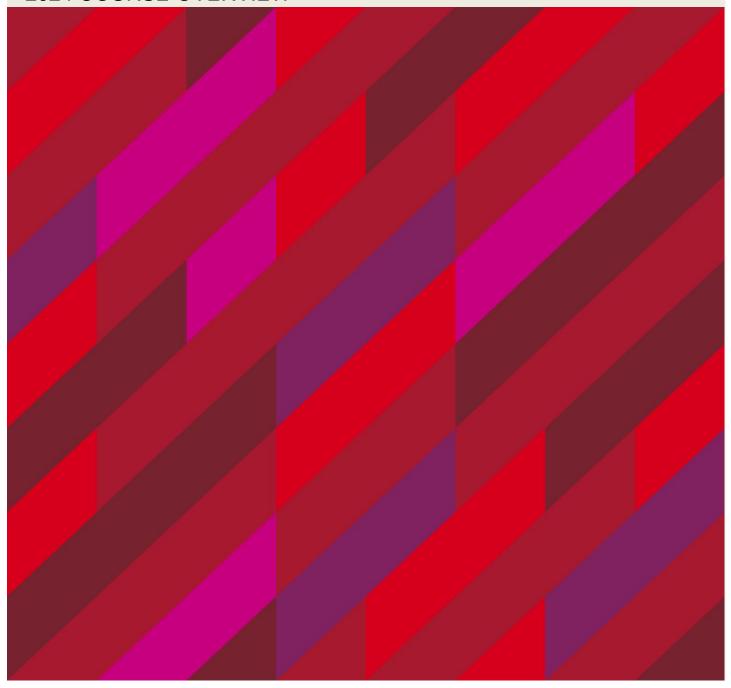
FACULTY OF MEDICINE HEALTH AND HUMAN SCIENCES (FMHHS)



# Master of Research

2024 COURSE OVERVIEW



# **Table of Contents**

| Table of Contents   | 2  |
|---|----|
| Graduate Capabilities – FMHHS Master of Research (Year 1 & 2)           | 3  |
| FMHHS Course Learning Outcomes – Year 1                                 | 4  |
| FMHHS Course Learning Outcomes – Year 2                                 | 5  |
| Course Structure  | 6  |
| Core units  | 7  |
| MEDI7000 Research communications  | 7  |
| MEDI7001 Medical research foundations – ethics, integrity, and practice | 8  |
| Frontiers units   | 9  |
| APPL7020 Designing and conducting language-related research             | 9  |
| MEDI7011 Research frontiers in medical sciences                         | 10 |
| MEDI7101 Epidemiology and biostatistics for research                    | 11 |
| PSYM7718 Advanced research design and statistics                        | 12 |
| Elective units  | 13 |
| MEDI7002 Research data analysis   | 13 |
| MEDI7003 Researcher professional development                            | 14 |
| MEDI7007 Unlocking the mechanisms of human disease                      | 15 |
| MEDI7041 Research rotation 1  | 16 |
| MEDI7042 Research rotation 2  | 17 |
| MEDI7047 Research project management                                    | 18 |
| Year 2 and key contacts   | 19 |

# **Graduate Capabilities – FMHHS Master of Research (Year 1 & 2)**









| Scientist   | & Scholar   | Research Pi  | ractitioner                                    | Engaged G  | lobal Citizen  | Profess   | ional  |
|---|---|--|--|--|--|---|--|
| Applied<br>medical<br>research<br>scientist   | Scholar and<br>evidence-<br>based<br>practitioner | Effective<br>personal and<br>digital<br>communicator                               | Skilled and informed researcher                | Socially and culturally versatile practitioner   | Internationally<br>aware<br>researcher   | Team worker   | Ethical and reflective practitioner            |
| Graduates will have coherent and advanced knowledge of the underlying principles and concepts in one or more disciplines and knowledge of research principles and methods |   | Graduates will<br>communicators<br>skilled, competer<br>delivering ethic<br>resear | s and highly<br>nt researchers<br>cal and safe | culturally<br>practitioners w<br>local and global<br>issues, and v<br>operate effectiv | I be socially and responsible with awareness of medical research who are able to vely in a range of nvironments. | Graduates will<br>communicator<br>skilled, competer<br>delivering ethic<br>resear | s and highly<br>nt researchers<br>cal and safe |

# **FMHHS Course Learning Outcomes – Year 1**

Macquarie University's **Master of Research Year 1 (BPhil) Course** in FMHHS has several course learning outcomes for each of the four previously stipulated graduate capabilities.

- 1. Scientist & Scholar: Graduates will be scientists and scholars with advanced knowledge and skills to deliver science and evidence based research practice. Graduates will have:
  - 1.1. cognitive skills to review, analyse, consolidate and synthesize knowledge to identify and provide solutions to complex problems with intellectual independence.
  - 1.2. cognitive and technical skills to demonstrate a broad understanding of a body of knowledge and theoretical concepts with advanced understanding in some areas.
  - 1.3. cognitive skills to exercise critical thinking and judgement in developing new understanding.
  - 1.4. technical skills to design and use research in a project.
  - 1.5. communication skills to present a clear and coherent exposition of knowledge and ideas to a variety of audiences.
- 2. Research Practitioner: Graduates will be effective communicators and highly skilled, competent researchers delivering robust research outcomes. Graduates will demonstrate the application of knowledge and skills:
  - 2.1. with initiative and judgement in professional practice and/or scholarship.
  - 2.2. to adapt knowledge and skills in diverse contexts.
  - 2.3. with responsibility and accountability for own learning and practice and in collaboration with others within broad parameters.
  - 2.4. to plan and execute project work and/or a piece of research and scholarship with some independence.
- 3. Engaged Global Citizen: Graduates will be socially and culturally responsive researchers with awareness of local and global medical research issues, and who are able to operate effectively in a range of settings.
  - 3.1. Graduates will demonstrate awareness of implications of different research approaches and be aware of the process of developing sound research projects.
  - 3.2. Graduates will demonstrate knowledge of contemporary local and global research and apply strategies for best practice in their research investigations.
  - 3.3. Graduates will demonstrate an understanding of, and work effectively within, research organizations and be able to identify and recommend strategies for improvement where appropriate.
- 4. Professional: Graduates will be ethical and reflective research practitioners able to lead and work collaboratively within teams.
  - 4.1. Graduates will demonstrate an understanding of governance and management of research and research environments.
  - 4.2. Graduates will demonstrate an ability to apply their knowledge and skills as ethically responsible and reflective researchers committed to lifelong learning to advance their practice.
  - 4.3. Graduates will demonstrate management, project leadership and strategy skills to deliver competitive cutting-edge research outcomes that benefit society

# FMHHS Course Learning Outcomes - Year 2

Macquarie University's **Master of Research Year 2 Course** in FMHHS has several course learning outcomes for each of the four previously stipulated graduate capabilities.

- 1. Scientist & Scholar: Graduates will be scientists and scholars with advanced knowledge and skills to deliver science and evidence based research practice. Graduates will have:
  - 1.1. cognitive skills to demonstrate mastery of theoretical knowledge and to reflect critically on theory and its application.
  - 1.2. cognitive, technical, and creative skills to investigate, analyse, and synthesize complex information, problems, concepts, and theories to different bodies of knowledge or practice.
  - 1.3. cognitive, technical, and creative skills to generate and evaluate complex ideas and concepts at an abstract level.
  - 1.4. cognitive and technical skills to design, use, and evaluate research and research methods.
  - 1.5. communication and technical skills to present a coherent and sustained argument and to disseminate research results to specialist and non-specialist audiences.
  - 1.6. technical and communication skills to design, evaluate, implement, analyse, theorise and disseminate research that makes a contribution to knowledge.
- 2. Research Practitioner: Graduates will be effective communicators and highly skilled, competent researchers delivering robust research outcomes. Graduates will demonstrate the application of knowledge and skills:
  - 2.1. with creativity and initiative to new situations in professional practice and/or for further learning.
  - 2.2. with high-level personal autonomy and accountability.
  - 2.3. to plan and execute a substantial piece of research.
- 3. Engaged Global Citizen: Graduates will be socially and culturally responsive researchers with awareness of local and global medical research issues, and who are able to operate effectively in a range of settings.
  - 3.1. Graduates will have a body of knowledge that includes the understanding of recent developments in one or more disciplines.
  - 3.2. Graduates will demonstrate advanced knowledge of research principles and methods applicable to the field of work or learning.
  - 3.3. Graduates will demonstrate knowledge of contemporary local and global research issues and apply strategies for best practice in their research investigations.
  - 3.4. Graduates will demonstrate an understanding of, and work effectively within, research organizations and be able to identify and recommend strategies for improvement where appropriate.
- 4. Professional: Graduates will be ethical and reflective research practitioners able to lead and work collaboratively within teams.
  - 4.1. Graduates will demonstrate an understanding of governance and management of research and research environments, be able to both lead projects and work within project teams effectively.
  - 4.2. Graduates will demonstrate an ability to apply their knowledge and skills as ethically responsible and reflective researchers committed to lifelong learning to advance their practice.

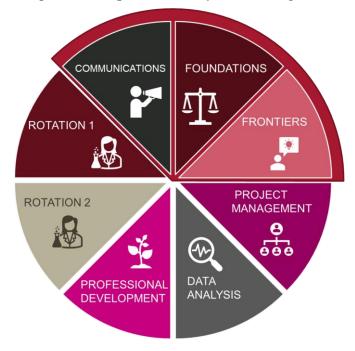
Graduates will demonstrate management, project leadership and strategy skills to deliver competitive cutting-edge research outcomes that benefit society.

## **Course Structure**

Students may commence the FMHHS MRes course in either session 1 or 2 of the academic year, and may choose to study full time or part time, depending on circumstances.

#### Semester 1 and 2 (BPhil Year 1): Foundation research skills

The figure below outlines the structure of the FMHHS BPhil program. The BPhil is an 80 credit point AOF level 8 qualification. All units are 10 credit points. Each 10 credit point unit has a nominal workload of 150 hours. Eight units are required to complete the BPhil year, including core units: Communications, Foundations, and Frontiers.



#### RESEARCH FOUNDATIONS

Build your understanding of good research practice, ethics, integrity, and leadership. (MEDI7001)

#### RESEARCH COMMUNICATIONS

Develop your written and oral skills in research communication to peers and general audiences (MEDI7000)

#### RESEARCH FRONTIERS

Explore recent advancements and research approaches common in your field of interest (MEDI7011, MEDI7101, APPL7020, PSYM7718)

#### **RESEARCH DATA ANALYSIS**

Explore advanced practices in data analysis for the research problems faced in your field. (MEDI7002)

#### RESEARCHER PROFESSIONAL DEVELOPMENT

Develop your strategy and collaboration skills with an assigned senior research mentor. (MEDI7003)

#### **RESEARCH ROTATIONS**

Develop your skills as a researcher through participation in research activities in different groups (MEDI7041, MEDI7042)

#### RESEARCH PROJECT MANAGEMENT

Learn how you can apply advanced project management practices in your research projects (MEDI7047)

If students wish to proceed into MRes Year 2, they must complete the core unit requirements plus five other units.

#### Semester 3 and 4 (MRes Year 2): Research Project

Year 2 of the MRes will be made up of structured research preparation and training, where candidates will:

- Extend their knowledge of research innovations in their discipline;
- Survey the current literature related to their particular research interest;
- Engage with the latest research methods in their field;
- Receive training in project management and plan a major research project, and
- Complete a significant individual research project of own design, with the support of a research supervisor.

The requirements for your MRes 2 year will include a variety of tasks depending on the department in which you are enrolled. More details can be sourced from your departmental directors and course guides.

Altogether 90% of your final grade will be allocated by external examiners, and the remaining 10% will be internally allocated by specific examined tasks defined by your department.

#### **BPHIL/MRES Y1**

## **Core units**

#### MEDI7000 RESEARCH COMMUNICATIONS

Offered online in session 1 and on campus in session 2

This unit aims to equip you with skills to communicate academic research effectively, and with a heightened appreciation of the relationship between research communications and disciplinary knowledge creation. You will analyse, critique and practise academic communication conventions from different research genres in a variety of modes (written, oral and visual), across disciplines. You will develop communication skills to present a clear and coherent exposition of research concepts to a variety of audiences.

#### **LEARNING OUTCOMES**

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

- 1. Demonstrate a range of communication styles required as an active academic research professional.
- 2. Effectively utilise written, oral, and visual communications to disseminate research.
- 3. Explain the structure and style of various types of research communications.
- 4. Identify different approaches taken to present your data and communicate your research.

#### **ASSESSMENT**

| Assessment No. | Type of Assessment            | Value | Content (LO) |
|----------------|-------------------------------|-------|--------------|
| A1             | Comparative analysis          | 15%   | LO1,2        |
| A2             | Research Pitch                | 25%   | LO2,3,4      |
| A <sub>3</sub> | Systematic Review<br>Protocol | 15%   | LO1,2,3,4    |
| A4             | Oral Presentation             | 45%   | LO2,3,4      |

#### **UNIT CONVENOR**

Dr Jennifer Rowland jen.rowland@mg.edu.au

#### MEDI7001 MEDICAL RESEARCH FOUNDATIONS - ETHICS, INTEGRITY, AND PRACTICE

Offered in session 1.

This unit will cover a range of key topics critical to good research practice in Medical Sciences. Presented by lecturers from the various disciplines represented in the faculty, the unit will focus on good research practice, ethics, fundamentals of different research approaches, and research reproducibility. You will explore how best to pose questions, design and deliver their research, with a strong emphasis on integrity, leadership, and cultural competence. The focus will be on the principles that underlie effective research in all disciplines of health systems, clinical and biomedical research. This unit is recommended to all students wishing to pursue robust and high quality research.

#### **LEARNING OUTCOMES**

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

- 1. Describe good practice in Medical Research, including ethics, integrity and leadership.
- 2. Explain the fundamentals of different research types and approaches.
- 3. Pose effective research questions and describe key components in research design.
- 4. Critique different methodologies that might be applied to address research questions.

#### **ASSESSMENT**

| Assessment No. | Type of Assessment  | Value | Content (LO) |
|----------------|---------------------|-------|--------------|
| A1             | Debate/Role Play    | 20%   | LO1,2        |
| A2             | Literature Analysis | 40%   | LO1,2,3,4    |
| A3             | Poster and talk     | 40%   | LO1,3,4      |

#### **UNIT CONVENORS**

Assoc. Prof. Simon Boag simon.boag@mq.edu.au

## **Frontiers units**

#### APPL7020 DESIGNING AND CONDUCTING LANGUAGE-RELATED RESEARCH

Offered in session 1 and 2

Acquiring advanced research knowledge and developing research skills is integral to and a core element in Master of Research course. In this unit, you will be exposed to main research methodologies including quantitative, qualitative, and mixed-methods; you will also be involved with research activities through learning and assessment tasks. By completing this unit, it is anticipated that you will master critical concepts in research and be able to apply different research methods by preparing research proposals on topics of interest.

#### **LEARNING OUTCOMES**

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

- 1. Identify and communicate a research topic to a professional audience.
- 2. Demonstrate an in-depth understanding of different approaches to research
- 3. Conceive and formulate research questions/hypotheses relating to language study and language learning
- 4. Apply your research and writing skills to write a research proposal
- 5. Conduct and report a small-scale replication study to answer your research questions

#### **ASSESSMENT**

| Assessment No. | Type of Assessment      | Value | Content (LO) |
|----------------|-------------------------|-------|--------------|
| A1             | Research Proposal       | 50%   | LO 1,2,3,4,5 |
| A2             | Annotated bibliography  | 30%   | LO1,2,3,4    |
| A <sub>3</sub> | Group oral presentation | 20%   | LO 3,4       |

#### **UNIT CONVENOR**

Assoc. Prof. Peter Roger peter.roger@mq.edu.au

#### MEDI7011 RESEARCH FRONTIERS IN MEDICAL SCIENCES

Offered in session 1.

In this unit you will develop an advanced conceptual knowledge of breakthrough discoveries relevant to a range of topics within the field of medical research. Through mentoring by senior research-active staff and postdoctoral researchers within the Faculty of Medicine, Health, and Human Sciences, you will gain discipline-specific knowledge that will be relevant to your future research career. You will attend seminars and lectures focused on ongoing research projects from the Faculty of Medicine and Health Sciences and from invited speakers from leading national and international research institutes. You will also participate in self-directed and group tasks in which you will learn to conduct research, read and critically review seminal research findings that have shaped contemporary thinking, and to disseminate these findings in written and oral form.

#### **LEARNING OUTCOMES**

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

- 1. Explain the ethical and practical requirements for research with humans and animals.
- 2. Synthesise and analyse information regarding medical/health research from a wide variety of sources.
- 3. Identify and discuss complex problems and issues in medical research with intellectual independence.
- 4. Articulate cogent arguments in written and oral form for a variety of audiences.
- 5. Apply skills in research literacy and research related information technology.

#### **ASSESSMENT**

| Assessment No. | Type of Assessment              | Value | Content (LO)  |
|----------------|---------------------------------|-------|---------------|
| A1             | Journal Club Presentation       | 25%   | LO 1,2,3,4, 5 |
| A2             | Scientific News Article         | 20%   | LO 2,3,4,5,   |
| A3             | Essay                           | 35%   | LO 2,3,4,5    |
| A4             | Seminar attendance and critique | 20%   | LO1,2         |

#### **UNIT CONVENOR**

Prof. Jacqueline Phillips jacqueline.phillips@mq.edu.au

Dr Sarah Hemley sarah.hemley@mq.edu.au

#### MEDI7101 EPIDEMIOLOGY AND BIOSTATISTICS FOR RESEARCH

Offered in session 1.

This unit provides an introduction to scientific inquiry and evaluation of evidence fundamental to research and practice with particular reference to public health. You will be introduced to epidemiology, biostatistics, and qualitative methods, via modules designed with an integrated approach to learning in mind. You will learn about study design, analysis, and interpretation. You will also gain an appreciation of the importance of evidence to the field of health research and apply techniques directly to your field of research interest.

#### **LEARNING OUTCOMES**

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

- 1. Calculate and interpret the epidemiologic measures of occurrence; and association between exposure and disease and measures of public health impact.
- 2. Characterise analytic epidemiology study designs and describe the measures associated with these studies.
- 3. Explain epidemiological and statistical concepts commonly used in public health.
- 4. Organise, summarise, analyse and interpret data relevant to public health.

#### **ASSESSMENT**

| Assessment No. | Type of Assessment         | Value | Content (LO) |
|----------------|----------------------------|-------|--------------|
| A1             | Online Quiz (Epidemiology) | 10%   | LO1,3,4      |
| A2             | Critical Appraisal         | 40%   | LO1,2,3      |
| A3             | Final Exam                 | 50%   | LO1,2,3,4    |

#### **UNIT CONVENOR**

Prof. Janaki Amin janaki.amin@mq.edu.au

#### **PSYM7718 ADVANCED RESEARCH DESIGN AND STATISTICS**

Offered in session 1.

This unit is designed as preparation for the Master of Research projects and to help equip you for your research career. The unit focuses on practical issues of quantitative data analysis. Most topics are dealt with in the context of Stata. Topics include sample size and statistical power analysis, data management in Stata and more advanced methods specifically applicable to research in psychology.

#### **LEARNING OUTCOMES**

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

- 1. Make connections between principles of good research design and relevant research questions, and correctly apply designs to the appropriate question.
- 2. Demonstrate an understanding of how abstract concepts are operationalised in statistical terms in psychological research.
- 3. Apply and interpret several advanced statistical methods to research in psychology.
- 4. Demonstrate an enhanced practical understanding of statistical software used in psychological research, with a focus on understanding the syntax required to carry out analyses and interpreting output.

#### **ASSESSMENT**

| Assessment No. | Type of Assessment       | Value | Content (LO) |
|----------------|--------------------------|-------|--------------|
| A1             | Research Evaluation Form | 35%   | LO 1,2,3,4   |
| A2             | Final Examination        | 55%   | LO 1,2,3,4   |
| A <sub>3</sub> | Quiz                     | 10%   | LO 1,2,3,4   |

#### **UNIT CONVENOR**

Associate Prof. Naomi Sweller naomi.sweller@mq.edu.au

## **Elective units**

#### **MEDI7002 RESEARCH DATA ANALYSIS**

Offered in session

In this unit you will explore advanced practices in data analysis related to the research problems faced in your field of study. You will learn about the fundamentals of reproducible science using case studies that illustrate various practices. You will review different research data, and explore best practice in preparing it for reports and publications. You will learn about experimental design and theory relevant to your research discipline; including data analytics and statistical analysis, and digital tools that support your research. This unit will equip you for analysing your research outcomes in your MRes2 project.

#### **LEARNING OUTCOMES**

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

- 1. Critically review research data and define analytical approaches to interpret data.
- 2. Critique and apply theories and methodologies underpinning analytical approaches for advanced research data.
- 3. Explain complex research concepts and ideas using discipline-specific language.
- 4. Present clearly articulated analysis of data from your selected research discipline.

#### **ASSESSMENT**

| Assessment No. | Type of Assessment | Value | Content (LO) |
|----------------|--------------------|-------|--------------|
| A1             | Data Analysis Quiz | 25%   | LO1,2        |
| A2             | Presentation       | 35%   | LO1,2,3,4    |
| A3             | Report             | 40%   | LO1,2,3,4    |

#### **UNIT CONVENORS**

Prof. Thomas Fath thomas.fath@mq.edu.au

#### MEDI7003 RESEARCHER PROFESSIONAL DEVELOPMENT

Offered in session 1

This unit is focused on the skills that support professional development as a research practitioner with a strong focus on strategy and collaboration. You will assess advanced conceptual knowledge of breakthrough discoveries relevant to a range of topics. Your skills in pitching your research for funding will be developed as you participate in self-directed and group tasks and participate in peer review. Professional opportunities where you can apply your training will be explored. You will be partnered with a mentor during the session, who will support you in preparing a competitive funding application in your discipline.

#### **LEARNING OUTCOMES**

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

- 1. Demonstrate advanced knowledge of current research and prospective future investigations warranted in your chosen discipline.
- 2. Identify and discuss complex research problems and issues with intellectual independence.
- 3. Communicate and collaborate effectively with peers and mentors in written and oral formats.
- 4. Develop and deliver written tasks relating to professional research practice.
- 5. Apply professional practice and skills related to research and research training.

#### **ASSESSMENT**

| Assessment No. | Type of Assessment | Value | Content (LO) |
|----------------|--------------------|-------|--------------|
| A1             | Reflective Report  | 30%   | LO1,2,3,4    |
| A2             | Proposal           | 40%   | LO1,2,3,4,5  |
| A3             | Presentation       | 30%   | LO1,3,4,5    |

#### **UNIT CONVENORS**

Dr Sarah Hemley sarah.hemley@mq.edu.au

#### MEDI7007 UNLOCKING THE MECHANISMS OF HUMAN DISEASE

Offered in session 2.

#### PREREQUISITE: MEDI7001 Research Foundations

In this unit you will explore the aetiology, pathogenesis and risk factors involved in common human diseases, including cancer and neurodegenerative conditions. Disease processes will be studied with a focus on cell biology, genetics, and immunology. You will gain an in depth understanding of fundamental biological mechanisms governing human disease pathogenesis. Current treatments and clinical trials will be reviewed and the impact of disease on the individual and on society will be discussed. The latest research into treatment response and resistance, liquid biopsies, and biomarker discovery will be incorporated throughout the unit, and the reality and promise of personalised therapy will be considered.

#### **LEARNING OUTCOMES**

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

- 1. Identify the mechanisms and risk factors that contribute to disease.
- 2. Critically review contemporary research in human disease processes.
- 3. Evaluate current treatment strategies and the role of personalised therapy.
- 4. Demonstrate competency in communicating ideas within a research group to produce a research grant proposal.

#### **ASSESSMENT**

| Assessment No. | Type of Assessment | Value | Content (LO) |
|----------------|--------------------|-------|--------------|
| A1             | Oral presentation  | 30%   | LO1,2,3,4    |
| A2             | Written assessment | 25%   | LO1,2,3,4    |
| A3             | Final exam         | 45%   | LO1,2,3      |

#### **UNIT CONVENOR**

Prof. Helen Rizos

helen.rizos@mq.edu.au

#### **MEDI7041 RESEARCH ROTATION 1**

Offered in session 1

This unit is one of two units facilitating research within the first year of the Masters of Research within the Faculty of Medicine, Health and Human Sciences. This unit focuses on providing a first hand experience of performing research and research communication. In this unit, you will become a member of several research groups under the supervision of a senior PhD candidate or post-doctoral staff member. Learning activities will include participation in research activities such as assisting in the acquisition, analysis and interpretation of data, participation in research group meetings and journal clubs, and practical experience in research communication. The immersive learning environment within the research activities will provide you with access to discipline-specific expertise, and you will be able to demonstrate the application of the theoretical knowledge obtained in your other learning activities. Through this unit you will develop skills as a researcher and research communicator.

#### **LEARNING OUTCOMES**

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

- 1. Communicate advanced theoretical and practical knowledge of fields of contemporary research.
- 2. Participate in the day-to-day running of a research group and the responsibilities in research and collaborate in discussion centred around research ideas, methods, and data.
- 3. Acquire, analyse, and interpret research data and methods in a way suitable for presentation to the scientific community.
- 4. Review and critically evaluate diverse scientific literature and present your findings.

#### **ASSESSMENT**

| Assessment No. | Type of Assessment    | Value | Content (LO) |
|----------------|-----------------------|-------|--------------|
| A1             | Research Engagement   | 15%   | LO1,2        |
| A2             | Poster presentation   | 30%   | LO1,2,3,4    |
| A3             | Mini-paper submission | 30%   | LO1,2,3,4    |
| A4             | Project proposal      | 25%   | LO1,3,4      |

#### **UNIT CONVENORS**

Assoc. Prof. Angela Laird angela.laird@mq.edu.au

#### **MEDI7042 RESEARCH ROTATION 2**

Offered in session 2.

This unit is one of two units facilitating research within the first year of the Masters of Research within the Faculty of Medicine, Health and Human Sciences. This unit focuses on a first hand experience of research and research communication. In this unit, you will become a member of a research group under the supervision of a senior PhD candidate or post-doctoral staff member. Learning activities will include an opportunity to participate in research activities such as assisting in the acquisition, analysis and interpretation of data, participation in research group meetings and journal clubs, and practical experience in research communication. The immersive learning environment of the research activities will provide you with access to discipline-specific expertise, and you will be able to demonstrate the application of the theoretical knowledge obtained in your other learning activities. Through this unit you will develop skills as a researcher and research communicator.

#### **LEARNING OUTCOMES**

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

- 1. Review advanced theoretical and/or practical knowledge of a field of research and apply this knowledge to a small research project.
- 2. Participate in the day-to-day running of a research group and the responsibilities of self-directed postgraduate research and collaborate in discussion centred around research ideas, methods, and data.
- 3. Acquire, analyse, and interpret research data and methods in a way suitable for presentation to the scientific community.
- 4. Review and critically evaluate diverse scientific literature and present your findings.

#### **ASSESSMENT**

| Assessment No. | Type of Assessment      | Value    | Content (LO) |
|----------------|-------------------------|----------|--------------|
| A1             | Conference presentation | 35%      | LO 1,2,3,4   |
| A2             | Conference paper        | 35%      | LO 1,2,3,4   |
| A <sub>3</sub> | Research engagement     | required | LO 2,3,4     |
| A4             | Skills reflection       | 30%      | LO 3,4       |

#### **UNIT CONVENORS**

Dr Mark Butlin mark.butlin@mq.edu.au

#### MEDI7047 RESEARCH PROJECT MANAGEMENT

Offered in session 2.

In this unit you will review the key stages of a scientific/medical research project, from conception to completion. Topics covered will include: project design and planning; establishing key project contributors; launching a project; managing a project underway; troubleshooting and dealing with change; record keeping; communicating and networking; publishing; and project completion. These topics will be explored in the context of short (1 year) and long (3 year) classical academic research projects. In completing this course, you will develop a clear understanding of how to deliver a research project from start to finish. Special guest lecturers will also provide insight to research projects in different contextual settings.

#### **LEARNING OUTCOMES**

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

- 1. Describe how to design and deliver a project plan.
- 2. Critically evaluate components and deliverables of a project.
- 3. Apply understanding of project management techniques in selected disciplinary practice.
- 4. Evaluate best project troubleshooting approaches and the required associated steps.
- 5. Describe the coordination of a research project with a diverse multidisciplinary team.
- 6. Demonstrate skills in communication and self-directed learning.

#### **ASSESSMENT**

| Assessment No. | Type of Assessment                     | Value | Content (LO) |
|----------------|--|-------|--------------|
| A1             | Quiz                                   | 20%   | LO1,2        |
| A2             | Retrospective review of thesis project | 40%   | LO2,3,4,5,6  |
| A3             | Project Cycle Analysis                 | 40%   | LO1,2,3,4,6  |

#### **UNIT CONVENOR**

Dr Jennifer Rowland jen.rowland@mq.edu.au

## Year 2 and key contacts

Year 2 of the course is hosted within the department where you will be completing your MRes project, and follow the basic structure outlined on page 6.

For further information about your year 2 course please contact your relevant departmental MRes Advisor.

| Department                                   | MRes Advisor               | Contact                   |
|--|----------------------------|---------------------------|
| Australian Institute of<br>Health Innovation | Associate Prof. Ling Li    | ling.li@mq.edu.au         |
| Macquarie Medical School                     | Prof. Thomas Fath          | thomas.fath@mq.edu.au     |
| Psychological Sciences                       | Assoc.Prof Simon Boag      | simon.boag@mq.edu.au      |
| Health Sciences                              | Assoc.Prof Seema Mihrshahi | seema.mihrshahi@mq.edu.au |
| Linguistics                                  | Dr Cassi Liardet           | cassi.liardet@mq.edu.au   |
| Chiropractic                                 | Dr Michael Swain           | michael.swain@mq.edu.au   |

To explore the research being pursued in the faculty, please navigate to the PURE database. https://researchers.mq.edu.au/en/organisations/faculty-of-medicine-health-and-human-sciences

#### **FMHHS HDR Contacts**

| Associate Dean Research<br>Training and Performance | Prof. Mark Connor | mark.connor@mq.edu.au |
|---|-------------------|-----------------------|
| MRes Director                                       | Dr Jen Rowland    | jen.rowland@mq.edu.au |

#### **Graduate Research Academy**

 Candidate Management
 Candidate support
 gr.candidatesupport@mq.edu.au

Questions relating to current candidates, including enrolment, changes to candidature, individual scholarships, and examination• Support using e-Forms and the e-Exam Portal

Candidate Development Development Team gr.development@mq.edu.au

Enquiries about training and development opportunities for candidates, including courses, workshops, seminars, and 1:1 consultations with Development Advisors

**Candidate Experience** HDR peer mentor program <u>gr.mentors@mq.edu.au</u> Information about the HDR peer mentor program and candidate experience initiatives

## **Faculty of Medicine, Health and Human Sciences**

Macquarie University NSW 2109 Australia T: +61 (0) 2 9850 4531

E: adrtp.fmhhs@mq.edu.au



