655-801 Biological Foundations of Clinical Optom

Credit Points:	25.000
Level:	Graduate/Postgraduate
Dates & Locations:	2008, This subject commences in the following study period/s: Semester 1, - Taught on campus. Semester 2, - Taught on campus. Distance Learning
Time Commitment:	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.
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	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.
Coordinator:	Dr Alex Gentle
Subject Overview:	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: # 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. # Genetics of eye disease. # Biochemistry and metabolism: review of the key biochemical pathways; changes to ocular tissues in disease, metabolic demands of the retina; glucose and oxygen deprivation. # Pharmacology: review of basic pharmacological concepts and the action of common drugs in ophthalmic practice. # General principles of immunology with particular reference to the eye. # General principles of inflammation and wound healing. # Microbiology of the eye. On completion of the subject students should: # have refreshed and enhanced their knowledge of the basic and clinical sciences which underlie optometric practice; # 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; # have updated their understanding of the mechanisms which underlie the development and progression of clinical disorders of the eye; # 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.
Assessment:	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.

Prescribed Texts:	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 od prescribed reading.
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	Students should develop certain generic skills, including: # being able to critically evaluate and synthesise basic and clinical research literature; # understanding the importance of regularly refreshing one's knowledge base through use of the relevant scientific and professional literature; # being competent in seeking and retrieving information using a number of resources, such as the world-wide-web; # being able to manage competing demands on one's time and being comfortable with the demands of self-directed study; # being capable of articulating knowledge and understanding in written presentations; # appreciating the ways in which advanced knowledge can equip one with enhanced problem solving skills for application in the work and/or clinical environment.
Related Course(s):	Postgraduate Diploma in Advanced Clinical Optometry