

FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: MGF 1106

COURSE TITLE: Topics in College Mathematics

PREREQUISITE(S): MAT 1033 with a grade of "C" or better or a satisfactory score on the placement test

COREQUISITE(S): None

CREDIT HOURS: 3

CONTACT HOURS/WEEK: 3

CONTACT HOUR BREAKDOWN:

Lecture/Discussion: 3

Laboratory:

Other _____:

FACULTY WORKLOAD POINTS: 3

STANDARDIZED CLASS SIZE ALLOCATION: 25

CATALOG COURSE DESCRIPTION:

This course is designed for students who plan to major in fields that do not require an in-depth study of mathematics. The major topics introduced in this course are set theory, symbolic logic, geometry and measurement, introductory combinatorics, probability, and descriptive statistics and history of mathematics.

SUGGESTED TEXT(S):

Angel, Survey of Mathematics with Application: Expanded ISBN# 321205650

Angel, Survey of Mathematics PKG, ISBN# 032137732X

Blitzer, Thinking Mathematically, ISBN# 012134868X

Blitzer, Thinking Mathematically (w/2 CD's), ISBN# 0131752049

SUGGESTED TEXT(S):

Bello, Topics in Contemporary Math, ISBN# 0618775242

Angel, Survey Math with Application Expanded,
ISBN# 0321319249

Miller, Mathematical Ideas Expanded, ISBN# 0201793911

Tannenbaum, Excursions in Modern Mathematics,
ISBN# 0131873636

Blitzer, Thinking Mathematically & My Math Lab,
ISBN# 0131516876

Tannenbaum, Excursions in Modern Mathematics,
ISBN# 0132319136

IMPLEMENTATION DATE:

Fall Term, 1986

REVIEW OR MODIFICATION DATE:

Fall Term, 1999

Fall Term, 2002 (20031)

Spring Term, 2005 (20052)

Fall Term, 2007 (20081)

Fall Term, 2008 (20091) - Outline Review 2007

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
I. Sets	7
A. Relations	
B. Operations	
C. Venn Diagrams	
D. Applications	
E. Infinite Sets	
II. Logic	10
A. Inductive and Deductive Reasoning	
B. Statements	
C. Logical Operations	
D. Truth Tables	
E. Negations	
F. Logical Equivalence	
G. Variations of the Conditional	
H. Logical Inferences	
I. Application to Switching Circuits	
III. Geometry and Measurement	9
A. Geometry	
1. Angles	
2. Circles and Polygons	
3. Similar Figures	
B. Measurement	
1. Estimation	
2. Rounding Off	
3. Significant Digits	
4. Error Analysis	
5. The English and Metric Systems	
6. Dimensional Analysis	
C. Measures of Geometric Figures	
1. Perimeter	
2. Area	
3. Volume	
IV. Introductory Combinatorics	3
A. Counting Principles	
B. Permutations	
C. Combinations	

COURSE TOPICS (CONTINUED)	CONTACT HOURS <u>PER TOPIC</u>
V. Probability	7
A. Empirical Probability B. Theoretical Probability C. Conditional Probability D. Union and Intersection E. Odds F. Expectation	
VI. Descriptive Statistics	6
A. Frequency Distributions B. Statistical Graphs C. Measures of Central Tendency D. Measures of Dispersions E. The Normal Distribution	
VII. History of Mathematics	3

*TOPICS NEED NOT BE COVERED IN THE INDICATED SEQUENCE.



Course Prefix and Number: <u>MGF1106</u>	Semester Credit Hours: <u>3</u>
Course Title: <u>Topics in College Mathematics</u>	

Discipline Area for the Course:

<input type="checkbox"/> Communication	<input checked="" type="checkbox"/> Mathematics	<input type="checkbox"/> Social & Behavioral Sciences
<input type="checkbox"/> Humanities & Visual/Performing Arts	<input type="checkbox"/> Natural Sciences	<input type="checkbox"/> Other-Designated Option

INTELLECTUAL COMPETENCIES:

<input checked="" type="checkbox"/> Reading	<input type="checkbox"/> Speaking	<input checked="" type="checkbox"/> Critical Analysis	<input checked="" type="checkbox"/> Quantitative Skills	<input type="checkbox"/> Scientific Method of Inquiry
<input type="checkbox"/> Writing	<input checked="" type="checkbox"/> Listening	<input type="checkbox"/> Information Literacy	<input type="checkbox"/> Ethical Judgment	<input type="checkbox"/> Working Collaboratively

Learning Outcomes	Method Of Assessment
The students will be able to:	
1. Represent mathematical information symbolically and visually through use of sets and Venn diagrams.	Students are successful on class tests, class assignments, and projects.
2. Demonstrate an understanding of the fundamentals of mathematical logic and be able to differentiate between a valid argument and a fallacy.	
3. Use geometry and measurement techniques to develop spatial and measurement sense and to solve real-world applications.	
4. Estimate and check answers to mathematical problems in order to determine reasonableness.	Students are successful in subsequent courses.
5. Demonstrate an understanding of units of measurement and use metric and U.S. customary systems to solve real-world problems.	Students are successful on standardized tests that require mathematical methods, models, and measures.
6. Utilize basic combinatorics to develop data for determining probability.	
7. Use statistical methods to summarize data visually and numerically.	

Name of Person Completing This Form: Scott Carter, John Freeman, Christina Joyner, Bill Meisel

Signature: _____ Date: 11/19/2007



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KNOWLEDGE	Primary	Secondary	N/A	VALUE	Primary	Secondary	N/A		
Global and Historical Knowledge & Understanding				Intellectual honesty	X				
Comprehends a general knowledge of the nature, origins and contributions of major civilizations				Curiosity and openness to new ideas	X				
Comprehends the workings and interrelations of personal, business and government economies		X		Recognition of one's own creative potential		X			
Comprehends political, social and economic systems and their effects upon society				Acceptance of and respect for differences among people and cultures	X				
Cultural and Aesthetic Knowledge and Understanding				Civic Engagement					
Comprehends the contributions of the arts and humanities to the human experience on a personal, national or global level				Lifelong Learning		X			
Comprehends the historical development of the arts and sciences		X							
Comprehends religious and cultural systems and their effects upon society									
Human Awareness and Understanding									
Comprehends the dynamics of human behavior and the process of increasing self-awareness, growth and development									
Comprehends the stages of human development and the dynamics of human relationships in diverse cultures									
Comprehends the factors that promote physical, mental and social well-being									
Mathematics, Science and Technology									
Comprehends the basic concepts and investigative processes of the natural sciences		X							
Comprehends the breadth, significance and development of the mathematical sciences	X								
Comprehends the ways science and technology have shaped and continue to reshape human cultures and the environment		X							

Name of Person Completing This Form: Scott Carter, John Freeman, Christina Joyner, Bbill Meisel

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Rev 12/10/02