Faculty of Arts

# EDST2110 - Principles of Maths, Science and Technology Education

**Unit** | **10 credit points** | You are viewing the 2023 version | **2023**

## Overview

This unit develops teacher education students' pedagogical content knowledge (PCK) and understanding of the aims, content and pedagogy of the NSW Mathematics K-6 and Science and Technology K-6 syllabi. Within the context of the Australian Curriculum in Mathematics, Science, and Digital Technologies, the unit focuses on the scope and depth of appropriate teaching and learning content and pedagogies. Using relevant contexts (including sustainability), teacher education students develop their numeracy and scientific literacy through the processes of Design and Production, Working Mathematically and Working Scientifically. A research-based approach supports teacher education students' understanding of primary students' conceptual and developmental stages of learning and learning progressions, and builds the ability to interpret research findings both in science and mathematics education.

Read Less

**Offered by:**
Macquarie School of Education

**Unit level:**
2000

**Grading requirement:**
Graded

## Offerings

More detailed information about unit activities and assessments is provided in the Unit Guides.

Session 2, In person-scheduled-weekday, North Ryde
Session 2, In person-scheduled-infrequent, North Ryde

## Requisites

Expand all

### Enrolment rules

#### Pre-requisite

80cp including (EDST100 or EDST1000) and (EDST101 or EDST1010) and admission to (BABEd(Prim) or BEd(Prim)BPsych))

#### Info

If you have not met the pre-requisites but have at least three Band 5 (or above) NSW HSC results, including one English, you can apply for a waiver. (Band E3 or above results in an HSC extension course also meet Band 5 requirements for the purposes of a waiver application for this unit of study.)

#### NCCW (pre-2020 units)

EDST211

## Learning outcomes

Expand all

On successful completion you will be able to

1. Explain the current research foundations of the mathematical, scientific, design and computational thinking of students.
2. Articulate pedagogical principles for developing students' mathematical, scientific and computational thinking skills with reference to educational research and practice.
3. Interpret and explain key concepts/principles/approaches/developmental progressions in NSW syllabuses for mathematics, science and technology.

4. Critically reflect upon the efficacy of learning resources and approaches to develop mathematical, scientific and technological skills and concepts.

5. Develop understanding of the requirements of a Graduate Teacher.

## Assessments

### Assessments

Expand all

#### Portfolio for teaching mathematics

**Type:** Portfolio

**Weighting:** 45

**Hurdle task?** No

#### Practical scientific investigations of Science and Technology syllabus concepts

**Type:** Practice-based task

**Weighting:** 40

**Hurdle task?** No

#### Tutorial participation

**Type:** Participatory task

**Weighting:** 10

**Hurdle task?** No

#### ASSET survey

**Type:** Participatory task

**Weighting:** 5

**Hurdle task?** No

## Learning and teaching activities

### Scheduled learning activities

Expand all

#### Tutorial (In-person)

**Description:** 1x 7hr, 1x 5hr

**Applicable to offerings:** Session 2-F2F-INF-North Ryde

#### Tutorial (In-person)

**Description:** 12x 2hr Weekly tutorials

**Applicable to offerings:** Session 2-F2F-DAY-North Ryde

#### Lecture Live (In-person)

**Description:** 12x 1hr Weekly lectures, also recorded online

**Applicable to offerings:** Session 2-F2F-DAY-North Ryde

To check detailed information on unit assessments, visit the unit iLearn site.