



# Brain and Mind Centre Postgraduate Program

2019





“In the 21st century, to progress scientific enquiry, clinical practice or public policy, those interested in the brain and mind sciences need a solid background in the new evidence that informs this field. Studying at the Brain and Mind Centre provides a unique opportunity for active interaction with those scientific and clinical leaders who are at the forefront of modern science, technology and clinical services.”

#### Professor Ian Hickie AM

Professor Ian Hickie is Co-Director, Health and Policy at The University of Sydney's Brain and Mind Centre. He is an NHMRC Senior Principal Research Fellow (2013-2017 and 2018-22), having previously been one of the inaugural NHMRC Australian Fellows (2008-12). He was an inaugural Commissioner on Australia's National Mental Health Commission (2012-18) overseeing enhanced accountability for mental health reform and suicide prevention. He is an internationally renowned researcher in clinical psychiatry, with particular reference to medical aspects of common mood disorders, depression and bipolar disorder in young people, early intervention, use of new and emerging technologies and suicide prevention. In his role with the National Mental Health Commission, and his independent research, health system and advocacy roles, Professor Hickie has been at the forefront of the move to have mental health and suicide prevention integrated with other aspects of health care (notably chronic disease and ambulatory care management).

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# POSTGRADUATE PROGRAM in BRAIN and MIND SCIENCES

## Program overview

The Brain and Mind Centre is a place for discovery, innovation, research, clinical delivery and translating research into improved treatment and disease prevention strategies.

The Postgraduate Program in Brain and Mind Sciences builds on existing undergraduate offerings of the University of Sydney with units of study that cut across boundaries between traditional subject areas.

The Postgraduate Program is currently open to applications for the following coursework options:

- Graduate Certificate in Brain and Mind Sciences
- Graduate Diploma in Brain and Mind Sciences
- Master of Brain and Mind Sciences
- Graduate Certificate in Medicine (Psychiatry)
- Graduate Diploma in Medicine (Psychiatry)
- Master of Medicine (Psychiatry)
- Master of Medicine (Advanced) (Psychiatry)
- Non degree Continuing Medical Education Psychiatry course

and the following research degrees:

- Master of Philosophy
- Doctor of Philosophy.

The courses provide focused education and training for the next generation of science, medical, nursing, psychiatry, psychology and allied health workforces to better meet the needs of those experiencing disorders of the brain and mind.

## Who should apply?

- Psychologists, nurses, general practitioners and allied health staff for postgraduate education and professional development.
- Graduate scientists, medical scientists and those who wish to update their neuroscience skills and knowledge before undertaking a higher research degree in the area of brain and mind sciences.
- Psychiatry trainees, for whom this will form the Formal Education Course (FEC) component of training under the Royal Australian and New Zealand College of Psychiatrists (RANZCP) Fellowship requirements, can undertake the Master of Medicine (Psychiatry) programme, as can psychiatrists and other doctors working in the field of psychiatry (eg Career Medical Officers). The FEC can also be undertaken as a non degree option as a continuing medical education (CME) program.

## Why choose the University of Sydney?

The University of Sydney was founded in 1850 and was the first university in Australia. For over 150 years we have maintained a national and international reputation for academic excellence. We strive constantly for excellence in intellectual inquiry, academic freedom and integrity, and ethical practice in academic endeavours. At the heart of all of this is an exciting and stimulating student-centred learning and teaching environment. Our award courses are administered by Sydney Medical

School, respected as not only a provider of quality teaching, but also as a leader in research, with funding from state, national and international bodies. Sydney Medical School is conducting cutting-edge education and research in the full spectrum of health and medical knowledge, from the medical sciences through to clinical medicine, public health, health service delivery and medical education.

# Master of Brain and Mind Sciences – Coursework

## Overview

This postgraduate program strongly promotes the philosophy of interdisciplinary research that underpins the Brain and Mind Centre. Diseases of mental health are explored from both the basic sciences and clinical research rather than as disparate scientific disciplines.

The **core units** of the program give students a foundation in fundamental neuroscience and its clinical applications. Critical appraisal of the biomedical literature is developed, as is the ability to use this to inform further research or clinical applications.

The **elective units** of the program approach disorders of the brain and mind from the perspective of clinical staging: how they emerge during development from early childhood, adolescence and into old age.

Other areas of focus at the Brain and Mind Centre and in the postgraduate program are genetic aetiology of brain and mind disorders, practice of therapeutic strategies from pharmacology to cognitive behaviour therapy, and principles of neuropsychological assessment. Workshops in clinical leadership will give students an understanding of the broader provision of support in the mental health field.

**Capstone units** of study are designed to allow students to delve into an area of brain and mind sciences and produce an original work of scholarship. Those students accepted into the Research Activity unit will have an opportunity to work with a research group at the Brain and Mind Centre or other associated groups, culminating in a mini thesis.

The postgraduate program in brain and mind sciences brings together lecturers from the cutting edge of their respective fields. Students will emerge with an understanding of the very latest in interdisciplinary research and the skills to use this in professional settings in the laboratory, clinic or mental health care.

## Coursework options

### Graduate Certificate in Brain and Mind Sciences (24 credit points)

Students must complete 2 core subjects BMRI5002 and BMRI5004 and 2 electives. Students can complete requirements in a minimum of 1 semester and a maximum of 2 years from initial enrollment.

### Graduate Diploma in Brain and Mind Sciences (36 credit points)

Students must complete 2 core subjects BMRI5002 and BMRI5004 and 4 electives. Students can complete requirements in a minimum of 1 year and a maximum of 4 years from initial enrollment.

### Master of Brain and Mind Sciences (48 credit points)

Students must complete 3 core subjects BMRI5002, BMRI5004 and BMRI5020 and 5 electives, including at least 1 capstone unit of study. Students can complete requirements in a minimum of 1 year and a maximum of 6 years from initial enrolment.

## Course outcomes

Graduates of the Master of Brain and Mind Sciences demonstrate:

- knowledge, principles and methods of brain and mind sciences
- training in the skills required to apply the basic knowledge, principles and methods to problems of professional practice (research and/or clinical)
- acquisition of specific skills in the use of relevant procedures, technologies and techniques in relation to research investigation, assessment, diagnosis and management of brain and mind disorders
- development of the skills and attitudes to exhibit initiative and self-reliance in critically evaluating and synthesizing ideas & information related to the units
- development of the skills and attitudes to work effectively and collaboratively within teams from different disciplinary, professional and cultural backgrounds.

## Entry requirements

### For Master of Brain and Mind Sciences and embedded degrees:

Bachelor degree in a relevant discipline. Examples of relevant degrees are Bachelor of Science, Medical Science, Nursing, Medicine, Psychology, Health Science and Pharmacy.

Students may be asked to attend an interview to discuss suitability for entry into the course. This will be determined after applications close.

## Student pathway

The options of enrolment for a full-time Masters candidate are laid out below.

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BMRI5002	Fundamental Neuroscience	5
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Electives – choose from the following units of study		
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BMRI5001	Neuroethics ( <i>capstone</i> )	11
BMRI5006	Cognitive Behaviour Therapy	12
BMRI5007	Neuropsychology	13
BMRI5012	Brain Ageing	14
BMRI5017	Genetics of Brain and Mind Disorders ( <i>capstone</i> )	15
BMRI5023/5024	Research Activity ( <i>capstone</i> )	16
BMRI5027	Leadership and Policy in Mental Health ( <i>capstone</i> )	10

- Part-time students should undertake core BMRI5002 and BMRI5004 before attempting electives.
- You can enrol as a non-award student for any of the units of study listed. You can count the credit obtained from the successful completion of these units of study towards one of our university degrees, as long as it is claimed within two years of completing the unit of study and you have approval from your degree coordinator.

# Fundamental Neuroscience

## BMRI5002 Semester 1 CORE

This core unit of study will introduce the main concepts of neurobiology starting with neural cell structure and physiology, neurodevelopment and synaptic plasticity. The modularity of the brain and connective pathways will then be examined with a focus on the functional anatomy of sensory processing, the basal ganglia and the limbic

system. Immunology and neuropathology will also be studied with insights into how genetics and interaction with glial cells underlie these processes. Examples will be given of how brain disorders emerge from disruption to these fundamental processes.

Week	Proposed topic / presenter
1	Neurotransmission I – <i>Dr Mic Cavazzini</i>
2	Neurotransmission II – <i>Dr Mic Cavazzini</i>
3	Synaptic plasticity and learning – <i>Dr Mic Cavazzini</i>
4	Glia – neuronal interactions and pathology <i>Prof Manuel Graeber</i>
5	Neural development and axonal guidance– <i>Dr Eryn Werry</i>
6	Neuroanatomical pathways – <i>Dr Eryn Werry</i>
7	Sensory processing – <i>Dr Daniel Brown</i>
8	Sensory perception – <i>Dr Daniel Brown</i>
9	Motor Systems Network – <i>Dr Rachel Tan</i>
10	Learning, Memory and Cognition <i>Dr Ian Johnston, School of Psychology</i>
11	Limbic system and emotions <i>Dr Ian Johnston, School of Psychology</i>
12	Neuroimmunology and auto-immune disorders <i>Dr Emily Mathey</i>
13	Genomic epidemiology and gene mapping neurodegenerative diseases – <i>A/Prof Marina Kennerson</i>

Credit points: 6

Teacher/Coordinator: Dr Rachel Tan

Session: Semester 1

Classes:

1x 2-hr lecture/week

Assumed knowledge:

Cell biology up to 1st year level

Assessment: Online modules (5%),  
Online Quiz 25%, Extended Response  
(30%), online test (40%)

Campus: Mallett Street

Delivery Mode: Normal (lecture/lab/  
tutorial) Evening

## Learning outcomes

At the conclusion of this unit of study, students should be able to:

- Explain the basis of neuronal excitability and synaptic transmission.
- Describe the main stages of neural development and axonal wiring.
- Interpret neuropathological microimages and the role of glia in neuronal development and support.
- Describe learning and memory from a behavioural and cellular perspective.
- Evaluate how network behaviour contributes to functional sensory, motor and emotional processing.
- Discuss the role of neuroimmunology and genomic epidemiology in brain and mind disorders.

# Translational and Clinical Neuroscience

## BMRI5004 Semester 1 CORE

This unit of study introduces the principal disorders of mental health and current methods for diagnosing and understanding them. Disorders of development, mood, personality and cognitive decline will be introduced from the perspective of the clinical staging model. This model attempts to identify the risks of such disorders emerging and progressing in individuals when all biopsychosocial variables are considered. In this way,

windows for therapeutic intervention that would prevent or delay progression from earlier to later stages of a disorder can be defined. The unit will also describe fundamental principles of clinicopathology and some of the latest understanding of early diagnostic biomarkers for disease and novel applications of neuroimaging and spectroscopy will be discussed in this context.

Week	Proposed topic / presenter
1	Advantages-disadvantages of DSM / ICD & development of clinical staging models for brain and mind disorders <i>Dr Shantel Duffy, Healthy Brain Ageing</i>
2	Q & A session – Clinical staging model vs DSM / ICD <i>Dr Shantel Duffy, Prof Ian Hickie and Prof Nick Glozier</i>
3	Brain and mind disorders emerging in childhood <i>A/Prof Sandra Johnson</i>
4	Brain and mind disorders emerging in youth <i>Dr Shane Cross, Clinical Services Director, Headspace</i>
5	Brain and mind disorders emerging in adulthood and ageing <i>- Dr Stephanie Wong, Frontier</i>
6	Clinical assessments of brain and mind disorders & introduction to cognitive therapies <i>Dr Shane Cross, Clinical Services Director, Headspace</i>
7	Introduction to therapeutic interventions <i>A/Prof Loyola McLean, Brain and Mind Centre Prof Alan Rosen, NSW Deputy Mental Health Commissioner</i>
8	Suicide Prevention <i>Adj Assoc Prof John Mendoza, Connetica Consulting</i> Molecular Biomarkers in Neuroscience <i>Dr Zac Chatterton, Forefront</i>
9	Transcranial magnetic stimulation: clinical applications <i>Dr Donel Martin - Black Dog Institute</i>
10	MRI and Spectroscopy: biomarkers of neurodegenerative disorders <i>Dr Shantel Duffy, Healthy Brain Ageing</i>
11	Diffusion tensor imaging & Functional MRI <i>Dr Ramon Landin-Romero, Frontotemporal Dementia Research</i>
12	Q & A session – Imaging biomarkers – why do we need them? <i>Dr Mac Shine and Dr Lianne Schmaal</i>
13	Electrophysiological Biomarkers <i>Dr Neil Bailey, Monash University</i>

**Credit points:** 6 **Teacher/Coordinator:** Dr Shantel Duffy **Session:** Semester 1  
**Classes:** 1x 2-hr lecture/week  
**Assessment:** essay (30%), case study analysis (30%), literature review (40%)  
**Campus:** Mallett Street **Delivery Mode:** Normal (lecture/lab/tutorial) Evening

### Learning outcomes

At the conclusion of this unit of study students should be able to:

- Understand and investigate the relevance of clinical staging models for the diagnosis and management of a variety of brain and mind disorders.
- Identify a range of risk factors during a spectrum covering childhood, adolescence and old age that are associated with the manifestations of clinical symptoms of various brain and mind disorders.
- Evaluate a case study by interpreting various assessment techniques and understand the range of potential interventions suitable to various clinical stages.
- Demonstrate a critical understanding of neuroimaging techniques, and how these can be used to identify preclinical markers of brain and mind disorders.

# Research Inquiry

## BMRI5020 Semester 1 CORE

Doctors and researchers depend on the latest scientific literature published week by week in countless different journals, but not every study can be trusted. Scientific studies are fraught with complications that can threaten their reliability, or the extent to which their results can be applied widely. This unit will help you develop the skills necessary to critically appraise the research literature and identify sources of bias and confounding. Students will learn how cross-sectional studies, case-control studies, cohort studies and clinical trials are more or less vulnerable to these problems.

Similarly, students will look at the basic design of laboratory research and the different types of questions that can be asked from studies on humans, rats or brain tissue.

All classes will be based on published examples of research literature and students will learn how to navigate different methods and data types.

This unit will give students the confidence to read widely across the mental health field, and judge which findings can be relied upon to inform future research or medical practice.

**Credit points:** 6 **Teacher/Coordinator:** Dr Eryn Werry

**Session:** Semester 1 **Classes:** 1 x 2-hr lecture/week, 3 tutorials

**Assumed knowledge:** some basic statistical concepts essential, with 1st year university statistics desirable

**Assessment:** journal club (20%), extended response questions (35%), 2hr exam (45%) **Campus:** Mallett Street **Delivery Mode:** Normal (lecture/tutorial) Evening

Week	Proposed topic / presenter
1	Levels of evidence <i>A/Prof Loyola McLean, Brain and Mind Centre</i>
2	Introductory biostatistics <i>Dr Erin Cvejic, School of Public Health</i>
3	Qualitative research <i>A/Prof Loyola McLean, Brain and Mind Centre</i>
4	Case control studies <i>Dr Yu Sun Bin, Northern Clinical School</i>
5	Cohort studies <i>Dr Brian O'Toole, Brain and Mind Centre</i>
6	Cross-sectional surveys <i>Dr Isabella Choi, Northern Clinical School</i>
7	Clinical and Controlled trials <i>Izabella Pokorski, Brain and Mind Centre</i>
8	Systematic reviews and meta-analysis <i>Dr Yu Sun Bin, Northern Clinical School</i>
9	Ethics – <i>Dr Cynthia Forlini</i>
10	Lab publications: Animal behaviour <i>Dr Michael Bowen, Brain and Mind Centre</i>
11	Lab publications: Human neurophysiology <i>Dr Ramon Landin-Romero, Frontotemporal Dementia Research</i>
12	Electrophysiology & pharmacology <i>Dr Karin Aubrey, Northern Clinical School</i>
13	Lab publications: Localisation and genetic manipulation <i>Dr Eryn Werry, Discipline of Pharmacology</i>

## Learning outcomes

- Evaluate the merit of different clinical study designs in the 'levels of evidence' hierarchy.
- Identify sources of selection bias and information bias in a research study and the potential effects on data.
- Assess the statistical tests used of a given study.
- Ascertain confounding variables in research and ways to address these.
- Recognise different levels of laboratory research and navigate papers presenting a range of complex data and experiments.
- Critically appraise and compare publications from clinical and basic research.

# Brain and Mind Disorders (Child/Youth)

BMRI5010 Semester 1 ELECTIVE

This unit of study will address key neurobiological, psychological and environmental contributions and their interactions on child and adolescent brain development from a clinical perspective. Students will be introduced to neurodevelopmental disorders affecting infants, children and youth, including intellectual disability, autism spectrum disorders, attention deficit hyperactivity disorder, and a range of emergent mental disorders such as anxiety disorders, mood disorders,

psychotic disorders, sleep disorders and somatic symptom disorders. The aetiology, phenomenology and treatment of these mental disorders are considered in the context of developmental continuities and brain maturational processes throughout infancy, childhood and adolescence. Finally, students will understand the principles of pharmacological, psychological and family management of these disorders, including models of service delivery in child and youth mental health.

**Credit points:** 6 **Teacher/Coordinator:** Dr Raphael Chan **Session:** Semester 1 **Classes:** 1 x 2-hr lecture/week  
**Assessment:** extended response questions (30%) extended response questions (30%), essay (40%) **Campus:** Mallett Street  
**Delivery Mode:** Normal (lecture/lab/tutorial) Evening

	Proposed topic / presenter
1	Introduction & Mental health assessment of children and youth <i>Dr Raphael Chan, Brain and Mind Centre</i>
2	Language and cognitive development in childhood <i>Dr Antoinette Hodge &amp; Rebecca Sutherland, Children's Hospital Westmead</i>
3	Principles of attachment in infancy and childhood <i>Dr Margaret Goldfinch, Senior Clinical Psychologist</i>
4	Adolescent development and youth onset mental disorders <i>Dr Suraj Samtani, Clinical Psychologist</i>
5	Intellectual disability and autism spectrum disorder <i>Dr Bruce Chenoweth, Senior Developmental Psychiatrist</i>
6	Attention-deficit / hyperactivity disorder (ADHD) Disruptive behaviour disorder - <i>A/Prof Sandra Johnson</i>
7	Mood disorders in youth - <i>Dr Raphael Chan</i>
8	Anxiety disorders in children and youth <i>Dr Lauren McLellan, Macquarie University</i>
9	Psychotic disorders in children and youth <i>Dr Anthony Harris, Westmead Clinical School</i>
10	Psychosomatic disorders in children and youth <i>Blanche Savage, Children's Hospital Westmead</i> Chronobiology of sleep disorders in adolescents <i>Prof Nick Glozier, Brain and Mind Centre</i>
11	Mental disorders in children and youth: Principles of treatment <i>Dr Raphael Chan</i>
12	Introduction to family therapy <i>Dr Glenn Lerner, Northern Sydney Local Health District</i>
13	Service delivery for youth mental health <i>Rachael Harker, Headspace</i>

## Learning outcomes

At the conclusion of this unit of study students should be able to:

- Characterise normal child development from infancy to adolescence.
- Assess the influence of genetics on child and youth development and learning.
- Evaluate how environmental and societal factors influence child and youth development.
- Compare and contrast common developmental, learning and cognitive disorders.
- Assess the effectiveness of different therapeutic and management options for children and youth with brain and mind disorders.



# Neuropsychopharmacology

BMRI5013 Semester 1 ELECTIVE

This elective unit will focus on neuropsychopharmacology as a tool for characterising brain pathways and as a treatment for brain disorders. Students will be introduced to basic principles of pharmacology governing drug binding and metabolism that underlie the rationale for drug design. Links between brain circuitry and phenomenology of mood disorders, psychosis and

addiction will be examined to provide a rationale for chosen drug targets. Students will also examine the relationship between dosage, specificity and negative side effects of such drugs. There will be opportunity to examine current directions in neuropharmacology research, the role of the pharmaceutical industry and potential new pathways for future drug design.

Credit points: 6 Teacher/Coordinator: Dr Eryn Werry Session: Semester 1

Classes: 9am–5pm on a weekday in weeks 2, 6 and 11 Assessment: Online test (30%), report (40%), presentation (30%)

Campus: Mallett Street Delivery Mode: Block Mode

## Learning outcomes

At the conclusion of this unit of study, students should be able to:

- Understand the breadth of drug targets, neurotransmitter systems and receptors in the central nervous system.
- Apply basic principles of pharmacokinetic and pharmacodynamics to commonly used agents targeting the central nervous system.
- Interpret side effects in the context of non specific targets of pharmacological agents.
- Evaluate the advantages and limitations of cellular and animal models used in neuropharmacology.
- Use knowledge of molecular mechanisms of disorders such as anxiety, dementia and chronic pain to explain the mechanisms of action for common pharmaceutical treatments.
- Discuss the neurobiology of addiction, mechanisms of common drugs of abuse and describe pharmacological interventions to combat addiction.
- Examine the current research developments in the area of drug design.

Workshop	Proposed topic / presenter
1	Basic principles of pharmacology Neurotransmitter systems <i>A/Prof Jonathon Arnold,</i> Drug absorption and metabolism Dosage and non-specific targets Principles of drug discovery <i>Dr Eryn Werry</i>
2	Modelling behaviour – cellular and animal laboratory and their use <i>Dr Arsalan Yousef, Pharmacology Lab Tour</i> Anxiety and Dementia <i>Dr Briony Winters</i>
3	Drugs of abuse – mechanisms Neuroadaptation and addiction <i>Dr Kirsten Morely</i> 'Harnessing the power of drugs of addiction for good' <i>Dr Eryn Werry</i> Anti-glioblastoma data analysis <i>Dr Eryn Werry</i>



# Foundations of Leadership and Policy in Mental Health

BMRI5027 Semester 1&2 CAPSTONE ELECTIVE

This unit is designed to provide participants with an introduction to the key constructs of leadership, leadership development and change management with specific reference to mental health reform in Australia. The unit will provide an overview of concepts and models of leadership development plan to embark on a service level reform initiative. In this unit participants will gain

an understanding of, their own leadership attributes and developmental needs and an insight into the development of strategy, organisational level policy and governance for achieving change. These elements will provide the foundations for self-development as a leader and the development of service level change and reform initiatives.

**Credit points:** 6 **Teacher/Coordinator:** Adj Assoc Prof John Mendoza **Session:** Semester 1 and Semester 2

**Classes:** 9am–5pm Friday and 9am–12.30pm Saturday in weeks 2 and 6, 9am–5pm Friday in week 12

**Assessment:** leadership assessment and self development plan (30%), scenario analysis (20%), change management and implementation plan (40%), participation (10%) **Campus:** Mallett Street **Delivery Mode:** Block Mode

Workshop	Proposed topic / presenter
1 Full day Friday + half day Saturday	Introduction and analyses of key concepts and dimensions of the unit, and the importance of reform in the mental health sector. Topics will include: leadership, leadership development and change management; why leadership matters to mental health reform in Australia; the core of leadership – personal effectiveness, communication and influence. <i>Facilitated by Adj Assoc Professor John Mendoza</i>
2 Full day Friday + half day Saturday	Major topics include: leading people. leading and strategic analysis and planning; policy deployment and leadership, Organisational culture and change <i>Facilitated by Adj Assoc Professor John Mendoza</i>
3 Friday	Application of leadership theory and practice in meeting some of the challenge in mental health reform. Student presentations <i>Facilitated by Adj Assoc Professor John Mendoza</i>

*The workshops are part didactic, part interactive. The didactic sessions are short with opportunities to apply learning in workplaces and other contexts.*

## Learning outcomes

At the conclusion of this unit of study students should be able to:

- Compare and contrast different models of leadership and change management strategies.
- Evaluate their own leadership strengths and learning priorities.
- Assess how policy and strategy are critical to the implementation of leadership vision.
- Evaluate effective personal influence strategies.
- Develop strategies to improve team performance, including recognising staff strengths and improving staff engagement.
- Analyse key strategies for successful organisational change initiatives.
- Apply leadership theory and practice and a change management framework to develop reform within a service setting.

# Neuroethics

## BMRI5001 Semester 2 CAPSTONE ELECTIVE

This unit of study synthesizes and critically scrutinizes our models and concepts of brain and mind through a neuroethics lens. Neuroethics is sub-field of bioethics that is concerned with the ethical, legal and social impact of the neurosciences. Beginning with a series of lectures on the historical development of modern neuroscience, students will learn about (1) the beliefs, experiments and discoveries that have led us to recognise how the brain contributes to the human experience in unique ways and (2) the philosophical and ethical debates that have arisen

as a result of progress in neuroscience. Throughout this unit, students will examine how advances in neuroscience have shaped how we conduct research, treat clinical conditions, make individual and collective decisions, and live together as a society. During the class discussions and assessments students will grapple with the ethical impact of intervening in the brain through the concepts of health, illness, identity and morality. The scope of these issues is enormous and speaks to the importance of students developing a clear framework to contextualize developments in neuroscience within the scientific, ethical, cultural, social and legal environments in which they arise

Week	Proposed topic / presenter
1	Welcome and background: An overview of the unit and an introduction to ethics - <i>Dr Cynthia Forlini</i>
2	Introduction to neuroethics: Definitions, goals and underlying principles of neuroethics scholarship and practice - <i>Dr Cynthia Forlini</i>
3	The individual and social neuro-significance of emerging brain research and technology - <i>Dr Cynthia Forlini</i>
4	History I: Aristotle, the soul, Ventricular doctrine - <i>Prof Max Bennett</i> Discussion: "Neuroessentialism"- does our brain function define who we are? - <i>Dr Cynthia Forlini</i>
5	Neuroscience and Free Will - <i>Prof. Eric Racine, Director, Pragmatic Health Ethics Research Unit at the Montreal Clinical Research Institute (IRCM)</i>
6	<i>History II: The mind, consciousness and the cortex - Prof Max Bennett</i> Debrief of open peer commentaries & preparation of position papers - <i>Dr Cynthia Forlini</i>
7	The "neuroscience of ethics": What has neurotechnology shown us about the neural basis of behaviour, personality, and consciousness? - <i>Dr Cynthia Forlini</i>
8	"Zapping" the brain: The hype and hope surrounding the use of invasive and non-invasive brain stimulation to treat neurodegenerative and psychiatric illness.- <i>Dr Cynthia Forlini</i>
9	Neurolaw: Does neuroscience have a place in the courtroom? - <i>Dr Sascha Callaghan</i>
10	Introduction to a materialist philosophy of consciousness - <i>Prof David Braddon-Mitchell</i>
11	Lessons from Neuroscience in the National Socialist Regime - <i>Prof David Braddon-Mitchell and Dr Edwina Light</i>
12	"Better than well": Ethical and social issues of improving the cognitive performance of healthy individuals - <i>Dr Cynthia Forlini</i>
13	Public understanding of neuroscience: Representations of neuroscience in the media and examples of hyped neurotechnology - <i>Dr Cynthia Forlini</i>

**Credit points:** 6 **Teacher/Coordinator:** Dr Cynthia Forlini , Prof Max Bennett  
**Session:** Semester 2  
**Classes:** 1x 2-hr lecture/week **Assessment:** class discussion (5%), open peer commentary (10%), Abstract (5%), position paper I (40%), position paper II (40%)  
**Campus:** Mallett Street  
**Delivery Mode:** Normal (lecture/lab/tutorial) Evening

### Learning outcomes

At the conclusion of this unit of study, students should be able to:

- Discuss brain and mind function within an historical, philosophical and ethical context.
- Explain the impacts of key neuroscience innovations of the last century on concepts of brain and mind function.
- Critique claims regarding the benefits and harms of neuroscience for understanding brain and mind function, and psychological capacities.
- Examine how society and culture influence central concepts in brain and mind sciences.
- Determine ethical issues that arise from the use of neurotechnology in research and clinical contexts.
- Analyze broader implications of neuroscience in social and legal contexts.
- Debate appropriate uses of neurothechnology in clinical, social and legal contexts.

# Cognitive Behaviour Therapy

BMRI5006 Semester 2 ELECTIVE

Cognitive Behaviour Therapy (CBT) is an evidence-based psychotherapy for a range of psychological disorders, with strong foundations in cognitive science and now increasingly in neuroscience. This unit provides a solid foundation in the theoretical and clinical underpinnings of the therapy, with a specific focus on the

neuroscience of CBT as applied to various conditions. It demonstrates techniques of CBT, including case assessment, formulation, and therapy components. Students will develop a neurobiological understanding of CBT interventions and examine practice through case examination and group exercises.

**Credit points:** 6 **Teacher/Coordinator:** Prof Adam Guastella **Session:** Semester 2 **Classes:** 3pm- 5pm in week 2, 9am-5pm on a weekday in weeks 3, 7 and 10 **Assessment:** online test (20%), case study analysis (40%), extended response questions (40%) **Campus:** Mallett Street **Delivery Mode:** Block Mode

Workshop	Proposed topic / presenter
Introduction (2 hours)	Overview of themes and reading materials to be covered by students in preparation for Workshop 1 <i>Prof Adam Guastella, Brain and Mind Centre</i>
1 Full day	Novel cognitive approaches to the assessment and treatment of fear circuitry - The neurobiological underpinnings of CBT intervention; causal and maintenance processes according to dominant CBT models of anxiety; identifying critical targets for change in therapy for anxiety <i>Prof Adam Guastella, Brain and Mind Centre</i>
2 Full day	Understanding and Treating Mood Disorders: Pathways to the development of mood disorders, Assessment and formulation of mood disorders and Evidence-based intervention for mood disorders. <i>Dr Alice Norton, Brain and Mind Centre</i>
3 Full day	CBT, family therapy, and exploring the neuroscience of externalising problems: theoretical models and pathways for externalising disorders; assessment of subjects and treatment formulation; evidence-based practice of externalising problems <i>Dr Tracy Rhodes, Clinical Psychologist, Brighter Pathways</i>

## Learning outcomes

At the conclusion of this unit of study students should be able to:

- Explain the theoretical and neurobiological underpinnings of CBT.
- Assess recent advances in the understanding CBT that may improve methods of assessment and intervention.
- Examine case scenarios of anxiety, depression and externalising problems and identify critical targets for change in therapy.
- Discuss the process of assessment and case formulation and evaluate best practice CBT skills.



# Neuropsychology

## BMRI5007 Semester 2 ELECTIVE

This unit of study will enable students to understand the basic principles of brain behaviour relationships that underpin assessment of brain disorders across the age span. A wide range of neuropsychological syndromes and neuropsychiatric and neurological disorders will be examined. The unit of study will enable you to

develop skills in integrating medical, psychological and social information into neuropsychological assessment through case based learning. At the end of the unit of study, students will have an awareness of the 'state of the art' in neuropsychological intervention/rehabilitation strategies for people with acquired brain impairment.

Week	Proposed topic / presenter
1	Introduction to neuropsychology and the unit <i>Professor Sharon Naismith, Charles Perkins Centre and Brain and Mind Centre</i>
2	Neuropsychological assessment (Effort/Personality/Forensic) <i>Dr Sara Lucas, Neuropsychologist</i>
3	Neuropsychological profiles: Traumatic Brain Injury <i>Dr Susanne Meares, Macquarie University</i>
4	Neuropsychological profiles: MCI, Alzheimer's Disease and Vasc Dementia <i>Dr Haley La Monica, Healthy Brain Ageing Program</i>
5	Neuropsychological profiles: stroke, brain tumours and epilepsy <i>Dr Zoe Thayer, RPAH</i>
6	Neuropsychological profiles in schizophrenia and affective disorders – <i>Dr Antoinette Hodge, Children's Hospital Westmead</i>
7	Pediatric Neuropsychology <i>Dr Antoinette Hodge, Children's Hospital Westmead</i>
8	Behavioural neurology <i>Dr Elie Matar, Brain and Mind Centre</i>
9	Neuropsychological profiles: Fronto-temporal dementia <i>Professor Olivier Piguet, Brain and Mind Centre</i>
10	Neuropsychological profiles: multiple sclerosis <i>Dr Wendy Longley, Sydney Medical School</i>
11	Cognitive rehabilitation <i>Dr Loren Mowszowski, Charles Perkins Centre and Brain and Mind Centre</i>
12	Student case presentations <i>A/Prof Sharon Naismith</i>
13	Student case presentations <i>A/Prof Sharon Naismith</i>

**Credit points:** 6 **Teacher/Coordinator:** Prof Sharon Naismith  
**Session:** Semester 2  
**Classes:** 1x 2-hr lecture/week  
**Assessment:** essay (40%), clinic visit and case presentation (15%), client report (45%) **Campus:** Mallett Street **Delivery Mode:** Normal (lecture/lab/tutorial) Evening

### Learning outcomes

At the conclusion of this unit of study students should:

- Analyse the theoretical frameworks underpinning the study of brain behaviour relationships.
- Understand and differentiate core neuropsychological syndromes arising from brain disorders.
- Apply knowledge and skills to the interpretation of neuropsychological tests and questionnaires used in the assessment of brain disorders.
- Examine the pathological changes that occur in brain disorders across the age spectrum.
- Compare and contrast social, psychological, medical, neurological and rehabilitation factors associated with neuropsychological syndromes.

# Brain Ageing

BMRI5012 Semester 2 ELECTIVE

This unit of study provides an introduction to two important aspects of brain and mind ageing science – neurodegenerative disorders and opportunities for neuroplasticity and human flourishing. Students will learn about the clinical presentation and pathophysiology of neurodegenerative disorders such as Alzheimer’s disease, Parkinson’s disease, vascular dementia and frontotemporal dementia. Psychogeriatrics and late-life depression will also

be covered, and counterbalanced with new insights about what determines successful ageing and how we can use lifestyle interventions to keep people’s brains and minds fit and well throughout late life.

This unit will use case studies to reinforce learning, focusing on common neuropsychological assessment methods and research methods. Students will also be introduced to the social and ethical aspects of brain and mind ageing.

Week	Proposed topic / presenter
1	Mild cognitive impairment, dementia and Alzheimer’s disease – <i>Dr Haley LaMonica, Healthy Brain Ageing</i>
2	Current directions in the basic science of Alzheimer’s disease – <i>Dr Claire Goldsbury, Alzheimer’s Disease Cell Biology Laboratory</i>
3	Parkinson’s disease and Lewy body dementia <i>Prof Simon Lewis, Parkinson’s Research Clinic</i>
4	Frontotemporal dementia <i>Prof Olivier Piguet, Brain and Mind Centre</i>
5	Vascular dementia <i>Dr David Burke, Consultant Psychiatrist</i>
6	Brain imaging across neurodegenerative diseases <i>Dr Mac Shine</i>
7	The digital revolution: new technology in Brain Ageing and dementia - <i>Christos Boulamatsis</i>
8	Case discussion conference <i>Healthy Brain Ageing Team</i>
9	Late-life depression/Mood disorders in older adults <i>Dr Louisa Norrie, Consultant Psychiatrist</i>
10	Successful ageing: what have we learnt from Aussie centenarians? – <i>Dr Charlene Levitan, UNSW</i>
11	Psychological interventions for Depression and Dementia (inc CCT) - <i>Dr Zeeshan Shahnawaz</i>
12	Neuroethics of Dementia, ethics of guardianship and capacity assessments - <i>Dr Cynthia Forlini</i>
13	Prevention and lifestyle modifications for healthy brain ageing – <i>Prof Michael Valenzuela, Regenerative Neuroscience Group</i>  <i>5 separate Psychiatry specific lectures weeks 2,7,8,10 and 10. To develop clinical skills in old age psychiatry.</i>

Credit points: 6

Teacher/Coordinator:

Dr Jacqueline Huber **Session:** Semester 2

**Classes:** 1 x 2-hr lecture/week

**Assessment:** extended response questions (40%), case study analysis (40%), presentation (20%)

**Campus:** Mallett Street

**Delivery Mode:** Normal (lecture/ lab/ tutorial) Evening

## Learning outcomes

At the conclusion of this unit of study students should be able to:

- Analyse the contribution of environment and pathophysiology to various neurodegenerative disorders.
- Compare assessment and imaging techniques used in differentiating diagnoses.
- Explain how risk factors for brain and mind disorders are related to ageing and psychiatric symptoms such as late-life depression.
- Describe some of the determinants of successful ageing.
- Understand capacity in a medico-legal sense and discuss issues associated with informed consent.
- Critically evaluate strategies for healthy brain ageing.

# Genetics of Brain and Mind Disorders

## BMRI5017 Semester 2 CAPSTONE ELECTIVE

This unit of study provides a comprehensive introduction to the research methods that can be used in identification and characterisation of genetic variants underlying neuropsychiatric and neurodegenerative diseases. The first part of the unit will focus on the statistical methods to quantify the contribution of genetic factors to complex genetic disorders in the population. The principles of genetic association will be discussed, using examples of neurodegenerative disorders. The course will then discuss concepts of gene mapping for Mendelian diseases using linkage analysis and the identification of causative variants using filtering strategies of next generation sequencing data. Students will learn to

use a suite of bioinformatics tools and resources. This is a capstone unit of study that will require students to develop over the semester a scholarly piece of work using advanced bioinformatic skills. Over the assessments in this unit student will identify genetic variants associated with a neurodegenerative-related trait, map and identify possible causative genes for a Mendelian neurodegenerative disease, examine the suitability of gene DNA variants as disease candidates using bioinformatics, and propose future laboratory research that would confirm the role of this gene in disease.

**Credit points:** 6 **Teacher/Coordinator:** A/Prof Marina Kennerson **Session:** Semester 2

**Classes:** 9am-3pm a weekday in Week 2, 9am-5pm a weekday in Weeks 4, 9 and 11 **Assessment:** lab report (40%), Journal Article (60%) **Campus:** Mallett Street **Delivery Mode:** Block Mode

Workshop	Proposed topic / presenter
Introduction	Introduction to the Unit <i>A/Prof Marina Kennerson, ANZAC Research Institute and Dr Carol Dobson-Stone, Brain and Mind Centre</i>
1 Full day	Understanding genetic contributions to complex traits <i>Dr Carol Dobson-Stone, Brain and Mind Centre</i>
2 Full day	Understanding linkage analysis to map genes for Mendelian disease <i>A/Prof Marina Kennerson, ANZAC Research Institute</i>
3 Full day	Understanding Next Generation Sequencing (NGS) and variant filtering strategies to identify Mendelian disease genes <i>A/Prof Marina Kennerson and Ms Bianca Grosz, ANZAC Research Institute</i> Bioinformatics to explore the genome and DNA variants <i>Dr Megan Brewer and Ms Bianca Grosz, ANZAC Research Institute</i>

## Learning outcomes

At the conclusion of this unit of study students should be able to:

- Interpret measures for genetic association in brain and mind disorders.
- Demonstrate a practical understanding of genome-wide association studies (GWAS) & their limitations.
- Demonstrate a practical understanding of genetic linkage analysis with Mendelian families
- Demonstrate a practical understanding of next generation sequencing (NGS) variant filtering for identifying causative alleles in Mendelian disease.
- Use bioinformatics tools to assess properties of candidate variants identified through Galaxy filtering to determine frequency and pathogenicity prediction
- Use bioinformatics resources to find out what is known about gene's function, expression pattern, protein outcomes and evolutionary history.

# Research Activity

## BMRI5023/24 Semester 2 CAPSTONE ELECTIVE

This unit of study requires students to develop over the semester an original piece of research and provides a capstone experience for those wishing to go on to further postgraduate research. This practical project is based in a research group at the Brain and Mind Centre or affiliates which deal variously in areas of clinical, epidemiological and fundamental neuroscience research. The 12 credit points combined of BMRI5023/ BMRI5024 carry the expectation of around 3 days per week availability towards the given research project. Students will learn a variety of skills for acquisition, analysis and presentation of data. This is a capstone

unit of study requiring a great deal of independence and the production of an original piece of research scholarship. Students can also expect ample support and guidance from their supervisors and research team and are expected to integrate into their research team's environment.

*NB: These units require departmental permission prior to enrolment.*

**Credit points:** 6 **Teacher/Coordinator:** Dr Carol Dobson-Stone and Dr Cynthia Forlini **Sessions:** Semester 2 **Classes:** 3 days per week **Corequisites:** BMRI5023/5024 **Assumed knowledge:** At discretion of particular supervisor **Assessment:** presentation (10%), thesis (40%), supervisor evaluation (40%) Final presentation (10%) **Campus:** Mallett Street **Delivery Mode:** Field Experience

Week	Proposed topic / presenter
3 days per week	Research topic to be discussed with supervisor
Throughout semester	Statistics Workshops

### Learning outcomes

At the conclusion of this unit of study students should be able to:

- Formulate a broad scientific question and define specific research objectives.
- Employ standard research techniques in order to address specific research aims and explain the strengths and limitations of different approaches.
- Assess and carry out protocols for data acquisition within the project.
- Present data using appropriate figures and written language.
- Apply statistical tests to examine trends in the data.
- Interpret the project's research findings in the context of the broader field and discuss implications and limitations of the project.
- Produce a written summary of the research project in the form of a mini thesis or journal publication.

*Note: Department permission is required prior to enrolment. Students will be accepted based on availability of places and suitability of academic background. Departmental permission is arranged in the semester prior to enrolment.*



# Master of Medicine (Psychiatry) – Coursework

## Overview

The Master of Medicine (Psychiatry) programme has been developed specifically as a Formal Education Course (FEC) for stage 1 and 2 trainees in Psychiatry. It enhances neuroscience and research training in psychiatry, facilitating collaboration between clinicians and researchers, thus optimising the translation of research findings into improved healthcare practice. The course can also be undertaken more broadly choosing units of study from the Master of Brain and Mind Sciences for those doctors who do not need to cover the RANZCP Formal Education course requirements.

Capstone units of study require students to produce a work of scholarship that builds on learning throughout the course. The Research Project capstone provides an opportunity to work in the student's own clinical setting or with a research group at the Brain and Mind Centre. The other capstone electives are Genetics, Leadership and Neuroethics.

The postgraduate program in Medicine (Psychiatry) brings together academics and experts from the cutting edge of their respective fields. Students will emerge with an understanding of the latest in interdisciplinary research and develop critical appraisal skills to utilise the findings in clinical or research settings. The MMed (Psychiatry) offers a number of shared units with the Master of Brain and Mind Sciences, which will provide the opportunity for vital interdisciplinary collaboration in mental health research and clinical practice.

## Course outcomes

Graduates of the Master of Medicine (Psychiatry) will:

- Acquire the knowledge, skills and attitudes of the Learning Outcomes for Stage 1 and 2 trainees as outlined in the Royal Australian and New Zealand College of Psychiatrists Competency-Based Fellowship Program.
- Demonstrate the relevant competencies at the level of entry into advanced training in psychiatry in the seven key CanMeds roles of Medical Expert (ME), Communicator (Com), Collaborator (Coll), Health Advocate (HA), Manager (Man), Scholar (Sch) and Professional (Prof).
- Understand and apply the biopsychosociocultural model in psychiatry.
- Understand and apply relevant procedures, models, technologies and techniques in relation to clinical assessment, diagnosis, management and research of brain, mind and related general medical disorders.
- Critically evaluate the literature and make evidence-based decisions in clinical practice and research.
- Be aware of the consumer context of health delivery and have an understanding and application of recovery and trauma-informed models of care.
- Possess the University of Sydney graduate attributes including scholarship, lifelong learning and global citizenship.



## Coursework options

### Graduate Certificate in Medicine (Psychiatry)

requires the successful completion of 24 credit points of stream specific units of study.

### Graduate Diploma in Medicine (Psychiatry)

requires the successful completion of 36 credit points of units of study comprising:

- 6 credit points of compulsory units of study (BMRI5020 Research Inquiry or equivalent)
- 30 credit points of stream specific units of study

### Master of Medicine (Psychiatry)

requires the successful completion of 48 credit points of units of study comprising:

12 credit points of compulsory units of study made up of BMRI5020 Research Inquiry or online equivalent AND a capstone unit of study chosen from:

- BMRI5055 Research Project in Psychiatry
- BMRI5001 Neuroethics
- BMRI5017 Genetics of Brain and Mind Disorders
- BMRI5027 Leadership & Policy in Mental Health

AND 36 credit points of psychiatry stream units of study

**The Master of Medicine (Advanced) (Psychiatry)** requires the successful completion of 60 credit points of units of study comprising:

- 48 credit points of the Master program and an additional 12 credit points of Master of Medicine research units of study. Entry requires departmental permission

### Continuing Medical Education (Short course option)

A Continuing Medical Education (CME) option is available for psychiatry trainees who wish to complete the Formal Education Course but who do not wish to progress towards a degree. Students undertaking this option will be required to attend teaching sessions and participate in online learning activities, but will not be required to submit assignments or examinations. Students in locations outside Sydney will be able to participate in classes online. All units required for completion of the FEC will be available as CME units. Please email [postgrad.bmc@sydney.edu.au](mailto:postgrad.bmc@sydney.edu.au) for further information on Psychiatry FEC pathway.

## Units of study

### Compulsory for the Master degree

- BMRI5020 Research Inquiry (or Introduction to Clinical Epidemiology (online unit))
- Capstone (choice listed below)

### Brain and Mind Centre capstone electives

- BMRI5055 Research Project in Psychiatry
- BMRI5001 Neuroethics
- BMRI5017 Genetics of Brain and Mind Disorders
- BMRI5027 Leadership and Policy in Mental Health

### Psychiatry stream units

- BMRI5003 Clinical Psychiatry I
- BMRI5050 Clinical Psychiatry II
- BMRI5053 Bodies, Brains and Minds in Connection
- BMRI5052 Child and Youth Mental Health
- BMRI5012 Brain Ageing
- BMRI5054 Psychotherapy and Psychosocial Care

### Other electives

Students are also able to choose other electives from the Master of Brain and Mind Sciences degree and other medical disciplines, including public health, paediatrics and critical care.

### RANZCP Formal Education Course requirements

Psychiatry trainees who wish to meet the RANZCP requirements need to complete all of the following units of study over the 3 year program:

- BMRI5003 Clinical Psychiatry I
- BMRI5050 Clinical Psychiatry II
- BMRI5020 Research Enquiry
- BMRI5053 Bodies, Brains and Minds in Connection
- BMRI5052 Child and Youth Mental Health
- BMRI5012 Brain Ageing
- BMRI5054 Psychotherapy and Psychosocial Care

### Non degree subjects also required for FEC

- Forensic Psychiatry & Substance Use & Addictions in Psychiatry (one semester duration)

## Entry requirements

- Admission to the Master of Medicine (Psychiatry) or embedded degrees requires current employment in a RANZCP-accredited psychiatry training position or similar. Psychiatrists, both local and internationally trained, CMOs and GPs working within psychiatry are also eligible to apply.

# Student Pathway

The Master of Medicine (Psychiatry) can be completed on a part-time basis. The Formal Education Course units of study approved by the RANZCP are available over a three year pathway. The standard course progression over three years is shown below.

Stage 1 (same units every year)		Page
Semester 1		
BMRI5003	Clinical Psychiatry I	20
Semester 2		
BMRI5050	Clinical Psychiatry II	21
Stage 2 (some units only offered in alternate years)		
Semester 1, 2019		
BMRI5052	Child and Youth Mental Health	23
BMRI5020	Research Inquiry	7
	Capstone unit (BMRI5027 or BMRI5055)	10,25
Semester 2, 2019		
BMRI5053	Bodies, Brains and Minds in Connection	24
BMRI5012	Brain Ageing	13
	Capstone unit (BMRI5001, BMRI5017, BMRI5027 or BMRI5055)	11,14,10,25
Stage 2		
Semester 1, 2020		
	Forensic Psychiatry and Substance Use and Addictions in Psychiatry (required for FEC)	
BMRI5020	Research Inquiry	7
	Capstone unit (BMRI5027 or BMRI5055)	10,25
Semester 2, 2020		
BMRI5054	Psychotherapy and Psychosocial Care	22
BMRI5012	Brain Ageing	13
	Capstone unit (BMRI5001, BMRI5017, BMRI5027 or BMRI5055)	11,14,10,25

\* BMRI5052, BMRI5053, BMRI5054 and Forensic Psychiatry and Substance Use and Addictions in Psychiatry will be offered in alternate years only

\* BMRI5055 and BMRI5027 – available in semester 1 or 2 (departmental permission required for BMRI5055)

# Clinical Psychiatry I

## BMRI5003 Semester 1

This unit of study provides psychiatry trainees with an opportunity to develop effective clinical skills including the psychiatric interview, mental state examination and biopsychosocial formulation. Management of psychiatric emergencies including the use of mental health legislation is covered. Students will acquire a deeper understanding of how genetic and environmental risk factors affect the developing individual to generate

the neurobiological features and clinical symptoms of psychiatric disorders. This unit will cover all aspects of psychotic and mood disorders including aetiology, phenomenology and epidemiology. Students learn to develop management plans for these disorders according to a biopsychosocial framework incorporating psychopharmacology and psychosocial care.

**Credit points:** 6 **Coordinator:** Dr Sonia Kumar **Session:** Semester 1 **Classes:** Tuesday afternoons **Assessment:** case formulation (25%), presentation 35%, case history (40%) **Campus:** Mallett Street **Delivery Mode:** Normal (seminar)

Week	Seminar topic
0	Orientation Day - Psychiatric Emergencies, Mental Health Act, ECT
1	Psychiatric Assessment / MSE - <i>Dr Peter Kelly</i> Formulation - <i>Dr Sonia Kumar</i>
2	Psychosis and schizophrenia – <i>A/Prof Antony Harris</i> Risk Assessment - <i>Dr Chris Ryan</i>
3	Antipsychotics – <i>Dr Petra Van Nieuwenhuijzen/ Prof Marcus Leweke</i>
4	Interpersonal Neurobiology & De-escalation - <i>A/Prof Loyola McLean</i>
5	Adverse Effects and Medication Monitoring – <i>Dr Megan Kalucy</i>
6	Psychosocial Management – <i>Prof Alan Rosen &amp; A/Prof Antony Harris</i>
7	Introduction to substance abuse - <i>Dr Lisa Juckes</i>
8	Suicide Prevention <i>Adj Assoc Prof John Mendoza</i>
9	Neurobiology of Depression. Psychosocial management of Mood disorders - <i>A/Prof Loyola McLean</i>
10	Genetic Epidemiology - <i>Prof Philiip Mitchell</i> Bipolar Disorder - <i>Prof Philiip Mitchell</i>
11	Pharmacotherapy of Depression - <i>Prof Philip Boyce</i> Treatment-resistant Depression - <i>Prof Philip Boyce</i>
12	Individualised & Lifestyle Management of Mood Disorders - <i>Dr Sonia Kumar</i>
13	Neuroimaging – <i>Rebecca Koncz</i> Introduction to delirium/dementia – <i>Dr Peter Kelly</i>

## Learning outcomes

At the conclusion of this unit of study students should be able to:

- Conduct a comprehensive psychiatric assessment.
- Critically discuss the literature regarding epidemiology, aetiology, clinical characteristics of psychotic and mood disorders.
- Identify and summarise biological, psychological, cultural and social contributors to the patient's illness and recovery and construct a differential diagnosis for patients presenting with psychotic and mood disorders.
- Construct and implement comprehensive management plans using evidence-based biological and psychosocial approaches in a recovery-oriented multidisciplinary team setting.
- Describe the principles and practical application of mental health legislation and informed consent and work appropriately with the relevant mental health legislation.

# Clinical Psychiatry II

## BMRI5050 Semester 2

This unit provides an overview of normal development, the formation of relational attachments, and psychological sequelae of trauma and loss. Students will examine anxiety, trauma and personality disorders in depth, including epidemiology, aetiology, phenomenology and management of these disorders. In addition there will be a focus on developing trainees' clinical skills towards a broader well rounded approach that involves psychosocial techniques and work collaboratively

with consumers and families in multidisciplinary and community settings. This unit will provide psychiatry trainees with foundational knowledge and skills in psychotherapeutic techniques including psychodynamic theory, supportive psychotherapy building a therapeutic alliance and cognitive behavioural therapy. Principles of recovery-oriented practice and trauma-informed care, psychiatric ethics, history of psychiatry, rural and indigenous mental health will be studied.

**Credit points:** 6 **Coordinator:** Dr Sonia Kumar **Session:** Semester 2 **Classes:** Tuesday afternoons

**Assessment:** attachment formulation (40%), reflective journal essay (25%), presentation (35%)

**Campus:** Mallett Street **Delivery Mode:** Normal (seminar)

Week	Seminar topic
1	Attachment theory and normal development - <i>A/Prof Loyola McLean</i>
2	Trauma: Normal responses and associated disorders – <i>Dr Anthony Korner</i> Trauma informed care – <i>Dr Cathy Kezelman</i>
3	Therapeutic Alliance – <i>Sophia Parnas</i> Supportive psychotherapy – <i>Sophia Parnas</i>
4	Personality disorders I – <i>A/Prof Janine Stevenson</i>
5	Anxiety disorders – <i>Dr Bill Brakoulias</i>
6	Introduction to psychodynamic therapy <i>A/Prof Loyola McLean</i>
7	Personality disorders II – <i>A/Prof Janine Stevenson</i>
8	Introduction to CBT – <i>Dr Jason Fowler</i>
9	History of Psychiatry - <i>Dr Greg de Moore</i> Ethics seminar – <i>Dr Chris Ryan</i>
10	Family-centred care - <i>Dr Kristof Mikes-Liu</i> Recovery Philosophy & Peer-Led Services - <i>Anthony Stratford</i>
11	Leadership - <i>Dr Anthony Llewellyn</i> Professionalism - Teach the Teacher workshop - <i>A/Prof Louise Nash &amp; Dr Catherine Hickie</i>
12	Aboriginal mental health – <i>Dr Bruce Gynther</i>
13	Rural psychiatry - <i>Dr Therese Grotowski</i> Cultural diversity – <i>Dr Lea Crisante</i>

## Learning outcomes

At the conclusion of this unit of study students should be able to:

- Discuss the epidemiology, aetiology and clinical characteristics of anxiety, trauma-related disorders and personality, with reference to key academic sources.
- Construct an attachment-based formulation and comprehensive biopsychosocial management plan for patients with these disorders.
- Understand and apply psychodynamic principles to the development of therapeutic relationships with patients, carers and relevant others.
- Identify the major principles of supportive psychotherapy and cognitive-behaviour therapy and develop skills to apply these therapies in routine clinical practice.
- Demonstrate an understanding of the needs and characteristics of special populations within psychiatry (including Indigenous, victims of trauma, culturally diverse and rural populations) and adapt clinical approaches accordingly.
- Demonstrate an awareness of the principles of personal recovery, trauma informed care, professionalism and psychiatric ethics and apply these to clinical professional practice.

# Psychotherapy and Psychosocial Care

## BMRI5054 Semester 2

This unit of study will foster development of knowledge, skills and attitudes necessary to understand, evaluate and apply a wide range of evidence-based psychotherapeutic and psychosocial interventions, including integrated service delivery systems for individuals with mental health disorders and their families. This unit will build on the psychosocial foundations and concepts of integrated formulation and care established in the first year courses to support trainees to understand the role of the major modalities of psychotherapy and psychosocial interventions which have been shown to significantly contribute to recovery and improved outcomes in mental health.

The unit offers an overview of assessment and the historical context of the development of theories and evidence, moving to frameworks of human development across the life span, expanding applied knowledge of attachment and exploring theories of learning and personality. Participants will then examine a range of specific psychological interventions aimed at different aspects of individual and systemic functioning including psychodynamic approaches, DBT, structured brief therapies, more advanced applications of CBT and group, couples, family and systems of care interventions. Teaching methods will focus on research-enhanced and case-based learning with an integrative approach.

**Credit points:** 6 **Coordinator:** A/Prof Loyola McLean **Session:** Semester 2 **Classes:** Thursday afternoons **Assessment:** Discussion Board (10%), Case Study (20%), presentation (30%), Case Study (40%) **Campus:** Mallett Street **Delivery Mode:** Normal (seminar)

Week	Seminar topic
1	Overview of contemporary psychotherapy practice, evidence and process - <i>A/Prof Loyola McLean</i>
2	Psychology theories: history and overview; Assessment: principles and overview <i>Dr Jeffrey Streimer</i> Evidence based family and social system interventions <i>Prof Alan Rosen</i>
3	CBT advanced skills and applications - <i>Dr Katie Dimarco</i>
4	Structured brief therapies: ACT - <i>Dr Marie-Therese Proctor</i> Schema therapy -
5	Basic psychodynamic theory and formulation; <i>A/Prof Loyola McLean</i> Psychodynamic approaches I - <i>Dr Anne-Marie Swan</i>
6	Psychodynamic approaches II; Self psychology; <i>Jan Egan</i> Conversational model - <i>Dr Anthony Korner</i>
7	DBT overview - <i>Jo Hew</i>
8	Open Dialogue - <i>Dr Kristoff Mikes-Liu</i>
9	Group Theory, dynamics and therapy - <i>Dr Michael Williamson</i>
10	Couples therapy - <i>Dr Lea Crisante</i>
11	Family therapy - <i>Dr Lea Crisante</i>
12	Journal Club Session: Learning Theory, Personality Theory, Systems Theory and Outcome research - <i>A/Prof Loyola McLean</i>
13	Integrating care across time and systems: staged and multimodal approaches and cultural awareness <i>Mirijana Ascovic</i>

## Learning outcomes

At the conclusion of this unit of study, students should be able to:

- Understand, evaluate and apply a wide range of evidence-based psychotherapeutic and psychosocial interventions to individuals and systems.
- Understand the historical context of the development of theories, basic principles and evidence in psychotherapy and psychosocial care.
- Conduct comprehensive biopsychosocio-cultural assessments and develop related formulations and tailored management plans including relevant psychosocial interventions for individuals and systems.
- Apply a nuanced, self-reflective understanding of the personal contribution to the therapeutic relationship and consider personal and professional development and self-care.
- Develop deeper understanding of the frameworks of human development across the life span and apply this to biopsychosocial formulation, management and reflective practice.
- Understand and apply theories of learning and personality to psychiatric assessment and treatment.
- Understand and participate in integrated service delivery systems with an awareness of concepts of prevention, early and assertive intervention, recovery, and trauma-informed care.

# Child and Youth Mental Health

## BMRI5052 Semester 1

This unit of study is designed for psychiatry trainees to develop their learning in the subspeciality of child and adolescent psychiatry. The key approach of the unit will be to provide students with the capacity to understand child and family psychopathology from the molecular level to the societal. This unit provides an understanding of child development from conception through adolescence, looking at key genetic and environmental factors that contribute to clinical disorder, particularly the role of the family environment. The different phases of brain development will be studied, from the formation of new connections in childhood to the pruning of connections in adolescence and changes to the frontal

temporal lobes. Major psychopathologies such as mood and anxiety disorders, attention deficit/hyperactivity disorder (ADHD) and autism spectrum disorder will be examined, as well as other forms of learning difficulty and cognitive impairment. The effects of puberty and gene-environment interactions will be explored with respect to the development of emerging adolescent psychiatric disorders, such as mood disorders. Students will learn about psychological treatments and pharmacological management of mental disorders in children and adolescents, as well as the importance of working with families, carers and wider systems including multidisciplinary teams, education and welfare sectors.

**Credit points:** 6 **Coordinator:** A/Prof Louise Nash **Session:** Semester 1 **Classes:** Thursday afternoons **Assessment:** Case Study (50%) essay (50%) **Campus:** Mallett Street **Delivery Mode:** Normal (seminar)

Week	Seminar topic
1	Introduction to child and adolescent psychiatry <i>Dr Raphael Chan</i>
2	Overview of Childhood development - <i>Dr Sandra Johnson</i>
3	Assessment and Interview – <i>Dr Raphael Chan</i>
4	Adolescent development and youth onset mental disorders - <i>A/Prof Peter McGeorge</i>
5	Intellectual disability and Autism spectrum disorder
6	ADHD and externalising disorders – <i>Dr Raphael Chan</i>
7	Mood disorders in youth - <i>Prof Ian Hickie</i>
8	Children of parents with mental disorders <i>Dr Nick Kowalenko</i>
9	Psychotic disorders in childhood and adolescence <i>Dr Jean Starling</i>
10	Anxiety and psychosomatic disorders in childhood and adolescence - <i>Dr Raphael Chan</i>
11	Families, carers and systems - <i>Dr Ben Hoadley</i>
12	Pharmacological treatment – <i>Dr Raphael Chan</i>
13	Psychological and family treatments – <i>Dr Raphael Chan</i>

### Learning outcomes

At the conclusion of this unit of study, students should be able to:

- Analyse the trajectory of normal and abnormal brain, cognitive and social development from infancy through to early adulthood.
- Evaluate the influence of genetics, environmental and social factors on child and youth development.
- Conduct a comprehensive psychiatric assessment on a child or young person including family interviews to generate a differential diagnosis and formulation.
- Assess the effectiveness of different therapeutic and management options. Develop a comprehensive management plan guided by the formulation and incorporating psychological and pharmacological strategies.
- Identify at-risk groups for developing mental health disorders, discuss the range of targeted interventions and service delivery models that will maximize outcomes for this group.
- Adapt communication style to develop therapeutic relationships with children, adolescents and families and work collaboratively within a multi-disciplinary mental health team, other health professionals and agencies in achieving mental health outcomes for children and youth.

# Bodies, Brains and Minds in Connection

## BMRI5053 Semester 2

This unit of study provides Stage 2 psychiatry trainees with an opportunity to develop knowledge, skills and attitudes in biopsychosociocultural approaches, Consultation-Liaison (C-L) psychiatry and integrative medicine, by exploring psychiatry at the interface with medicine and society. The unit approach will emphasise the interconnectedness of body, brain and mind in individuals and the surrounding systems. What's different about C-L will be explored in this unit, grounded in an understanding of the normal and dysregulated responses to stress, trauma and medical illness, including pain, expanding Stage 1 concepts of formulation, multimodal and tailor-made management. Principles of containment, stigma, models of care in

medical settings and disorders of basic regulation – sleep, eating and sexual disorders – will be studied. We will examine psychiatry in particular settings: the perinatal period; intellectual and developmental disability; pain; oncology; spinal; burns; neuropsychiatry. This unit will also deepen knowledge of ECT and introduce the newer biological treatments such as TMS. This unit aims to enrich the trainee psychiatrist's approaches to working collaboratively with consumers, families, treatment teams and care systems in multidisciplinary hospital and community settings. Seminars will emphasise an enquiring approach, based on evidence and engagement with the background medical and general communities.

**Credit points:** 6 **Coordinator:** A/Prof Loyola McLean **Session:** Semester 2 **Classes:** Thursday afternoons  
**Assessment:** case study (20%), presentation (30%), essay (50%) **Campus:** Mallett Street **Delivery Mode:** Normal (seminar)

Week	Seminar topic
1	How is consultation-liaison different? The HIV case study – <i>Dr Melissa Corr</i>
2	Stress and its satellites - <i>A/Prof. Loyola McLean</i> Adjustment to illness – <i>Dr Jeff Streimer</i>
3	Chicken and egg: psychiatric sequelae of medical conditions and vice versa – <i>Dr Chris Ryan</i> C-L in action: delirium – <i>Dr Chris Ryan</i>
4	The body talks: somatic symptoms and related disorders – <i>A/Prof. Loyola McLean</i> / <i>Dr Jeff Streimer</i>
5	Collaborative Care and integrative care models - <i>Dr Rachael Kornhaber</i> CL in the ED - <i>Dr Robert Gribble</i>
6	C-L settings case studies -Oncology- <i>Dr Cathy Mason</i> C-L settings case studies -MS - <i>Dr Marinda Taha</i>
7	C-L settings case studies - Renal - <i>Dr Peter Kelly</i> C-L settings case studies -Sleep disorders - <i>Prof Nick Glozier</i>
8	Antenatal and perinatal – <i>Dr Marie-Paul Austin</i> Lived experience - <i>Gidget Foundation</i>
9	Got to eat! Eating disorders – <i>Lyn Chiem</i>
10	ECT/TMS/novel brain treatments – <i>Prof Colleen Loo</i>
11	Pain - <i>Dr Swapnil Sharma</i> Sexual Disorders - <i>Dr Kamal Touma</i>
12	Neuropsychiatry - Epilepsy- <i>Dr Adith Mohan</i> Neuropsychiatry - MND - <i>Dr Thanuja Dharmadasa</i>
13	Intellectual & developmental disabilities <i>Dr Bruce Chenoweth</i>

## Learning outcomes

At the conclusion of this unit of study, students should be able to:

- Understand the similarities and differences of working in Consultation and Liaison psychiatry and illustrate this through a closer knowledge of one or more C-L contexts.
- Demonstrate a developing knowledge of systems in healthcare settings
- Demonstrate an understanding of the particular medication needs of the medically ill or frail.
- Understand and apply concepts of stress, coping and stress dysregulation in individuals and systems including grief, loss, trauma and pain.
- Develop biopsychosocial formulations for C-L problems and develop a relevant integrated multimodal management plans.
- Demonstrate and apply an understanding of stigma, cultural competence and the role of containment and conflict resolution in C-L contexts.
- Understand and evaluate adjustment to illness and the sick role and the potential impact on normal development, comorbidity and health care presentations.
- Understand the impact of psychiatric illness on medical health and wellbeing.
- Critically appraise the use of ECT and novel neuropsychiatric treatments

# Research Project in Psychiatry

## BMRI5055 Semester 1 and/or 2 CAPSTONE ELECTIVE

This practically based elective unit of study aims to provide a capstone experience for those psychiatry trainees wishing to gain experience in empirical research (quantitative or qualitative). This unit is to be taken over one semester, 7 hours per week, or may be extended over two semesters, 3½ hours per week. Students will learn a variety of skills for acquisition, analysis and presentation of data particular to their field of interest and will write up their project as a draft research publication. Potential projects can be reviewed by students in the semester prior to commencement so that they can familiarise themselves with the research conducted at the Brain and Mind Centre, including placements

in clinical research groups and basic neuroscience laboratories, depending on student skills and supervisor availability. Students may consult their local training networks and propose a supervised project well prior to the commencement of the unit. Projects may contribute to the Scholarly Project for the RANZCP CBFP if approved by the RANZCP Branch Training Committee. Acceptance to a given project will be selective, requiring departmental permission.

*NB: This is a capstone unit of study.*

**Credit points:** 6 **Teacher/Coordinator:** A/Prof Loyola McLean **Sessions:** Semester 1 and 2 **Classes:** 1 day per week **Assessment:** Introductory presentation (10%), thesis (40%), supervisor evaluation (40%) Final presentation (10%) **Campus:** Mallett Street **Delivery Mode:** Field Experience

	Proposed topic / presenter
8 hours per week	Research topic to be discussed with supervisor

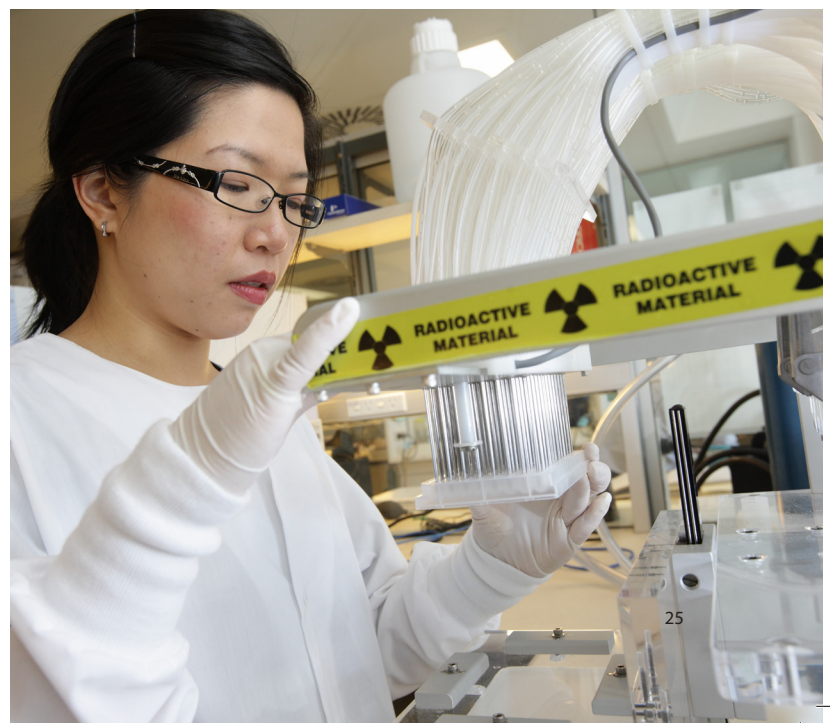
### Learning outcomes

At the conclusion of this unit of study students should be able to:

- Analyse a broad scientific question and define specific research objectives.
- Explain how the techniques being employed in the project address specific research aims and the strengths and limitations of different approaches.
- Assess and carry out protocols for data acquisition within the project.
- Present data using appropriate figures and written language.
- Apply statistical tests, qualitative analysis or integrative approaches to examine trends in the data.
- Interpret the project's research findings in the context of the broader field and the discuss implications and limitations of the project.
- Produce a written summary of the research project in a thesis format appropriate for academic publication.

*Note:*

*Department permission required for enrolment. Students will be accepted based on availability of places and suitability of academic background.*



# Postgraduate Research Degrees in Brain and Mind Sciences

## What is a research degree?

Research degrees are very different from coursework degrees in that the majority of work is self-directed study with supervision by a group of academics, working on a project that aims to make an original contribution to knowledge. Some degrees require a limited amount of coursework, but at least two thirds of the degree must be by research for the degree to be considered a higher degree by research.

Apart from any required coursework, the assessment of a research degree is through the examination of a thesis written by the student. The thesis is sent to a group of examiners and their recommendations form the basis for the outcome of the examination.

Postgraduate research degrees appeal to different people for different reasons. You may want to:

- investigate and explore in depth a specialised area of interest;
- demonstrate your capability to apply sustained effort and intellectual rigor to a complex problem;
- differentiate yourself from the masses and receive professional parity with clinical peers; and/or
- advance your career – a postgraduate research degree can help progress your career and obtain roles in government and industrial research and developmental organisations.

## Master of Philosophy

1–2 years full-time      2–4 years part-time

The Master of Philosophy (MPhil) is aimed at those who intend to pursue careers in medical or health research or who wish to upgrade their qualifications to give them a competitive edge in their employment by demonstrating superior ability and research experience. It may also be used as a stepping stone to commencing a Doctor of Philosophy (PhD).

The MPhil is a research degree in which students undertake supervised research leading to the production of a thesis. Admission normally requires a bachelor's degree with first or second class honours from the University of Sydney or another approved institution, or equivalent qualification. The faculty may admit an applicant who has obtained at least a credit in the

highest course available in the subject or subjects relevant to the proposed course of advanced study and research. Full-time MPhil students have a minimum of 1 year and maximum of 2 years to submit a thesis for examination. Part-time students have a minimum of 2 years and a maximum of 4 years to submit. MPhil students are required to complete one 6-credit-point unit of study, MEDF5005 Research Methods and Ethics, early in their candidature to provide them with guidance on areas relating to research such as writing papers and theses, reading and critiquing technical papers and writing literature reviews. Otherwise, MPhil students are not normally required to attend classes or undertake coursework units of study, with the thesis being the major examinable assessment requirement for the degree.

## Doctor of Philosophy

3½ years full-time      7 years part-time

The Doctor of Philosophy (PhD) allows you to pursue research from a wide range of areas in which the faculty has expertise. The degree has two purposes: to prepare a substantial piece of work representing a significant contribution in a particular field of study, and to train candidates in general research methodology and equip them with transferable research skills.

The PhD is aimed at those who intend to pursue careers in medical or health research or who wish to gain a competitive edge by demonstrating superior ability

and research experience. It takes a minimum of 3½ years' full-time or 7 years' part-time study to complete. Applicants of the Doctor of Philosophy should normally hold a relevant master's degree or a bachelor's degree with first or second class honours. In addition to these academic requirements the Associate Dean (HDR) must certify that your proposed research is appropriate and acceptable and that in addition to the academic qualifications you have the necessary training and ability to pursue the proposed research; and that there are sufficient supervisory and other resources and facilities available to enable your candidature to be completed successfully.

# Steps to become a postgraduate research student at the Brain and Mind Centre

## Are you academically qualified to apply for a higher degree by research?

In general, to be eligible for admission to a higher degree by research, you need to have undertaken a significant research project or thesis in your previous university level studies. For example, the equivalent of an Australian Honours degree or a Masters by research or a Masters by coursework with a thesis component.

### Step 1: Choose a project

Browse the Brain and Mind Centre's research pages <http://sydney.edu.au/brain-mind/>

Once you have identified an area of interest, contact the listed supervisor, provide your resume and arrange for a visit to discuss with them the possibility of studying with them at the Brain and Mind Centre.

### Step 2: Seek approval

Discuss the project details with your potential supervisor and provide them with a draft project proposal. (You will need to upload the proposal with your application.)

### Step 3: Apply for a scholarship

Apply for a scholarship with the University of Sydney or other funding body.

Please note that the cut-off date for scholarship applications may vary. Please check carefully.

### Step 4: Apply at the University of Sydney

Submit your application online via Sydney Student <http://sydney.edu.au/courses/master-of-philosophy-medicine>

<http://sydney.edu.au/courses/doctor-of-philosophy-medicine>

Click on the 'apply now' button. You will need to upload your Research Proposal along with other documents such as your academic transcript and your CV. Please also include any relevant scholarship information with your application.

### Step 5: Start

If your application is approved, you will be sent an offer from the University of Sydney. After you have accepted your offer, please contact your supervisor and arrange a start date. You will also need to enrol as directed.

Please contact the Postgraduate Program Student and Academic Manager two weeks prior to your start date at [postgrad.bmc@sydney.edu.au](mailto:postgrad.bmc@sydney.edu.au)

Research students are required by the University of Sydney to complete annual progress reviews. In addition, students are expected to participate in research meetings throughout their candidature. Students are required to present their work to their peers once a year.



# How to apply

## Postgraduate coursework applicants

### Domestic applicants

If you are:

- an Australian or New Zealand citizen; OR
- you hold dual citizenship with Australia or New Zealand and another country; OR
- you are an Australian permanent resident then you are a “domestic applicant”.

For detailed information about application, admission and enrolment procedures, go to: <http://sydney.edu.au/study/admissions/apply/how-to-apply.html> All applications need to be completed and submitted online.

### Closing dates for domestic applications

Brain and Mind Sciences degrees

30 November 2018\* for Semester 1

(commencement in Feb/March 2019)

Master of Medicine (Psychiatry)

31 January 2019 for semester 1 commencement

30 June 2019 for semester 2 commencement

\* Note that application closing dates for some scholarships may vary and therefore students should refer to the website: <http://sydney.edu.au/scholarships/> for specific application closing dates.

### International applicants

If you do not meet the criteria listed above to be considered a domestic applicant, then you are an “international applicant”.

For detailed information about application, admission and enrolment procedures for international students, visit <http://sydney.edu.au/study/admissions/international-students-why-choose-sydney.html> All applications need to be completed and submitted online.

### Closing dates for international applications

31 October 2018 for Semester 1

(commencement in Feb/March 2019)

## Postgraduate research applicants

In postgraduate research courses, students undertake a supervised research project leading to the production of a thesis. For information on the research application process, refer to the website <http://sydney.edu.au/study/find-a-course/postgraduate-study/postgraduate-research.html>

## Fees and scholarships

For detailed information about fees and scholarships for domestic students, <http://sydney.edu.au/scholarships/research/>

## English language requirements

If English is not your first language, you must demonstrate English language proficiency by one of the following means before admission can be confirmed:

- Provide evidence of satisfactory achievement in tertiary studies in which the exclusive language of the institution and the exclusive language of instruction, examination and assessment was English. These studies must have been undertaken no more than five years before you submit your application.
- Achieve the required grades in “English for Academic Purposes” at the University’s Centre for English Teaching. The course must have been completed no more than two years before you submit your application.
- Achieve the required grades on an International English Language Testing System (IELTS) or Test of English as a Foreign Language (TOEFL) test.

For more information on these tests, visit the IELTS website: <http://www.ielts.org> or the TOEFL website: [www.ets.org/toefl](http://www.ets.org/toefl)

Please refer to: <http://sydney.edu.au/study/admissions/apply/entry-requirements/english-language-requirements.html> for full details.



## Dr John Hayman

Consultant Psychiatrist and Graduate of Master of Brain and Mind Sciences, 2013:

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*"The course has greatly enriched my clinical practice, adding huge depth of additional understanding and perspective to my previous clinical knowledge and experience.*

*"To me, the Masters course felt like doing medicine and psychiatry all over again, informed by the latest research in neuroscience, and exposed to teachers of a high calibre.*

*My clinical work now has a greater authority in its delivery and my patients are often fascinated by explanations that describe*

*the working of the brain in relation to their clinical problem.*

*"I had been waiting many years for a course like that presented at the BMRI.\**

*"The course over-delivered in abundance. The scope of its content and clinical enrichment far exceeded what I had anticipated and hoped for. I am happy to personally recommend it to anyone considering further study whether they are contemplating a clinical or research career."*

\* The Brain and Mind Centre was formerly known as the BMRI until mid-2015.

### For additional information, contact:

Postgraduate Program  
Brain and Mind Centre

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**T** +61 2 9114 4048

**E** [postgrad.bmc@sydney.edu.au](mailto:postgrad.bmc@sydney.edu.au)

OR <http://sydney.edu.au/brain-mind/>

### Street address:

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Camperdown  
NSW 2050