Angelina College
Division of Science and Mathematics
MATH 1332 – Contemporary Mathematics
Instructional Syllabus Spring 2018

I. BASIC COURSE INFORMATION:

A. Contemporary Mathematics (Quantitative Reasoning) – MATH 1332 –Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications. Number sense, proportional reasoning, estimation, technology, and communication should be embedded throughout the course. Additional topics may be covered. Three lecture hours each week. Prerequisite: TSIA complete or equivalent.

B. The intended audience is any student with A.A. or A.A.S. degree plans which require 3 hours of mathematics. Generally, these degrees are in liberal arts, fine arts, some health care, and some business fields. MATH 1332 is not a prerequisite for any other mathematics courses and is not appropriate for elementary education, science, or mathematics majors.

C. Instructor: George Reed
Office Location: S211
Office Hours: as posted on office door
Phone: (936) 633-5485
E-mail Address: greed@angelina.edu

II. INTENDED STUDENT OUTCOMES:

A. Core Objectives Required for this Course

1. **Critical Thinking:** to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. **Communication:** to include effective development, interpretation and expression of ideas through written, oral and visual communication
3. **Empirical and Quantitative Skills:** to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

B. Course Learning Outcomes for all Sections

1. Apply the language and notation of sets.
2. Determine the validity of an argument or statement and provide mathematical evidence.
3. Solve problems in mathematics of finance.
4. Demonstrate fundamental probability/counting techniques and apply those techniques to solve problems.
5. Interpret and analyze various representations of data.
6. Demonstrate the ability to choose and analyze mathematical models to solve problems from real-world settings, including, but not limited to, personal finance, health literacy, and civic engagement.

III. ASSESSMENT MEASURES

A. Assessments for the Core Objectives

1. **Critical thinking:** Students will answer multiple choice questions in a project to show creative thinking, innovation, and analyze and evaluate arguments. The AC Critical Thinking rubric will be used to assess critical thinking skills and correctness of conclusions.

2. **Communication:** Students will answer multiple choice questions in project. The AC Communication Rubric will be used to assess written, oral, and visual communication skills.
3. **Empirical and Quantitative Skills:** Students will answer multiple choice questions in a project to calculate, analyze, and summarize the data. The AC Empirical and Quantitative Skills Rubric will be used.

B. Assessments for Course Learning Outcomes

1. Students will apply the language and notation of sets with embedded test questions.
2. Students will demonstrate the validity of an argument or statement and provide mathematical evidence with embedded test questions.
3. Students will solve problems in mathematical finance with embedded test questions.
4. Students will demonstrate and apply fundamental probability/counting techniques with embedded test questions.
5. Students will interpret and analyze various representations of data with embedded test questions.
6. Students will demonstrate the ability to choose and analyze mathematical models to solve problems from real-world settings, including, but not limited to, personal finance, health literacy, and civic engagement with embedded test questions.

IV. INSTRUCTIONAL PROCEDURES:

The course is taught using a combination of lectures, discussions, practice exercises, and group activities. The amount of time spent using any one technique will vary from class to class and from lesson to lesson as determined to be most appropriate by the instructor.

V. COURSE REQUIREMENTS AND POLICIES:

A. Required Textbooks and Recommended Readings, Materials and Equipment

1. Using and Understanding Mathematics: A Quantitative Reasoning Approach, 6th ed. by Bennett & Briggs (Pearson).
2. Access to MyLabsPlus (included with new book bought at AC bookstore) or purchased separately in the bookstore or on-line.
3. Use of a graphing calculator is encouraged – The TI-84 graphing calculator will be used by the instructor in classroom demonstrations.

B. Course Policies – This course conforms to the policies of Angelina College as stated in the Angelina College Handbook.

1. **Academic Assistance** – If you have a disability (as cited in Section 504 of the Rehabilitation Act of 1973 or Title II of the Americans with Disabilities Act of 1990) that may affect your participation in this class, you should see Maria Lopez or Steve Hudman in room 200 of the Student Center. At a postsecondary institution, you must self-identify as a person with a disability; Ms. Lopez and Mr. Hudman will assist you with the necessary information to do so. To report any complaints of discrimination related to disability, you should contact Mr. Steve Hudman, Dean of Student Affairs, in Room 101 of the Student Center. You may also contact Dean Hudman by phone at (936) 633-5292 or by email shudman@angelina.edu.

2. **Attendance –** This course conforms to the Angelina College attendance policy as stated in the Angelina College Policies and Procedures Manual. Records will be turned in to the academic dean at the end of the semester. Do not assume that non-attendance in class will

always result in an instructor drop. **You must officially drop a class or risk receiving an F**. This is official Angelina College Policy.

3. Additional Policies Established by the Instructor

MAKE-UP EXAMS
Make-up exams will be offered only in unusual circumstances. The grade on the final exam can replace the lowest exam grade, including the grades from a missed exam.

Cheating on tests is not tolerated as per Angelina College policy and may result in expulsion from the course. Plagiarism is not tolerated and will result in a zero for any assignment in which it is detected.

CELL PHONES
Students may not have access to cell phones, iPads, etc. during tests. Phones should be silent and out of sight during class.

VI. COURSE OUTLINE:

See attached COURSE SCHEDULE

VII. EVALUATION AND GRADING:

1. Your grade will be assessed by:
    a. Three tests valued at 100 points each for a total of 300 points.
    b. Homework on MyLabsPlus and other assignments valued at 100 points.
    c. Three projects valued for a total of 100 points.
    d. A comprehensive final examination valued at 100 points.

2. Homework will be completed on MyLabsPlus and **is required.**
    a. MyLabsPlus comes with new books from the AC bookstore. It may also be purchased with a major credit card on the website www.angelina.mylabsplus.com
    b. Homework will have due dates and penalties for late work. Each homework grade will be a zero if it is not done within the allotted time.

3. The final exam grade will replace any one missed test or the lowest test grade during the semester.

Students who drop the course on or before January 31st will not receive a grade for the class. Those dropping between February 1st and April 2nd (inclusive) will receive a W in the course. April 2nd is the last day for dropping a course.

The instructor may modify the provisions of the syllabus to meet individual class needs by informing the class in advance as to the changes being made.

CONTENT, TOPICS, and COURSE SCHEDULE (TR)

Class	Date	Section	Topics
1	01/16	Prologue	Introduction to Course
2	01/18	1A	Recognizing Fallacies
3	01/23	1C	Sets and Venn Diagrams
		1E	Critical Thinking in Everyday Life
4	01/25	2A	Working with Units
		2B	Problem Solving with Units
5	01/30	3A	Uses and Abuses of Percentages
6	02/01	3E	How Numbers Can Deceive: Polygraphs, Mammograms, and More
7	02/06	Review	
8	02/08	Test 1	
9	02/13	Project 1 Due	
		8A	Growth: Linear versus Exponential
10	02/15	4B	The Power of Compounding
11	02/20	4C	Savings Plans and Investments
12	02/22	4D	Loan Payments, Credit Cards, and Mortgages
13	02/27	4E	Income Taxes
14	03/01	4F	Understanding the Federal Budget
15	03/06	Review	Activity
16	03/08	Test 2	
17	03/20	Project 2 Due	
		5A	Fundamentals of Statistics
18	03/22	5B	Should You Believe a Statistical Study?
		5C	Statistical Tables and Graphs
19	03/27	5D	Graphics in the Media
		5E	Correlation and Causality
20	03/29		Chapter 5 Practice
		6A	Characterizing Data
21	04/03	6B	Measures of Variation
22	04/05	6C	The Normal Distribution
23	04/10	6D	Statistical Inference
24	04/12	Review	Activity
25	04/17	Test 3	
26	04/19	Project 3 Due	
		7A	Fundamentals of Probability
27	04/24	7B	Combining Probabilities
28	04/26	7C	The Law of Large Numbers
29	05/01	11C	Proportion and the Golden Rule
30	05/03	Review	Activity
31		Comprehensive Final Exam (scantron needed) 8:00 am – 10:00 am	