EDUC90615 Mathematics: Teaching with Technology

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:	You cannot undertake this subject if you have completed:

Subject	Study Period Commencement:	Credit Points:
EDUC90014 Teaching Mathematics with CAS	Not offered 2016	25
EDUC90023 Learning Mathematics with Technology	Not offered 2016	25

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 Lynda Ball
Contact:	**lball@unimelb.edu.au (mailto:lball@unimelb.edu.au)**
Subject Overview:	This subject examines how the teaching of mathematics in upper primary and secondary schools and beyond can be enhanced by the use of new computer and calculator technologies. The impact on curriculum, on presentation, on teaching, on assessment and on ways of doing mathematics will be considered. The main focus will be on the use of software and calculators that are mathematically able, open platforms that provide opportunities for changed pedagogies. Participants will have the opportunity to develop new skills for teaching with technology, to study theories underlying educational uses and theories of representation in mathematics, and to review products and examine their educational uses. Participants will select a specialisation in technology appropriate to the age group of most interest.
Learning Outcomes:	Students completing this subject will # develop advanced skills in the use of selected computer and calculator technologies for teaching mathematics; # understand the nature of the pedagogical opportunities provided by new technologies and how they can best be exploited; # be able to analyse aspects of teaching with technology in terms of current educational theories; # be able to devise and critique educational materials that use new technologies.

Assessment:	A 15 minute oral presentation and accompanying documentation, demonstrating a specific use of teaching with technology, which highlights a key concern or opportunity. 1000 words equivalent. 20 per cent. During subject. An article suitable for a professional journal that provides advice for teachers on a specific aspect of teaching mathematics with technology. 2500 words. 50 per cent.End of subject. A pedagogical analysis of the use of technology in one carefully selected lesson. 1500 words. 30 per cent. Mid-subject. Active contribution, including demonstration of technology skills, in at least 80% of sessions. Hurdle requirement. 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:	Students completing this subject should be able to: # demonstrate a superior knowledge and understanding of educational theory and practice in general and as it applies to teaching mathematics with technology; # express informed opinions about teaching mathematics with technology; # 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 addressing professional problems; # have the depth of knowledge and understanding that will enable them to be a resource for colleagues in particular professional situations.
Related Course(s):	Master of Education Master of Education Master of Numeracy