Course Outline (Higher Education)

School: School of Education

Course Title: SENIOR SCIENCE CURRICULUM 2

Course ID: EDMAS6118

Credit Points: 15.00

Prerequisite(s): (EDMAS6018)

Co-requisite(s): Nil

Exclusion(s): Nil

ASCED: 070105

Description of the Course :

This course is designed to follow on from Senior Science Curriculum 1 focusing on curriculum and pedagogy in the Senior Science specialist teaching area for undergraduate Pre-Service Teachers.Pre-service teachers will develop confidence and competence in teaching Physics, Chemistry, Environmental Science, or Biology at VCE level. They will develop skills in course and unit planning, pedagogy, assessment and reporting and will further develop their knowledge of the field of Science as it relates to education.

Grade Scheme: Graded (HD, D, C, etc.)

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks..

Program Level:

AQF Level of Program						
	5	**6**	**7**	**8**	**9**	**10**
Level						
Introductory						
Intermediate						
Advanced					✔	

Learning Outcomes:

Knowledge:

Course Outline (Higher Education)

EDMAS6118 SENIOR SCIENCE CURRICULUM 2

K1. Articulate a sound knowledge of the VCE Study Designs in Biology, Chemistry, Physics or Environmental Science particularly in Units 2 and 4.

K2. Display a cohesive knowledge of the appropriate Biological, Chemical, Physical or Environmental science, and how they interact in effective teaching.

K3. Understand the rationale, methodology and teaching strategies relevant to VCE Biology, Chemistry, Physics or Environmental Science.

K4. Design detailed teaching plans for Units 2 and 4 and within the Unit framework design lesson plans, unit plans and area of study plans which integrate a range of activities, resources and materials to support learning, including the use of ICT and other learning technologies.

K5. Identify and examine the links between effective planning, teaching, and assessment areas, specifically School Assessed Coursework in Unit 4.

Skills:

S1. Devise valid methods for assessment in VCE Units 2 and 4, in line with VCE guidelines for Biology, Chemistry, Physics or Environmental Science.

S2. Trial and evaluate teaching approaches for Biology, Chemistry, Physics or Environmental Science using theoretical frameworks and practical ability to produce effective learning for a wide range of students.

S3. Select and use a variety of technologies in the classroom in order to assist learning.

S4. Design, implement, assess and report on School Assessed Coursework in VCE Units 3 and 4.

S5. Communicate effectively and articulate and justify decisions related to practice.

Application of knowledge and skills:

A1. Teach a conceptually difficult component of a VCE course and receive feedback whilst on school placement

A2. Design a VCE Science curriculum with learning activities (including use of ICT), assessment tasks and links to the relevant VCE Study Design

A3. Plan School Assessed Coursework for Units 2 or 4 and discuss issues related to student achievement within the VCE assessment system.

Course Content:

- The Victorian Certificate of Education and the specific structure and content in VCE Units 1, 2, 3 and 4 in Biology, Chemistry, Physics or Environmental Science with a particular focus on understanding concepts in Units 2 and 4.
- Discussion of methodology and teaching strategies in VCE Biology, Chemistry, Physics or Environmental Science with reference to school placement experiences.
- The development of VCE Units 2 and 4 courses into effective learning and teaching sequences that cater for students with varying capabilities and characteristics.
- School Assessed Coursework requirements and design of assessment for Unit 4
- Further consideration of general issues of the assessment system at VCE level.
- Observing practicing teachers of Units 2 and 4 in Biology, Chemistry, Physics or Environmental Science and discussing content, teaching approaches and assessment issues.
- Preparing students with a range of abilities for examinations in VCE Biology, Chemistry, Physics or Environmental Science.
- Investigating the introduction and content of the Australian Curriculum into Senior Sciences

Course Outline (Higher Education)

EDMAS6118 SENIOR SCIENCE CURRICULUM 2

Values:

- **V1.** Be flexible and prepared to adapt to change through knowing how to learn.
- **V2.** Be motivated and confident to engage in continuous learning in order to meet the challenges of a changing world.
- **V3.** Be ethical in the teaching profession and act in a socially responsible manner in the workplace and other settings.
- **V4.** Be engaged and socially responsible citizens.

Graduate Attributes:

FedUni graduate attributes statement. To have graduates with knowledge, skills and competence that enable them to stand out as critical, creative and enquiring learners who are capable, flexible and work ready, and responsible, ethical and engaged citizens.

Attribute	Brief Description	Focus
Knowledge, skills and competence	PSTs demonstrate knowledge and understanding of concepts, and organise content into effective learning sequences using a range of assessment, literacy, and numeracy teaching strategies.	High
Critical, creative and enquiring learners	PSTs demonstrate knowledge and understanding of concepts, and organise content into effective learning sequences using a range of assessment, literacy, and numeracy teaching strategies.Â	High
Capable, flexible and work ready	PSTs demonstrate knowledge and understanding of concepts, and organise content into effective learning sequences using a range of assessment, literacy, and numeracy teaching strategies.Â	High
Responsible, ethical and engaged citizens	PSTs demonstrate knowledge and understanding of concepts, and organise content into effective learning sequences using a range of assessment, literacy, and numeracy teaching strategies.Â	High

Learning Task and Assessment:

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1, K2, K3, K4, K5 S2, S3, S5 A1 APST 2.1, 2.5, 3.1, 3.3, 3.4, 3.5, 4.1, 4.2	Plan and teach a conceptually difficult content area in Unit 2 or Unit 4 Biology, Chemistry, Physics or Environmental Science, using strategies to address difficulties and develop effective student learning.	Teaching Performance	10-20%
K1, K2, K3, K4, K5 S1, S2, S3, S5 A2 APST 2.1, 2.2, 2.3, 3.2, 3.3, 3.4, 4.1	Design a unit plan with a sequence of lessons for VCE Biology, Chemistry, Physics or Environmental Science for Units 2 and 4 including teaching strategies which cater for diverse learners, resources (including the use of ICT), assessment approaches, references to the recent Examiner's Report, and a personal reflection on learning.	Curriculum Design	40 - 60%

Course Outline (Higher Education)

EDMAS6118 SENIOR SCIENCE CURRICULUM 2

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1, K2, K3, K5 S1, S4, S5 A3 APST 5.1, 2.5, 3.1, 3.3, 3.4, 4.1	PlanSchool Assessed Coursework tasks for Unit 4 in VCE Science with consideration given to the VCAA SAC requirements, their place in the curriculum, and a personal reflection on issues related to assessment in VCE.	Assessment Design	30-40%

Adopted Reference Style:

APA