# EDUC90470 Learning Area Physics 2

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| **Credit Points:** | 12.50 |
| **Level:** | 9 (Graduate/Postgraduate) |
| **Dates & Locations:** | 2010, Parkville<br>This subject commences in the following study period/s:<br>Semester 2, Parkville - Taught on campus.<br>Parkville |
| **Time Commitment:** | Contact Hours: 36 hours Total Time Commitment: 125 hours total commitment |
| **Prerequisites:** | You must have successfully completed the following subject/s prior to enrolling in this subject |

| Subject | Study Period Commencement: | Credit Points: |
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| EDUC90469 Learning Area Physics 1 | February | 12.50 |

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| **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, especially VCE Physics Units 2 and 4. Pedagogical methods and learning and teaching approaches appropriate to physics are covered. These include the use of classroom instruction, practical laboratory work, and the use of Information and Communication Technology. The subject also explores assessment of physics. 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. In combined science, shared with the other science methods, teacher candidates will employ in practice research on children's naïve conceptions in different Years 7 – 10 science topics, and develop skills in managing communication in peer based learning. Workshops and excursions will strengthen particular content areas. School visits will introduce models of department management and associated career options. |
| **Objectives:** | On completion of this subject, teacher candidates will be able to:;<br># Be skilled teachers of physics with the theoretical frameworks and practical ability to produce effective learning for a wide range of students, including in junior science;<br># Display a solid current knowledge of the physical sciences, educational contexts and how they interact in effective pedagogy;<br># Understand the links between effective planning teaching and evaluation in physics;<br># Use a variety of technologies in the classroom to assist learning in physics classes;<br># Apply physics understandings to familiar and new contexts;<br># 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: Unit plan, due end of semester (2700 words, 66%) EITHER a report on peer-based teaching 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. There is 1 hurdle requirement: • Weekly written tasks |

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| **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:<br># Be skilled communicators who can effectively articulate and justify their practices as knowledgeable agents of change.<br># Be flexible and able to adapt to change through knowing how to learn.<br># Understand the significance of developing their practice on the basis of research evidence.<br># Work in teams with skills in cooperation, communication and negotiation.<br># Be independent of mind, responsible, resilient, self-regulating.<br># Have a conscious personal and social values base. |
| **Links to further information:** | www.education.unimelb.edu.au |
| **Related Course(s):** | Master of Teaching (Secondary)<br>Master of Teaching (Secondary) |