

NORTHWEST FLORIDA STATE COLLEGE
COURSE SYLLABUS – Part I Course Data

Lab Fee _____
Other _____
 Req'd Opt A Opt B
By _____

Course Number MGF1107 New (Add) Revision Textbook Revision Only Deletion (Inactive) Reactivate

Course Title Math in Society

Div/Dept Code MATH MTHG Subject Code AMAT Effective Term 201710 End Term _____

Course/Credit Type (Check One only)	Contact/Credit Hours	ICS Code
<input checked="" type="checkbox"/> 01 A & P	Lecture Hours <u>45</u>	11617
<input type="checkbox"/> 02 PSV (AS/AAS only)	Lab Hours _____	
<input type="checkbox"/> 02 PSV Dual (Transfer)	Clinical Hours _____	
<input type="checkbox"/> 05 PSAV	Other _____	
<input type="checkbox"/> 03 College Prep		Grading <input checked="" type="checkbox"/> A-F
<input type="checkbox"/> 07 ABE/ESL	Clock Hours _____	<input type="checkbox"/> P/F
<input type="checkbox"/> 09 GED		<input checked="" type="checkbox"/> Audit OK
<input type="checkbox"/> 08 Adult Secondary (Collegiate HS) Total Credits <u>3</u>		CEU Approved <input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> 10 Voc Prep		Number of enrollment times for credit <u>1</u>

Course Catalog Description: This course is designed for those students requiring only general education mathematics courses. Topics include numeration and mathematical systems, number theory, linear and exponential growth, history of mathematics, voting techniques, graph theory, and consumer mathematics.

Prerequisites Completion of MAT1033A or higher mathematics course with a grade of "C" or better, or equivalent or appropriate placement score.

Corequisites None

General Education No Yes, AA and AS Yes, AAS Only Area Mathematics

Gordon Rule No Yes, Word Count 1

Oral Communication No Yes Computer Technology No Yes

Scheduling Fall Spring Summer All As needed

Special Equipment/Facilities Room with ample board space, including a grid board, board ruler, compass, geometric models, and computer when available.

Recommended Text/Software: Thinking Mathematically, Custom Ed (from 6th ed.), Blitzer, Pearson/Prentice Hall; ISBN 9781269748834 Includes: MyMathLab access code and student solutions manual

Required in these Programs _____

Elective in these Programs AA, AS, AAS

Replaces or is equivalent to another course No Yes If so, course number _____

Special Designators D1 PA PD PI

Prepared By Chris Mizell Date 07/25/2016

Director/Chair Approval Chris Mizell Date 07/25/2016

Curriculum Committee Action Approved Disapproved Postponed Date _____

Vice President for Instruction _____ Date _____

President _____ Date _____

Course Dictionary Update by _____ Date _____

White: VP Instruction Yellow: Business Office Pink: Registrar

COURSE SYLLABUS — PART II
COURSE GOALS

Course Number MGF1107 Title Math in Society

Prepared by Chris Mizell Date 07/25/2016

Director/Chair Chris Mizell Date 07/25/2016

Criteria: (1) Direction oriented; (2) student oriented — written in terms of what students will accomplish; (3) provide the lay reader with an understanding of the substance of the course; and (4) the number of statements should be sufficient to clearly identify the mission of the course.

Goal Number	Statement
	Student Outcomes – The student will:
1	The student will demonstrate understanding of numeration and mathematical systems.
2	The student will demonstrate understanding of number theory.
3	The student will demonstrate understanding of linear and exponential growth.
4	The student will demonstrate understanding of voting techniques.
5	The student will demonstrate understanding of graph theory.
6	The student will demonstrate understanding of consumer mathematics.
7	The student will demonstrate understanding of how the above goals relate to the history of mathematical thought.

**COURSE SYLLABUS — PART III
PERFORMANCE OBJECTIVES**

Course Number MGF1107 Title Math in Society

Prepared by Committee Date 7/25/2016

Director/Chair Chris Mizell Date 7/25/2016

A specific objective is one in which the outcome and the level of achievement are defined in measurable terms.

(If this course is used in the annual assessment and reporting of SLOs, the Objectives below should include the assessments associated with the SLOs reported on the previous page.)

Objective No.	Related Goals	Objectives (Student Learning Outcomes)	Evaluation
M1		The student in MGF1107 will represent mathematical information verbally, graphically and symbolically using correct terminology and notation.	The student will solve at least 2 problems pertaining to each course-specific student learning outcome (SLO). Students scoring at least two-thirds of the points available for the problems for a particular course-level SLO are said to have met that SLO.
M2		The student in MGF1107 will interpret graphical, symbolic and tabular representations of mathematical models.	
M3		The student in MGF1107 will identify appropriate mathematical and computational models in problem solving.	
M4		The student in MGF1107 will effectively apply mathematical and computational methods in problem solving.	
M5		The student in MGF1107 will use technology, where appropriate, to solve mathematical problems.	

Director/Chair Approval _____ Date _____

Academic Dean Approval _____ Date _____

Vice President of Academic Affairs Approval _____ Date _____

CURRICULUM COMMITTEE ACTION:	Date Approved:	Other:
Comments:		

COURSE SYLLABUS — PART III
PERFORMANCE OBJECTIVES

Course Number MGF1107

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Date 05/25/2010

Prepared by Chris Mizell

Course Title Math in Society

Director/Chair Chris Mizell

A specific objective is one in which the outcome and the level of achievement are defined in measurable terms.

Object No.	Related Goals	Objectives (Student Learning Outcomes)	Evaluation
1	1,7 M1, NWF1	The student will demonstrate understanding of the concept of a mathematical system.	The student will work problems on a written exam with standard department questions. A grade of "C" denotes basic competence. The specific percentage for the "C" may vary with the instructor, but in no case is a "C" awarded for less than 70% mastery of the assignment.
2	1,7 M1, NWF1	The student will demonstrate understanding of the historical numeration systems of the ancient Egyptians, the traditional Chinese numeration system, and the Hindu-Arabic numeration.	
3	1,7 M1, NWF1	The student will demonstrate understanding of the concept of positional numeration.	
4	1,7 M1, NWF1	The student will convert between different number bases.	
5	1,2,7 M1, NWF1	The student will demonstrate understanding of computer mathematics.	
6	1,2,7 M1, NWF1	The student will demonstrate understanding of clock arithmetic and modular systems.	
7	1,2,7 M1, NWF1	The student will add, subtract, and multiply in a finite mathematical system.	
8	1,2,7 M1, NWF1	The student will demonstrate understanding of congruence modulo m.	
9	1,2,7 M3, NWF1	The student will demonstrate understanding of the criterion for convergence.	
10	1,2,7 M1, NWF1	The student will solve problems in a finite system.	

File: Course Syllabus-VPI

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Object No.	Related Goals	Objectives (Student Learning Outcomes)	Evaluation
11	1,2,7 M3, NWF1	The student will demonstrate understanding of topics from number theory such as perfect number, deficient and abundant numbers, amicable numbers, mersenne primes, Goldbach's conjecture, and twin primes.	The student will work problems on a written exam with standard department questions. A grade of "C" denotes basic competence. The specific percentage for the "C" may vary with the instructor, but in no case is a "C" awarded for less than 70% mastery of the assignment.
12	1,2,7 M3, NWF1	The student will distinguish between prime and composite numbers.	
13	1,2,7 M3, NWF1	The student will demonstrate understanding of the concept of divisibility.	
14	1,2,7 M3, NWF1	The student will demonstrate understanding of the Fundamental Theorem of Arithmetic.	
15	1,2,7 M3, NWF1	The student will demonstrate understanding of the Fibonacci sequence and the golden ratio.	
16	3,5,7 M2, NWF1	The student will demonstrate understanding of the applications of linear equations by interpreting slope and y-intercept.	
17	3,5,7 M2, NWF1	The student will identify an exponential equation.	
18	6,7 M4, NWF2	The student will demonstrate understanding of the compound interest formula.	
19	6,7 M4, NWF2	The student will demonstrate understanding of the continuous compounding interest formula.	
20	5,7 M2, NWF1	The student will demonstrate understanding of Non-Euclidean Geometry, Topology, and Networks.	

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Object No.	Related Goals	Objectives (Student Learning Outcomes)	Evaluation
21	5,7 M2, NWF1	The student will demonstrate understanding of Euclid's fifth postulate and the origins of non-euclidean geometry.	The student will work problems on a written exam with standard department questions. A grade of "C" denotes basic competence. The specific percentage for the "C" may vary with the instructor, but in no case is a "C" awarded for less than 70% mastery of the assignment.
22	5,7, NWF1 M2	The student will demonstrate understanding of the concepts of networks to include vertices, nodes, odd vertex, even vertex, and results on vertices and traversability.	
23	5,7 M2, NWF1	The student will demonstrate understanding of the concept of chaos and fractal geometry.	
24	6,7 M4, NWF2	The student will demonstrate understanding of interest and inflation.	
25	6,7 M4, NWF2	The student will demonstrate understanding of the "Effective Annual Yield Formula" and its interpretation.	
26	6,7 M4, NWF2	The student will demonstrate understanding of "Future Value of an Ordinary Annuity" and its interpretation.	
27	6,7 M4, NWF2	The student will demonstrate understanding of "Open-End Credit".	
28	6,7 M4, NWF2	The student will demonstrate understanding of the concept of truth in lending (APR, Unearned Interest-rule of 78 and Finance Charge)	
29	6,7 M4, NWF2	The student will demonstrate understanding of the mathematics of buying a house (Regular Monthly payment formula, ARM, VRM).	

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Object No.	Related Goals	Objectives (Student Learning Outcomes)	Evaluation
30	6,7 M4, NWF2	The student will demonstrate understanding of the mathematics of investing in the stock market (Current Yield, finding commissions, mutual funds).	The student will work problems on a written exam with standard department questions. A grade of "C" denotes basic competence. The specific percentage for the "C" may vary with the instructor, but in no case is a "C" awarded for less than 70% mastery of the assignment.
31	4,7 M4, NWF2	The student will demonstrate understanding of voting techniques.	

Use additional pages as needed