MTH 110.003 Course Policies
Department of Mathematics and Statistics
Mathematics in Society, Fall 2018

Professor: Dr. Jonathan Mitchell
Class Times & Place: 11 – 11:50 AM MWF, Room 204, Math Building
Office: 352 Mathematics building
Remind Messaging App: You must join the course group by texting @mth110-drj to 81010
Office: mitchelljonat@sfasu.edu
Office Phone: 936.468.1606
Office Hours: by appointment (Remind) or
(MWF 9AM – 10AM, MTWTh 1:30PM – 3PM
(Closed-door policy: Just knock
Open-door policy: keep the door open when you enter.)

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

Text and Materials:
- MyMathLab Account: Online homework is done through www.mymathlab.com
- Calculator: The TI-30XS MultiView is recommended and demonstrated during class times. For exams students may use a calculator, but not a phone or tablet (nor TI-89 or equivalent)
- Notebook: Each student must maintain a 1-2” binder with dividers which will organize class notes, handouts, group work, etc.

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) Wednesday, September 19
Exam 2 (Logic and Finance) Friday, October 19
Exam 3 (Probability and Statistics) Friday, November 16
Final Exam (Cumulative) Monday, Dec 10, 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 tablet will be allowed on exams. You will need to bring your own calculator to exams. You may not borrow another student’s calculator during exams. [CO 1, 2, 3]
- Activities & Projects—We will have periodic in-class activities and take-home group projects. [CO 1, 2, 3]
- Notebook – Each student will need their own personal 1-2” binder which will hold class notes, handouts, past exams, etc. The notebook will be assessed periodically via office visits. This is part of your grade.
- A cumulative final exam—The final exam is Monday, December 10, 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]
  - Course ID: mitchell39899
  - You are allowed 14 days of temporary free access. (This is your grace period)
  - Make sure you acquire paid access by September 16.
• **Class attendance and participation**—Students are expected to attend all class meetings, arriving on time. If you arrive late then you are counted absent. If you are absent, you are responsible for determining what you missed and for being prepared for class when you return. Leaving class early will result in your being counted absent for the class session. Students that sleep in class, send or receive text messages, or conduct other activities on their phone during class will be counted absent. If you miss any in-class quizzes, then there are no make ups. I will drop everyone’s lowest 2 HW/Quiz grades at the end of the semester. Percentage points may be added to your overall numerical grade based on the following table:

<table>
<thead>
<tr>
<th>Number of Absent/Late/Asleep/Phone</th>
<th>Points Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 2</td>
<td>+2 points</td>
</tr>
<tr>
<td>3 – 4</td>
<td>+1 point</td>
</tr>
<tr>
<td>5 – 6</td>
<td>0 points</td>
</tr>
<tr>
<td>7 – 8</td>
<td>-1 points</td>
</tr>
<tr>
<td>9+</td>
<td>-2 points</td>
</tr>
</tbody>
</table>

**Grading Policy:** 60% Three in-class exams [CO: 1,2,3]  
15% **Homework, projects, & visits** [CO: 1,2,3]  
25% Cumulative Final Exam [CO: 1,2,3]  

**Grading Scale:** 90% - 100%: A  
80% - 89%: B  
70% - 79%: C  
60% - 69%: D  
Below 60%: F  

**Testing, Grading, and Make-up Policies:**

- If you miss an exam for any reason, your zero exam grade will be replaced by your final exam grade. If more than one exam is missed, the final exam grade will replace only one of the missed exams.
- You must bring and display either your SFASU Student ID or a valid driver’s license before you will be permitted to take each test and the final exam. I must be able to recognize you from the photo on the ID.
- You may use your (approved) calculator on exams, but you must present it to me so that I may clear the memory, if so equipped.
- **Students may not share calculators during an exam.** Students **may not use cell phone calculators, etc during an exam.**
- Since you have a full semester to arrange any travel plans, they are not an excuse for missing the final.
- Your instructor reserves the right to drop each student’s lowest 2 HW grades from the HW portion of your grade.
Course calendar/outline: (also, see D2L)

- Critical Thinking (Chapter 1) [CO: 1,2,3]
  - Inductive and Deductive Reasoning
  - Problem-Solving with Patterns
  - Problem-Solving Strategies
  - Approximate time spent: 10%

- Logic (Chapter 2) [CO: 1,2,3]
  - Logic, Statements, and Quantifiers
  - Truth Tables, Equivalent Statements and Tautologies
  - The Conditional and Biconditional
  - The Conditional and Related Statements
  - Arguments
  - Approximate time spent: 14%

- Set Theory (Chapter 3) [CO: 1,2,3]
  - Basic Properties of Sets
  - Complements, Subsets and Venn Diagrams
  - Set Operations
  - Infinite Sets
  - Approximate time spent: 14%

- Financial Mathematics (Chapter 10) [CO: 1,2,3]
  - Simple Interest
  - Compound Interest
  - Credit Cards and Consumer Loans
  - Stocks, Bonds and Mutual Funds
  - Home Ownership
  - Approximate time spent: 16%

- Counting and Probability (Chapter 11) [CO: 1,2,3]
  - The Counting Principle
  - Permutations and Combinations
  - Probability and Odds
  - Addition and Complement Rules
  - Conditional Probability
  - Expectations
  - Approximate time spent: 18%

- Statistics (Chapter 12) [CO: 1,2,3]
  - Measures of Central Tendency
  - Measures of Dispersion
  - Measures of Relative Position
  - Normal Distributions
  - Linear Regression and Correlation
  - Approximate time spent: 18%

- Graph Theory (Chapter 13)
  - Euler Circuits
  - Hamilton Circuits
  - Approximate time spent: 10%

- 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.

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.
### Core Objective | Definition | Course Assignment Title | Date Due in D2L
--- | --- | --- | ---
Critical Thinking Skills | To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information. | NA | NA
Communication Skills | To include effective development, interpretation and expression of ideas though written, oral, and visual communication. | NA | NA
Empirical and Quantitative Skills | To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions. | NA | NA

**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.*

**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.

**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](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.

**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/](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](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.