



ORIGINAL COURSE IMPLEMENTATION DATE: March 1992
 REVISED COURSE IMPLEMENTATION DATE: September 2018
 COURSE TO BE REVIEWED: (six years after UEC approval) January 2020
 Course outline form version: 09/15/14

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: MATH 105		Number of Credits: 4 Course credit policy (105)																	
Course Full Title: Math for the Elementary School Teacher																			
Course Short Title (if title exceeds 30 characters): Math for Elementary Teachers																			
Faculty: Faculty of Science		Department (or program if no department): Mathematics and Statistics																	
Calendar Description: Provides direct experiences with elementary school mathematics, allowing students to explore their reasoning strategies and gain greater understanding and confidence in their mathematical abilities. Topics include problem solving strategies, sets, numeration systems, properties of real numbers, number theory, and geometry. Note: MATH 105 is a mathematics course aimed at developing mathematical ability and is not a course in the methods of teaching.																			
Prerequisites (or NONE):		One of the following: (C or better in one of Principles of Mathematics 11, Pre-calculus 11, or MATH 085) or (B or better in Foundations of Mathematics 11) or (C+ or better in Applications of Math 11) or (one of Foundations of Mathematics 12 or Pre-calculus 12) or (any UFV MATH course numbered 092 or higher) or (a score of 17/25 or better on Part A of the MSAT). Note: As of January 2019, prerequisites will change to: One of the following: (C or better in one of Principles of Mathematics 11, Pre-calculus 11, Foundations of Mathematics 12, or MATH 085) or (C+ or better in Applications of Mathematics 12) or (B or better in Foundations of Mathematics 11) or (Pre-calculus 12) or (any UFV MATH course numbered 092 or higher) or (a score of 17/25 or better on Part A of the MSAT).																	
Corequisites (if applicable, or NONE):		NONE																	
Pre/corequisites (if applicable, or NONE):		NONE																	
Equivalent Courses (cannot be taken for additional credit) Former course code/number: Cross-listed with: Equivalent course(s): <i>Note: Equivalent course(s) should be included in the calendar description by way of a note that students with credit for the equivalent course(s) cannot take this course for further credit.</i>		Transfer Credit Transfer credit already exists: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Transfer credit requested (OReg to submit to BCCAT): <input type="checkbox"/> Yes <input type="checkbox"/> No (if yes, fill in transfer credit form) Resubmit revised outline for articulation: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																	
Total Hours: 60 Typical structure of instructional hours: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Lecture hours</td><td style="text-align: center;">60</td></tr> <tr><td>Seminars/tutorials/workshops</td><td></td></tr> <tr><td>Laboratory hours</td><td></td></tr> <tr><td>Field experience hours</td><td></td></tr> <tr><td>Experiential (practicum, internship, etc.)</td><td></td></tr> <tr><td>Online learning activities</td><td></td></tr> <tr><td>Other contact hours:</td><td></td></tr> <tr><td style="text-align: right;">Total</td><td style="text-align: center;">60</td></tr> </table>		Lecture hours	60	Seminars/tutorials/workshops		Laboratory hours		Field experience hours		Experiential (practicum, internship, etc.)		Online learning activities		Other contact hours:		Total	60	Special Topics Will the course be offered with different topics? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, different lettered courses may be taken for credit: <input type="checkbox"/> No <input type="checkbox"/> Yes, repeat(s) <input type="checkbox"/> Yes, no limit <i>Note: The specific topic will be recorded when offered.</i>	
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Seminars/tutorials/workshops																			
Laboratory hours																			
Field experience hours																			
Experiential (practicum, internship, etc.)																			
Online learning activities																			
Other contact hours:																			
Total	60																		
		Maximum enrolment (for information only): 36 Expected frequency of course offerings (every semester, annually, every other year, etc.): Fall & Winter semesters																	
Department / Program Head or Director: Ian Affleck		Date approved: September 2017																	
Faculty Council approval		Date approved: September 8, 2017																	
Campus-Wide Consultation (CWC)		Date of posting: October 13, 2017																	
Dean/Associate VP: Lucy Lee		Date approved: September 8, 2017																	
Undergraduate Education Committee (UEC) approval		Date of meeting: October 27, 2017																	

Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Perform the necessary computations in order to demonstrate a conceptual understanding of the basic laws of arithmetic and the properties of geometry.
2. Use appropriate problem-solving strategies in order to structure clear and concise solutions to problems related to the elementary school curriculum.
3. Evaluate mathematical materials related to the elementary school curriculum

Prior Learning Assessment and Recognition (PLAR)

Yes No, PLAR cannot be awarded for this course because

Typical Instructional Methods (guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion)

Lectures are balanced with problem sessions and group activities. Evaluation will include tests, quizzes, assignments, and a three-hour comprehensive exam.

Grading system: Letter Grades: Credit/No Credit: Labs to be scheduled independent of lecture hours: Yes No

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Text(s) and Resource Materials

The text is chosen by a departmental curriculum committee.

	Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1.	Musser, Burger, Peterson.	Mathematics for Elementary Teachers, 10 th edition	<input type="checkbox"/>	Wiley	2013
2.			<input type="checkbox"/>		
3.			<input type="checkbox"/>		
4.			<input type="checkbox"/>		
5.			<input type="checkbox"/>		

Required Additional Supplies and Materials (software, hardware, tools, specialized clothing, etc.)

Compass and protractor.

Typical Evaluation Methods and Weighting

Final exam:	40%	Assignments:	15%	Midterm exam:	%	Practicum:	%
Quizzes/tests:	35%	Lab work:	%	Field experience:	%	Shop work:	%
Other:	Project: 10	Other:	%	Other:	%	Total:	%

Details (if necessary):

Students must achieve at least 40% on the final exam to receive credit for this course

Typical Course Content and Topics

Patterns and Problem Solving Strategies
 Sets and Venn Diagrams
 Whole Number Operations
 Numeration Systems
 Algorithms in other Bases
 Primes, Composites
 Fractions, Decimals, Ratio and Proportion and Percent
 Operations with Integers, Rational Numbers and Irrational Numbers
 Geometric Shapes and Properties
 Measurement including Perimeter and Area
 Congruence and Similarity
 Transformations and Tessellations