

## 512-330 Human Psychophysiology 3

<b>Credit Points:</b>	12.50
<b>Level:</b>	3 (Undergraduate)
<b>Dates &amp; Locations:</b>	2009, This subject commences in the following study period/s: Semester 2, - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: Twenty-four hours of lectures, 12 hours of laboratory classes. [Estimated total time commitment of 120 hours.] Total Time Commitment: 120 hours
<b>Prerequisites:</b>	512-222 (or equivalent).
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. This subject requires all students to actively and safely participate in laboratory activities. Students who feel their disability may impact upon their participation are encouraged to discuss this with the subject coordinator and the Disability Liaison Unit.
<b>Coordinator:</b>	Prof John Arthur Trinder
<b>Subject Overview:</b>	<p>This subject comprises four units. Only two units will be offered in any one year.</p> <p><i>Cognitive Neuroscience of Attention and Consciousness:</i> examines the cognitive and neural mechanisms underlying attention and consciousness in humans. Particular emphasis is placed on the use of convergent methodologies, including brain imaging (EEG, fMRI, PET), neuropsychological patient studies, psychophysical techniques, and single-neuron recordings. Topics will be selected from the cognitive and neural correlates of selective attention; mechanisms of binding information across sensory modalities; perception and action; disorders of attention, object recognition and consciousness (Àspatial neglect, agnosia, blindsight); implicit and unconscious information processing; neural correlates of conscious experience; neural representations of the self and external space; cognitive neuroscience models of attention and consciousness.</p> <p><i>The Physiology and Psychology of Sleep:</i> provides students with a basic understanding of the nature of sleep. Topics will be selected from basic sleep phenomenology; the neurophysiology and neuropharmacology of sleep; regulatory controls exerted by sleep; sleep disorders; theories as to the functional significance of sleep; and the nature of dreams.</p> <p><i>The Physiological Bases of Emotion:</i> covers a variety of topics relevant to the biological bases of emotions selected from theoretical approaches to the relationship of physiological and emotional phenomena; neuroanatomy, neurophysiology and neurochemistry of emotional networks in the human brain; somatovisceral substrates of emotion; and facial expression of emotion.</p> <p><i>Functional Imaging of the Human Brain:</i> covers issues relating to the measurement of brain function and its relationship to cognitive processes. While the majority of the unit deals with EEG, other imaging technologies such as functional MRI, PET and SPECT are also covered.</p>
<b>Objectives:</b>	.
<b>Assessment:</b>	Laboratory reports of no more than 2000 words (40%) and an examination of no more than two hours (60%). Each piece of assessment must be completed (hurdle requirement). Attendance at 80% or more 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>	None

<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<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>	On completion of this subject, student should be able to: appreciate the physiological basis of human behaviour; have an understanding of the basic principles of physiology as applied to human behaviour; understand the cognitive and neural mechanisms underlying various behavioural processes, such as attention, emotional behaviour and sleep.
<b>Notes:</b>	Students enrolled in the BSc (pre-2008), BAsc or a combined BSc course may receive science credit for the completion of this subject. Students undertaking psychology subjects can receive credit toward <i>either</i> the science <i>or</i> arts requirement of the BAsc or BA/BSc course. Credit for psychology cannot be split between the two components. Students should advise the Faculty of Science if they would like psychology to count toward the science requirement of their BAsc or BA/BSc course.
<b>Related Majors/Minors/ Specialisations:</b>	Neuroscience (Behavioural Neuroscience specialisation) Psychology Major