BINF90001 Statistics for Bioinformatics

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2014.
Time Commitment:	Contact Hours: 36 hours Total Time Commitment: 120 hours
Prerequisites:	One of the following, or equivalent:

Subject	Study Period Commencement:	Credit Points:
MAST90058 Elements of Statistics	Semester 2	12.50
MAST20005 Statistics	Semester 2	12.50

Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
Contact:	Email: **dferrari@unimelb.edu.au (mailto:dferrari@unimelb.edu.au)**
Subject Overview:	Bioinformatics involves the analysis of biological data and randomness is inherent in both the biological processes themselves and the sampling mechanisms by which they are observed. This subject first introduces stochastic processes and their applications in Bioinformatics, including evolutionary models. It then considers the application of classical statistical methods including estimation, hypothesis testing, model selection, multiple comparisons, and multivariate statistical techniques in Bioinformatics.
Learning Outcomes:	At the conclusion of this subject, students should be able to: # understand some of the common stochastic models encountered in Bioinformatics; # apply a variety of statistical techniques to problems arising in Bioinformatics.
Assessment:	50 pages of written assignments (40%: two assignments worth 20% each, due mid and late in semester), a 3 hour written examination (60%, in the examination period)
Prescribed Texts:	None
Recommended 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
Generic Skills:	# Problem-solving skills including engaging with unfamiliar problems and identifying relevant strategies;

	# Analytical skills - the ability to construct and express logical arguments and to work in abstract or general terms to increase the clarity and efficiency of an analysis; Through interaction
Related Course(s):	Master of Science (Bioinformatics)