HSYP806

Systems Science in Healthcare

S2 Block 2019

Medicine and Health Sciences Faculty level units

Contents

Disclaimer

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General Information

Unit convenor and teaching staff
Unit Convenor
Yvonne Zurynski
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Level 6, 75 Talavera Road
Thursdays 10am-12noon *by appointment only

Credit points
4

Prerequisites
Admission to MPH

Corequisites

Co-badged status

Unit description
This core unit in the MPH program 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, on-line 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:

Demonstrate an understanding of how systems underpin healthcare

Demonstrate an understanding of the current discipline of systems thinking

Analyse and apply a range of theoretical concepts related to systems thinking including:

resilience; sociotechnical systems; case study methodology; safe systems; consumer

participation, and systems evaluation methods to public health issues

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

Discuss the rational for adopting a systems approach to address population health issues

Examine the challenges to adopting a systems approach to public health

General Assessment Information

Information concerning Macquarie University's assessment policy is available at http://mq.edu.au/policy/docs/assessment/policy_2016.html. Grade descriptors and other information concerning grading requirements are contained in Schedule 1 of the Macquarie University Assessment Policy.

To pass this unit, students must demonstrate sufficient evidence of achievement of the learning outcomes and attempt all assessment tasks.

Further details for each assessment task will be available on iLearn, including marking rubrics.

All final grades in the department of Health Systems and Populations are determined by a grading committee and are not the sole responsibility of the Unit Convenor.

Students will be awarded one of these grades plus a Standardised Numerical Grade (SNG). The SNG is not necessarily a summation of the individual assessment components. The final grade and SNG that are awarded reflect the corresponding grade descriptor in Schedule 1 of the Assessment Policy.

Extensions for Assessment tasks

Applications for assessment task extensions must be submitted via www.ask.mq.edu.au. For further details please refer to the Disruption to Studies Policy available at https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/disruption-to-studies.

Late Submission of Work

All assignments which are officially received after the due date, and where no extension has been granted by the course convenor or tutor, will incur a deduction of 5% for the first day including the actual day on which the work is received, and 5% for each subsequent day. Weekends and public holidays are included. Late penalty is capped at 50%. For example:

Due date	Received	Days late	Deduction	Raw mark	Final mark
Friday 14th	Saturday 15th	1	5%	75%	70%
Friday 14th	Monday 17th	3	15%	75%	60%

Friday 14th	Tuesday 25th	11	50% (capped)	75%	25%

Assessment Tasks

Name	Weighting	Hurdle	Due
Online Quiz and Reflection	10%	No	Week 4
Case study report	50%	No	Week 8
Health Evaluation	40%	No	Week 14
Student Portfolio Reflection	0%	No	Week 15

Online Quiz and Reflection

Due: **Week 4**
Weighting: **10%**

Students are required to answer 4 short answer questions and write a short reflective piece (250 words) related to systems thinking, resilience and sociotechnical systems (weeks 1,2 and 3).

On successful completion you will be able to:
- Demonstrate an understanding of how systems underpin healthcare
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- Analyse and apply a range of theoretical concepts related to systems thinking including: resilience; sociotechnical systems; case study methodology; safe systems; consumer participation, and systems evaluation methods to public health issues
- Examine the challenges to adopting a systems approach to public health

Case study report

Due: **Week 8**
Weighting: **50%**

Students will be presented with a real-life case-study of an event in the health system. You will be asked to analyse the case from a variety of health system perspectives and write a report.

On successful completion you will be able to:
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- Analyse and apply a range of theoretical concepts related to systems thinking including: resilience; sociotechnical systems; case study methodology; safe systems; consumer

participation, and systems evaluation methods to public health issues

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Health Evaluation

Due: **Week 14**
Weighting: **40%**

Health Intervention Evaluation - On-line Presentation

Weighting: 30% content, 10% for presentation style

Students will select one health intervention and outline an evaluation approach using the six-step evaluation method covered in Weeks 7 & 8. You will record yourselves presenting a 10-15 minute PowerPoint presentation and provide a transcript.

On successful completion you will be able to:
- Demonstrate an understanding of how systems underpin healthcare
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Student Portfolio Reflection

Due: **Week 15**
Weighting: **0%**

Student Portfolio Reflection on meeting LOs & PLOs / Collection of supporting materials. Programmatic assessment not marked for this unit.

On successful completion you will be able to:
- Analyse and apply a range of theoretical concepts related to systems thinking including: resilience; sociotechnical systems; case study methodology; safe systems; consumer participation, and systems evaluation methods to public health issues
- Examine the challenges to adopting a systems approach to public health

Delivery and Resources

Unit Organisation

This is a four credit point unit run over a 13 week session. There are lectures, tutorials and full day workshops. Further information is available via the HSYP806 online Learning Management System (LMS) iLearn http://ilearn.mq.edu.au

Attendance

All lectures and tutorials are scheduled in your individual timetable. Attendance is expected at both lectures and tutorials, as this is where the majority of learning occurs, in most cases lectures are recorded. Failure to attend may impact your final results. It is the responsibility of the student to contact their tutor by email to inform tutors if they are going to be absent. Please note that this unit uses both Face-to-Face lectures on campus and online learning materials taht you are expected to complete independently. The timetable for classes can be found on the University web site at: http://www.timetables.mq.edu.au/.

Readings

The readings for each week will be listed in ilearn using the Leganto system. Leganto is a new reading list management system, which you can access through your iLearn unit. For further information to understand and navigate your unit reading lists in Leganto, check this guide: http://libguides.mq.edu.au/leganto

Readings marked as 'required' are those that are essential to be completed for that week. Some readings may be included within a weeks readings that are marked as 'recommended' or 'secondary sources'. These are there for your recommended reading or for where we have sourced additional material that may be of interest to you. Please use these at your discretion.

Technology and equipment

On-campus

Teaching rooms are equipped with state of art audio-visual and ICT equipment including iPads, internet connection, high quality video cameras and multiple LCD screens. You are expected to **Bring Your Own Device** (BYOD) to all lectures and tutorials.

Off-campus

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

Unit Schedule

Week	Topic
1	Introduction – What are systems?
2	Resilient Systems
3	Sociotechnical systems
4	Digital Health and Informatics I
5	Digital Health and Informatics II
6	Case study methodology in Health Systems
7	Systems Evaluation Methods I
	2 weeks recess
8	Systems Evaluation Methods II
9	Consumer Participation
10	Changing Systems: implementation Science /Managing /Leading
11	Safe Systems
12	Bringing it Together: Knowledge Translation & Policy to Practice
13	Private Study
14	Study week

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.)*

Undergraduate 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 (https://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 or if you are a Global MBA student contact 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) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops

- StudyWise

- Academic Integrity Module for Students

- Ask a Learning Adviser

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

If you are a Global MBA student contact 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/.

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.

Graduate Capabilities

PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcomes

- Demonstrate an understanding of the current discipline of systems thinking
- Discuss the rational for adopting a systems approach to address population health issues
- Examine the challenges to adopting a systems approach to public health

Assessment tasks

- Case study report
- Student Portfolio Reflection

PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

Learning outcomes

- Demonstrate an understanding of how systems underpin healthcare
- Demonstrate an understanding of the current discipline of systems thinking
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- Examine the challenges to adopting a systems approach to public health

Assessment tasks

- Online Quiz and Reflection
- Case study report
- Health Evaluation

PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

Learning outcomes

- Demonstrate an understanding of how systems underpin healthcare
- Demonstrate an understanding of the current discipline of systems thinking
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Assessment tasks

- Online Quiz and Reflection
- Case study report
- Health Evaluation
- Student Portfolio Reflection

PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

Learning outcomes

- Demonstrate an understanding of the current discipline of systems thinking
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Assessment tasks

- Online Quiz and Reflection
- Case study report
- Health Evaluation

PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

Learning outcomes

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- Examine the role of digital health and health informatics in systems thinking
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Assessment tasks

- Online Quiz and Reflection
- Case study report
- Health Evaluation

PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in

relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning outcomes

- Demonstrate an understanding of the current discipline of systems thinking
- Examine the challenges to adopting a systems approach to public health

Assessment task

- Case study report