School of Information and Physical Sciences

MATH1900: Elementary Mathematics

Callaghan and Ourimbah Semester 2 - 2023



OVERVIEW

Course Description Primary and Early Childhood teachers regularly draw upon their own understanding of the methods and concepts underlying the K-6 Mathematics syllabus. To this end, MATH1900 consolidates students' skills and deepens their understanding of many of the key mathematical themes underpinning this syllabus.

Assumed Knowledge HSC level mathematics is desirable, but some understanding of basic arithmetic, algebra and geometry is sufficient. Contact Hours

> Lecture Live online via Zoom 3 hour(s) per Week for Full Term

Workshop (80% compulsory attendance requirement) Face to Face On Campus 2 hour(s) per Week for 12 Weeks

Unit Weighting Workload

10 Stud

Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.



www.newcastle.edu.au CRICOS Provider 00109J



CONTACTS

Course Coordinator

Callaghan and Ourimbah Prof James McCoy James.McCoy@newcastle.edu.au (02) 4033 9633 Consultation: By appointment.

Teaching StaffOther teaching staff will be advised on the course Canvas site.

School Office

School of Information and Physical Sciences SR233, Social Sciences Building Callaghan CESE-SIPS-Admin@newcastle.edu.au +61 2 4921 5513 9am-5pm (Mon-Fri)

SYLLABUS

Course Content	 Introductory number concepts Elementary geometry Beginnings of measurement Basic probability and statistics 		
Course Learning Outcomes	On successful completion of this course, students will be able to: 1. Recognise key mathematical ideas relevant to Early Childhood and Primary teaching.		
	2. Solve problems using methods relevant to Early Childhood and Primary mathematics classes.		
	3. Connect mathematics language and concepts to real world contexts.		
	4. Apply mathematical and statistical methods that support good teaching practice.		
Course Materials	Other Resources: All course materials for MATH1900 are provided in class and/or via Canvas. 		



Week Begins Topic Learning Activity Assessment Due					
1	17 Jul	Space: shapes.	Live online lectures (3	No workshop or	
hours). assessment					
2	24 Jul	Space: geometry.	Live online lectures (3	Workshop quiz 1:	
			hours). On-campus	Shapes	
	workshops (2 hours)				
3	31 Jul	Size: Measurement.	Live online lectures (3	Workshop quiz 2:	
			hours). On-campus	Geometry	
	workshops (2 hours)				
4	7 Aug	Size: Chance.	Live online lectures (3	Workshop quiz 3:	
			hours). On-campus	Measurement	
			workshops (2 hours).		
5	14 Aug	Numbers: Combining.	Live online lectures (3	Test 1: Space and Size.	
			hours). On-campus		
			workshops (2 nours) includes		
	01 4	Niversia and a law and a s	Class test.		
0	ZTAUg	Numbers: inverses.	Live online lectures (3	Workshop quiz 4:	
			nours). On-campus	Compining numbers	
7	29 444	Numbers: Number systems	Live opline lectures (2	Workshop quiz 5:	
· ·	20 Aug	Numbers. Number systems.	hours) On-campus	Inverse operations	
			workshops (2 hours)	inverse operations	
8	4 Sen	Numbers: Decimals	Live online lectures (3	Workshop quiz 6:	
Ū	4 000	Numbers. Decimais	hours) On-campus	Number systems	
			workshops (2 hours)	Number Systems	
9	11 Sep	Patterns: Statistics.	Live online lectures (3	Test 2: Numbers	
			hours). On-campus		
			workshops (2 hours) includes		
	class test.				
10	18 Sep	Patterns: Factors.	Live online lectures (3	Workshop quiz 7:	
	•		hours). On-campus	Statistics	
			workshops (2 hours)		
Mid Term Break					
Mid Term Break					
11	9 Oct	Patterns: Number theory.	Live online lectures (3	Workshop quiz 8:	
			hours). On-campus	Factors	
			workshops (2 hours)		
12	16 Oct	Patterns: cycles	Live online lectures (3	Workshop quiz 9:	
			hours). On-campus	Number theory	
			workshops (2 hours)		
13	23 Oct		On-campus workshops (2	Test 3: Patterns	
	hours) includes class test.				
Examination Period					
Examination Period					

ASSESSMENTS

This course has 2 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Tutorial Quizzes	Workshops in weeks 2,3,4,6,7,8,10,11,12.	Individual	28%	1, 2, 3, 4
2	In Class Tests	Weeks 5, 9 and 13.	Individual	24% x 3 = 72%	1, 2, 3, 4





Late Submissions	The mark for an assessment item submitted after the designated time on the due date,			
	without an approved extension of time, will be reduced by 10% of the possible maxi			
	mark for that assessment item for each day or part day that the assessment item is late.			
	Note: this applies equally to week and weekend days.			

Assessment 1 - Tutorial Quizzes

Assessment Type	Quiz		
Purpose	To provide skills practice, insight, and timely feedback on progress each week. Each quiz contributes 4% to the assessment for MATH1900		
Description	Weekly workshop quizzes.		
Weighting	28%		
Length	15 minutes		
Due Date	Workshops in weeks 2,3,4,6,7,8,10,11,12.		
Submission Method	In Class		
Assessment Criteria	A correct solution to each question will attract full marks. Of the 9 quiz marks, the best 7 will count, for 28 marks.		
Return Method	In Class		
Feedback Provided	Returned Work - Following workshop. Correct answers, corrected work.		

Assessment 2 - In Class Tests

Assessment Type Purpose	In Term Test To assess each student's mastery of the topics in the prior four weeks of the course. Each test contributes 24% to the assessment for MATH1900 and, from the university policy perspective, is to be considered a major assessment item.		
Description	Each test will cover topics from the prior four weeks of the course, with several multiple choice and short answer questions.		
Weighting	24% x 3 = 72%		
Length	50 minutes		
Due Date	Workshops in weeks 5, 9 and 13.		
Submission Method	In Class		
Assessment Criteria	A correct solution to each multiple choice question will attract full marks. A complete correct solution with an appropriate explanation will attract full marks for the short answer questions.		
Return Method Feedback Provided	Not Returned No Feedback		

ADDITIONAL INFORMATION

Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail	Failure to satisfactorily achieve learning outcomes. If all



	(FF)	compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.	
	*Skills are those identified for the purposes of assessment task(s).		
Communication Methods	 Communication methods used in this course include: Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site. 		
Course Evaluation	Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.		
Oral Interviews (Vivas)	As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the <u>Oral Examination (viva)</u> <u>Procedure</u> . In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the <u>Student Conduct Rule</u> .		
Academic Misconduct	All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to https://policies.newcastle.edu.au/document/view-current.php?id=35.		
Adverse Circumstances	 The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where: the assessment item is a major assessment item; or the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system; you are requesting a change of placement; or the course has a compulsory attendance requirement. Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at: https://policies.newcastle.edu.au/document/view-current.php?id=236 		
Important Policy Information	The Help button in the Canvas Navigation menu contains helpful information for using Learning Management System. Students should familiarise themselves with the pol and procedures at https://www.newcastle.edu.au/current-students/no-room-for/policies- procedures that support a safe and respectful environment at the University.		

This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.

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