CR290

CONTENT AND PEDAGOGY: TECHNOLOGY

This sample unit outline is provided by CHC for prospective and current students to assist with unit selection.

Elements of this outline which may change with subsequent offerings of the unit include Content, Required Texts, Recommended Readings and details of the Assessment Tasks.

Students who are currently enrolled in this unit should obtain the outline for the relevant semester from the unit lecturer.
**Unit Name** | Content and Pedagogy: Technology
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**Unit Code** | CR290
**Award** | Bachelor of Education (Middle Years)
**Core/Elective** | Core
**Pre/co-requisite** | CR191 Introduction to Technology Education: Technology and ICT
**Mode** | Internal
**Weighting** | 10 credit points
**Delivery/Contact hrs** | Class contact 33 hours
| Engagement with unit materials readings 44 hours
| Assignment preparation 63 hours
| **Total** 140 hours
**Teaching Staff** | Keith McMillan

**Unit Rationale**

In the contemporary Australian context, Technology has become an important and somewhat seductive commodity. The rate of consumption of goods and services has steadily increased over recent decades and the rate of development of new technologies is increasingly out-pacing our capacity to economically and technologically keep abreast. The same phenomenon is occurring in countries and societies around the globe, and issues of stewardship and sustainability in the face of continued technological development are becoming increasingly important at both a local and global level.

While little has been said about Technology in the development of the Australian curriculum in recent years, it remains an important part of the overall curriculum landscape. It is supported by syllabus documents in the current Queensland framework: Technology: Essential Learnings. Curricular intentions and practices related to the Technology learning area need to be addressed to provide teaching and learning experiences for school students that will contribute positively to the need for sustainable production and consumption both now and in the future.

As such, preservice teachers need to be competent and effective in their knowledge and applications of teaching and learning practices in the Technology learning area. This unit provides preservice teachers with grounding in the teaching of Technology within school contexts. It emphasises problem identification, solution generation and evaluation through application of the design process, rather than the learning of specific applications. It provides beginning teachers with an understanding of the knowledge, skills and processes necessary in the effective teaching of Technology concepts and principles. It covers a broad range of practical issues important to the teaching, learning and managing of technology education within schools.

**Learning Outcomes:**

On completion of this unit, preservice teachers will have provided evidence that they have:

1. Understood and critiqued the rationale for the inclusion of Technology in the curriculum.
2. Constructed a sound knowledge base across all conceptual areas relevant to Technology as a key learning area in the compulsory years of education.
3. Developed teaching and learning strategies and resources to engage, support and assess school student learning in the Technology key learning area.
4. Developed teaching and learning strategies and resources to engage, support and assess school student learning and development in relation to literate, numerate and digital demands in Technology.
5. Articulated Christian perspectives, in terms of responses and/or initiatives to address the Technology needs, policies, priorities and practices of communities in sustainable ways.
6. Written at an appropriate tertiary standard (with special attention to correct grammar, punctuation, spelling, vocabulary, usage, sentence structure, logical relations, style, referencing and presentation).
<table>
<thead>
<tr>
<th>Week</th>
<th>Lectures</th>
<th>Technology Tutorial</th>
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</table>
| 1    | Technology as a learning area; policy and curriculum  
*The national agenda for the development of Technology curriculum* | Workplace health and safety in Technology contexts |
| 2    | The design process; design, make and appraise  
*Technology syllabuses, profile and student performance statements* | *Home Economics/Hospitality*  
Experiences with:  
- Ingredients; local, seasonal  
- Cooking skills and menus  
- Fashion and fabrics |
| 3    | Historical concepts of technological development  
*Middle Years: Technology curriculum scope and sequence* | |
| 4    | Timelines of common technology; communication and transport  
*Engaging literacy and numeracy in Technology* | |
| 5    | Australian technologies; including indigenous  
*Middle Years: Current policies and practices* | *Outdoor Education*  
Experiences with:  
- Sustainable gardening  
- Indigenous technologies |
| 6    | Production processes; ethics, rights and responsibilities  
*Middle Years: Case Study of curriculum design and implementation 1* | |
| 7    | Globalisation of technology and production  
*Middle Years: Case Study of curriculum design and implementation 2* | |
| 8    | Technological needs and wants in developed countries  
*Using Technology to engage learners in the Middle Years* | *Shop*  
Experiences with:  
- Timbers, plastics, metals  
- Design processes |
| 9    | Technological needs and wants in developing countries  
*School student learning - prospects, problems and priorities* | |
| 10   | Stewardship and sustainability; local and global issues  
*Problems and prospects of policies, programs, profiles and practices* | |
| 11   | Futures perspectives; development and consumption  
*Integrating Technology with other key learning areas* | Engaging Technology in middle phase classrooms |

**Set Text Requirements:**

- Essential Learnings: Technology
- Essential Learnings: ICT Cross-Curricular Priority

**Recommended Readings:**

[Accessed 5 May 2009].
Assessment:

<table>
<thead>
<tr>
<th>Assessment Item</th>
<th>Topic/s</th>
<th>Learning Outcomes assessed</th>
<th>Week Due</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argument Map (1000 words)</td>
<td>Develop an argument map that outlines the justification of the inclusion of Technology in the curriculum for primary and middle school contexts. Summarise the core arguments into a rationale for Technology Education.</td>
<td>1, 2, 5, 6</td>
<td>Week 5</td>
<td>35%</td>
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<tr>
<td>Practical Project: Built Environments (1000 words)</td>
<td>Design and undertake a project based on the ‘design, make, appraise’ model that responds to a need within a selected community context. The project must be one that would be sustainable within a classroom context. Include a detailed guide to making judgements for a teacher who would implement the project as an assessment task with school students.</td>
<td>1-6</td>
<td>Week 11</td>
<td>65%</td>
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Unit Overview:

This unit provides preservice teachers with foundations in the discipline and pedagogical content knowledge required for the teaching of Technology within classroom contexts. It emphasises problem identification, solution generation and evaluation through application of the design process, rather than the learning of specific applications. It provides preservice teachers with opportunities to develop an understanding of the knowledge, skills and processes necessary for teaching and learning the concepts and principles of Technology in the classroom.