460-559 Learning Area Biology 1

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus. Parkville, On Campus
Time Commitment:	Contact Hours: 36 hours Total Time Commitment: 125 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
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
Coordinator:	Dr Roderick Alan Fawns
Subject Overview:	The subject explores the rationale, resources, methodology and specific techniques appropriate to teaching, learning and assessing Biology, including the current VCE Study Design Units 1 and 3 and VELS. Teaching skills in biological investigation and inquiry, application of biological understandings and communication of biological information and understandings will be developed. In VCE Study Design Unit 1 the emphasis is on cell microstructures and functions and systems in functioning organisms and taxonomical research. In Unit 3 the emphasis is on molecular and biochemical processes and medical technologies: investigating DNA structure and proteomics and its application in medicine, cell communication and bioinformatics. 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: # Show theoretical frameworks and practical ability to produce effective learning for a wide range of school students, including in junior science; # Display a solid knowledge of the biological sciences, and educational contexts and how they interact in effective pedagogy; # Understand the links between effective planning teaching and evaluation in biology; # Use a variety of technologies in the classroom to assist learning in biology classes; # Apply biological 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 2 assessment tasks for this subject. Lesson plans for Biology (2700 words) due end of semester, with individual components due throughout the semester (66%) 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) VCE Biology Study Design. VCAA(2006) Victorian Essential Learning Standards A collection of readings
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 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):	Master of Teaching (Secondary)