460-516 Mathematics, Assessment and Learning

Credit Points:	12.500
Level:	Graduate/Postgraduate
Dates & Locations:	This subject is not offered in 2008. Parkville, On Campus
Time Commitment:	Contact Hours: 36 hours Total Time Commitment: 125 hours total commitment
Prerequisites:	460-504 Primary Mathematics 1460-515 Designing Personalised Learning
Corequisites:	460-515 Designing Personalised Learning
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:	Vicki Steinle
Subject Overview:	Teacher candidates will analyse the development of key concepts in primary mathematics and identify critical progression points for children's learning. They will identify the importance to progress of factors such as computational fluency and number sense, encapsulation of processes as concepts, confidence in learning and metacognitive skills. They will consider typical conceptions and misconceptions held by children, their likely causes, and teaching strategies for changing them. There will be an in-depth study of Australian early years numeracy programs and the major intervention programs. Teacher candidates will investigate the design and use of targeted diagnostic tools to evaluate mathematical understanding, and will identify the advantages and limitations of particular assessment items for monitoring children's procedural and conceptual knowledge. Teacher candidates will examine teaching strategies to address identified learning needs. They will learn to interpret children's mathematical responses, and devise appropriate teaching. Teacher candidates will consider assessment schemes for children's understanding (e.g., early years interview, AIM) and the use of school and state-wide data to improve school students' learning. They will work together to design and test plans for improvement.
Assessment:	There are 2 assessment tasks: A literature review (1500 words) due mid semester (37.5%) A report (2500 words) due end of semester (62.5%) There is 1 hurdle requirement: Satisfactory completion of weekly tasks.
Prescribed Texts:	Zevenbergen, R., Dole, S., & Wright, R. J. (2004). Teaching Mathematics in Primary Schools. Allen & Unwin. Collection of readings.
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 be able to: # Demonstrate understanding of key progression points in the development of mathematical understanding in the primary school

	# Demonstrate an understanding of how children construct mathematical knowledge # Demonstrate knowledge of a range of teaching techniques available to help school students develop mathematical understanding # Demonstrate a knowledge of how to assess mathematical understanding and interpret school students' reasoning # Demonstrate understanding of individual differences in school students. 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 change. # 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 (Primary)