

## PSYC20006 Biological Psychology

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| <b>Credit Points:</b>                    | 12.5   |
| <b>Level:</b>                            | 2 (Undergraduate)  |
| <b>Dates &amp; Locations:</b>            | 2015, Parkville<br>This subject commences in the following study period/s:<br>Semester 1, Parkville - Taught on campus.  |
| <b>Time Commitment:</b>                  | Contact Hours: 140 hours including teaching and non-teaching weeks through to the end of the examination period Total Time Commitment: 36 contact hours, estimated total time commitment 120 hours   |
| <b>Prerequisites:</b>                    | There are no prerequisites for this subject  |
| <b>Corequisites:</b>                     | There are no corequisites for this subject   |
| <b>Recommended Background Knowledge:</b> | Prior coursework in the two Level 1 psychology subjects, Mind Brain and Behaviour 1 and Mind Brain and Behaviour 2 is recommended.   |
| <b>Non Allowed Subjects:</b>             | 512222 Behavioural Neuroscience 2<br><br>512225 Biological Psychology  |
| <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>                      | Dr Piers Howe  |
| <b>Contact:</b>                          | Melbourne School of Psychological Sciences<br>12th floor Redmond Barry Building (Building 115 Map)<br>Telephone: + 61 3 8344 6377<br>Email: <a href="mailto:secondyear-psych@unimelb.edu.au">secondyear-psych@unimelb.edu.au</a><br>Web: <a href="http://www.psych.unimelb.edu.au/study/subjects/biological-psychology">http://www.psych.unimelb.edu.au/study/subjects/biological-psychology</a>   |
| <b>Subject Overview:</b>                 | <p>This subject studies the relationship between brain mechanisms and behaviour. Its major aim is to develop an appreciation of the neurobiological basis of psychological function and dysfunction via three approaches. The first emphasises a top-down method that links psychological functions to their biological substrates. Neuroscientific research techniques and what they can reveal about psychological function are emphasised. These techniques are presented within an historical context, beginning with electroencephalography (EEG) and finishing with functional magnetic resonance imaging (fMRI). The second approach emphasises a bottom-up approach including the topics of brain development, neurons and neural circuits, neurotransmission and neurotransmitter substances, and the structurofunctional properties of selected brain regions. Neurobiological principles are illustrated using conditions with abnormal neuronal function. The third approach combines the top-down and bottom-up approaches to demonstrate how combining knowledge of cognitive theory and structurofunctional properties of the brain enables diagnosis and interpretation of pathological conditions. Case studies are used to illustrate this approach.</p> <p>A quantitative methods component will be integrated into the lecture, tutorial and assessment structure of this subject. The aim is to provide an understanding of, and practical experience</p> |

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|   | with, the appropriate experimental design and statistical analysis techniques used to evaluate hypotheses in Biological Psychology.   |
| <b>Learning Outcomes:</b>                     | <p>Knowledge</p> <p>On completion of the Lecture Stream students should demonstrate knowledge of:</p> <ul style="list-style-type: none"> <li># The way in which the brain regulates complex forms of human behaviour.</li> <li># Some of the methodologies for investigating brain and behaviour relationships.</li> <li># Some methods of analysing data that are appropriate for research in biological psychology</li> </ul> <p>Skills</p> <p>On completion of the Lecture and Tutorial streams students should have developed skills in:</p> <ul style="list-style-type: none"> <li># Critically reviewing literature in an area of biological psychology in a way that could lead to clearly motivated research questions</li> <li># Analysing data in ways that are appropriate for research in biological psychology</li> <li># Interpreting data accurately on the basis of appropriate analytical methods</li> <li># Evaluating and drawing conclusions from research findings</li> <li># Communicating biological psychology research findings effectively in a written format</li> <li># Critically analysing and critiquing multiple sources of information and generating a cohesive understanding of that information</li> </ul> <p>Application of knowledge and skills</p> <p>On completion of this subject students should be able to apply their knowledge and skills:</p> <ul style="list-style-type: none"> <li># Solve problems in biological psychology based on knowledge of psychological research findings</li> <li># Apply biological psychology concepts and theories to problems of behavioural change in a range of contexts</li> </ul> |
| <b>Assessment:</b>                            | Laboratory report(s) of not more than 2000 words (40%) to be submitted during semester. An examination of no more than two hours (60%) to be completed at the end of semester during the specified University examination period. Each piece of assessment must be completed (hurdle requirements). Attendance at 80% or more of the laboratory classes and a class presentation are hurdle requirements. In case of failure to meet either hurdle requirement, additional work will be required before a passing grade can be awarded.   |
| <b>Prescribed Texts:</b>                      | Carlson, NR. <i>Physiology of Behaviour</i> . 11th Edition. Pearson International.  |
| <b>Recommended Texts:</b>                     | Kandel, E et al. <i>Essentials of Neural Science and Behaviour</i> . McGraw Hill.   |
| <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 Commerce</b> (<a href="https://handbook.unimelb.edu.au/view/2015/B-COM">https://handbook.unimelb.edu.au/view/2015/B-COM</a>)</li> <li># <b>Bachelor of Environments</b> (<a href="https://handbook.unimelb.edu.au/view/2015/B-ENVS">https://handbook.unimelb.edu.au/view/2015/B-ENVS</a>)</li> <li># <b>Bachelor of Music</b> (<a href="https://handbook.unimelb.edu.au/view/2015/B-MUS">https://handbook.unimelb.edu.au/view/2015/B-MUS</a>)</li> </ul> <p>You should visit <b>learn more about breadth subjects</b> (<a href="http://breadth.unimelb.edu.au/breadth/info/index.html">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:</p> <ul style="list-style-type: none"> <li># develop skills related to the ability to research an area</li> <li># analyze the information critically</li> <li># arrange it in a report that is clearly expressed and lucid</li> </ul>   |
| <b>Related Course(s):</b>                     | Graduate Diploma in Psychology  |
| <b>Related Majors/Minors/Specialisations:</b> | Psychology<br>Psychology  |

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|                                  | Psychology Major<br>Science-credited subjects - new generation B-SCI and B-ENG.<br>Selective subjects for B-BMED |
| <b>Related Breadth Track(s):</b> | Connecting the Mind and Brain  |