

# EDUC90469 Learning Area Physics 1

<b>Credit Points:</b>	12.50
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	2012, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus. Parkville
<b>Time Commitment:</b>	Contact Hours: 36 hours Total Time Commitment: 125 hours total commitment. 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>Prerequisites:</b>	None
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<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 Description, Subject Objectives, Generic Skills 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 HDisability Liaison Unit website: <a href="http://www.services.unimelb.edu.au/disability/H">http://www.services.unimelb.edu.au/disability/H</a>
<b>Coordinator:</b>	Dr Pam Mulhall
<b>Contact:</b>	Education Student Centre
<b>Subject Overview:</b>	<p>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, particularly 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 K-10 draft Australian Curriculum, and specific areas of the VCE course unlikely to be familiar to teacher candidates.</p> <p>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 through practice with pupils in small groups in school classrooms, and through workshops and excursions delivered by Science education experts. Teacher candidates will be introduced 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.</p> <p>ICT is treated as an integral part of contemporary science teaching practice; where appropriate it is used to support and enhance conceptual understanding and teaching practice.</p>
<b>Objectives:</b>	<p>On completion of this subject, teacher candidates will be able to:</p> <ul style="list-style-type: none"> <li>• Be skilled teachers of physics with the theoretical frameworks and practical ability to produce effective learning for a wide range of students;</li> <li>• Display a solid current knowledge of the physical sciences, educational contexts and how they interact in effective pedagogy;</li> <li>• Understand the links between effective planning teaching and evaluation in physics;</li> </ul>

	<ul style="list-style-type: none"> <li>• Use a variety of technologies in the classroom to assist learning in physics classes;</li> <li>• Apply physics understandings to familiar and new contexts;</li> <li>• 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;</li> <li>• Demonstrate the knowledge, skills and abilities to use ICT to support student learning and professional practice.</li> </ul>
<b>Assessment:</b>	There are 3 assessment tasks for this subject. Lesson planning task for VCE Physics (800 words) 22%, due mid-semester Unit design task for VCE Physics (1200 words) 45%, due end of semester Either a practice-based reflective task (equivalent 1300 words) due mid-semester, 33% OR a project exploring pedagogical strategies (equivalent 1300 words) due end of semester, 33% NOTE: Teacher candidates doing one LA science subject will submit the practice-based reflective task while those doing 2 LA science subjects will submit both assessment tasks listed in dot point 3, completing one for each of their LA science subjects. There is one hurdle requirement (a brief in-class presentation).
<b>Prescribed Texts:</b>	<ul style="list-style-type: none"> <li>• VCAA(2008) VCE Physics Study Design (also available online)</li> <li>• VCAA( 2008) Victorian Essential Learning Standards (also available online)</li> <li>• Australian Curriculum, Assessment and Reporting Authority (ACARA) website</li> <li>• A collection of readings</li> </ul>
<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>
<b>Generic Skills:</b>	<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"> <li># Be skilled communicators who can effectively articulate and justify their practices as knowledgeable agents of change.</li> <li># Be flexible and able to adapt to change through knowing how to learn.</li> <li># Understand the significance of developing their practice on the basis of research evidence.</li> <li># Work in teams with skills in cooperation, communication and negotiation.</li> <li># Be independent of mind, responsible, resilient, self-regulating.</li> <li># Have a conscious personal and social values base.</li> </ul>
<b>Related Course(s):</b>	<p>Master of Teaching (Secondary) Master of Teaching (Secondary)</p>