460-590 Learning Area Mathematics (Additional) 2

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 2, - Taught on campus. Parkville, On Campus
Time Commitment:	Contact Hours: 36 hours Total Time Commitment: 125 hours total commitment
Prerequisites:	460-587 Learning Area Mathematics 1
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 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. 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
Coordinator:	Dr Helen Lesley Chick, Mr Peter John Flynn
Subject Overview:	This subject will focus on teaching and learning issues associated with developing school students' skills, strategies and dispositions for working mathematically. Themes to be considered include problem solving (including strategies and heuristics), mathematical modelling, extended investigations, real-world applications, integrating mathematics into other curriculum areas, project work, argumentation and conjecturing informal and formal proof, and the choice and use of technology to support mathematical work. Teacher candidates will examine a number of theories and theoretical perspectives on mathematical learning and how they inform teaching towards working mathematically.
Objectives:	On completion of this subject, teacher candidates will be able to: # Demonstrate an understanding of problem solving strategies and how to help school students to develop problem solving ability; # Demonstrate an understanding of mathematical modelling and applications and their importance in school students' mathematical learning; # Demonstrate the ability to foster school students' skills in mathematical conjecturing and reasoning; # Demonstrate an understanding of selected learning theories in mathematics education.
Assessment:	There are 3 assessment tasks: A report (1500 words) due early semester (37.5%) A report (1500 words) due mid semester (37.5%) An essay (1000 words) due end of semester (25%) There is 1 hurdle requirement: Completion of weekly tasks.
Prescribed Texts:	CAS calculator Goos, M., Stillman, G., Vale, C. (2007) Teaching Secondary Mathematics: Research and Practice for the 21st Century. Crows Nest NSW: Allen & Unwin
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:	On completion of this subject, teacher candidates will have the knowledge, skills and understanding to enable them to: # Be skilled communicators who can effectively articulate and justify their practices as knowledgeable agents of changes. # Be flexible and able to adapt to change through knowing how to learn; # Understand the significance of developing their practice on the basis of research evidence; # Work in teams with skills in cooperation, communication and negotiation; # Be independent of mind, responsible, resilient, self-regulating; # Have a conscious personal and social values base.
Related Course(s):	Master of Teaching (Secondary)