

## 655-801 Biological Foundations of Clinical Optom

<b>Credit Points:</b>	25.00
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus. Semester 2, - Taught on campus. Distance Learning
<b>Time Commitment:</b>	Contact Hours: This subject is available by distance learning in both Semesters 1 and 2. Total Time Commitment: Approximately 10-12 hours per week, incorporating reading, note taking and assignment completion.
<b>Prerequisites:</b>	None
<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. Students who feel their disability may impact upon their active and safe participation in a subject are encouraged to discuss this with the relevant subject coordinator and the Disability Liaison Unit.
<b>Coordinator:</b>	Dr Alex Gentle
<b>Subject Overview:</b>	<p>The purpose of this subject is to explore the applications of modern biomedical science to understanding ocular disorders and diseases. It covers the following topics:</p> <ul style="list-style-type: none"> <li># anatomy and embryology with an emphasis on clinically important structures especially the blood supply to the brain, the cranial nerves relevant to ophthalmic practice, embryology relevant to common congenital conditions.</li> <li># Genetics of eye disease.</li> <li># Biochemistry and metabolism: review of the key biochemical pathways; changes to ocular tissues in disease, metabolic demands of the retina; glucose and oxygen deprivation.</li> <li># Pharmacology: review of basic pharmacological concepts and the action of common drugs in ophthalmic practice.</li> <li># General principles of immunology with particular reference to the eye.</li> <li># General principles of inflammation and wound healing.</li> <li># Microbiology of the eye.</li> </ul> <p>On completion of the subject students should:</p> <ul style="list-style-type: none"> <li># have refreshed and enhanced their knowledge of the basic and clinical sciences which underlie optometric practice;</li> <li># be familiar with current thinking on the anatomy, embryology, genetics, biochemistry, pharmacology, immunology, pathology and microbiology which is relevant to the structure and function of the normal eye;</li> <li># have updated their understanding of the mechanisms which underlie the development and progression of clinical disorders of the eye;</li> <li># have developed an appropriate foundation in basic and clinical science in preparation for future modules of the Postgraduate Diploma in Advanced Clinical Optometry and/or to undertake the Postgraduate Certificate in Ocular Therapeutics.</li> </ul>
<b>Assessment:</b>	Two 2,000 word assignments on prescribed topics that will include case studies (40%) submitted during the course of the semester; a 3 hour written examination in the examination period (60%). Satisfactory completion of all components of assessment is necessary to pass the subject.

<b>Prescribed Texts:</b>	The American Academy of Ophthalmology Basic and Clinical Science Course. Section 2 (Fundamental and Principles of Ophthalmology), and Section 5 (Neuro-Ophthalmology) San Francisco, American Academy of Ophthalmology (latest edition). Students will be provided with a comprehensive study guide, which will include key journal articles and a list of prescribed reading.
<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>Students should develop certain generic skills, including:</p> <ul style="list-style-type: none"> <li># being able to critically evaluate and synthesise basic and clinical research literature;</li> <li># understanding the importance of regularly refreshing one's knowledge base through use of the relevant scientific and professional literature;</li> <li># being competent in seeking and retrieving information using a number of resources, such as the world-wide-web;</li> <li># being able to manage competing demands on one's time and being comfortable with the demands of self-directed study;</li> <li># being capable of articulating knowledge and understanding in written presentations;</li> <li># appreciating the ways in which advanced knowledge can equip one with enhanced problem solving skills for application in the work and/or clinical environment.</li> </ul>
<b>Related Course(s):</b>	Postgraduate Diploma in Advanced Clinical Optometry