# PhD Programs FMNHS

From the 1st of January 2015 PhD training will become a compulsory part of the doctoral program in the Faculty of Medicine Nursing and Health Sciences.

**In the FMNHS there are 7 PhD programs.**

2 Coursework Programs: Public Health and Preventive Medicine and Translational Research

5 Graduate Research Professional Development Programs: Biomedical Science; Nursing and Midwifery; Education Teaching and Learning; Primary Health Care; and Psychological Sciences.

The Faculty PhD programs are outlined in the following pages.

# PhD PROGRAM

**Biomedical Sciences**

**Program Director: A/Prof Martin Stone**

Within the Faculty of Medicine, Nursing and Health Sciences students who undertake a doctorate by research in Biomedical Science typically have completed honours or a masters in a Biomedical Science discipline and are undertaking the doctorate as a pathway to a career in research, academia or industry. It is proposed that training for students who undertake HDR research in this discipline area is composed of opportunities to gain fundamental research skills, as well as be exposed to state of the art research technologies and the latest cutting edge research. Creating unique opportunities to broaden their career horizons.

Program features 120 hrs of training (80 hrs – MIGR, 40 hrs – Biomedical Science).

Biomedical Science component is as follows:

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| **Activity Title** | **Description and expected outcomes** |
| Cutting Edge Research Technologies in Biomedical Science – Research Technology Platforms | Training may include attending workshops/symposia on specific platform research technologies and specific equipment training**.** Level 1 of this training module is compulsory for all students undertaking the Biomedical Sciences Program. |
| Effective Teaching Approaches in Biomedical Science | Includes the general Teaching Associate training workshop [one day – new], as well as convenor-run demonstrator meetings to discuss teaching approaches (typically one meeting per week or fortnight throughout a semester). The maximum of 20 hours would usually involve demonstrating in 2-3 semesters.) |
| Effective Management of a Biomedical Science Research Project. (New - to be developed). | Pre-requisite MIGR project management modules, introductory and intermediate project management. |
| From Project to Product. | This module will introduce students to the initial stages of the planning process, including what needs to be considered when implementing such a project. |
| Scholarly communication in the Biomedical Sciences | In this training module students will learn about discipline specific practices and tools to enable efficient scholarly communication throughout their research program and into their careers. |
| Analysis of Current Literature in Biomedical Science. | Journal Club |
| Other technical training programs in biomedical sciences (internal and external to Monash). | Training must be specifically for postgraduate students. Must be run by a recognized tertiary institution, specialist research centre or professional society in the relevant field. |
| Written and Oral Communication Skills for Biomedical Science. (New - to be developed). | This module is designed to build on the MIGR offerings in Research Development and further develop the written and oral communication skills for students in biomedical science. |

# PhD PROGRAM

**Education, Teaching and Learning – Medicine**

**Program Director: Prof. Wayne Hodgson and Prof. Marg Hay**

Within the Faculty of Medicine, Nursing and Health Sciences there is a small cohort, currently 10 students, who undertake HDR research in Education, Teaching and Learning, a portfolio that falls under the responsibility of the Deputy Dean of Education, Prof. Wayne Hodgson. Students are enrolled in the academic unit FMNHS - The Health Professions Education and Educational Research (HealthPEER). In the future students in this discipline are likely to grow as Education-focused academics across the faculty develop their discipline based research in learning and teaching.

Program features 120 hrs of training (80 hrs – MIGR, 40 hrs – HealthPeer- FMNHS, Faculty of Education). FMNHS and Faculty of Education component is as follows:

It is proposed that training for students who undertake HDR research in this discipline area is composed of opportunities to be able to:

1. Audit three units that compose part of the Graduate Certificate in Health Professional Education.

* MEU9001: An introduction to teaching and learning in the health professions
* MEU9011: Research methods in health professional education
* MEU9015: Contemporary innovations and research in health professions education

2) Undertake Faculty Research Skills Training Modules from the Faculty of Education PhD Training Program as this aligns with the discipline research area.

# PhD PROGRAM

**Nursing and Midwifery**

**Program Director: Dr. Susan Lee**

Within the Faculty of Medicine, Nursing and Health Sciences students who undertake a doctorate by research in Nursing and Midwifery already have a vocation and professional qualification in Nursing and Midwifery. The role of the doctor of philosophy is to build core research skills in addition to clinical knowledge. It is proposed that training for students who undertake HDR research in this discipline area is composed of opportunities that these students have not previously had to gain the skills they need to perform evidence based research and be able to communicate this with impact. Opportunities to build skills required for career opportunities in educational roles in academia or health care organisations are also included.

Program features 120 hrs of training (80 hrs – MIGR, 40 hrs –Nursing and Midwifery).

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| **Activity Title** | **Description and expected outcomes** |
| Evidence synthesis for best practice health care decision making | Building on standard narrative literature review technique, this course develops evidence synthesis techniques. |
| Evidence Translation for Health Care Practice | This course will enable students to build evidence summaries to inform clinical practice change. |
| Academic Nursing and Midwifery Career Development Program | The purpose of this program is to develop skill in tutoring, demonstrating lecturing, clinical teaching and assessment |
| Communicating Research Goals and Outcomes with Impact | This program will utilise peer and academic support forums to foster communication skills in the communication of research to a range of audiences. |

# PhD PROGRAM

**Primary Health Care**

**Program Director: Prof. Colette Browning and A.Prof Jan Cole**

Within the Faculty of Medicine, Nursing and Health Sciences many of the students who undertake a doctorate by research in the Primary Health Care, Rural Health, Social Work and Radiology and Imaging are already have a vocation and professional qualification in their discipline and are undertaking PhDs to develop their research skills and have a direct impact on the quality of healthcare in the areas in which they work. Having a PhD training program that encompasses formal research training opportunities would be very attractive to heath care professionals looking to further their careers. It is proposed that training for students who undertake HDR research in this discipline area is composed of modules and training options that will allow students to gain these research skills in the context of their discipline areas. As these students are already in the workforce, many undertake their PhDs in a part-time capacity, these training options would need to include off-campus or online options such as podcast/web-based and/or videoconference activities.

Program features 120 hrs of training (80 hrs – MIGR, 40 hrs –Primary Health Care, Social Work, Rural Health Care).

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| **Activity Title** | **Description and expected outcomes** |
| Module 1: Systematic Reviews and Meta Analysis for Health Care Professionals and Researchers | This module focuses on systematic and Cochrane reviews and meta analysis. On completion of the module students should be able to: explain the difference between systematic reviews, Cochrane reviews and meta analysis; develop a research question to be answered by a review; develop the methodology for literature collating and reporting and data analysis; and the process of conducting a meta analysis; |
| Module 2 Qualitative Methods in Primary Health Care | This module introduces the student to the major methods and approaches in conducting qualitative research in the primary care context. Data analytic methods are included. |
| Module 3 SPSS Data analysis for Primary Health Care Researchers | This module is a hands-on data analysis module. Descriptive statistics ANOVA and multivariate approaches will be included. |
| Module 4 Measurement Scales in Primary Health Care | This module provides training in all aspects of the design, development and use of measurement scales, the selection of existing scales, scale and analysis. In addition the module includes outcome measurement. |
| Module 5 Primary Care Research Issues | This module covers the challenges of undertaking research in primary care settings and includes types of research conducted in primary care settings, complex interventions, recruitment and statistical issues, and data resources. |
| Current Research Topics in Primary Health Care | Research seminars are designed to enhance the breadth of HDR student knowledge in Primary Health Care, in addition to improving student appreciation of current issues, and their understanding of the approaches used by successful scientists to investigate these issues. It is expected that students will develop a broader knowledge of their discipline area. |
| Social Work HDR Conference. | The Department of Social Work HDR conference consists of lecture style academic presentations combined with small group workshop teaching, computer based analysis teaching, with students submitting written reports for assessment. All aspects of the research process are covered. For an example of this module please see the 2014 program - Appendix 1 |
| Short Courses in Rural and Indigenous Health | Each session consists of 2 hours of face-to-face attendance with approximately 2 hours of preparation and follow up. Short course Include sessions in: evaluations and research; research without numbers; talking evidence; culturally sensitive research and evaluation; keys to literature; Ethics for everyone; systematic reviews and evidence; Stats without maths; survey design and development; on-line survey development; easy as results- charts, pie graphs and interview texts; writing for effect. |
| Statistics and Data Analysis for Health Care Researchers in Rural and Indigenous Health | Training includes presenting data in tables and graphs; descriptive statistics and/or basic thematic analysis; using a statistical software package (e.g. SPSS, Prism) and/or using NVivo or equivalent software package; demonstration of statistical analysis and/or comprehensive coding and thematic analysis |
| Current Research Literature in Primary, Rural and Indigenous Health Care | A critical aspect of productive research is the ability to read and understand published research papers. One of the best ways for PhD students to develop this skill is through participation in group discussions of published articles. In addition to broadening the students’ knowledge of a field, these discussions familiarize students with many types of scientific questions and methodological approaches and allow them to hone their skills at data interpretation and criticism. |
| Annual Research Bootcamp –School of Rural Health | Attended by both research staff and postgraduate students of the School. The program involves student and staff research presentations, keynote speakers and capacity building activities. The 4-day bootcamp will be run in collaboration with other regional university campuses to promote networking. A shorter 1-day forum will be run in years where the bootcamp is not held. |

# PhD PROGRAM

**Psychological Sciences**

**Program Director: Prof. Nellie Georgiou-Karistianis**

Within the Faculty of Medicine, Nursing and Health Sciences students who undertake a doctorate by research in Psychological Sciences typically have completed an undergraduate with honours and are undertaking the research doctorate as a pathway to a career in academia, government and regulatory bodies, hospitals, management or industry. It is proposed that training for students who undertake HDR research in this discipline area is composed of options that will allow students to gain fundamental research skills in addition to advanced discipline specific knowledge and experience with the most up-to-date research technologies. Opportunities also exist in the program for industry placements allowing students the ability to obtain real world experience and expand their career options.

Program features 120 hrs of training (80 hrs – MIGR, 40 hrs –Psychological Sciences).

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| **Activity Title** | **Description and expected outcomes** |
| Advanced writing for publication inPsychological Sciences | This workshop builds on the MIGR workshop writing for publication. Students will cover topics such as: selecting the right Psychological Sciences journal; following journal specific instructions; The structure and writing of Psychological Sciences papers. |
| Auditing of the unit DPSY5103 - Research Methods in Professional Psychology | Students will audit this unit (auditing the unit requires completing the unit to the satisfaction of supervising staff but not complete any formalised assessment tasks). |
| Latest News in Cognitive Neurosciences | Research seminars specific for Psychological Sciences are designed to enhance the breadth of HDR student knowledge, their appreciation of current issues, and their understanding of the approaches used by successful scientists to investigate these issues. From attending seminars in the school and sub-Faculty it Is expected that students will develop a broader knowledge of their discipline area. |
| Cutting Edge Research Technologies and Practice in Psychological Sciences | This module contains workshops on the most up to date research methodologies in the Psychological Sciences, including: Imaging, Genetics and Sleep, in addition to real world insights by practicing Psychologists. Training may include attending workshops/symposia on specific platform technologies and equipment training. |
| Cutting Edge Research Technologies in Biomedical Sciences | Other Research Platform Training -– may include attending workshops/symposia on specific research platform technologies and specific equipment training used in biomedical research more generally (this component has been developed as part of the Biomedical Science PhD training program) |
| Effective Teaching Approaches in Psychological Sciences | This training includes training in how to be an effective demonstrator and tutor for undergraduate Psychology students. |
| Scholarly communication in the Psychological Sciences | In this series of activities students will learn about discipline specific practices and tools to enable efficient scholarly communication throughout their research program and into their careers. |
| Grant Writing and Fellowship Applications in Psychological Sciences | This workshop will cover opportunities available for grants and fellowships as well as tips on how to write these for Psychological Science based research. |
| Industry placements in Psychological Sciences | Work experience in an industry setting will facilitate engagement with industry partners and will help to develop transferable skills. |
| Honours supervision experience in Psychological Sciences | Available for PhD students who have been confirmed. HDR students will be able to offer an honours project under the guidance of their primary supervisor. This will allow HDR students to mentor junior researchers at the honours level and develop skills in supervision, communication, and mentoring. Only 5 places will be available each year. |

# PhD PROGRAM

**Public Health and Preventive Medicine**

**Program Director: Prof. Rory Wolfe**

The Public Health and Preventive Medicine PhD Program will be a Coursework program.

Students who undertake this program will be required to take two core course work units:

* MPH5040: Introductory Epidemiology – 6 credit points
* MPH5041: Introductory Biostatistics – 6 credit points

Elective coursework units can also be undertaken. The conditions under which additional elective units can be taken are outline below.

Elective coursework units.

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| **Unit Title** | **Unit code** |
| Pharmaceutical economics | ECX9710 |
| Economic evaluation in health care | ECX9730 |
| Regression Methods for epidemiology | MPH5200 |
| Clinical Epidemiology | MPH5202 |
| Chronic disease:epidemiology & prevention | MPH5207 |
| Research methods | MPH5213 |
| Infectious Disease Epidemiology | MPH5218 |
| Clinical trials (OCL) | MPH5236 |
| Measurement in clinical research | MPH5237 |
| Systemic Reviews and meta analysis | MPH5239 |
| Health & Human Rights | MPH5255 |
| Injury, epidemiology & prevention | MPH5256 |
| Health policy and prevention in a global world | MPH5260 |
| Law for health systems | MPH5265 |
| Clinical Leadership and Manaagement | MPH5266 |
| Foundations of Health Policy | MPH5269 |
| Advanced statistical methods for clinical research | MPH5270 |
| Reform & development of health services | MPH5272 |
| Data management & Computing | MPH5277 |
| Ethics, good research practice and practical research skills | MPH5283 |
| Medical evidence | FOR4001 |
| Ethics, medicine and the law | FOR4003 |
| Elements of the forensic sciences | FOR4004 |
| Elements of forensic odontology | FOR4007 |
| Elements of forensic toxicology | FOR5007 |

With respect to the elective units:

With the agreement of the SPHPM PhD program coordinator and a student's main supervisor, a student may additionally undertake up to two of the elective units. While this is not mandatory, it is strongly encouraged in order to add breadth to the student's training.

In exceptional circumstances and with the agreement of SPHPM PhD program coordinator and a student's main supervisor, a student may undertake an elective unit in place of one of the required coursework units.

Students are also required to undertake the Good Research Practice Short Course delivered by the Department of Epidemiology and Preventive Medicine within their first year of candidature.

# PhD PROGRAM

**Translational Research**

**Program Director: Prof. Stephen Jane**

The Translational Research PhD Program will be a coursework program.

Students who undertake this program will be required to take one core course work unit:

* TRM4002: Translational Research – 6 credit points (new unit)

and

one elective coursework unit:

* MPH5041: Introductory Biostatistics – 6 credit points
* APG5210: Bioethics Theory and Practice – 6 credit points
* TRM4001: Introduction to Clinical Trials – 6 credit points