

# PSYC30018 Neuroscience and the Mind

<b>Credit Points:</b>	12.5
<b>Level:</b>	3 (Undergraduate)
<b>Dates &amp; Locations:</b>	2016, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: 36 hours Total Time Commitment: Estimated total time commitment for this subject is 170 hours.
<b>Prerequisites:</b>	No prerequisites are required for this subject
<b>Corequisites:</b>	No corequisites are required for this subject
<b>Recommended Background Knowledge:</b>	Prior coursework in at least two Level 2 psychology subjects, including Biological Psychology, is recommended. Level 2 psychology subjects are: Biological Psychology, Cognitive Psychology, Developmental Psychology, and Personality & Social Psychology.
<b>Non Allowed Subjects:</b>	512350 Brain, Cognition and Behaviour 3.  512307 Neuroscience and the Mind
<b>Core Participation Requirements:</b>	For the purposes of considering request for Reasonable Adjustments under the Disability Standards of Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit Website: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>
<b>Coordinator:</b>	Assoc Prof Rob Hester
<b>Contact:</b>	enquiry-psych@unimelb.edu.au <b>Melbourne School of Psychological Sciences</b> Currently enrolled students: # General information: <a href="https://ask.unimelb.edu.au">https://ask.unimelb.edu.au</a> # Email: <a href="mailto:enquiries-STEM@unimelb.edu.au">enquiries-STEM@unimelb.edu.au</a>  Future students: # Further information: <a href="http://www.psych.unimelb.edu.au/study/subjects/neuroscience-and-mind">http://www.psych.unimelb.edu.au/study/subjects/neuroscience-and-mind</a> # Email: <a href="http://www.psych.unimelb.edu.au/contact-us-0">http://www.psych.unimelb.edu.au/contact-us-0</a>
<b>Subject Overview:</b>	This subject explores the relationship between the brain and psychological attributes, such as behaviour and cognition. It covers a number of specific areas which may include: # the structure and function of the brain in general and clinical populations # how to measure brain activity, and how brain activity can be used to inform models of cognitive function # a variety of cognitive functions and their neural underpinnings, such as: representation of objects, rules, intentions, decisions, laterality, memory, number processing, attention and perception.
<b>Learning Outcomes:</b>	Knowledge On completion of the subject students should demonstrate knowledge of:

	<ul style="list-style-type: none"> <li># The key research findings that underpin specific domains of cognitive neurosciences</li> <li># The strengths and limitations of cognitive neuroscience methods used to examine the relationship between brain function and behaviour</li> <li># How dysfunction in cortical systems is associated with symptoms of neurologic and psychiatric conditions</li> <li># Ethical considerations of conducting and interpreting human and animal cognitive neuroscience research</li> </ul> <p><b>Skills</b></p> <p>On completion of the subject students will have had the opportunity to develop skills in:</p> <ul style="list-style-type: none"> <li># Critically evaluating studies using cognitive neuroscience methods to examine brain and behaviour relationships</li> <li># Identifying and justifying meaningful and appropriate methods of investigation for cognitive neuroscience research questions</li> <li># Interpreting data accurately on the basis of appropriate analytical methods</li> <li># Evaluating and drawing conclusions from research findings so as to inform different levels of society: individual clients, policymakers, health professionals</li> <li># Communicating psychological research findings effectively in oral and written formats</li> </ul> <p><b>Application of knowledge and skills</b></p> <p>On completion of this subject students should be able to apply their knowledge and skills to:</p> <ul style="list-style-type: none"> <li># Provide a critical evaluation of cognitive neuroscience evidence so as to inform individual or collective decision making</li> <li># Conduct, statistically analyse and evaluate cognitive neuroscience methods to answer a psychological question</li> <li># Oral debate of cognitive neuroscience research approaches to discovering new basic knowledge and clinical aetiology</li> </ul>
<b>Assessment:</b>	Two written reports/essays of 1500 words each (50%) to be submitted during semester. An examination of no more than two hours (50%) to be completed at the end of semester during the specified University examination period. Each piece of assessment must be completed (hurdle requirement). Attendance of at least 80% of the laboratory classes is a hurdle requirement. In case of failure to meet the hurdle requirement, additional work will be required before a passing grade can be awarded.
<b>Prescribed Texts:</b>	Gazzaniga, M.S., Ivry, R., Mangun, G. Cognitive Neuroscience (3rd ed.) New York: W.W Norton Publishers Hanson, S.J., Buzsáki, M. (2010). Foundational Issues in Human Brain Mapping. Cambridge, UK: MIT Press
<b>Recommended Texts:</b>	
<b>Breadth Options:</b>	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> <li># <b>Bachelor of Arts</b> (<a href="https://handbook.unimelb.edu.au/view/2016/B-ARTS">https://handbook.unimelb.edu.au/view/2016/B-ARTS</a>)</li> <li># <b>Bachelor of Commerce</b> (<a href="https://handbook.unimelb.edu.au/view/2016/B-COM">https://handbook.unimelb.edu.au/view/2016/B-COM</a>)</li> <li># <b>Bachelor of Environments</b> (<a href="https://handbook.unimelb.edu.au/view/2016/B-ENVS">https://handbook.unimelb.edu.au/view/2016/B-ENVS</a>)</li> <li># <b>Bachelor of Music</b> (<a href="https://handbook.unimelb.edu.au/view/2016/B-MUS">https://handbook.unimelb.edu.au/view/2016/B-MUS</a>)</li> </ul> <p>You should visit <a href="http://breadth.unimelb.edu.au/breadth/info/index.html">learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html)</a> and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p>
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<p>Students will be given appropriate opportunity and educational support to develop skills to:</p> <ul style="list-style-type: none"> <li># critically evaluate studies exploring the relation between the brain and behaviour</li> <li># test hypotheses, analyse and interpret data and to communicate scientific research effectively</li> <li># develop skills in the oral and written communication of scientific research</li> </ul>
<b>Related Course(s):</b>	Graduate Diploma in Psychology

<b>Related Majors/Minors/ Specialisations:</b>	Psychology Psychology Science-credited subjects - new generation B-SCI and B-ENG. Selective subjects for B-BMED
<b>Related Breadth Track(s):</b>	Connecting the Mind and Brain Perception and Cognition