

## EDUC90669 Teaching Algebra

<b>Credit Points:</b>	12.5
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	This subject is not offered in 2016.
<b>Time Commitment:</b>	Contact Hours: 24 Total Time Commitment: 170 hours
<b>Prerequisites:</b>	None
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	Knowledge of mathematics to Year 10 level, and general knowledge of teaching practices in any subject.
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	<p>&lt;p&gt;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.&lt;/p&gt;         &lt;p&gt;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: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>
<b>Contact:</b>	This subject is not offered in 2016.
<b>Subject Overview:</b>	<p>This subject explores the content and pedagogical content knowledge needed to teach the Algebra strand in junior secondary mathematics, including expressing generality, functions and graphs, equations and algebraic properties of number. Participants will study research on students' mathematical thinking and effective teaching methods, analyse major teaching resources including instructional software, spreadsheets and graphics calculators. Methods of planning units of work and longer sequences will be a focus. Research and practice on teaching for procedural fluency and conceptual understanding, will be reviewed. Practical teaching tasks will complement theory.</p> <p>Students will be expected to participate in intensive teaching, complete weekly exercises to satisfactory standard and regularly contribute to the electronic forum.</p>
<b>Learning Outcomes:</b>	<p>On completion of this subject, participants will be able to</p> <ul style="list-style-type: none"> <li># give overview of the content of this strand of mathematics</li> <li># demonstrate insight into student thinking</li> <li># review the options for teaching of the strand and relevant research</li> <li># explain how the goals of working mathematically can be achieved through this strand</li> <li># discuss critical pedagogical issues, especially related to developing fluency and understanding and use of technology.</li> </ul>
<b>Assessment:</b>	Report on algebra curriculum (1500 words) due mid semester. (30%) Unit plan and related pedagogical analysis (3500 words) due end of semester. (70%) This subject has a minimum hurdle requirement of 80% attendance at all tutorials, seminars and workshops.
<b>Prescribed Texts:</b>	Goos, M., Stillman, G., & Vale, C. (2007). Teaching secondary school mathematics: Research and practice for the 21st century. Sydney: Allen & Unwin Further readings will be provided. Special requirement Years 7-10. Handheld calculator or computer software recommended for use in the VCE subject Further Mathematics.
<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>	<ul style="list-style-type: none"><li># Be skilled communicators who can effectively articulate and justify their mathematics teaching practices;</li><li># Understand the significance of developing their mathematics teaching practice on the basis of research evidence;</li><li># Demonstrate mastery of the subject matter for this area of teaching and of general principles of effective teaching and learning in a mathematics context, including with technology.</li></ul>