COURSE OUTLINE

EDU363 Teaching Junior Secondary Mathematics

School: School of Education and Tertiary Access

2026 | Trimester 1

UniSC Sunshine Coast
UniSC Moreton Bay

BLENDED LEARNING

Most of your course is on campus but you may be able to do some components of this course online.

Please go to unisc.edu.au for up to date information on the teaching sessions and campuses where this course is usually offered.

1. What is this course about?

1.1. Description

This course builds capacity to design and recognise effective pedagogy within Mathematics for Years 7 - 10. You organise and plan lessons using the Australian Curriculum for Mathematics, apply your knowledge, understanding and skills to interpret, implement and adapt learning, in order to engage Junior Secondary students. You integrate Aboriginal and Torres Strait Islander histories, culture or languages into learning activities and reflect on your developing teaching practice.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – You are required to engage with asynchronous materials and activities accessed through Canvas modules, course readings, and textbook activities.	2hrs	Week 1	9 times
Tutorial/Workshop 1 – face to face tutorials	2hrs	Week 1	10 times

1.3. Course Topics

- *Australian Curriculum: Mathematics* – content and proficiencies
- Concepts, principles and structure of mathematics pedagogy and content for Years 7 - 10
- Linking learning theory with practice through lesson planning and assessment design to support and extend learner's understanding in Mathematics
- Critically review research relating to cognition, culture, inclusion and equity, and consider the implications for practice
- Differentiation of curriculum, interdisciplinary approaches, differences in experiences of students, language use and transition from Primary schooling
- Relationship between mathematics, numeracy, and literacy
- Assessment, feedback and reporting in Mathematics including NAPLAN
- ICT applications in teaching, learning and communication with parents and carers.

2. What level is this course?

300 Level (Graduate)

Demonstrating coherence and breadth or depth of knowledge and skills. Independent application of knowledge and skills in unfamiliar contexts. Meeting professional requirements and AQF descriptors for the degree. May require pre-requisites where discipline specific introductory or developing knowledge or skills is necessary. Normally undertaken in the third or fourth full-time study year of an undergraduate program.

3. What is the unit value of this course?

12 units

4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES On successful completion of this course, you should be able to...	GRADUATE QUALITIES MAPPING Completing these tasks successfully will contribute to you becoming...	PROFESSIONAL STANDARD MAPPING * Australian Institute for Teaching and School Leadership
1 Apply knowledge of Australian Curriculum, Year 7 10 mathematical content and pedagogies for inclusion, engagement and behaviour management to develop lesson plans in mathematics	Knowledgeable Empowered	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 4.1, 4.5
2 Apply knowledge of mathematical ideas, higher order thinking skills and inquiry-based pedagogies to design and reflect on classroom activities for year 7 10 secondary learners	Creative and critical thinker	2.1, 2.4, 2.5, 2.6, 3.4, 4.2
3 Demonstrate an understanding of diverse student learning needs and adopt an ethical student-centred approach to teaching and assessment in mathematics	Knowledgeable Ethical	2.1, 2.3, 2.4, 2.5, 3.2, 5.1, 5.2, 5.3, 5.4
4 Demonstrate an understanding of the relevant issues and the strategies available to support the safe, responsible and ethical use of ICT in learning and teaching.	Creative and critical thinker Ethical	2.6, 3.2, 3.3, 3.4, 4.1
5 Create oral and/or written communication concerning curriculum, teaching, learning, and assessment in senior secondary mathematics for classroom and professional contexts.	Knowledgeable Ethical	3.5, 5.5

* Competencies by Professional Body

CODE	COMPETENCY
AUSTRALIAN INSTITUTE FOR TEACHING AND SCHOOL LEADERSHIP	
2.1	Content and teaching strategies of the teaching area: Demonstrate knowledge and understanding of the concepts, substance and structure of the content and teaching strategies of the teaching area
2.2	Content selection and organisation: Organise content into an effective learning and teaching sequence.
2.3	Curriculum, assessment and reporting: Use curriculum, assessment and reporting knowledge to design learning sequences and lesson plans.
2.4	Understand and respect Aboriginal and Torres Strait Islander people to promote reconciliation between Indigenous and non-Indigenous Australians: Demonstrate broad knowledge of, understanding of and respect for Aboriginal and Torres Strait Islander histories, cultures and languages.

CODE	COMPETENCY
2.5	Literacy and numeracy strategies: Know and understand literacy and numeracy teaching strategies and their application in teaching areas.
2.6	Information and Communication Technology (ICT): Implement teaching strategies for using ICT to expand curriculum learning opportunities for students.
3.1	Establish challenging learning goals: Set learning goals that provide achievable challenges for students of varying abilities and characteristics.
3.2	Plan, structure and sequence learning programs: Plan lesson sequences using knowledge of student learning, content and effective teaching strategies.
3.3	Use teaching strategies: Include a range of teaching strategies.
3.4	Select and use resources: Demonstrate knowledge of a range of resources, including ICT, that engage students in their learning.
3.5	Use effective classroom communication: Demonstrate a range of verbal and non-verbal communication strategies to support student engagement
4.1	Support student participation: Identify strategies to support inclusive student participation and engagement in classroom activities.
4.2	Manage classroom activities: Demonstrate the capacity to organise classroom activities and provide clear directions
4.5	Use ICT safely, responsibly and ethically: Demonstrate an understanding of the relevant issues and the strategies available to support the safe, responsible and ethical use of ICT in learning and teaching.
5.1	Assess student learning: Demonstrate understanding of assessment strategies, including informal and formal, diagnostic, formative and summative approaches to assess student learning.
5.2	Provide feedback to students on their learning: Demonstrate an understanding of the purpose of providing timely and appropriate feedback to students about their learning
5.3	Make consistent and comparable judgements: Demonstrate understanding of assessment moderation and its application to support consistent and comparable judgements of student learning.
5.4	Interpret student data: Demonstrate the capacity to interpret student assessment data to evaluate student learning and modify teaching practice.
5.5	Report on student achievement: Demonstrate understanding of a range of strategies for reporting to students and parents/ carers and the purpose of keeping accurate and reliable records of student achievement

5. Am I eligible to enrol in this course?

Refer to the UniSC Glossary of terms for definitions of “pre-requisites, co-requisites and anti-requisites”.

5.1. Pre-requisites

Enrolled in Program (AE304 and a Mathematical Sciences Extended Minor) or (SE303 and a Mathematical Sciences Major or Extended Minor) or (ED315 and a Mathematical Studies Minor)

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

Not applicable

5.4. Specific assumed prior knowledge and skills (where applicable)

It is expected that you will engage in this course when you have successfully studied some university Mathematics courses. This course will draw on your knowledge of Mathematics.

5.5. Microcredential Information

Not applicable

6. How am I going to be assessed?

6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

6.2. Details of early feedback on progress

You will receive feedback in tutorials on activities in the early weeks to support task 1.

6.3. Assessment tasks

DELIVERY MODE	TASK NO.	ASSESSMENT PRODUCT	INDIVIDUAL OR GROUP	WEIGHTING %	WHAT IS THE DURATION / LENGTH?	WHEN SHOULD I SUBMIT?	WHERE SHOULD I SUBMIT IT?
All	1	Written Piece	Individual	25%	1250 words	Week 4	Online Assignment Submission with plagiarism check
All	2a	Oral	Group	0%	15 minutes	Throughout teaching period (refer to Format)	In Class
All	2b	Written Piece	Individual	40%	2000 words	Refer to Format	Online Assignment Submission with plagiarism check
All	3	Examination - not Centrally Scheduled	Individual	35%	90 minutes	Week 10	In Class

All - Assessment Task 1: Reflective task

GOAL:	The goal of this task is to reflect on your transition from mathematics student to mathematics teacher by connecting your own experience as a learner with the experiences of students you may teach.
PRODUCT:	Written Piece
AUTHORSHIP STATEMENT:	
FORMAT:	Part a. Understanding yourself as learner of mathematics. Write your personal mathematical life history, describing and reflecting on your experiences of learning mathematics at school and at university. How did mathematics lessons make you feel? What were some of the challenges that you or your friends experienced in learning mathematics? What was the influence of different teachers and other people you may have encountered? Give specific examples to illustrate your story. Part b. Understanding a student's learning of mathematics. Choose one of the samples of student work provided on Canvas. • Analyse the task and identify the mathematical concept(s). • Describe what the student may have been thinking when they completed the task. What did they not understand or misunderstand? Use academic literature to support your description where appropriate. Part c. Imagining yourself as a future teacher of mathematics. Drawing on your own experience of learning mathematics and your analysis of this student's work, plan and script an instructional conversation with the student. The aims are to help the student understand the mathematical concept and develop a positive attitude towards mathematics. Identify any resources you will use. Use academic literature to support your description where appropriate.
CRITERIA:	

No.		Learning Outcome assessed
1	Demonstration of understanding and application of appropriate mathematical content and pedagogical knowledge to engage a diversity of students.	1 2
2	Written communication skills and academic literacies including use of credible evidence and sources, and APA referencing conventions	5

GENERIC SKILLS:	Communication, Information literacy

All - Assessment Task 2a: Teaching segment

GOAL:	Task 2 is presented in three segments. Its overall goal is to develop your ability to plan, teach, and reflect on mathematics lessons and lesson sequences. Task 2a - The goal of this task is for you to develop your ability to teach a segment of the lesson to peers
PRODUCT:	Oral
AUTHORSHIP STATEMENT:	
FORMAT:	In week 1 students will choose/ be allocated a curriculum strand from the Australian Curriculum and week in which to present a team-taught lesson segment aligned with this strand. In pairs you will choose an inquiry or problem-based activity from Canvas addressing a new mathematical concept in your allocated strand and team-teach this activity during the tutorial. The time allocation for teaching the activity is 10 - 15-minutes. This will be followed by feedback on the activity through discussion with peers. Criteria This segment of Task 2 is not assessed, but it generates the initial experience that you will use to complete Task 2b and Task 2c.
CRITERIA:	**No.** — **Learning Outcome assessed** 1 — This segment of Task 2 is not assessed, but it generates the initial experience that you will use to complete Task 2b and Task 2c.
GENERIC SKILLS:	Communication, Organisation

All - Assessment Task 2b: Learning sequence, reflection, and justification

GOAL:	The goal of this task is for you to develop your ability to a) develop your ability to reflect on your teaching; b) prepare an inquiry or problem-based mathematics lesson sequence and lesson plan; and c) use literature to justify your choices of activities, teaching strategies, and pedagogy.
PRODUCT:	Written Piece
AUTHORSHIP STATEMENT:	
FORMAT:	Based on the lesson segment you taught in Task 2a and the feedback you received: • Prepare a 3-lesson learning sequence including a fully detailed 70-minute lesson plan which includes the activity you taught as part of the first lesson in this sequence. The lesson plan will be for a Year 7 – 10 secondary class of 25 students. The lesson plan requirements will be provided on Canvas. You will also identify the key activities for the next 2 lessons that could follow on from your initial lesson. One activity must include an ICT and you must identify the mathematics content and teaching of literacy and numeracy (using the 21st C numeracy model) as appropriate in the activities. The lesson plan will Include mathematics content, teaching strategies, and assessment. (Criteria 1,2,6) • Write a personal reflection on your teaching as well as the learning sequence you developed. Include links to literature. • Justify your pedagogical and assessment decision making using the curriculum and academic literature. Your justification should explain how the teaching and learning sequence engages students of varying abilities and characteristics in an achievable challenge for junior mathematics. Include explanations of mathematics content, pedagogy, teaching strategies, ICT, assessment, and teaching of literacy and numeracy (using the 21st C numeracy model) as appropriate. (Criteria 3, 4, 5,6)
CRITERIA:	

No.		Learning Outcome assessed
1	Application of knowledge of the Australian Curriculum: Mathematics, appropriate mathematical content, pedagogical knowledge, ICT, literacy and numeracy to planning and assessment to engage students.	1 2
2	Application of mathematical ideas, higher order thinking skills, inquiry-based pedagogies and understanding of diverse student learning needs to design classroom activities for year 7 – 10 secondary learners.	2 3
3	Understanding of the relevant issues and strategies available and justify the safe, responsible, and ethical use of ICT in learning and teaching for a diversity of students.	3 4
4	Written communication skills and academic literacies including use of credible evidence and sources, and APA referencing conventions.	5

GENERIC SKILLS:	Communication, Collaboration, Problem solving, Organisation, Applying technologies, Information literacy

All - Assessment Task 3: Examination

GOAL:	The goal of this task is foryou to demonstrate your knowledge and understanding of curriculum, pedagogy and assessment in relation to mathematics in the junior phase of secondary schooling.
PRODUCT:	Examination - not Centrally Scheduled
AUTHORSHIP STATEMENT:	
FORMAT:	A 90-minute examination with short answer and scenario questions. You may bring in two A4 pages of notes. The following topics will be included: • Inquiry-based / problem-based teaching and learning in junior secondary Mathematics • Assessment (informal and formal, diagnostic, formative and summative and their application), reporting (to students and parents/carers) and feedback strategies in Mathematics • Strategies for differentiating teaching to meet the specific learning needs of student in Mathematics including Aboriginal and Torres Strait islander students • Ethical use of ICT strategies and resources in curriculum, assessment and reporting
CRITERIA:	

No.		Learning Outcome assessed
1	Knowledge of Australian Curriculum, Year 7 - 10 mathematical content and pedagogies for inclusion, engagement, and behaviour management to develop lesson plans in mathematics	1
2	Knowledge of mathematical ideas, higher order thinking skills and inquiry-based pedagogies to design and reflect on classroom activities for year 7 - 10 secondary learners	3
3	Understanding of diverse student learning needs and adopt an ethical student-centred approach to teaching and assessment in mathematics	3
4	Understanding of the relevant issues and the strategies available to support the safe, responsible, and ethical use of ICT in learning and teaching.	4

GENERIC SKILLS:	Problem solving, Applying technologies

7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Student workload is calculated at 12.5 learning hours per one unit.

8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Canvas site– Please log in as soon as possible.

8.1. Prescribed text(s) or course reader

You need regular access to the resource(s) below. Many texts are available as ebooks through the Library at no additional cost.

REQUIRED?	AUTHOR	YEAR	TITLE	EDITION	PUBLISHER
Required	Merrilyn Goos,Gloria Stillman,Colleen Vale,Sandra Herbert,Vince Geiger	2017	Teaching Secondary School Mathematics	2nd edn	n/a
Recommended	Van der Walle, Karp, Bay-Williams, Bras, ...	2019	Primary and MMiddle Years Mathematics Teaching Developmentally	First Australian	n/a

8.2. Specific requirements

Not applicable

9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the online induction training for students, and following the instructions of the University staff.

10. What administrative information is relevant to this course?

10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

10.2. Assessment: Additional Requirements

Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:
(a) The final mark is in the percentage range 47% to 49.4%; and
(b) The course is graded using the Standard Grading scale

10.3. Assessment: Submission penalties

Late submissions may be penalised up to and including the following maximum percentage of the assessment task's identified value, with weekdays and weekends included in the calculation of days late:
(a) One day: deduct 5%;
(b) Two days: deduct 10%;
(c) Three days: deduct 20%;
(d) Four days: deduct 40%;
(e) Five days: deduct 60%;
(f) Six days: deduct 80%;
(g) Seven days: A result of zero is awarded for the assessment task.

The following penalties will apply for a late submission for an online examination:
Less than 15 minutes: No penalty
From 15 minutes to 30 minutes: 20% penalty
More than 30 minutes: 100% penalty

10.4. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching

10.5. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The Student Charter sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

10.6. General Enquiries

For course-specific questions, contact your teaching staff or Course Coordinator.

For other enquiries or to access support, please contact Student Central:

- UniSC Student Central
- UniSC Adelaide Student Central