

433-651 Computational Genomics

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus.
Time Commitment:	Contact Hours: Twenty-Four hours of lectures, 12 hours of laboratory work; Non-contact time commitment: 84 hours Total Time Commitment: Not available
Prerequisites:	Two semesters of programming experience or equivalent .
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	<p>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.</p> <p>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: http://services.unimelb.edu.au/disability</p>
Coordinator:	Dr Linda Stern
Subject Overview:	Topics covered include: computational issues in physical mapping of DNA, in genome annotation, and in analyzing gene expression data; motif extraction; methods for determining phylogenetic trees; RNA structure determination; and protein structure determination.
Objectives:	On successful completion, students should : <ul style="list-style-type: none"> # be familiar with the computational methods used for constructing, annotating, and comparing DNA gene sequences # be familiar with the underlying theory behind these methods; # be familiar with current research issues in bioinformatics; # be able to undertake problem identification, formulation and solution; # have a capacity for independent critical thought, rational inquiry and self-directed learning; and # have a profound respect for truth and intellectual integrity, and for the ethics of scholarship.
Assessment:	One 3-hour examination (50%) and an assignments of 4,000 words equivalent (50%). Both the project work and examination component of assessment must be completed satisfactorily to pass the subject.
Prescribed Texts:	None
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
Related Course(s):	Master of Biomedical Engineering