EDUC90688 Numeracy: Improving Learning

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 24 Total Time Commitment: 170 hours
Prerequisites:	None
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:	Mrs Catherine Pearn
Contact:	**cpearn@unimelb.edu.au (mailto:cpearn@unimelb.edu.au)**
Subject Overview:	This subject is concerned with improving the learning outcomes for students in primary and secondary schools in selected hard-to-teach topics that are central to numeracy. It will considerably enhance the numeracy-specific pedagogical content knowledge of the participants. A detailed study of the conceptual growth along a developmental continuum that is required for making progress in key areas of mathematics will be undertaken. Participants will learn to conduct ‘assessment for learning’ in a way that is instructionally highly effective. Diagnostic assessments will be reviewed, critiqued and created, and used with sample students. Teaching methods that promote conceptual growth will be reviewed, with relevant research. All topics will be examined through the lens of current Australian and international educational policies.
Learning Outcomes:	On completion of the subject students will be able to # demonstrate practical and theoretical knowledge of the developmental continuum for learning some central topics of mathematics # analyse curriculum sequences and lessons to assess their potential for promoting conceptual growth and other key mathematical competencies # describe and analyse the policies and findings of major contemporary mathematics curriculum initiatives related to improving learning # provide leadership in an educational setting in improving the learning of mathematics and numeracy.
Assessment:	There are three pieces of assessment: Oral presentation (15 minutes) on the mathematical understandings of a small number of students in a defined area of mathematics/numeracy, with supporting documentation. 1000 words. Mid-semester (10%) Design and analysis of a lesson sequence that will improve school outcomes in a defined area of numeracy, with reference to research findings. 2000 words. End of semester. (45%) Literature review on students’ conceptual growth of one mathematical topic. 2000 words. End of semester (45%) This subject

	has a minimum hurdle requirement of 80% attendance at all tutorials, seminars and workshops. Professional practice placements require 100% attendance.
Prescribed Texts:	Goos, M., Stillman, G., & Vale, C. (2007). Teaching secondary school mathematics: Research and practice for the 21st century. Sydney: 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:	Students completing this subject should be able to: # demonstrate a superior knowledge and understanding of theory and practice relating to numeracy and mathematics learning; # have an understanding of the theory and practice of educational research needed to evaluate research literature and carry out appropriate research activity; # make effective use of the findings of educational writings and research in improving student mathematics and numeracy learning; # have the depth of knowledge and understanding of student learning trajectories, appropriate teaching methodologies and professional development techniques that will enable them to be a resource for colleagues.
Related Course(s):	Master of Education Master of Education Master of Numeracy