
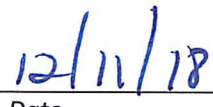

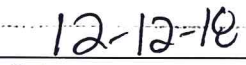
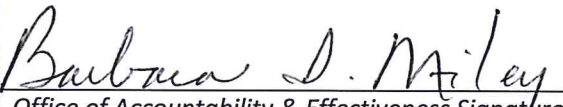
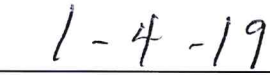


Curriculum Committee



New Course Proposal

School or Division	School of Pure and Applied Sciences
Program or Certificate	A.A.
Proposed by (faculty only)	Don Ransford
Presenter (faculty only)	Don Ransford
Note that the presenter (faculty) listed above must be present at the Curriculum Committee meeting or the proposal will be returned to the School or Division and must be submitted for a later date.	
Submission date	10/18/2018
Course prefix, number, and title	MGF 1113 Mathematics for Teachers
All Curriculum proposals require approval of the Curriculum Committee and the Interim Provost for Academic Affairs. Final approval or denial of a proposal is reflected on the completed and signed proposal.	
<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	
 _____ <i>Curriculum Committee Chair Signature</i>	 _____ <i>Date</i>
<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	
 _____ <i>Interim Provost for Academic Affairs Signature</i>	 _____ <i>Date</i>
All Curriculum proposals require review by the Office of Accountability & Effectiveness.	
<input checked="" type="checkbox"/> Reviewed <input type="checkbox"/> Not Reviewed	
 _____ <i>Office of Accountability & Effectiveness Signature</i>	 _____ <i>Date</i>

Section I, Important Dates and Endorsements Required

NOTE: Course and Program changes must be submitted by the dates listed on the published Curriculum Committee Calendar. Exceptions to the published submission deadlines must receive prior approval from the Interim Provost for Academic Affairs' Office.

Term in which approved action will take place	Fall 2019
Provide an explanation below for the requested exception to the effective date.	

Any exceptions to the term start date requires the signatures of the Academic Dean and Interim Provost for Academic Affairs prior to submission to the Dropbox.		
Dean	Signature	Date
Interim Provost for Academic Affairs	Signature	Date
Dr. Eileen DeLuca		

Required Endorsements	Type in Name	Select Date
Department Chair or Program Coordinator/Director	Dr. Ivana Ilic	10/18/2018
Academic Dean or Interim Provost for Academic Affairs	Dr. Martin McClinton	10/18/2018

List all faculty endorsements below. (Note that proposals will be returned to the School or Division if faculty endorsements are not provided).
The Mathematics Department, chaired by Dr. Ivana Ilic, voted unanimously in favor of the course being added to the catalog; Dr. Joyce Rollins.

Has the Libraries' Collection Manager been contacted about the new course and discussed potential impacts to the libraries' collections?
Yes

Section II, New Course Information (must complete all items)

List course prerequisite(s) and minimum grade(s) (must include minimum grade if higher than a "D").	MAT 1033 or MAT 1100 with a "C" or better, or an appropriate placement score.
Provide justification for the proposed prerequisite(s).	Since this course will meet the standards of a General Education mathematics course for the A.A. program, it should have the same prerequisites as those named for other like courses in mathematics. In addition, the level of critical thinking and problem solving and mathematical skills utilized in this course are dependent on those taught in MAT 1033 and/or MAT 1100.
Will students be taking any of the prerequisites listed for this course in different parts of the same term (ex. Term A and Term B)?	No
List course co-requisites.	None
Provide justification for the proposed co-requisite(s).	
Is any co-requisite for this course listed as a co-requisite on its paired course? (Ex. CHM 2032 is a co-requisite for CHM 2032L, and CHM 2032L is a co-requisite for CHM 2032)	No
Course credits or clock hours	3 credits
Contact hours (faculty load)	3 contact hours
Are the Contact hours different from the credit/lecture/lab hours?	
Select grade mode	Standard Grading (A, B, C, D, F)
Credit type	College Credit
Possible Delivery Types (Online, Blended, On Campus)	On Campus and Blended
Course description (provide below)	
This course will help students to achieve the National Council of Teachers of Mathematics Curriculum standards for grades K-5. <i>Mathematical reasoning, problem solving, geometrical concepts, and connections are a central focus in this course.</i> This course provides an introduction to problem-solving, sets and numeration, whole numbers, integers, rational numbers, geometric shapes, and measurement and geometry. Credit is not given for both MGF 1113 and MGF 1106.	

General topic outline (type in outline below)

- Introduction to Problem Solving
- Introduction to Logic and Sets
- Numeration Systems and Whole Number Operations
- Elements of Number Theory
- Integers
- Rational Numbers, Proportional Reasoning, and Decimals and Percents
- Real Numbers and Algebraic Thinking
- Basics of Probability
- Basic Elements of Statistics and Data Analysis
- Introductory Plane Geometry
- Applications of Geometric Concepts: Area, Pythagorean Theorem and Volume

Learning Outcomes: For information purposes only.

IV. Course Competencies, Learning Outcomes and Objectives

A. General Education Competencies and Course Outcomes

1. Integral *General Education Competency or competencies*: Evaluate

- Examine solutions provided by elementary-age students, determine the mathematical principles creating their errors, and create a plan to assist the students correct their mistakes.

2. Supplemental *General Education Competency or competencies*: Communicate

- Analyze a proposed problem and provide multiple methods of determining and communicating a solution to the problem.

B. Other Course Objectives/Standards

- Solve a variety of problems requiring critical thinking
- Discuss the difference between necessary and sufficient
- Determine the validity of an argument by using Euler diagrams
- Write the negation of quantitative logic statements
- Determine the cardinality of a set
- List all possible subsets of a given set
- Perform the operations of union, intersection and/or negation on two or more unique sets
- Analyze and create Venn diagrams
- Distinguish among the elements of the subsets of the real numbers
- Convert between and perform operations within multiple base number systems to include the base-ten number system
- Design multiple methods of demonstrating basic operations on whole numbers, integers and fractions
- Identify numbers with special properties from number theory such as prime, composite, Fibonacci, odd, even, multiples and factors

- Provide multiple representations of fractions, decimals and percentages
- Demonstrate proportional reasoning including its application to similar geometric figures
- Discuss the density of the real number line
- Create visual representations of irrational numbers through the use of the Pythagorean theorem
- Convert numbers between standard form and scientific notation, and determine appropriate settings for using scientific notation
- Design a variety of methods of solving basic algebraic equations
- Demonstrate the meaning of raising a numeric value to both positive and non-positive exponents
- Determine the probability of a simple and a conditional event
- Evaluate situations best suited for mean, median or mode
- Interpret the standard deviation in the context of a set of data
- Create and analyze various displays of statistical data including scatter plots
- Distinguish among basic shapes from plane geometry
- Identify the relationships between angles and parallel lines, and angle measures and convex polygons
- Calculate the area and volume of two-dimensional and three-dimensional geometric figures, respectively, and determine an appropriate unit of measurement
- Given measurement equivalencies, convert units of measure through the use of dimensional analysis

Copy and Paste the SCNS Course Profile Description below (http://scns.fldoe.org/scns/public/pb_index.jsp).

This course will help students to achieve the national council of teachers of mathematics curriculum standards for grades k-5. Mathematical reasoning, problem solving, geometrical concepts, and connections are a central focus in this course. This course provides an introduction to problem-solving, sets and numeration, whole numbers, integers, rational numbers, geometric shapes, and measurement and geometry.

ICS code for this course	ADVANCED AND PROFESSIONAL - 1.16.17 - MATHEMATICS
Institutional Reporting Code	11617 MATHEMATICS
Degree Attributes	AA - AA COURSE
Degree Attributes (if needed)	
Degree Attributes (if needed)	
Degree Attributes (if needed)	
Should any major restriction(s) be listed on this course? If so, select "yes" and list the appropriate major restriction code(s) or select "no".	Yes Students should not receive credit for <i>both</i> MGF1113 and MGF1106.
Is the course an "International or Diversity Focus" course?	No, not International or Diversity Focus
Is the course a General Education course?	Yes

Is the course a Writing Intensive course?	No
If Replacing a course, combining a Lecture/Lab or splitting a C course – Is there a course equivalency?	
Is the course repeatable*?	No
Do you expect to offer this course three times or less (experimental)?	No

Impact of Course Proposal	
Will this new course proposal impact other courses, programs, departments, or budgets?	Yes
If the answer to the question above is “yes”, list the impact on other courses, programs, or budgets?	Since a maximum of two sections is planned to be offered in any one term, there should be a minimal effect on enrollments in other general education mathematics courses.
<p>Have you discussed this proposal with anyone (from other departments, programs, or institutions) regarding the impact? Were any agreements made? Provide detail information below.</p> <p>I discussed with Dr. Joyce Rollins and Dr. Lawrence Miller of the School of Education the possibility of offering this course as a general education mathematics course through the mathematics department as a means of providing a college level mathematics experience that would be designed specifically for educators. They both thought the course would be beneficial to the students in their education programs.</p>	

Section III, Justification for proposal

Provide justification (below) for this proposed curriculum action.
The mathematics department would like to offer <i>MGF 1113 Mathematics for Teachers</i> as an option to students in programs related to education. It should be beneficial since the course outcomes are designed to enhance the student’s understanding and application of elementary mathematical concepts and principles through the use of multiple modalities. This course may also serve as record of continuing education for practicing educators.