

# BIOL30002 Experimental Reproductive Physiology

<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 2, Parkville - Taught on campus. An enrolment quota of 40 students applies to this subject. For detailed information on the quota subject application process, enrolment deadlines and selection preferences, refer to the Faculty of Science website: <a href="http://science.unimelb.edu.au/students/course-planning-and-advice">http://science.unimelb.edu.au/students/course-planning-and-advice</a>																																				
<b>Time Commitment:</b>	Contact Hours: 1 x one hour lecture/tute per week; 1 x four hour practical class/research laboratory-based research work time per week; one 4 hour excursion late in the semester. Total Time Commitment: Estimated total time commitment of 170 hours Students are strongly encouraged to attend all lectures and pracs.																																				
<b>Prerequisites:</b>	<p>At least one of:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>PHYS20009 Research-Based Physiology</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>ZOOL20005 Animal Structure and Function</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>ZOOL20006 Comparative Animal Physiology</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>plus, if only one of the above has been completed, an additional subject from:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>BCMB20002 Biochemistry and Molecular Biology</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>CEDB20003 Fundamentals of Cell Biology</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>GENE20001 Principles of Genetics</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>PHYS20008 Human Physiology</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>OR, for Bachelor of Biomedicine students, both of</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>BIOM20001 Molecular and Cellular Biomedicine</td> <td>Semester 1</td> <td>25</td> </tr> <tr> <td>BIOM20002 Human Structure and Function</td> <td>Semester 2</td> <td>25</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	PHYS20009 Research-Based Physiology	Semester 1, Semester 2	12.50	ZOOL20005 Animal Structure and Function	Semester 1	12.50	ZOOL20006 Comparative Animal Physiology	Semester 2	12.50	Subject	Study Period Commencement:	Credit Points:	BCMB20002 Biochemistry and Molecular Biology	Semester 1, Semester 2	12.50	CEDB20003 Fundamentals of Cell Biology	Semester 1	12.50	GENE20001 Principles of Genetics	Semester 1	12.50	PHYS20008 Human Physiology	Semester 1, Semester 2	12.50	Subject	Study Period Commencement:	Credit Points:	BIOM20001 Molecular and Cellular Biomedicine	Semester 1	25	BIOM20002 Human Structure and Function	Semester 2	25
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<b>Recommended Background Knowledge:</b>	None																																				
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	DASC30006 Applied Animal Reproduction & Genetics	Semester 1	12.50
	# BIOL30001 Reproduction (prior to 2013)		
<b>Core Participation Requirements:</b>	<p>&lt;p&gt;For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.&lt;/p&gt; &lt;p&gt;It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>		
<b>Coordinator:</b>	Dr Mark Green		
<b>Contact:</b>	<a href="mailto:mark.green@unimelb.edu.au">mark.green@unimelb.edu.au</a> (mailto:mark.green@unimelb.edu.au)		
<b>Subject Overview:</b>	<p>The program will provide students with the opportunity to gain a first-hand laboratory experience of the structure, function, and development of the reproductive organs, including selected aspects of the endocrine, neuroendocrine and environmental control of reproduction, fertilisation, pregnancy, parturition and lactation in mammals. Student will gain experience in experimental design, cutting-edge research techniques, data analysis, and scientific report writing and will be introduced to the practicalities of reproductive manipulation and assisted reproductive technologies.</p>		
<b>Learning Outcomes:</b>	<p>This subject aims to give students of science and biomedical science a solid foundation in laboratory practise in reproductive biology. Students will be provided with an opportunity to engage in an authentic experience of scientific research: addressing questions in reproductive physiology to generate a hypothesis; designing an experiment; hands-on experience in the use of experimental animals; working in a group to complete the experiments and collect and analyse the data; writing up an individual final report in the format of a scientific manuscript; and peer-review.</p> <p>By the completion of this subject students should:</p> <ul style="list-style-type: none"> <li># understand the modern experimental approaches of reproductive physiology and assisted reproductive techniques;</li> <li># be aware of the ethical issues in using animals for experimental studies;</li> <li># understand and be able to apply selected methods used in reproductive physiology research;</li> <li># understand the structure and function of male and female reproductive systems;</li> <li># understand neuroendocrine and endocrine control systems and their role in the regulation of reproductive processes; and</li> <li># understand the process by which scientists move from an original idea to a final published paper.</li> </ul>		
<b>Assessment:</b>	<p>4 x Laboratory worksheets of 200 words each due throughout semester (35%) Project proposal of 500 words due week 6 (5%) Project report of 3000 words due week 11 (50%) Peer-reviewed group oral presentation of 20 minutes due week 12 (10%) The group presentation component will be partially assessed by other students. All students will be required to review group presentations of their peers. This will contribute to the total 10% allocated for the oral presentation.</p>		
<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>	<p>This subject builds upon existing generic skills, including an ability to approach and assimilate new knowledge from observation and the literature, and an ability to use that knowledge to</p>		

	<p>evaluate and communicate results. Students should acquire the basic skills required to make and record scientific observations, and evaluate data in an objective manner as part of practical class report writing. They will be encouraged to access information from the primary scientific literature, through both electronic and traditional sources, and to develop the skills needed to produce scientific reports that are succinct, clear and completed on time. They should develop their abilities to evaluate scientific evidence critically, to formulate hypotheses, and be alert to alternative explanations. Students should also gain first-hand experience in the ethical use of animals in experimentation. Students will undertake practical work in a small group and will refine their skills in cooperative teamwork.</p>
<b>Related Majors/Minors/ Specialisations:</b>	<p>Molecular Biotechnology (specialisation of Biotechnology major) Reproduction and Development (specialisation of Cell and Developmental Biology major) Science-credited subjects - new generation B-SCI and B-ENG. Selective subjects for B-BMED Zoology Zoology Zoology Zoology Zoology</p>