

MAST90084 Statistical Modelling

Credit Points:	12.5											
Level:	9 (Graduate/Postgraduate)											
Dates & Locations:	This subject is not offered in 2015.											
Time Commitment:	Contact Hours: Contact Hours: 36 hours comprising 2 one-hour lectures per week and 1 one-hour practice class per week. Total Time Commitment: Estimated Total Time Commitment - 170 hours											
Prerequisites:	Both of											
	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>MAST30025 Linear Statistical Models</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>MAST90082 Mathematical Statistics</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	MAST30025 Linear Statistical Models	Semester 1	12.50	MAST90082 Mathematical Statistics	Semester 1	12.50
Subject	Study Period Commencement:	Credit Points:										
MAST30025 Linear Statistical Models	Semester 1	12.50										
MAST90082 Mathematical Statistics	Semester 1	12.50										
Corequisites:	None											
Recommended Background Knowledge:	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>MAST30027 Modern Applied Statistics</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	MAST30027 Modern Applied Statistics	Semester 2	12.50			
Subject	Study Period Commencement:	Credit Points:										
MAST30027 Modern Applied Statistics	Semester 2	12.50										
Non Allowed Subjects:	None											
Core Participation Requirements:	<p><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></p>											
Contact:	Email: r.huggins@ms.unimelb.edu.au (mailto:r.huggins@ms.unimelb.edu.au)											
Subject Overview:	Statistical models are central to applications of statistics and their development motivates new statistical theories and methodologies. Commencing with a review of linear and generalized linear models, analysis of variance and experimental design, the theory of linear mixed models is developed and model selection techniques are introduced. Approaches to non and semiparametric inference, including generalized additive models, are considered. Specific applications may include longitudinal data, survival analysis and time series modelling.											
Learning Outcomes:	<p>After completing this subject students should gain:</p> <ul style="list-style-type: none"> # a deeper understanding of the principles of statistical modelling and some of its important applications. # the ability to pursue further studies in this and related areas 											
Assessment:	Up to 40 pages of written assignments (two assignments worth 10% each) Three hour written examination (80%)											
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
Generic Skills:	<p>In addition to learning specific skills that will assist students in their future careers in science, they will have the opportunity to develop generic skills that will assist them in any future career path. These include:</p> <ul style="list-style-type: none"> # problem-solving skills: the ability to engage with unfamiliar problems and identify relevant solution 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 analysis; # collaborative skills: the ability to work in a team; # time-management skills: the ability to meet regular deadlines while balancing competing commitments
Related Course(s):	Master of Philosophy - Engineering Master of Science (Mathematics and Statistics) Ph.D.- Engineering
Related Majors/Minors/ Specialisations:	Mathematics and Statistics