

# BINF90001 Statistics for Bioinformatics

<b>Credit Points:</b>	12.5									
<b>Level:</b>	9 (Graduate/Postgraduate)									
<b>Dates &amp; Locations:</b>	2016, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.									
<b>Time Commitment:</b>	Contact Hours: 36 hours Total Time Commitment: 170 hours									
<b>Prerequisites:</b>	One of the following, or equivalent: <table border="1" data-bbox="387 544 1485 748"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>MAST90058 Elements of Statistics</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>MAST20005 Statistics</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	MAST90058 Elements of Statistics	Semester 2	12.50	MAST20005 Statistics	Semester 2	12.50
Subject	Study Period Commencement:	Credit Points:								
MAST90058 Elements of Statistics	Semester 2	12.50								
MAST20005 Statistics	Semester 2	12.50								
<b>Corequisites:</b>	None									
<b>Recommended Background Knowledge:</b>	None									
<b>Non Allowed Subjects:</b>	None									
<b>Core Participation Requirements:</b>	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: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>									
<b>Coordinator:</b>	Dr Davide Ferrari									
<b>Contact:</b>	Email: <a href="mailto:davide.ferrari@unimelb.edu.au">davide.ferrari@unimelb.edu.au</a> ( <a href="mailto:davide.ferrari@unimelb.edu.au">mailto:davide.ferrari@unimelb.edu.au</a> )									
<b>Subject Overview:</b>	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.									
<b>Learning Outcomes:</b>	At the conclusion of this subject, students should be able to: <ul style="list-style-type: none"> <li># understand some of the common stochastic models encountered in Bioinformatics;</li> <li># apply a variety of statistical techniques to problems arising in Bioinformatics.</li> </ul>									
<b>Assessment:</b>	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)									
<b>Prescribed Texts:</b>	None									
<b>Recommended Texts:</b>	None									

<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>	<ul style="list-style-type: none"><li># Problem-solving skills including engaging with unfamiliar problems and identifying relevant strategies;</li><li># 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</li></ul>
<b>Related Course(s):</b>	Master of Science (Bioinformatics)
<b>Related Majors/Minors/ Specialisations:</b>	Approved Masters level subjects from other departments