

EDUC90615 Mathematics: Teaching with Technology

| Credit Points: | 12.50 | | | | | | | | | |
|--|--|----------------|----------------------------|----------------|---|------------------|----|--|------------------|----|
| Level: | 9 (Graduate/Postgraduate) | | | | | | | | | |
| Dates & Locations: | 2011, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus. | | | | | | | | | |
| Time Commitment: | Contact Hours: 24 hours. Total Time Commitment: 125 hours. 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. | | | | | | | | | |
| Prerequisites: | None | | | | | | | | | |
| Corequisites: | None | | | | | | | | | |
| Recommended Background Knowledge: | None | | | | | | | | | |
| Non Allowed Subjects: | You cannot undertake this subject if you have completed: <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>EDUC90014 Teaching Mathematics with CAS</td> <td>Not offered 2011</td> <td>25</td> </tr> <tr> <td>EDUC90023 Learning Mathematics with Technology</td> <td>Not offered 2011</td> <td>25</td> </tr> </tbody> </table> | Subject | Study Period Commencement: | Credit Points: | EDUC90014 Teaching Mathematics with CAS | Not offered 2011 | 25 | EDUC90023 Learning Mathematics with Technology | Not offered 2011 | 25 |
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| EDUC90023 Learning Mathematics with Technology | Not offered 2011 | 25 | | | | | | | | |
| Core Participation Requirements: | For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the HDisability Liaison Unit websiteH: Hhttp://www.services.unimelb.edu.au/disability/H | | | | | | | | | |
| Coordinator: | Assoc Prof Robyn Pierce | | | | | | | | | |
| Contact: | Education Student Centre | | | | | | | | | |
| 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. | | | | | | | | | |
| Objectives: | Students completing this subject will <ul style="list-style-type: none"> # 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 | | | | | | | | | |

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| | 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. |
| 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: | <p>Students completing this subject should be able to:</p> <ul style="list-style-type: none"> # 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): | <p>Master of Education (Stream 100B)Coursework Master of Education (Stream 150)</p> |