MAST90063 Probability & Mathematical Statistics II

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 36 hours comprising one 2-hour lecture per week and one 1-hour practice class per week. Total Time Commitment: 3 contact hours and 7 hours private study per week.
Prerequisites:	The following subject, or equivalent:

Subject	Study Period Commencement:	Credit Points:
MAST20026 Real Analysis with Applications	Semester 1, Semester 2	12.50

Corequisites:	None
Recommended Background Knowledge:	It is recommended that students have completed a third year subject in probability and statistical inference equivalent to the following:

Subject	Study Period Commencement:	Credit Points:
MAST30020 Probability and Statistical Inference	Semester 1	12.50

Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering requests 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 for 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/
Coordinator:	Prof Konstantin Borovkov
Contact:	Email: **borovkov@unimelb.edu.au (mailto:borovkov@unimelb.edu.au)**
Subject Overview:	This is a measure theory based advanced level course on probability theory, with applications to the theory of point estimation. The subject introduces key concepts and presents formal derivations of a number of fundamental results from probability theory. The second part of the course is devoted to the statistical theory of point estimation, where the results presented in the first part play a crucial role.
Objectives:	After completing this subject students should: # have developed an understanding of the measure theoretic framework of modern probability theory; # have developed an understanding of the key limit theorems of Probability Theory and the techniques used to prove them; # have developed an understanding how these results are applied in Mathematical Statistics, especially in the context of Point Estimation.
Assessment:	Up to 40 pages of written assignments (20%: two assignments worth 10% each, due mid and late in semester), a 3-hour written examination (80%, in the examination period).

Prescribed Texts:	None
Recommended Texts:	TBA
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:	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: # 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 Science (Mathematics and Statistics)
Related Majors/Minors/ Specialisations:	Mathematics and Statistics