consumer participation and systems evaluation methods to public health issues

ULO5: Examine the challenges of adopting a systems approach to public health

General Assessment Information

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 Convenor.

Students will be awarded a final grade and a mark which must correspond to the grade descriptors specified in the Assessment Procedure.

To pass this unit, you 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 Submissions

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 1-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. Note, that there needs to be an approproate reason as per Assessment Policy.

Assessment Tasks

Name	Weighting	Hurdle	Due
Multiple choice questions and reflection	20%	No	Week 4
Analysis and response to a case study of an incident in health care	40%	No	Week 9
Planning for the evaluation of a health intervention	40%	No	Week 13
Reflective journal	0%	No	Week 14

Multiple choice questions and reflection

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 10 hours
Due: **Week 4**
Weighting: **20%**

A brief assessment on the learnings from the first 3 weeks and a personal reflection on the learning so far.

On successful completion you will be able to:

- Demonstrate an understanding of the current discipline of systems thinking and how it underpins healthcare
- Analyse and apply a range of theoretical concepts related to systems thinking including resilience, sociotechnical systems, safe systems, consumer participation and systems evaluation methods to public health issues

Analysis and response to a case study of an incident in health care

Assessment Type [1]: Case study/analysis
Indicative Time on Task [2]: 40 hours
Due: **Week 9**
Weighting: **40%**

A case study analysis about an incident in healthcare taking a systems thinking approach.

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- Discuss the rationale for adopting a systems approach to address population health issues
- Examine the role of digital health and health informatics in systems thinking
- Analyse and apply a range of theoretical concepts related to systems thinking including resilience, sociotechnical systems, safe systems, consumer participation and systems evaluation methods to public health issues
- Examine the challenges of adopting a systems approach to public health

Planning for the evaluation of a health intervention

Assessment Type [1]: Presentation
Indicative Time on Task [2]: 35 hours
Due: **Week 13**
Weighting: **40%**

A brief presentation describing the approach and plan for the evaluation of a public health intervention or program.

On successful completion you will be able to:

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Reflective journal

Assessment Type [1]: Reflective Writing
Indicative Time on Task [2]: 7 hours
Due: **Week 14**

Weighting: **0%**

A personal reflection journal on the learning journey each week. This assessment task is compulsory.

On successful completion you will be able to:
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- Discuss the rationale for adopting a systems approach to address population health issues
- Examine the role of digital health and health informatics in systems thinking
- Analyse and apply a range of theoretical concepts related to systems thinking including resilience, sociotechnical systems, safe systems, consumer participation and systems evaluation methods to public health issues
- Examine the challenges of adopting a systems approach to public health

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[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: readings, online modules, videos and lectures. Details can be found on the iLearn site for this unit.

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.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (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). 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) 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 Advocacy provides independent advice on MQ policies, procedures, and processes

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.

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 practical, 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.

Unit information based on version 2024.02 of the Handbook