

EDUC90473 Learning Area Science 1

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: February, Parkville - Taught on campus. Parkville
Time Commitment:	Contact Hours: 36 hours Total Time Commitment: 125 hours total commitment
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	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.
Coordinator:	Dr Maurizio Toscano
Contact:	Education Student Centre
Subject Overview:	This subject prepares teacher candidates for teaching secondary school general science in years 7-10. Teacher candidates will use, develop and critically evaluate resources for teaching secondary science within the contexts of the physical, chemical, biological, earth and space sciences. In particular, they will draw upon and elaborate the science curriculum guidelines outlined in the Victorian Essential Learning Standards documents. Teacher candidates will analyse their own and others' use of classroom demonstrations, modelling techniques, production of scientific artefacts, use of Information and Communication Technology and practical work. They will also use the science education literature to inform their teaching practices and engage in debates about the nature and purpose of science and science education. A combined science component, shared with the other science methods, has a focus on the design and management of the general science curriculum and teaching in years 7-10. This is taught partly with pupils in small groups in school classrooms, special topic workshops, and excursions. Teacher candidates will be introduced in practice to the use of research on children's naïve conceptions in various science topics, principles of constructivist teaching, socially situated and peer-based learning, lesson planning, laboratory and classroom management and laboratory safety.
Objectives:	On completion of this subject, teacher candidates will be able to: <ul style="list-style-type: none"> # Be skilled teachers of science with the theoretical frameworks and practical ability to produce effective learning for a wide range of students, including in junior science; # Display a solid current knowledge of the sciences, educational contexts and how they interact in effective pedagogy; # Understand the links between effective planning teaching and evaluation in science; # Use a variety of technologies in the classroom to assist learning in science classes; # Apply science understandings to familiar and new contexts; # Analyse issues and implications relating to scientific and technological developments and analyse and evaluate the reliability of information and opinions presented in the public domain.
Assessment:	There are 3 assessment tasks for this subject. A portfolio of teaching resources (1200 words) due end of semester (30%) A report addressing a research question with reference to the literature and teaching experiences (1500 words) due mid semester (36%) EITHER a unit box on junior science OR a set of workshop productions (equivalent to 1300 words) due end of semester (34%) NOTE: Teacher candidates doing one LAS Science subject will do one of these tasks. Teacher candidates doing 2 LAS Science subjects will do both, one in each of their LAS subjects.

Prescribed Texts:	VCAA (2006) Victorian Essential Learning Standards Collection of readings
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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>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"> # Be skilled communicators who can effectively articulate and justify their practices as knowledgeable agents of change. # 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 independent of mind, responsible, resilient, self-regulating. # Have a conscious personal and social values base.
Related Course(s):	<p>Master of Teaching (Secondary) Master of Teaching (Secondary)</p>