EDUC90457 Learning Area Mathematics 1

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: February, Parkville - Taught on campus. Parkville, On Campus
Time Commitment:	Contact Hours: 36 hours Total Time Commitment: 125 hours total commitment
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	Attendance at all classes (tutorial/seminars/practical classes/lectures/labs) is obligatory. Failure to attend 80% of classes will normally result in failure in the subject.
Coordinator:	Ms Lynda Ball
Contact:	Education Student Centre
Subject Overview:	This subject provides an orientation to the profession of mathematics teaching, to teaching mathematics in Victorian schools, and to Australian mathematics curricula. Teacher candidates will develop teaching skills and the pedagogical content knowledge for the effective teaching and learning of years 7-10 mathematics. They will consider the importance of numeracy to school students' further study and life chances, and explore the connections between numeracy and mathematics. Teacher candidates will consider Victorian curriculum documents, lesson planning, classroom assessment of and for learning, effective use of resources (e.g. technology, textbooks), and the provision of a balanced curriculum incorporating concepts, skills, applications and problem solving. A research-informed analysis of school students' mathematical understanding in selected topics will provide insight into teaching strategies to cater for school students' individual differences and personalise their learning. T eacher candidates will consider important pedagogical issues such as: questioning, selection of good examples, representations and models of mathematical ideas. Teacher candidates will form an appreciation of exemplary mathematics teaching, and develop reflective mathematics teaching practices.
Objectives:	On completion of this subject, teacher candidates will be able to: # Demonstrate pedagogical content knowledge for teaching years 7-10 mathematics; # Demonstrate knowledge of the Victorian years 7-10 mathematics curriculum; # Use research to inform teaching strategies to cater for school students' individual differences; # Reflect on and evaluate teaching practices to improve their own mathematics teaching; # Demonstrate the ability to plan effective mathematics lessons incorporating good teacher questions and appropriate examples, explanations and tasks; # Use resources, including technology, effectively in mathematics teaching; # Understand the components of a balanced curriculum; # Demonstrate a knowledge of how to assess mathematical understanding.
Assessment:	There are 3 assessment tasks: Lesson plan with pedagogical analysis (1,000 words equivalent) due early semester (25 per cent) A report critiquing resources for a given topic (1,500 words

	equivalent) due mid semester (37.5 per cent). Report on pedagogical issues associated with the teaching of a mathematical topic (1,500 words) due end of semester (37.5 per cent)
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) Master of Teaching (Secondary)