

EDUC90668 Teaching Chance and Data

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 24 hours. Total Time Commitment: 120 hours.
Prerequisites:	Enrolling students must have a teaching qualification either : # an undergraduate degree and a fourth-year level education qualification, or equivalent, or # a four-year education degree, or equivalent.
Corequisites:	None.
Recommended Background Knowledge:	Knowledge of mathematics to Year 10 level, and general knowledge of teaching practices in any subject.
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/
Coordinator:	Assoc Prof Robyn Pierce
Contact:	Education Student Centre
Subject Overview:	This subject examines the teaching of probability and statistics in junior secondary school from all perspectives. There will be a focus on the importance of teaching in context and on developing students' ability to communicate quantitative information clearly and correctly. It introduces the notion of statistical literacy and the importance of embedding the teaching of chance and data within real world contexts, developing students' critical thinking and ability to discuss, display and interpret quantitative data. Particular attention will be given to misconceptions commonly associated with measurement and chance. Strategies for engaging students in real problems, including practical work will be discussed. Participants will study the use of statistics software for teaching. Assessment practices of, for and as learning and effective questioning and orchestrating discussion is a focus. Practical teaching tasks will complement theory. Students will be expected to participate in intensive teaching, complete weekly exercises to satisfactory standard and regularly contribute to the electronic forum.
Objectives:	On completion of this subject, participants will be able to: # Discuss assessment practices ('of' and 'for' and 'as' learning); # Demonstrate understanding of statistical literacy and critical thinking; # Design experiments to collect data; displaying and interpreting quantitative data; descriptive statistics; probability concepts # Discuss junior secondary mathematics and associated issues in the light of contemporary national and international curriculum documents; # Demonstrate effective use of technology: spreadsheets, graphics calculators, internet for teaching # Discuss effective questioning and orchestrating productive classroom discussion. # Explain how the goals of working mathematically can be achieved through the teaching of chance and data.
Assessment:	Data collection and analysis task with reflective commentary (3000 words) due mid semester (60%)An issues paper illustrating student thinking and appropriate pedagogy. (2000 words)

	due end of semester. (40%)Hurdle Requirement. Students will be required to demonstrate an adequate level of mastery of mathematics knowledge at an advanced Year 10 level through successful completion of a written test.
Prescribed Texts:	Goos, M., Stillman, G., & Vale, C. (2007). Teaching secondary school mathematics: Research and practice for the 21st century. Sydney: Allen & Unwin Further readings will be provided. Special requirement Years 7-10. Handheld calculator or computer software recommended for use in the VCE subject Further Mathematics
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:	<ul style="list-style-type: none"> # Be skilled communicators who can effectively articulate and justify their mathematics teaching practices; # Understand the significance of developing their mathematics teaching practice on the basis of research evidence; # Demonstrate mastery of the subject matter for this area of teaching and of general principles of effective teaching and learning in a mathematics context, including with technology.
Related Course(s):	Postgraduate Certificate in Mathematics Teaching (Years 7-10)