OPTO20003 Visual Processing and Control

Credit Points:	12.50
Level:	2 (Undergraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus. Lectures and practicals.
Time Commitment:	Contact Hours: 2 x one hour lectures per week; plus 7 x three hour practical classes during the semester Total Time Commitment: Estimated total time commitment of 120 hours
Prerequisites:	

Subject	Study Period Commencement:	Credit Points:
OPTO20002 Human Visual Functions	Semester 1	12.50

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. This subject requires all students to actively and safely participate in laboratory activities.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 Larry Abel
Contact:	**Email: label@unimelb.edu.au (mailto:label@unimelb.edu.au)**
Subject Overview:	The subject begins with the neural control of gaze and follows up with a full account of normal and abnormal eye movements. The subject deals with muscular mechanisms of the eye including the mechanics of translatory, saccadic and slow pursuit eye movements, Listing's Law, neural control of eye movements and binocular eye movements, Hering's Law, accommodation and the accommodative-convergence synkinesis and pupillary reactions. There will be lectures on the use of electrical recordings from the eye to help understand ocular function. The subject will also include a detailed account of the visual space sense, including binocular correspondence, the horopter, fusion and stereopsis.
Objectives:	This subject aims to provide students with a series of lectures dealing with the structure and function of the visual system, essential for a fundamental understanding of the rationale of many types of measurements and observations undertaken in evaluating visual function.
Assessment:	Ongoing assessment of practical work during the semester (20%); a 30-minute written examination held mid-semester (10%); a 3-hour written examination in the examination period (70%). Satisfactory completion of practical work is necessary to pass the subject.
Prescribed Texts:	E R Kandel, J H Schwartz, T M Jessell, Principles of Neural Science 4th Ed, McGraw-Hill, 2000
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # **Bachelor of Arts (https://handbook.unimelb.edu.au/view/2010/B-ARTS)** # **Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2010/B-COM)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2010/B-ENVS)**

	# **Bachelor of Music (https://handbook.unimelb.edu.au/view/2010/B-MUS)** You should visit **learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html)** and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Notes:	This subject is available for science credit to students enrolled in the BSc (pre-2008 degree), BASc or a combined BSc course.
Related Course(s):	Bachelor of Optometry