# TEAC 2054 SCIENTIFIC DISCOVERY AND INVENTION

**Credit Points** 10

**Legacy Code** 102209

**Coordinator** Les Vozzo (https://directory.westernsydney.edu.au/search/name/Les Vozzo/)

**Description** Scientific discovery and inventions have made a significant impact on contemporary society. Science is a dynamic, futures oriented, collaborative human endeavour arising from curiosity and interest. In this subject students explore science as a distinctive way of thinking about and explaining events and phenomena. This subject aims to develop students' understanding of the creativity of science and technology concepts and investigative and innovative processes. As the subject also aims to investigate the impact of scientific discoveries and inventions on society, students will examine how various perspectives, such as cultural (including Australian Aboriginal and Torres Strait Islander) perspectives, explain natural phenomena. This subject will benefit students interested in teaching as a career to design authentic learning programs that explore how scientific discovery and invention are applied in everyday life. This subject is included in the Foundation Phase of the Bachelor of Education.

**School** Education

**Discipline** Teacher Education

**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 2 subject

## Learning Outcomes

On successful completion of this subject, students should be able to:

1. Explain concepts which form the basis of knowledge associated with various scientific discoveries and inventions that have arisen from physics, chemistry, earth science, biology and astronomy;
2. Compare and contrast natural phenomena through cultural (including Australian Aboriginal and Torres Strait Islander) and scientific frameworks;
3. Assess the impact of scientific discoveries and inventions on contemporary society through experimentation and research;
4. Analyse a wide range of science fiction (films and novels) to illustrate a wide variety of multi-discipline scientific concepts;
5. Apply a variety of ICT tools for scientific discoveries and inventions in the context of science and technology education;
6. Articulate clear learning goals in preparing learning experiences for science and technology education that are appropriate for the cognitive, social and language abilities of young people.

## Subject Content

1. Science, technology and innovation concepts associated with the physics, chemistry, earth science, biology and astronomy and other contributing disciplines;
2. Scientific processes of investigation and communication;
3. Cultural perspectives of examining natural phenomena;
4. Learning about scientific discoveries and inventions from science fiction stories;
5. Students?f own experiences with innovative science and technologies;
6. Attitudes and values regarding the core role of science and technology in today?fs society;
7. Scientific and technological research, processes and creative applications to everyday life;
8. Social and educational impact of variances of understandings of science and technology;
9. Information and communication technologies as a means of investigating ideas, creative problem solving and representing understandings.

## 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 | Mandatory |
|---|---|---|---|---|---|
| Report | 2,000 words + 5-6 digital images | 40 | N | Individual | Y |
| Applied Project | 20 slides (Multimedia resource) 500 words (research) | 40 | N | Individual | Y |
| Quiz | 10 multiple choice questions per quiz | 20 | N | Individual | Y |

Prescribed Texts

- Hewiit, P., Lyons, S., Suchocki, J. & Yeh, J. (2020). Conceptual Integrated Science (3rd ed.). Boston, MA: Pearson.

Teaching Periods

## Autumn (2025)

### Bankstown City

#### On-site

**Subject Contact** Les Vozzo (https://directory.westernsydney.edu.au/search/name/Les Vozzo/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=TEAC2054_25-AUT_BK_1#subjects)

### Parramatta - Victoria Rd

#### On-site

**Subject Contact** Les Vozzo (https://directory.westernsydney.edu.au/search/name/Les Vozzo/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=TEAC2054_25-AUT_PS_1#subjects)