EDUC90469 Learning Area Physics 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 toatl 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 Pam Mulhall
Contact:	Education Student Centre
Subject Overview:	This subject prepares teacher candidates for the teaching of secondary school physics. Pedagogical methods approaches appropriate to physics are covered. These include classroom instruction, practical laboratory work, and the use of Information and Communication Technology. The subject prepares students to teach and assess VCE students' understandings as outlined in the Victorian Certificate of Education Physics Study Design, Units 1 and 3. In addition, some coverage is devoted to physics as outlined in the Victorian Essential Learning Standards for years 7-10, the International Baccalaureate curriculum, and specific areas of the VCE course unlikely to be familiar to teacher candidates. 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: # Be skilled teachers of physics with the theoretical frameworks and practical ability to produce effective learning for a wide range of students; # Display a solid current knowledge of the physical sciences, educational contexts and how they interact in effective pedagogy; # Understand the links between effective planning teaching and evaluation in physics; # Use a variety of technologies in the classroom to assist learning in physics classes; # Apply physics 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 Physics (2, 700 words) due end of semester, with individual components due through out 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 (2005) VCE Physics Study Design. VCAA (2006) Victorian Essential Learning Standards 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) Master of Teaching (Secondary)