

# EDUC90457 Learning Area Mathematics 1

<b>Credit Points:</b>	12.5
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	2015, Parkville This subject commences in the following study period/s: February, Parkville - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: 36 hours Total Time Commitment: 170 hours
<b>Prerequisites:</b>	Teacher Candidates must meet the minimum academic study requirements for teaching in specialist areas, in accordance with the Victorian Institute of Teaching's <b>Specialist Area Guidelines</b> ( <a href="http://www.vit.vic.edu.au/finditfast/Teacher-education-programs/Pages/Assessmentofqualifications.aspx">http://www.vit.vic.edu.au/finditfast/Teacher-education-programs/Pages/Assessmentofqualifications.aspx</a> ), for entry into this subject.
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	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 Disability Liaison website: <a href="http://www.services.unimelb.edu.au/disability">http://www.services.unimelb.edu.au/disability</a>
<b>Coordinator:</b>	Dr Lynda Ball
<b>Contact:</b>	<b>Contact Us</b> ( <a href="https://enquiry.app.unimelb.edu.au/?cc=MGSE-ALL&amp;fn=MGSE">https://enquiry.app.unimelb.edu.au/?cc=MGSE-ALL&amp;fn=MGSE</a> ) Call: 13 MELB (13 6352)
<b>Subject Overview:</b>	<p>This subject provides an orientation to teaching Years 7-10 mathematics in Victorian schools. Teacher candidates will develop pedagogical content knowledge for the effective teaching and learning of the following mathematics strands in the Australian curriculum:</p> <ul style="list-style-type: none"> <li># Content Strands: Number and Algebra, Measurement and Geometry, Statistics and Probability</li> <li># Proficiency Strands: Understanding, Fluency, Problem Solving, Reasoning.</li> </ul> <p>Teacher candidates will consider curriculum documents, lesson planning, classroom assessment of and for learning, effective use of resources (e.g. technology, textbooks), and the provision of a balanced curriculum incorporating the four proficiency strands above.</p> <p>A research-informed analysis of school students' mathematical understanding in selected topics will provide insight into teaching strategies to cater for school students' individual differences and personalise their learning.</p> <p>Teacher candidates will consider important pedagogical issues such as: questioning, selection of good examples, representations and models of mathematical ideas. Teacher candidates will form an appreciation of exemplary mathematics teaching, and develop reflective mathematics teaching practices.</p>
<b>Learning Outcomes:</b>	<p>On completion of this subject, teacher candidates will be able to:</p> <ul style="list-style-type: none"> <li># Demonstrate pedagogical content knowledge for teaching years 7-10 mathematics;</li> <li># Demonstrate knowledge of the Victorian years 7-10 mathematics curriculum;</li> <li># Use research to inform teaching strategies to cater for school students' individual differences;</li> </ul>

	<ul style="list-style-type: none"> <li># Reflect on and evaluate teaching practices to improve their own mathematics teaching;</li> <li># Demonstrate the ability to plan effective mathematics lessons incorporating good teacher questions and appropriate examples, explanations and tasks;</li> <li># Use resources, including technology, effectively in mathematics teaching;</li> <li># Understand the components of a balanced curriculum;</li> <li># Demonstrate a knowledge of how to assess mathematical understanding.</li> </ul> <p>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:</p> <p>1.2 Understand how students learn  1.5 Differentiate teaching to meet the specific learning needs of students across the full range of abilities  2.1 Content and teaching strategies of the teaching area  2.2 Content selection and organisation  2.3 Curriculum, assessment and reporting  2.6 Information and Communication Technology (ICT)  3.3 Use teaching strategies  3.4 Select and use resources  5.1 Assess student learning  5.4 Interpret student data</p>
<b>Assessment:</b>	There are 2 assessment tasks: A report critiquing resources for a given topic (2000 words equivalent) due mid-semester, 50%. Report on pedagogical issues associated with the teaching of a topic (2000 words equivalent) due end of semester, 50%. 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.
<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<p>On completion of this subject, teacher candidates will have the knowledge, skills and understanding to enable them to:</p> <ul style="list-style-type: none"> <li># Be skilled communicators who can effectively articulate and justify their practices as knowledgeable agents of changes.</li> <li># Be flexible and able to adapt to change through knowing how to learn;</li> <li># Understand the significance of developing their practice on the basis of research evidence;</li> <li># Work in teams with skills in cooperation, communication and negotiation;</li> <li># Be independent of mind, responsible, resilient, self-regulating;</li> <li># Have a conscious personal and social values base.</li> </ul>
<b>Related Course(s):</b>	Master of Teaching (Secondary) Master of Teaching (Secondary)