EDUC90835 Primary Mathematics Education3 Extension

Credit Points:	6.25
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 18 hours Total Time Commitment: 85 hours
Prerequisites:	

Subject	Study Period Commencement:	Credit Points:
EDUC90834 Primary Mathematics Education2 Extension	Semester 2	6.25

Corequisites:

Subject	Study Period Commencement:	Credit Points:
EDUC90771 Professional Practice & Seminar Prim 4	Semester 2	6.25

Recommended Background Knowledge: None

Non Allowed Subjects:

Subject	Study Period Commencement:	Credit Points:
EDUC90776 Primary Mathematics Education 3	Semester 2	6.25

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

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Subject Overview:

Teacher candidates will develop pedagogical content knowledge for the effective teaching and learning of the following mathematics content and proficiency strands from Foundation to Level 6:

Content Strand: Statistics and Probability
Proficiency Strands: Understanding, Fluency, Problem Solving, Reasoning.

Within this content strand, Candidates will analyse the development of key concepts in primary mathematics and identify critical progression points for children’s learning. They will consider typical conceptions and misconceptions held by children, their likely causes, diagnostic tools to diagnose them and teaching strategies for changing them.

Teacher candidates will learn to critically evaluate mathematics programs, materials and teaching methods. Teacher candidates will develop a mathematics unit in Statistics and Probability for use in primary mathematics classrooms.

	Candidates will consider research evidence related to selected key issues of teaching Statistics and Probability. They will examine cognitive and affective characteristics of mathematics classrooms that encourage deep learning in these content areas and in the proficiency strands. Candidates will be assisted to develop leadership skills to enable them to become future leaders of mathematics/numeracy in their future careers.
Learning Outcomes:	On completion of this subject, with respect to the strands above, Teacher Candidates will be able to: # Demonstrate a deep understanding of how children construct mathematical knowledge; # Demonstrate expert knowledge of a range of classroom teaching techniques; # Demonstrate expert knowledge of how children think and learn; # Demonstrate an outstanding ability to develop teaching activities and relate them to learning outcomes that cater for a diverse range of students; # Demonstrate understanding of alternative approaches to the teaching of mathematics across a primary school; # Critically evaluate mathematics programs, materials and teaching methods; # Demonstrate an ability to develop a mathematics unit for use in primary classrooms; # Effectively engage students, parents, community members, and professional colleagues to support student learning and development; and # Demonstrate the ability to maintain effective, ethical and respectful relationships with all involved in the learning community.
Assessment:	An evidence/research-based critique of a range of mathematical investigations (1,000 words) due mid-semester (50%) A continuum of technology integration across the Statistics & Probability content strand (choose either Statistics or Probability) of the primary mathematics curriculum (1000 words) due end of semester (50%) This subject has a minimum hurdle requirement of 80% attendance at all scheduled lectures, tutorials, seminars and workshops.
Prescribed Texts:	Reys, R.E., Lindquist, M.L., Lambdin, D.V., Smith, N.L., Rogers, A., Falle, J., Frid, S., & Bennett, S. (2012). Helping Children Learn Mathematics, 1st Australian Edition, Melbourne: John Wiley.
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:	On completion of this subject, teacher candidates will have the knowledge, skills and understanding to enable them to: # Be skilled communicators who can effectively articulate and justify their teaching practices; # Be flexible and able to adapt to change through knowing how to learn; # Understand the significance of developing their practice on the basis of research evidence; # Work in teams with skills in cooperation, communication and negotiation; # Be responsible, resilient, self-regulating and independent of mind; # Have a conscious personal and social values base.