

TEAC 1030 SCIENCE AND ENGINEERING IN EARLY CHILDHOOD

Credit Points 10

Legacy Code 102667

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

Description This subject will develop students' critical and meaningful understanding of the way in which engineering, science and technology shape our lives and the world we live in. It will extend students' understanding of how engineering, science and technology integrate and impact on each other and how they can be promoted in creative and meaningful ways in the learning environment. This subject will foster a positive disposition in students towards teaching and applying engineering, science and technology in diverse and multi-dimensional educational settings for children aged birth to 5 years. It will focus on investigation, critical thinking and problem solving as they relate to young children's learning processes. The subject will engage with relevant pedagogical approaches and the Early Years Learning Framework principles, practices and learning outcomes. This subject is included in the Foundation Phase of the Bachelor of Education.

School Education

Discipline Teacher Education: Early Childhood

Student Contribution Band HECS Band 1 10cp

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

Level Undergraduate Level 1 subject

Restrictions

Students must be enrolled in the 1926 Bachelor of Education (Early Childhood).

Learning Outcomes

1. Investigate the key concepts of science, technology and engineering in society and in everyday applications.
2. Explain the relationships between science, technology and engineering and the processes of investigation, critical thinking and problem solving.
3. Examine the different theoretical and pedagogical approaches relevant to science, technology, engineering teaching and learning for birth to 5 years.
4. Apply the principles, practices and outcomes of The Early Years Learning Framework for Australia to investigate the relationships between science, technology and engineering and play based pedagogies.
5. Propose learning experiences that integrate science, technology and engineering concepts, processes and language.
6. Discuss issues of diversity and equity in STEM and strategies to support the learning needs of diverse students.

Subject Content

1. Key concepts of science, technology and engineering in society and in everyday applications
2. Science, Technology, Engineering for Birth - 5 years

3. Processes of investigation, exploration and problem solving
4. Theory and approaches for teaching science, technology and engineering for children Birth-5 Years
5. Use of the Early Years Learning Framework principles, practices and learning outcomes to investigate the relationships between science, technology and engineering and play based pedagogies
6. Issues of diversity and equity in STEM – addressing the needs of diverse students

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
Quiz	20 Questions	20	N	Individual
Case Study	1500 Words	40	N	Individual
Applied Project	1500 Words	40	N	Individual

Teaching Periods

Autumn (2024)

Campbelltown

On-site

Subject Contact Sheridan Hewson ([https://directory.westernsydney.edu.au/search/name/Sheridan Hewson/](https://directory.westernsydney.edu.au/search/name/Sheridan%20Hewson/))

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=TEAC1030_24-AUT_CA_1#subjects)