

## EDUC90667 Teaching Measurement and Geometry

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| <b>Credit Points:</b>                    | 12.5  |
| <b>Level:</b>                            | 9 (Graduate/Postgraduate)   |
| <b>Dates &amp; Locations:</b>            | This subject is not offered in 2015.  |
| <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>  | 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 Overview, Learning Outcomes 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>Contact:</b>                          | <b>Contact Us (<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>)</b><br>Call: 13 MELB (13 6352)  |
| <b>Subject Overview:</b>                 | This subject explores the content and pedagogical content knowledge needed to teach the Space and Measurement strands in junior secondary mathematics, including units and conversions, area and volume, practical measuring and measurement error, trigonometry, visualisation in 2D and 3D, transformations and geometry. Participants will study research on students' mathematical thinking and effective teaching methods, analyse major teaching resources including dynamic geometry, instructional software and applets. Engaging students in mathematics and developing a productive disposition; equity in mathematics learning (e.g. gender). Practical teaching tasks will complement theory. Students will be expected to participate in intensive teaching, completion of weekly exercises to satisfactory standard and regularly contribute to the electronic forum. |
| <b>Learning Outcomes:</b>                | On completion of this subject, participants will be able to: <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 engaging students, achieving equity and developing a productive disposition.</li> </ul>   |
| <b>Assessment:</b>                       | Report (2000 words equivalent) due mid semester (40%) Unit plan and related pedagogical analysis (3000 words) due end of semester (60%) 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>                 | 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>   |

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| <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> |
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