Course Outline

Code: EDU780
Title: Teaching Technologies: Curriculum and Pedagogy

Faculty of: Science, Health, Education and Engineering
School of: Education
Teaching Session: Semester 2
Year: 2018
Course Coordinator: Dr David Martin Email: dmartin@usc.edu.au
Course Moderator: Carol Smith

Please go to the USC website for up to date information on the teaching sessions and campuses where this course is usually offered.

1. What is this course about?

1.1 Description
This course introduces you to the technologies discipline area and ICT across the curriculum. You will evaluate traditional, contemporary and emerging technologies for teaching and learning with primary students. You will engage in critical and creative thinking, including understanding interrelationships in systems when solving complex problems. You will make informed and ethical decisions about the role, impact and use of technologies in the economy, environment and society for a sustainable future.

1.2 Course topics
Design and Technologies Curriculum
- Engineering principles and systems
- Food and fibre production and food specialisations
- Materials and technologies specialisations
- Design solutions

Digital Technologies
- Digital solutions through guided play and integrated learning using robotic toys with software applications
- Cyber safety and ethical issues
- Digital communications

2. What level is this course?
700 level Specialised - Demonstrating a specialised body of knowledge and set of skills for professional practice or further learning. Advanced application of knowledge and skills in unfamiliar contexts

3. What is the unit value of this course?
6 units
4. How does this course contribute to my learning?

<table>
<thead>
<tr>
<th>Specific Learning Outcomes</th>
<th>Assessment Tasks</th>
<th>Graduate Qualities or Professional Standards mapping</th>
</tr>
</thead>
<tbody>
<tr>
<td>On successful completion of this course you should be able to:</td>
<td>You will be assessed on the learning outcome in task/s:</td>
<td>Completing these tasks successfully will contribute to you becoming:</td>
</tr>
<tr>
<td>Demonstrate implementation of effective learning within Design and Technologies and Digital Technologies for primary schools by critically evaluating learning theories, teaching frameworks, Australian Curriculum content, pedagogy and resources in a cross-curriculum capacity. Analyse and reflect on ethical and personal teaching knowledge and skills.</td>
<td>Task 1: Essay</td>
<td>Knowledgeable. Ethical.</td>
</tr>
<tr>
<td>Implement teaching strategies and learning activities in the Technologies and ICT discipline areas for early childhood and primary school students that incorporates literacy, numeracy, legislative, administrative and ethical considerations.</td>
<td>Task 2: Design challenge and sequence of lessons with rationale</td>
<td>Knowledgeable. Creative and critical thinkers.</td>
</tr>
</tbody>
</table>

Students may attend combined lectures with ED304 undergraduate students. These parallel course deliveries are designed to give students access to expert lecturers. However, postgraduate courses may have additional or separate assessment tasks with appropriate criteria that acknowledge the different expectations, learning outcomes, prior knowledge and life experience of a student undertaking an AQF Level 9 program.

5. Am I eligible to enrol in this course?
Refer to the [USC Glossary of terms](https://www.usq.edu.au/glossary) for definitions of “pre-requisites, co-requisites and anti-requisites”.

5.1 Enrolment restrictions
This course is only available to student enrolled in ED707 Master of Teaching (Primary).

5.2 Pre-requisites
Nil

5.3 Co-requisites
Nil

5.4 Anti-requisites
Nil

5.5 Specific assumed prior knowledge and skills (where applicable)
Nil

6. How am I going to be assessed?

6.1 Grading scale
Standard – High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL)

6.2 Details of early feedback on progress
Students will be provided academic progress feedback during the first third of the teaching semester. This feedback will be provided during the tutorials through group and individual discussion activities up to the delivery of the first assessment task.
# 6.3 Assessment tasks

<table>
<thead>
<tr>
<th>Task No.</th>
<th>Assessment Tasks</th>
<th>Individual or Group</th>
<th>Weighting %</th>
<th>What is the duration/length?</th>
<th>When should I submit?</th>
<th>Where should I submit it?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Essay *</td>
<td>individual</td>
<td>40%</td>
<td>2000 words</td>
<td>Friday 5pm, Week 4</td>
<td>Blackboard (SafeAssign)</td>
</tr>
<tr>
<td>2</td>
<td>Teaching and Learning Sequence of Lessons with Rationale*</td>
<td>Groups of 2-3</td>
<td>60% total 50% - teaching sequence with rationale 10% - collaboration and individual effort.</td>
<td>4-6 hour sequence of lessons written on approved unit or lesson plan template. Written rationale 2000 words</td>
<td>Friday 5pm, Week 10, along with Partner responsibility form</td>
<td>Blackboard (SafeAssign) Partner responsibility form through Blackboard</td>
</tr>
</tbody>
</table>

* The tasks in the course will be completed with a focus on your chosen specialisation and other integrated components as required by the Course Coordinator.

**Assessment Task 1: Essay**

<table>
<thead>
<tr>
<th>Goal:</th>
<th>To critically evaluate learning theories, best practice frameworks, knowledge of the Australian curriculum content, pedagogy and resources which employs best practice when technology integration across the curriculum is integral to learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product:</td>
<td>Essay</td>
</tr>
</tbody>
</table>
| Format: | Individual activity. Your essay will be based on week's 1-4 on-line lecture material. From that content, you will critically evaluate learning theories, teaching frameworks, Australian Curriculum content, pedagogy and resources which employ best practice technology use in a cross-curriculum capacity, while reflecting on ethical and personal teaching knowledge and skills, and report on it. The submission is to be written in essay format and submitted through Safe Assign in Blackboard. Provide references in APA format.  
- Investigate the Australian Curriculum: Technologies website and the wider curriculum  
- Identify and conceptualise main components within the Technologies curriculum  
- Analyse essential links between these components  
- Distinguish the purpose of the main components  
- Identify ethical demands and how it should be applied  
- Investigate the expected pedagogy for Technologies as presented by the AC website  
- Reflect on ethical and personal teaching knowledge and skills. |
2. Analysis of the essential curriculum links within and between the Australian Curriculum: Technologies.  
3. Critical analysis and interpretation of cyber safety/cyber ethics  
4. Learning and teaching sequences underpinned by the SAMR model  
5. Reflect on personal knowledge of teaching strategies, curriculum and use of appropriate resources  
6. Written communication skills and academic literacies including English expression grammar, spelling, punctuation, APA referencing conventions |
### Assessment Task 2: Teaching and Learning Sequence of Lessons with Rationale

| **Goal:** | The goal of this task is to demonstrate knowledge of the Australian Curriculum: Design and Technologies subject, and technological, pedagogical and content knowledge, through creation of a Design Challenge sequence of lessons for primary school students, based on the Design Process. |
| **Product:** | Sequence of Lessons with Rationale |
| **Format:** | Group work: You will design and develop a 4-6 day (4-6 hour) sequence of lessons, appropriate to a primary school-year level of your choice from Prep to Year 6. The teaching sequence is to derive from the Design and Technologies subject of the Australian Curriculum: Technologies and integrate with other curriculum areas, including ICT as a general capability. The sequence of lessons will use a problem-based learning approach and consider the SAMR and TPACK models. The premise being, the primary school-aged students collaboratively apply design and systems thinking and design processes to investigate ideas, generate and refine ideas, plan, produce and evaluate designed solutions for an identified authentic need. Consideration should be given to appropriateness and authenticity to the age group, collaboration between the students, lesson sequence and appropriate alignment between the lesson’s objective(s) and the assessment(s). Consideration should also be given to curriculum alignment, cross curriculum priorities and any general capabilities that are met with the design challenge activity, including literacy and numeracy in your specialisation learning area. Submitted through Safe Assign in Blackboard. Provide references in APA format. |
| **Criteria:** | 1. Applied knowledge and understanding of the Technologies curriculum including alignment of lesson objectives and assessment.
2. Sequenced innovative Design Challenge, underpinned by the SAMR model, for students in primary school to engage in problem-based learning.
3. Demonstration of age-appropriate pedagogy.
4. Analyse and interpretation of CyberSafety/CyberEthics.
5. Written communication skills and academic literacies including English expression grammar, spelling, punctuation, APA referencing conventions. |
7. What are the course activities?

7.1 Directed study hours
This course requires an overall time commitment of an average 12 hours of study per week. A blended learning approach is used to deliver this course. This course is delivered as a 2 hour lecture and a 2 hour tutorial equivalent each week.

7.2 Course content

<table>
<thead>
<tr>
<th>Week # / Module #</th>
<th>What key concepts/content will I learn?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The critical, ethical, legal and safety issues facing pre-service and practising teachers regarding the use of ICT and technologies in schools.</td>
</tr>
<tr>
<td>2</td>
<td>The knowledge of the concepts, substance and structure of the SAMR model. Review of the TPACK framework.</td>
</tr>
<tr>
<td>3</td>
<td>Overview of the Technologies curriculum. Knowledge of the concepts, substance and structure of the Australian Curriculum: Digital Technologies subject.</td>
</tr>
<tr>
<td>4</td>
<td>Knowledge of the concepts, substance and structure of the Australian Curriculum: Design and Technologies subject.</td>
</tr>
<tr>
<td>5</td>
<td>The alignment between the Australian Professional Standards for Teachers and the Australian Curriculum: Technologies.</td>
</tr>
<tr>
<td>6</td>
<td>Knowledge, concepts and structure of the backward design process for lesson planning.</td>
</tr>
<tr>
<td>7</td>
<td>Definitions and distinctions of problem-based learning (PBL) and the learning theories which underpin PBL.</td>
</tr>
<tr>
<td>8</td>
<td>The question of STEM and STEAM in and across the curriculum.</td>
</tr>
<tr>
<td>9</td>
<td>Smart and Makerspace Classrooms: Plugged and unplugged ideas to support teaching and learning.</td>
</tr>
<tr>
<td>10</td>
<td>Knowledge of current technologies and ICT.</td>
</tr>
</tbody>
</table>

Please note that the course content may be subject to variation.

8. What resources do I need to undertake this course?

Please note that course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Blackboard site. Please log in as soon as possible.

8.1 Prescribed text(s)

Please note that you need to have regular access to the resource(s) listed below as they are required:

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Title</th>
<th>Publisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albion, P., Campbell, C., &amp; Jobling, W.</td>
<td>2018</td>
<td>Technologies Education for the Primary Years</td>
<td>Cengage</td>
</tr>
</tbody>
</table>

8.2 Specific requirements

It is the student's responsibility to attend classes and keep up with the course readings and other preparatory activities. Any equipment required for the tutorial presentation is up to the student to source.

9. Risk management

Health and safety risks for this course have been assessed as low.

It is your responsibility as a student to review course material, search online, discuss with lecturers and peers, and understand the health and safety risks associated with your specific course of study. It is also your responsibility to familiarise yourself with the University’s general health and safety principles by reviewing the online Health Safety and Wellbeing training module for students, and following the instructions of the University staff.
10. What administrative information is relevant to this course?

10.1 Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Blackboard, are electronically checked through SafeAssign. This software allows for text comparisons to be made between your submitted assessment item and all other work that SafeAssign has access to.

10.2 Assessment: Additional requirements

Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

a) The final mark is in the percentage range 47% to 49.4%
b) The course is graded using the Standard Grading scale
c) You have not failed an assessment task in the course due to academic misconduct

10.3 Assessment: Submission penalties

Late submission of assessment tasks will be penalised at the following maximum rate:

- 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.
- 10% (of the assessment task's identified value) for the third day
- 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.
- A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task.

Weekdays and weekends are included in the calculation of days late.

To request an extension, you must contact your Course Coordinator and supply the required documentation to negotiate an outcome.

10.4 Study help

In the first instance, you should contact your tutor, then the Course Coordinator. Additional assistance is provided to all students through Academic Skills Advisers. To book an appointment or find a drop-in session go to Student Hub. Contact Student Central for further assistance: +61 7 5430 2890 or studentcentral@usc.edu.au

10.5 Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Administration of Central Examinations
- Deferred Examinations
- Student Academic Misconduct
- Students with a Disability
10.6 General Enquiries

In person:
- USC Sunshine Coast - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- USC South Bank - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- USC Gympie - Student Central, 71 Cartwright Road, Gympie
- USC Fraser Coast - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- USC Caboolture - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

Tel: +61 7 5430 2890
Email: studentcentral@usc.edu.au

10.7 Education Specific Information

The assessment tasks in this course support pre-service teachers to explicitly demonstrate the following Australian Professional Standards for Teachers (Graduate):

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Australian Professional Standards for Teachers (Graduate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1: Essay</td>
<td>1.1, 1.2, 3.6, 4.5, 6.1, 6.2, 6.3, 6.4, 7.4</td>
</tr>
<tr>
<td>Task 2: Teaching and Learning Sequence of Lessons with Rationale</td>
<td>2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7</td>
</tr>
</tbody>
</table>

Overview of the Master of Teaching (Primary) Program

Orientation to the profession:
EDU764 Quality Teaching and Learning
EDU765 Professional Experience: Orientation to the Profession

Developing professional knowledge and skills:
EDU712 Diversity and Inclusion
EDU716 Aboriginal and Torres Strait Islander Perspectives in Teaching and Learning
EDU717 Using Data for Learning
EDU792 Professional Experience: Individual Learner Needs

Developing curriculum and pedagogy knowledge and skills:
EDU767 Teaching Primary School English: Curriculum and Pedagogy
EDU768 Teaching Mathematics in the Early Years
EDU769 Teaching Science in Primary School
EDU774 Teaching Primary School Mathematics
EDU776 Teaching Reading and Writing in Primary School
EDU777 Teaching Arts in the Primary Schools
EDU778 Teaching History and Geography in Primary School
EDU779 Teaching Health and Physical Education in Primary School
EDU780 Teaching Technologies in Primary School

Synthesis of professional knowledge in practice and research:
EDU718 Teacher as Researcher
EDU720 Professional Experience: The Professional Teacher