MTH 110.002 Course Policies
Department of Mathematics and Statistics
Mathematics in Society, Fall 2017

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Office Hours:

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Class Times & Place: 11-11:50 MWF, Room 204, Math Building

Course description: Provides an introduction to mathematical thinking emphasizing analysis of information for decision-making.

CURRENT Text and Materials: The required textbook is A Survey of Mathematics with Applications, 10th edition, by Angel, et. al., ISBN 1323579575. This includes a semester’s access to the homework system myMathLab. Topics covered this semester are included in chapters 1, 2, 3, 10, 11, 12, and (either) 13 (or 14) of the textbook. For exams, students may use only a non-programmable, non-graphing calculator. The TI-30 series is allowed; specifically, the TI-30XS MultiView is recommended.

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

Exam Calendar: Please note that the dates for our in-class exams below are subject to change. The final is university scheduled and cannot be taken at a different time without permission of the Dean of the College of Sciences and Mathematics.

| Exam 1 (Critical Thinking and Sets) | Monday, September 18 |
| Exam 2 (Logic and Finance) | Monday, October 16 |
| Exam 3 (Probability and Statistics) | November 20 |
| Final Exam | Monday, December 11, 10:30AM-12:30PM |

Course Requirements/Assignments:

- **Three in-class exams**—If a student must miss an exam due to an excused absence, special arrangements should be made in advance. Student ID with photo may be required for exams. No cell phone or graphing calculators will be allowed on exams. You will need to bring your own calculator to exams. You may not borrow another student’s calculator on exam days. [CO 1, 2, 3]

- **Periodic in-class quizzes**—We will have periodic in-class quizzes. [CO 1, 2, 3]

- **A comprehensive final exam**—The final exam is Monday, December 11, 10:30AM – 12:30PM [CO 1, 2, 3]

- **Homework**—We will assign exercises from the text from each major topic in the course calendar/outline via the online homework system myMathLab. [CO 1, 2, 3]
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- **Class attendance and participation**—Students are expected to attend all class meetings, arriving on time. If you are absent, you are responsible for determining what you missed and for being prepared for class when you return. Leaving class early without notifying the professor in advance will result in your being counted absent for the class session. Students that sleep in class, send or receive text messages, or conduct other online activities not directly related to class will be counted absent. Extra credit percentage points may be added to your overall numerical grade based on the following table:
  - 0 – 3 absent/late/asleep/phone +2 points
  - 4 – 5 absent/late/asleep/phone +1 point
  - 6 – 8 absent/late/asleep/phone 0 points
  - 9 – 12 absent/late/asleep/phone -2 points
  - 13+ absent/late/asleep/phone Automatic Failure

- **Preparing for class**—Students should be prepared to invest several hours per day outside of class reading the text, practicing examples, and working homework exercises. Material to be discussed in class should be read before coming to class. Check your university email regularly, as I may send reminders, assignments, or announcements.

**Grading Policy:**
- 60% Three in-class exams [CO: 1,2,3]
- 20% Homework and quizzes [CO: 1,2,3]
- 20% Comprehensive Final Exam [CO: 1,2,3]

**Grading Scale:**
- 90% - 100%: A
- 80% - 90%: B
- 70% - 80%: C
- 60% - 70%: D
- Below 60%: F
General Education Core Curriculum
This course has been selected to be part of Stephen F. Austin State University’s core curriculum. The Texas Higher Education Coordinating Board has identified six objectives for all core courses: Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, Personal Responsibility, and Social Responsibility. SFA is committed to the improvement of its general education core curriculum by regular assessment of student performance on these six objectives.

Course calendar/outline: (also, see D2L) Approximate time spent

- Critical Thinking (Chapter 1) [CO: 1,2,3]
  - Inductive and Deductive Reasoning 10%
  - Problem-Solving with Patterns
  - Problem-Solving Strategies
- Logic (Chapter 2) [CO: 1,2,3]
  - Logic, Statements, and Quantifiers 14%
  - Truth Tables, Equivalent Statements and Tautologies
  - The Conditional and Biconditional
  - The Conditional and Related Statements
  - Arguments
- Set Theory (Chapter 3) [CO: 1,2,3]
  - Basic Properties of Sets 14%
  - Complements, Subsets and Venn Diagrams
  - Set Operations
  - Infinite Sets
- Financial Mathematics (Chapter 10) [CO: 1,2,3]
  - Simple Interest 16%
  - Compound Interest
  - Credit Cards and Consumer Loans
  - Stocks, Bonds and Mutual Funds
  - Home Ownership
- Counting and Probability (Chapter 11) [CO: 1,2,3]
  - The Counting Principle 18%
  - Permutations and Combinations
  - Probability and Odds
  - Addition and Complement Rules
  - Conditional Probability
  - Expectations
- Statistics (Chapter 12) [CO: 1,2,3]
  - Measures of Central Tendency 18%
  - Measures of Dispersion
  - Measures of Relative Position
  - Normal Distributions
  - Linear Regression and Correlation
- Graph Theory (Chapter 13)
  - Euler Circuits 10%
  - Hamilton Circuits

Explicit instruction in Critical Thinking, Communication and Empirical and Quantitative Reasoning is in addition to implicit instruction, modeling and practice that occur daily in the discussion of logic, sets, financial mathematics, counting, probability, and statistics. This explicit instruction includes explanation of solving mathematical problems by thinking critically, communicating logically ordered solutions with complete and correct notation, and applying empirical or quantitative skills as appropriate to the problem.

Academic Integrity (Policy A-9.1)
Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

The penalty for a student found cheating on any part of an assignment, quiz, or exam in this class will range from a grade of zero on the work to a grade of F in the course, and may result in additional, more severe disciplinary measures. A student who allows another to copy his work and the student copying the work are both guilty of cheating. Do your own work. Do not show your completed work to others. Do not allow others to copy your work.

Definition of Academic Dishonesty
Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an
assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one’s own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one’s paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp.

Withheld Grades Semester Grades Policy (A-54)
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

Students with Disabilities
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices.

Acceptable Student Behavior
Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1 http://www.sfasu.edu/policies/student_conduct_code.asp). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

Student Learning Outcomes (SLO): At the end of MTH 110, a student who has studied and learned the material should be able to:
1. Demonstrate understanding of elementary logic in order to make persuasive arguments, understand conflicting reports, identify faulty reasoning, detect bias, assess risk, suggest alternatives, and draw solid conclusions. [CO: 1,2,3]
2. Use sets as a tool for organizing information, recognize that relationships between and among sets provide the foundation for many valid arguments. [CO: 1,2,3]
3. Use counting techniques, estimation, proportional reasoning, percents, and unit conversions to more ably interpret numerical quantities that occur in everyday life. [CO: 1,2,3]
4. Demonstrate understanding of basic probability and how it is involved in virtually every decision we make – either explicitly or implicitly. [CO: 1,2,3]
5. Use statistics to critically evaluate and interpret statistical studies and corresponding reports. [CO: 1,2,3]
6. Use functions to model various relationships with enough precision to gain insight into how things work and to make reasonable predictions about the future. [CO: 1,2,3]

There are no specific program learning outcomes for this major addressed in this course. It is a general education core curriculum course and/or a service course.