# Unit Outline (Higher Education)

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|---|---|
| **Institute / School:** | Institute of Education, Arts & Community |
| **Unit Title:** | CURRICULUM STUDIES 2: TECHNOLOGIES, DESIGN AND SYSTEMS |
| **Unit ID:** | EDBED3146 |
| **Credit Points:** | 15.00 |
| **Prerequisite(s):** | Nil |
| **Co-requisite(s):** | Nil |
| **Exclusion(s):** | (EDDDE3146) |
| **ASCED:** | 070301 |

**Description of the Unit:**

This unit introduces the framework and unique teaching, learning, and assessment requirements of the Victorian Certificate of Education (VCE) with a curriculum method focused on Product Design and Technology, and Systems Engineering. Transitioning from year 10 into the VCE Technologies electives, the advanced elements of the curriculum, teaching resources, and planning assessment to prepare students for their VCE exams and assessments are examined. Student wellbeing, project management, and the unique pedagogical methods for Product Design and Technology, and Systems Engineering with respect to the scope and sequence of respective Study Designs are explored as part of this course.

**Grade Scheme:**     Graded (HD, D, C, P, MF, F, XF)

**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 Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment

**Course Level:**

| Level of Unit in Course | AQF Level of Course | | | | | |
|---|---|---|---|---|---|---|
| | **5** | **6** | **7** | **8** | **9** | **10** |
| Introductory | | | | | | |
| Intermediate | | | ✔ | | | |
| Advanced | | | | | | |

**Learning Outcomes:**

**Knowledge:**

**K1.** Examine and interpret the Victorian Certificate of Education (The VCE), the framework of the VCE Technologies Study Guides and their features relative to other VCE curriculum areas

**K2.** Identify strategies that improve learner success for the VCE in the Product Design and Technology curriculum

**K3.** Identify strategies that improve learner success for the VCE in the Systems Engineering curriculum

**K4.** Identify, interpret, and evaluate relevant teaching resources for effective pedagogy for the years 11 and 12 Technologies Curriculum

**K5.** Examine relevant research to guide teaching and learning assessments for the VCE Product Design and Technology and Systems Engineering Study Guide scope and sequence

**Skills:**

**S1.** Plan and implement programs, and units of work to deliver innovative and engaging lessons for the VCE Product Design and Technology, and Systems Engineering Study Guides

**S2.** Explore effective and safe project management and problem-based learning appropriate for the VCE Technologies Study Guides

**Application of knowledge and skills:**

**A1.** Design learning for inclusive and culturally informed education appropriate for the VCE Technologies Study Guides

**A2.** Develop and apply innovative pedagogies and online resources such as FUSE for in-school, remote, and blended or flexible learning delivery

**Unit Content:**

Topics may include:

- Introduction of the Victorian Certificate of Education (The VCE) and the framework of the Technologies study areas
- Structure, scope and sequence, and moderated assessments of the VCE Product Design and Technology Study Guide
- Structure, scope and sequence, and moderated assessments of the VCE Systems Engineering Study Guide
- Project Based Learning and relevant research that underpins the approach
- Problem Based Learning and relevant research that underpins the approach
- Safety and student wellbeing through effective student Project Management Pedagogies appropriate for the Design and Technology Study area.
- VCE Technologies Study Guides

**FEDTASKS**

Federation University Federation recognises that students require key transferable employability skills to prepare them for their future workplace and society. FEDTASKS (**T**ransferable **A**ttributes **S**kills and **K**nowledge) provide a targeted focus on five key transferable Attributes, Skills, and Knowledge that are be embedded within curriculum, developed gradually towards successful measures and interlinked with cross-discipline and Co-operative Learning opportunities. *One or more FEDTASK, transferable Attributes, Skills or Knowledge must be evident in the specified learning outcomes and assessment for each FedUni Unit, and all must be directly assessed in each Course.*

| FEDTASK attribute and descriptor | | Development and acquisition of FEDTASKS in the Unit | |
|---|---|---|---|
| | | Learning Outcomes (KSA) | Assessment task (AT#) |
| FEDTASK 1 Interpersonal | Students will demonstrate the ability to effectively communicate, inter-act and work with others both individually and in groups. Students will be required to display skills in-person and/or online in:<br><br>• Using effective verbal and non-verbal communication<br><br>• Listening for meaning and influencing via active listening<br><br>• Showing empathy for others<br><br>• Negotiating and demonstrating conflict resolution skills<br><br>• Working respectfully in cross-cultural and diverse teams. | K2. S1. A1. A2. | AT1. AT2. AT3. |
| FEDTASK 2 Leadership | Students will demonstrate the ability to apply professional skills and behaviours in leading others. Students will be required to display skills in:<br><br>• Creating a collegial environment<br><br>• Showing self -awareness and the ability to self-reflect<br><br>• Inspiring and convincing others<br><br>• Making informed decisions<br><br>• Displaying initiative | S1. S2. A1. A2 | AT1. |
| FEDTASK 3 Critical Thinking and Creativity | Students will demonstrate an ability to work in complexity and ambiguity using the imagination to create new ideas. Students will be required to display skills in:<br><br>• Reflecting critically<br><br>• Evaluating ideas, concepts and information<br><br>• Considering alternative perspectives to refine ideas<br><br>• Challenging conventional thinking to clarify concepts<br><br>• Forming creative solutions in problem solving. | K1. K2. K3. K4. A1. A2. | AT1. AT2. AT3. |

| FEDTASK attribute and descriptor | | Development and acquisition of FEDTASKS in the Unit | |
|---|---|---|---|
| | | Learning Outcomes (KSA) | Assessment task (AT#) |
| FEDTASK 4 Digital Literacy | Students will demonstrate the ability to work fluently across a range of tools, platforms and applications to achieve a range of tasks. Students will be required to display skills in:<br><br>• Finding, evaluating, managing, curating, organising and sharing digital information<br><br>• Collating, managing, accessing and using digital data securely<br><br>• Receiving and responding to messages in a range of digital media<br><br>• Contributing actively to digital teams and working groups<br><br>• Participating in and benefiting from digital learning opportunities. | K1. K3. K4. S1. A1. | AT2. AT3. |
| FEDTASK 5 Sustainable and Ethical Mindset | Students will demonstrate the ability to consider and assess the consequences and impact of ideas and actions in enacting ethical and sustainable decisions. Students will be required to display skills in:<br><br>• Making informed judgments that consider the impact of devising solutions in global economic environmental and societal contexts<br><br>• Committing to social responsibility as a professional and a citizen<br><br>• Evaluating ethical, socially responsible and/or sustainable challenges and generating and articulating responses<br><br>• Embracing lifelong, life-wide and life-deep learning to be open to diverse others<br><br>• Implementing required actions to foster sustainability in their professional and personal life. | K1. K2. K3. K4. S1. S2. A1. | AT1. AT2. AT3. |

## Learning Task and Assessment:

| Learning Outcomes Assessed | Assessment Tasks | Assessment Type | Weighting |
|---|---|---|---|
| K1, K2, K3, K5 | Critical essay comparing and contrasting Project-Based Learning and Problem-Based Learning | Critical Essay | 30%-50% |
| K4, K5, S1, S2, A1, A2 APST 2.1, 2.2, 3.2, 3.3, 4.1 | Drawing upon contemporary research and ideas, develop a unit of learning for the VCE Product Design and Technology or Systems Engineering courses to year 11 and 12 students | Curriculum Project | 30%-50% |
| K4, S2, A1. APST: 2.3, 5.1 | Critically analyse a project-based and or problem-based learning assessment | VCE Assessment Analysis | 20%-30% |

## Adopted Reference Style:

Refer to the [library website](#) for more information

Fed Cite - [referencing tool](#)

**Professional Standards / Competencies:**

**Australian Professional Standards for Teachers (AITSL) - Graduate Teacher: Initial**

| Attribute | Assessed | Level |
|---|---|---|
| **Professional Knowledge** | | |
| 2. Know the content and how to teach it | | |
| 2.1 Content and teaching strategies of the teaching area<br>Demonstrate knowledge and understanding of the concepts, substance and structure of the content and teaching strategies of the teaching area. | Yes | Intermediate |
| 2.2 Content selection and organisation<br>Organise content into an effective learning and teaching sequence. | Yes | Intermediate |
| 2.3 Curriculum, assessment and reporting<br>Use curriculum, assessment and reporting knowledge to design learning sequences and lesson plans. | Yes | Intermediate |
| **Professional Practice** | | |
| 3. Plan for and implement effective teaching and learning | | |
| 3.1 Establish challenging learning goals<br>Set learning goals that provide achievable challenges for students of varying abilities and characteristics. | Yes | Intermediate |
| 3.2 Plan, structure and sequence learning programs<br>Plan lesson sequences using knowledge of student learning, content and effective teaching strategies. | Yes | Intermediate |
| 3.3 Use teaching strategies<br>Include a range of teaching strategies. | Yes | Intermediate |
| 4. Create and maintain supportive and safe learning environments | | |
| 4.1 Support student participation<br>Identify strategies to support inclusive student participation and engagement in classroom activities. | Yes | Intermediate |
| 5. Assess, provide feedback and report on student learning | | |
| 5.1 Assess student learning<br>Demonstrate understanding of assessment strategies, including informal and formal, diagnostic, formative and summative approaches to assess student learning. | Yes | Intermediate |