

TEAC 3049 MATHEMATICS IN EARLY CHILDHOOD

Credit Points 10

Coordinator Linda Williams (<https://directory.westernsydney.edu.au/search/name/Linda Williams/>)

Description This subject explores the powerful mathematical and numeracy ideas that shape children's lives from birth to five years. Students will develop the ability to identify, assess and plan for young children's diverse mathematical and numeracy understandings, whilst using current curriculum frameworks and theoretical underpinnings to guide them. This subject will support students to make connections to mathematics and numeracy in everyday life, develop knowledge of effective pedagogical practices, and develop positive dispositions towards being a teacher of mathematics in the early years. This subject is included in the Development 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 3 subject

Restrictions

Students must be enrolled in 1926 Bachelor of Education (Early Childhood) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-education-early-childhood/>).

Learning Outcomes

1. Apply deep understanding of numeracy and mathematical concepts, skills and processes relevant to young children aged birth-5 years.
2. Examine effective pedagogical practices that contribute to maximising children's understanding of mathematics and numeracy.
3. Apply principles and learning outcomes of the Early Years Learning Framework for Australia and the Mathematics K-2 Syllabus to plan rich mathematics experiences.
4. Appraise young children's early mathematical thinking skills, diverse abilities, and needs, to plan creative, engaging mathematics experiences.
5. Examine the role of mathematics and numeracy in everyday contexts such as home, educational settings and community.
6. Evaluate theoretical approaches and current mathematics education literature and ICTs in supporting children's mathematics and numeracy development.
7. Discuss the importance of developing a positive disposition towards mathematics and numeracy.

Subject Content

1. The innate presence of mathematical and numerate thinking in young children from birth-5 years, including the role of language and real-life experiences
2. Teaching strategies including questioning and assessment to promote mathematical understanding

3. The role of concrete materials, technology, stories, investigation, problem solving and play in maximising learning opportunities
4. Implementing current curriculum (NSW Mathematics K-2 Syllabus) and curriculum frameworks (EYLF) for children birth-5 years
5. Early understanding of number, measurement, statistics and probability concepts.
6. Catering for diverse learners, skills and needs
7. The relevance of theory and research in supporting mathematics and numeracy development
8. Instilling positive attitudes and values to become confident teachers of mathematics

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
Quiz	20 questions	20	N	Individual	N
Case Study	1800 words	40	N	Individual	N
Critical Review	1800 words	40	N	Individual	N

Prescribed Texts

- Yelland, N., Diezmann, C., & Butler, D. (2014). *Early mathematical explorations*. Cambridge University Press.
- MacDonald, A. (2024). *Mathematics in early childhood*. (2nd ed.). Oxford University Press.

Teaching Periods

Autumn (2025)

Campbelltown

On-site

Subject Contact Linda Williams (<https://directory.westernsydney.edu.au/search/name/Linda Williams/>)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=TEAC3049_25-AUT_CA_1#subjects)