EDUC90426 Foundations of Mathematics Teaching

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 36 hours: 12 one hour lectures and 12 two hour workshops Total Time Commitment: 170 hours
Prerequisites:	Admission to the Master of Teaching (Secondary) A pass in a mathematics subject at Year 12
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	

Subject	Study Period Commencement:	Credit Points:
EDUC90457 Learning Area Mathematics 1	February	12.50
EDUC90458 Learning Area Mathematics 2	Semester 2	12.50
EDUC90459 Learning Area Mathematics (Additional) 1	February	12.50
EDUC90460 Learning Area Mathematics (Additional) 2	Semester 2	12.50

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 Caroline Bardini
Contact:	**wt.seah@unimelb.edu.au (mailto:wt.seah@unimelb.edu.au)**
Subject Overview:	This subject provides an introduction to teaching Years 7-9 mathematics in Victorian schools. Teacher candidates will develop pedagogical content knowledge of the mathematics content strands in the Australian curriculum, especially related to Algebra, Number, Statistics and Probability. In particular, in Number, they will consider strategies for developing school students' understanding of place value, fractions, decimals and percentages. Teacher candidates will consider curriculum (AusVELS) documents, lesson planning, effective use of resources (e.g. textbooks, technology), assessment and the provision of a balanced curriculum incorporating the four proficiency strands in the Australian curriculum: Understanding, Fluency, Problem Solving and Reasoning. Teacher candidates will consider important pedagogical issues such as: questioning, selection of good examples, representations and models of mathematical ideas to widen their understanding of what good mathematics teaching should be at years 7-9.

Learning Outcomes:	On completion of this subject teacher candidates will be able to: # demonstrate understanding of school students' learning in years 7-9 mathematics; # demonstrate knowledge of the Victorian years 7-9 mathematics curriculum; # demonstrate the ability to plan effective mathematics lessons incorporating good teacher questions and appropriate examples, explanations and tasks; # critically analyse teaching resources; # demonstrate a knowledge of how to assess mathematical understanding. The subject covers a range of the National Professional Standards for Teachers (for Graduate Teachers). In particular, the subject will contribute to students attaining the following standards: 2.6 Information and Communication Technology (ICT) 3.3 Use teaching strategies 3.4 Select and use resources
Assessment:	There are two assessment tasks: A report (2000 words equivalent) due mid-semester , 50% A written assignment on diagnosis and remediation of school students' mathematical misconceptions (2000 words) due end of semester, 50% There is 1 hurdle requirement: Teacher candidates will be required to demonstrate mastery in a mathematics test at Year 10 standard. They should prepare beforehand by working through current secondary school texts. This subject has a minimum hurdle requirement of 80% attendance at all tutorials, seminars and workshops.
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:	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)