

TEAC 5038 TECHNOLOGY CURRICULUM 3

Credit Points 10

Legacy Code 102883

Coordinator Dorian Stoilescu ([https://directory.westernsydney.edu.au/search/name/Dorian Stoilescu/](https://directory.westernsydney.edu.au/search/name/Dorian%20Stoilescu/))

Description In this subject, the place of Technology and applied STEM in secondary curriculum will be further explored using evidence-based approaches for curriculum development and alignment and to plan for effective teaching and learning, including formative and summative assessment. Pre-service teachers will learn approaches for teaching a range of Technologies using STEM pedagogy. They will focus on assessment design for project and problem-based learning. The subject will demonstrate approaches for engaging diverse senior secondary learners. Pre-service teachers will develop subject and assessment plans and demonstrate a knowledge of curriculum, learning and assessment theory. The subject requires students to develop original portfolio of teaching artefacts that demonstrate capacity to create and critique resources for effective teaching and learning in Technology.

School Education

Discipline Teacher Education: Secondary

Student Contribution Band HECS Band 1 10cp

Check your HECS Band contribution amount via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Postgraduate Coursework Level 5 subject

Pre-requisite(s) TEAC 7027 AND
TEAC 7004 AND
TEAC 7032

Restrictions

Students in program 1714 or 1848 must have a relevant Technology Curriculum Area applied to their student record before they can enrol in this subject. Students can view their Curriculum Areas on DegreeWorks in MySR.

Learning Outcomes

1. Generate and critically evaluate Technologies curriculum program for students which synthesises a variety of pedagogical approaches and resources appropriate to these year levels, assessment tasks and curriculum content.
2. Critically analyse and develop a variety of research-informed classroom strategies which cater for individual differences in student learning in the classroom.
3. Demonstrate understanding of Aboriginal and/or Torres Strait Islander design solutions in Technology and the impact of historical and contemporary design solutions surrounding Indigenous cultural and intellectual property.
4. Evaluate the relationship between learning task design, student learning and expertise, higher order thinking, assessment, feedback and reporting strategies and evaluation in Technology Education.
5. Present well-constructed, innovative, and coherent Technology and STEM based student-centred lessons that include literacy and (including key metalanguage) and numeracy, enhance thinking and

ICT skills and which take into account the full range of students' abilities and school-based and system data.

6. Prepare a suitable range of senior assessment instruments that use valid, reliable, and consistent judgements of student learning.
7. Design and select innovative problem-based teaching resources that apply a critically reflective approach to teaching arrange of Technologies and develop students critical and creative capabilities.
8. Reflect and research professional learning to develop the discipline of Technology teaching.

Subject Content

1. What is the nature of the subject in the secondary education including the concepts, substance, and structure of STEM curriculum content in Technology?
2. How are current educational policies and priorities addressed with particular reference to Aboriginal and Torres Strait Islander education, literacy and numeracy and ICT, in the teaching of the subject?
3. How can we explore Aboriginal and/or Torres Strait Islander design solutions in Technology?
4. How can we investigate the impact of historical and contemporary design solutions and understand ethical responsibilities surrounding Indigenous cultural and intellectual property?
5. In what ways do active and engaging, student-centred teaching practices inform the pedagogy for problem and project based learning?
6. Why is it necessary to continue to differentiate teaching in the subject in the secondary education? How do teachers go about differentiation?
7. Specific professional practices and key pedagogical approaches related to teaching and learning in Design and Technologies, and their theoretical underpinnings (eg. OHS, safe practices).
8. Alignment and coherence in content, learning outcomes, pedagogy in curriculum programming in Technologies.
9. Pedagogical strategies to facilitate creativity, promote problem solving and foster critical thinking in Technologies.
10. How may the incorporation of visionary and innovative uses of ICT, critical and creative thinking and problem solving support the achievement of quality learning outcomes in the subject?
11. How can assessment of learning, assessment for learning and assessment as learning be reconciled in teaching the subject?
12. In what ways has educational research contributed to the teaching and student learning of the subject?
13. What options are open to pre-service teachers to continue to learn about the subject?

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/Group Task
Professional Task	2000 Words	50	N	Individual
Portfolio	2000 Words (Portfolio)	50	N	Individual

Prescribed Texts

New South Wales Standards Authority [NESA]. (2013) Technology Stage 6 Syllabuses. (<https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/stage-6-learning-areas/technologies/>)

Teaching Periods

Autumn (2022)

Penrith (Kingswood)

Day

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View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=TEAC5038_22-AUT_KW_D#subjects)

Autumn (2023)

Penrith (Kingswood)

On-site

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View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=TEAC5038_23-AUT_KW_1#subjects)