



Unit Outline (Higher Education)

Institute / School: Institute of Education, Arts & Community

Unit Title: Mathematics Curriculum 2

Unit ID: EDBED3128

Credit Points: 15.00

Prerequisite(s): (EDBED3028 or EDDDE3001)

Co-requisite(s): Nil

Exclusion(s): (EDBED3019 and EDDDE3101)

ASCED: 070301

Description of the Unit:

This unit follows on from Mathematics Curriculum 1 and focuses on curriculum and pedagogy in the Mathematics specialist teaching area for under-graduate pre-service teachers. It examines the congruence between pedagogy, curriculum and assessment. Pre-service teachers will be required to explore specific issues relating to current practice in the teaching of Mathematics in Years 7-10. They will be required to design and critically evaluate learning and assessment tasks, self-evaluate pedagogy, and conduct research in to key issues related to learning Mathematics in school. A particular focus will be the differentiation of learning of Mathematics.

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

Work Experience:

Not wholly work experience: Student is not undertaking work experience in industry or student is undertaking work experience in industry where learning and performance is directed by the provider.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment

Course Level:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Learning Outcomes:

Knowledge:

- K1.** Demonstrate an understanding of inclusive strategies for Mathematics at a secondary level.
- K2.** Develop an understanding about processes of acceleration and remediation in Mathematics.
- K3.** Demonstrate understanding of contemporary curriculum documents and guidelines relevant to teaching Mathematics in years 7-10.Ā
- K4.** Understand the congruence between pedagogy, curriculum and assessment.
- K5.** Demonstrate understanding of effective teaching strategies for Mathematics at the secondary level.

Skills:

- S1.** Write lesson plans and activities appropriate to a particular level of mathematics.
- S2.** Research and present historical and contemporary issues in Mathematics education.
- S3.** Identify and examine specific issues relating to current practice in the teaching of Mathematics in Years 7-10.
- S4.** Design forms of assessment consistent with curriculum documents.
- S5.** Design learning that caters for a range of abilities and interests.

Application of knowledge and skills:

- A1.** Produce, present, examine and evaluate an assessment task related to a real world mathematical problem.
- A2.** Design, teach and self-evaluate a lesson plan based around the theme of acceleration or remediation.
- A3.** Accurately assess a student work sample, give appropriate feedback and determine the next level of learning for that student.

Unit Content:

Topics to be covered

- Developing content for diverse learners.
- Examine a range of effective teaching strategies in mathematics including group work.
- Linking mathematics curriculum content to mathematical activities.
- Making links to previous mathematical knowledge.
- Organising content into effective learning sequences.
- Identifying strategies to support inclusion in mathematics.
- Engagement strategies for students of all abilities.
- Differentiation of activities to cater for students of all abilities
- Using diagnostic assessment to determine groupings within classes.
- Giving feedback to students and responding to feedback from colleagues.
- Equity issues faced by Australian mathematics educators.

FEDTASKS

Federation University Federation recognises that students require key transferable employability skills to prepare them for their future workplace and society. FEDTASKS (**T**ransferable **A**tttributes **S**kills and **K**nowledge) provide a targeted focus on five key transferable Attributes, Skills, and Knowledge that are embedded within curriculum, developed gradually towards successful measures and interlinked with cross-discipline and Co-operative Learning opportunities. *One or more FEDTASK, transferable Attributes, Skills or Knowledge must be evident in the specified learning outcomes and assessment for each FedUni Unit, and all must be directly assessed in each Course.*

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 1 Interpersonal	<p>Students will demonstrate the ability to effectively communicate, interact and work with others both individually and in groups.</p> <p>Students will be required to display skills in-person and/or online in:</p> <ul style="list-style-type: none"> • Using effective verbal and non-verbal communication • Listening for meaning and influencing via active listening • Showing empathy for others • Negotiating and demonstrating conflict resolution skills • Working respectfully in cross-cultural and diverse teams. 	S5	AT1, AT2
FEDTASK 2 Leadership	<p>Students will demonstrate the ability to apply professional skills and behaviours in leading others.</p> <p>Students will be required to display skills in:</p> <ul style="list-style-type: none"> • Creating a collegial environment • Showing self-awareness and the ability to self-reflect • Inspiring and convincing others • Making informed decisions • Displaying initiative 	K1, K2, K5, S3, S4, S5	AT1, AT2
FEDTASK 3 Critical Thinking and Creativity	<p>Students will demonstrate an ability to work in complexity and ambiguity using the imagination to create new ideas.</p> <p>Students will be required to display skills in:</p> <ul style="list-style-type: none"> • Reflecting critically • Evaluating ideas, concepts and information • Considering alternative perspectives to refine ideas • Challenging conventional thinking to clarify concepts • Forming creative solutions in problem solving 	K3, K4, K5, S1, S2, A1, A3	AT2
FEDTASK 4 Digital Literacy	<p>Students will demonstrate the ability to work fluently across a range of tools, platforms and applications to achieve a range of tasks.</p> <p>Students will be required to display skills in:</p> <ul style="list-style-type: none"> • Finding, evaluating, managing, curating, organising and sharing digital information • Collating, managing, accessing and using digital data securely • Receiving and responding to messages in a range of digital media • Contributing actively to digital teams and working groups • Participating in and benefiting from digital learning opportunities 	S3, A1, A2	AT2

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 5 Sustainable and Ethical Mindset	<p>Students will demonstrate the ability to consider and assess the consequences and impact of ideas and actions in enacting ethical and sustainable decisions.</p> <p>Students will be required to display skills in:</p> <ul style="list-style-type: none"> • Making informed judgments that consider the impact of devising solutions in global economic environmental and societal contexts • Committing to social responsibility as a professional and a citizen • Evaluating ethical, socially responsible and/or sustainable challenges and generating and articulating responses • Embracing lifelong, life-wide and life-deep learning to be open to diverse others • Implementing required actions to foster sustainability in their professional and personal life 	K1, K2, K5, A3	AT1

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K3, K5, S1, S2, S4, S5, A1, A3, APST 2.1, 4.2, 5.1	Developing and using assessment tasks to measure student mathematical thinking	Case Study	40-60%
K2, K3, K4, S1, S2, S5, A2, APST 1.5, 2.2, 2.3, 3.2, 3.3, 4.1	Researching, designing, presenting and self-evaluating a learning sequence to cater for diverse students	Professional Plan	40-60%

Adopted Reference Style:

APA

Refer to the [library website](#) for more information

Fed Cite - [referencing tool](#)