

POSITION DESCRIPTION

Position Title	Senior Technical Officer - Healthy Brain and Mind Research Centre (Neuroscience of Addiction and Mental Health Program).		
Organisational Unit	Faculty of Health Sciences		
Functional Unit	School of Behavioural and Health Sciences		
Nominated Supervisor	Dr Valentina Lorenzetti		
Higher Education Worker (HEW) Level	HEW 7	Campus/Location	Melbourne Campus (St Patrick's)
CDF Achievement Level	1 All Staff	Work Area Position Code	TBA
Employment Type	Full-time, Fixed term	Date reviewed	May 2020

ABOUT AUSTRALIAN CATHOLIC UNIVERSITY

Mission Statement: *Within the Catholic intellectual tradition and acting in Truth and Love, Australian Catholic University is committed to the pursuit of knowledge, the dignity of the human person and the common good.*

At ACU we pride ourselves on offering a welcoming environment for everyone. At the same time, we are a university committed to standing for something clear. We stand up for people in need and causes that matter. ACU's Mission is central to the University, and informs every area – integrating the dignity of the human person, the common good, and ethical and social justice considerations into our core activities of student learning and teaching, research and service.

We are a publicly-funded university which has grown rapidly over the past few years. We're young, but we are making our mark: ranking among the top universities worldwide. We have got seven campuses around Australia, more than 200 partner universities on six continents, and a campus in Rome, Italy.

We know that our people make us a university like no other. It's your values, action and passion that makes the difference. Whatever role you may play in our organisation: it's what you do that defines who we are.

We value staff, offering excellent leave and employment conditions, and foster work environments where they have the ability grow and develop. We continue to invest in our facilities and workplaces, and actively involve staff in shaping the future direction of the organisation.

In order to be agents of change in the world, we all need to see life through the eyes of others. We believe that our role as a university is to inspire and equip people to make a difference – and that means cultivating their ability to act and think empathetically.

We hope that you might champion these values, and work with us to create a place of learning that is not only the envy of the world, but the making of it.

The structure to support this complex and national University consists of:

- Provost and Deputy Vice-Chancellor (Academic)
- Chief Operating Officer & Deputy Vice-Chancellor (Administration)
- Deputy Vice-Chancellor (Research)
- Deputy Vice-Chancellor (Education and Innovation)
- Deputy Vice-Chancellor (Coordination)
- Vice President

Each portfolio consists of a number of Faculties, Research Institutes or Directorates. The Vice President drives both the Identity and the [Mission](#) of the University. In addition, five Associate Vice-Chancellors and

Campus Deans focus on the University's local presence and development of the University at the local 'campus' level.

ABOUT THE FACULTY OF HEALTH SCIENCES

The Faculty of Health Sciences offers courses in biomedical science, clinical education, clinical exercise physiology, exercise and cancer, exercise science, health administration, healthcare simulation education, high performance sport, mental health, midwifery, nursing, nutrition science, occupational therapy, paramedicine, physiotherapy, psychology, public health, rehabilitation, social work and speech pathology.

Our vision is to provide caring and prepared graduates who promote health and prevent illness for Australia's health and sports industries, and provide quality healthcare for vulnerable communities such as the Indigenous, elderly and disabled.

The Schools are:

- School of Nursing, Midwifery and Paramedicine (National)
- School of Allied Health (National)
- School of Behavioral and Health Sciences (National)

The Faculty's courses are developed within the Catholic intellectual tradition with the goal of preparing graduates in health with an emphasis on social justice and equity, and sustainability.

Further information about the Faculty can be found at:

http://www.acu.edu.au/about_acu/faculties_institutes_and_centres

ABOUT THE HEALTHY BRAIN AND MIND RESEARCH CENTRE

The Healthy Brain and Mind Research Centre aims to advance knowledge critical to improving mental health, performance and well-being. Mental health and developmental disorders have significant negative impacts upon the mortality and social participation of the most vulnerable members of the community and are among the most urgent global challenges of the 21st century. The Centre seeks to make significant contributions to mental health, participation and well-being by integrating cutting edge research expertise and technology spanning neuroscience, addiction science, clinical psychology, developmental psychology, and rehabilitation science to improve the understanding, prevention and treatment of mental health and developmental disorders. The Healthy Brain and Mind Research Centre includes a program of research focused on the *Neuroscience of Addiction and Mental Health*.

ABOUT THE NEUROSCIENCE OF ADDICTION AND MENTAL HEALTH PROGRAM

Addiction is highly prevalent and has devastating effects on the lives of 35 million people globally. This program aims to resolve a deep evidence gap on the mechanisms of vulnerability and recovery in addiction and related mental health problems. The overarching focus of this program is to map the clinical, cognitive and brain mechanisms that *predate and predict* the onset of addiction, substance use behaviours, and related mental health problems (e.g. depression, anxiety, psychosis), the factors that *exacerbate* brain and mental health harms in people with addiction, and to pave the way for new strategies *to recover* these harms. To achieve our aims, we use next-generation multimodal brain imaging tools, longitudinal neuroimaging consortia, large cohort studies, and carefully-controlled experiments including behavioural and pharmacological interventions. Ultimately, this Program will generate new high-quality evidence to transform neuroscientific theories of addiction, and to inform the identification of prevention and treatment targets. Our vision is to alleviate the devastating impact of addiction on the lives of those affected, their families, and the broader society.

POSITION PURPOSE

The Senior Technical Officer will join a high-quality research team.

The overarching role will be to provide high-level technical support to researchers in the Neuroscience of Addiction and Mental Health Program. This includes providing technical expertise with the design of neuroscientific experiments and

computer and fMRI tasks to assess cognitive performance and brain function; analysis of behavioural and complex multimodal neuroimaging data; providing technical expertise relating to testing equipment, MRI data management, analysis software, methods techniques and computer systems; and providing technical support for research-related activities such as manuscript preparations, grant submissions, and publications as required.

POSITION RESPONSIBILITIES

Introduction

A number of frameworks and standards express the University's expectations of the conduct, capability, participation and contribution of staff. These are listed below:

- ACU Strategic Plan 2015-2020
- Catholic Identity and Mission
- ACU Capability Development Framework
- Higher Education Standards Framework
- ACU Service Principles
- ACU Staff Enterprise Agreement including provisions in relation to Performance Excellence

The [Capability Development Framework](#) in particular is important in understanding the core competencies needed in all ACU staff to achieve the University's strategy and supports its mission.

Key responsibilities

Key responsibilities specific to this position	Relevant Core Competences (Capability Development Framework)	Scope of contribution to the University			
		Within the work unit or team ✓	School or Campus ✓	Faculty or Directorate ✓	Across the University ✓
Design and implement automated pipelines for processing of behavioral and multimodal MRI data using relevant software (e.g. SPM, FSL, Matlab, Python) and manage the analyses of MRI data ensuring accuracy of results in a timely manner.	<ul style="list-style-type: none"> • Know ACU Work Processes and Systems • Make Informed Decisions • Collaborate Effectively 	✓			
Computer programming and use of technical equipment to run neuroscientific experiments to support the Program projects (e.g. Presentation, C, C++, Matlab, python, E-Prime).	<ul style="list-style-type: none"> • Make informed decisions • Collaborate Effectively 	✓			
Provide technical expertise for the operation and maintenance of equipment for neuroimaging and cognitive testing.	<ul style="list-style-type: none"> • Make informed decisions • Know ACU Work processes and systems 	✓			
Provide technical support and advice for preparing manuscripts, research presentations and grant applications and for other relevant Program research activities.	<ul style="list-style-type: none"> • Collaborate Effectively • Communicate with impact 	✓			

Key responsibilities specific to this position	Relevant Core Competences (Capability Development Framework)	Scope of contribution to the University			
		Within the work unit or team ✓	School or Campus ✓	Faculty or Directorate ✓	Across the University ✓
Manage training and continual support to users of technical equipment and systems, and resolve relevant hardware and software issues.	<ul style="list-style-type: none"> Coach and Develop Communicate with impact 	✓			
Provide advice on system and process improvements to ensure best practices are implemented in the Program.	<ul style="list-style-type: none"> Make informed decisions 	✓			

HOW THE ROLE OPERATES

Key Challenges and Problem Solving

- Design and implement new protocols for technical systems (e.g., MRI analyses) within the agreed timeframe and quality standards.
- Implement effective processes to ensure accurate data analyses to meet tight deadlines.
- Set up new and effective technical data management systems and management for large MRI data sets.
- Communicate effectively with busy team members to effectively complete data collection, analysis and preparation of research manuscripts for large complex research projects meeting demanding project timelines.

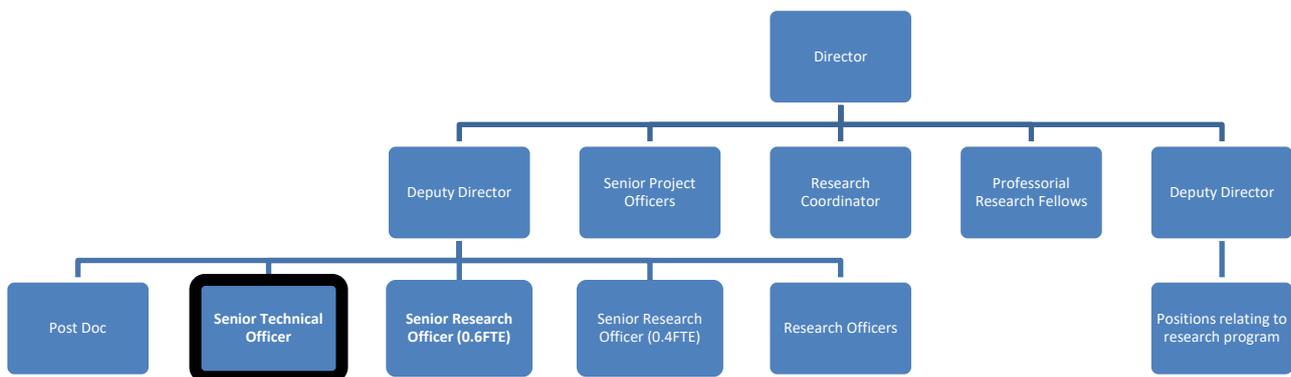
Decision Making / Authority to Act

- The position holder will work with considerable autonomy with respect to technical services and data management, the coordination of technical tasks across student and staff to achieve project goals, and preparation of project documentation, with feedback to be provided by the supervisor and other members of the research team when complex issues arise that require guidance.
- The position holder gives advice and recommendations on technical outcomes and related improvements to the manager in response to software and other technical requirements.

Communication / Working Relationships

- The Senior Technical Officer will communicate with members of the research centre to provide advice and information where needed. The position holder will also communicate with other School of Behavioural and Health Sciences and Psychology researchers / staff members where needed and appropriate.
- The position holder will be required to communicate efficiently with professionals from other Universities and relevant external organisations to coordinate joint initiatives, create collaborations, and share outcomes to wider community as appropriate.

Reporting Relationships



For further information about structure of the University refer to the [organisation chart](#).

QUALIFICATIONS AND CAPABILITY OF THE POSITION HOLDER

This section sets out the qualifications, skills, knowledge, experience and competencies expected of the position holder, collectively referred to as 'qualifications and capability'. These are informed by the key responsibilities of the role and the Core Competencies set out in the [Capability Development Framework](#).

Opportunities to develop capability are provided through the development programs coordinated by internal providers of professional development. See the [Training and Development website](#) for more information.

SELECTION CRITERIA

Qualifications, skills, knowledge and experience

1.	Completion of an undergraduate qualification with relevant research and or technical experience.
2.	Demonstrated computer programming experience (e.g. with MATLAB, Python, C, C++) to enable reliable cognitive and neuroimaging testing.
3.	A strong track record and interest in using multimodal neuroimaging methods, techniques and relevant software (e.g. Freesurfer, MRTrix, SPM / FSL)
4.	Highly motivated and enthusiastic with demonstrated ability to provide high-quality training, support to users; to problem-solve relevant hardware, software and system issues; and to design systems for effective data processing, sharing and storage.
5.	Experience with data analysis, statistical methods and research gold-standards in psychology, cognitive neuroscience or related fields.
6.	Experience with technical contributions to articles for publication in scientific journals.
7.	Demonstrated planning, organisational and problem solving skills.

Core Competencies (as per the [Capability Development Framework](#))

8.	Demonstrate confidence and courage in achieving ACU's Mission, Vision and Values by connecting the purpose of one's work to ACU's Mission, Vision and Values.
9.	Demonstrated ability to work collaboratively with stakeholders internal and external to the organisation to capitalise on all available expertise in pursuit of excellence.
10.	Ability to take personal accountability for achieving the highest quality outcomes through understanding of organisational context, self-reflection, and aspiring to and striving for excellence.

Other attributes

11.	Demonstrated commitment to cultural diversity and ethical practice principles and demonstrated knowledge of equal employment opportunity and workplace health and safety, appropriate to the level of the appointment.
-----	--

Desirable

1.	Post graduate studies in a relevant field such as neuroimaging, computational modelling, psychology, neuroscience, computer science, or engineering.
----	--