EDUC90433 Learning Area Chemistry 1

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2013.
Time Commitment:	Contact Hours: 36 hours. Total Time Commitment: 125 hours. 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.
Prerequisites:	Teacher Candidates must meet the minimum academic study requirements for teaching in specialist areas, in accordance with the Victorian Institute of Teaching's **Specialist Area Guidelines (http://www.vit.vic.edu.au/finditfast/Teacher-education-programs/Pages/Assessmentofqualifications.aspx)** , for entry into this subject.
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 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 Disability Liaison website: http://www.services.unimelb.edu.au/disability
Contact:	Education Student Centre 234 Queensberry Street Phone: +61 3 8344 8285
Subject Overview:	This subject explores the rationale, methodology and teaching techniques relevant to the teaching of VCE Chemistry, especially VCE Units 1 and 3. General teaching techniques of Chemistry are also emphasized in junior Science, including laboratory work, demonstrations and safety in the use of chemicals and equipment. The subject covers practical and theoretical aspects of planning engaging lessons and units of work in VCE Chemistry. Chemistry has conceptual complexities, like the Mole, which baffle secondary students. Very small scale particles and forces have to be used to explain macroscopic phenomena. An introduction to assessment in Chemistry will also be taught in this subject. 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. Teacher candidates will explore pedagogical strategies to engage science learners in the middle years of secondary school. 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 student'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. 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.
Objectives:	On completion of this subject, teacher candidates will be able to: # Be skilled teachers of chemistry 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 chemical sciences, and educational contexts and how they interact in effective pedagogy, # Understand the links between effective planning teaching and evaluation in chemistry, # Use a variety of technologies in the classroom to assist learning in chemistry classes,

	# Apply chemical 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, # Demonstrate the knowledge, skills and abilities to use ICT to support student learning and professional practice. The subject covers a range of the National Professional Standards for Teachers (for Graduate Teachers). In particular, the subject will contribute to students attaining the following standards: 2.1 Content and teaching strategies of the teaching area 3.3 Use teaching strategies 3.4 Select and use resources 3.5 Use effective classroom communication 4.1 Support student participation 4.4 Maintain student safety 5.1 Assess student learning
Assessment:	There are three assessment tasks: 10 minute presentation (including 5 minutes discussion) of VCE Chemistry relevant to units 1 or 3, plus an 800-word written description due after mid-semester, 33% Introductory Chemistry Teaching Plan, 1400 words, due end-semester , 34% 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%
Prescribed Texts:	VCAA, VCE Chemistry Study Design, VCAA, 2005 (extended to 2015)
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 the course, teacher candidates will have the knowledge, skills and understanding to enable them to: # Understand Secondary education as part of a spectrum of learning and development, linked to primary schooling and to post-schooling outcomes of further study and/or employment. # Develop in-depth knowledge of the complexity and diversity of primary students' learning and development. # Be expert in the disciplines they teach and committed to continual updating of their discipline knowledge. # Be able to intelligently and creatively plan, implement and critique mandated curriculum. # Be able to use data to identify and address the learning needs and capacities of individual students. # Be able to intentionally draw on a range of teaching practices to extend individual student's learning and development. # Shape and deliver responsive and inclusive curricula. # Be a self-reflective teacher who can work constructively and innovatively through relationships with parents, colleagues and the community across a range of contexts.
Related Course(s):	Master of Teaching (Secondary) Master of Teaching (Secondary)