MTH 110.003 and MTH 110.004 Mathematics in Society
Department of Mathematics and Statistics
SPR 2020

Instructor: Danielle Johnson
Class Times & Place:  
MTH 110.003: 1:00-2:15 MW , Room 204, Math Building
MTH 110.006: 9:30-10:45 TR , Room 208, Math Building

Office: Room 349, Math building
Email: drjohnson@sfasu.edu
Office Phone: 936.468.1521, 936 468-3805 (Math department office)
Office Hours: MW: 2:30-4PM   TR: 2pm - 3pm
Other hours by appointment.

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

Required Materials
Book:  A Survey of Mathematics with Applications, 10th Ed. by Angel, Abbott, and Runde
There are two approved versions of the text:
• eBook (bundled with MyMathLabAccess)

MyMathLab Account: Online homework and quizzes are done through www.mymathlab.com.
To create a MML account, students will need:
1. a valid email address (use your SFA email)
2. an access code (bundled with new textbooks, or may be purchased separately online)
3. course id (make sure to use the correct code for your class)
   MTH 110.003 course id:  johnson96762
   MTH 110.004 course id:  johnson35565

Calculator: You may use a graphing calculator for this course, but you may not use a calculator equivalent to a Ti-89 or higher. A Ti-36X Pro (or equivalent) is recommended. The calculator function of a cell phone will not be permitted during exams.

You will also be responsible for printing and bringing to class the appropriate fill-in-the-blank notes that will be posted on d2l.

Course Requirements: Daily grades, 4 exams, and a comprehensive final exam, core assessment assignment (not assessed this semester, see bullet point below)

Attendance Policy: I will take attendance. Although your attendance percentage does NOT factor into your numerical grade, attendance and class participation is critical to your success in this class.

Grading Policy:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
<th>Course Grade</th>
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</thead>
<tbody>
<tr>
<td>20%</td>
<td>Daily Average (from MML)</td>
<td>90% - 100%</td>
</tr>
<tr>
<td>60%</td>
<td>Tests (4 @ 15% each)</td>
<td>80% - 89%</td>
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<tr>
<td>20%</td>
<td>Comprehensive Final Exam</td>
<td>70% - 79%</td>
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<tr>
<td>100%</td>
<td>Final Course Grade</td>
<td>60% - 69%</td>
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<td>0% - 59%</td>
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MyMathLab Homework and Quiz Assignments

- Each textbook section covered in the course has a corresponding homework assignment on MyMathLab and quizzes on MyMathLab cover several textbook sections. Each homework assignment consists of several questions, and students have three attempts at the correct answer per question. Each quiz consists of several questions but students only have 1 attempt at the correct answer per question. Generally, the due date for all homework assignments and quizzes over sections covered in a particular week will be Wednesday of the following week, at 11:59 PM, but there are some exceptions to this rule. Check MML frequently for due dates.

20% of your grade will be determined by your My Math Lab homework and quiz average. My Math Lab assignments will be accepted late but there will be a 20% deduction per day in the grade for the assignment for each day the assignment is late. However, I will drop one or two of the daily grades at the end of the semester. The due dates for My Math Lab assignments will be posted on My Math Lab.

Exams

- Four exams will be given over the course of the semester. Each exam grade comprises 15% of a student’s overall course grade. A student’s final exam grade will replace their lowest regular exam grade (provided that the final exam grade is higher)
- The final exam for this course will be given as scheduled on the university calendar, in our normal classroom. No alternate arrangements will be allowed. The final exam is mandatory.
- **Exam Dates:** Please note that the dates for our in-class exams are in the calendar at the end of the syllabus and 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.

General Policies and Information

- You earn your grade by communicating your understanding of the material through the homework, and tests. Clearly communicating mathematics will be essential in this course.
- I will send e-mails to the entire class during the semester, often through D2L. Make sure you have your personal D2L settings set to forward email notifications. Watch for important class announcements on the D2L newsfeed.
- No cell phone use is permitted in class without special permission from the instructor.
- Students are expected to respect the learning environment of their fellow students. Behavior that disrupts this environment will not be tolerated. Please silence your phone and do not text or play on your phone during class.
- Tutoring: Visit the AARC (on the first floor of the library) to inquire about tutor support for MTH 110.

Weekly Appointments and Learning Teams: For more focused, course-specific tutoring, the AARC offers weekly one-on-one appointments and Learning Teams. A Learning Team is a group of 8 students from the same course who are coached by a peer tutor (a fellow student). These are student-led groups, so the students choose the topics covered. To sign up for these learning teams, the students will need to come by the AARC in person. Sign up times and dates for the learning teams are TBD. The AARC will also have certain hours at the Math walk-in table designated just for Math in Society students. These hours will be announced in class.

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 or smart watches during an exam.
• Since you have a full semester to arrange any travel plans, they are not an excuse for missing the final.
• You may get help on work that is assigned to be done outside of class, unless otherwise instructed, but I expect any work that you turn in to reflect your understanding of the material. On in-class graded work, I expect you to only use your brain, pencil, paper, and, sometimes, a calculator.

The following is an excerpt from SFA Policy 5.4:

The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:

1. Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time, or;
2. At least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

To this end, all students in courses offered by the Department of Mathematics and Statistics that wish to be successful should plan to spend a minimum of two hours outside of class for every credit hour associated with this course. Expected activities to be completed in the time outside of class include reviewing notes from previous class meetings, reading assigned course resources, completing all assigned exercises and projects, and performing periodic assessment preparation.

See http://www2.sfasu.edu/math/docs/syllabi/MTH110Syllabus.pdf for elements common to all sections.

General Education Core Curriculum
The Texas Higher Education Coordinating Board has identified six core learning objectives: 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.

By enrolling in MTH 110: Mathematics in Society, you are also enrolling in a Core Curriculum Course that fulfills the Critical Thinking Skills, Communication Skills, and Empirical and Quantitative Skills requirement. You will see this course on your D2L list.
At one point during the semester, you will receive an assignment that fulfills both the requirements of this course and the needs of Stephen F. Austin State University's Core Curriculum Assessment Plan with the Texas Higher Education Coordinating Board. When you complete this one assignment, you need to upload the assignment to both your standard course dropbox determined by your Instructor and the “Core Curriculum” dropbox. The Core Curriculum dropbox will be identified by the Objective for which work is being collected. (Examples: Critical Thinking, Teamwork, Social Responsibility Empirical & Quantitative Skills, Personal Responsibility, Communication Skills-Written, Communication Skills-Written & Visual, and Communication Skills- Oral & Visual.) Please note that this only applies to the approved assignment. All other assignments should be submitted according to regular class operations.
When you complete the assignment mentioned above, you will upload the assignment to both the MTH 110: Mathematics in Society dropbox and the Critical Thinking Skills, Communication Skills, or Empirical and Quantitative Skills dropbox.

Please note that this only applies to the specific assignment listed in the matrix below. All other assignments should be submitted according to regular class operations.

If you have any questions, please see your instructor, or contact the Office of Student Learning and Institutional Assessment at (936) 468-1130.

The chart below indicates the core objectives addressed by this course, the assignment(s) that will be used to assess the objectives in this course and uploaded to the D2L Critical Thinking Skills, Communication Skills, or Empirical and Quantitative Skills dropbox this semester, and the date the assignment(s) should be uploaded to the D2L Critical Thinking Skills, Communication Skills, or Empirical and Quantitative Skills dropbox. Not every assignment will be submitted for core assessment every semester. Your instructor will notify you which assignment(s) must be submitted for assessment in the D2L Critical Thinking Skills, Communication Skills, or Empirical and Quantitative Skills dropbox.

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<thead>
<tr>
<th>Core Objective</th>
<th>Definition</th>
<th>Course Assignment Title</th>
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<tbody>
<tr>
<td>Empirical and Quantitive Skills</td>
<td>To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.</td>
<td>NOT ASSESSED THIS SEMESTER</td>
</tr>
<tr>
<td>Week of . . .</td>
<td>Tentative Course Schedule MTH 110 001/ MTH 110 006</td>
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| **1/15-1/17**| Course Introduction  
|              | 2.1 Set Concepts |
| **1/21-1/24**| 2.1 Set Concepts (continued)  
|              | 2.2 Subsets  
|              | 2.3 Venn Diagrams and Set Operations |
| **1/27-1/31**| 2.4 Set Equality  
|              | 2.5 Applications of Sets  
|              | 3.1 Statements and Logical Connectives |
| **2/3-2/7**   | 3.2 Truth Tables I  
|              | 3.3 Truth Tables II  
|              | 3.4 Equivalent Statements  
|              | **EXAM 1 CHAPTER 2: Tues. Feb. 4th (MTH 110.004), Wed. Feb. 5th (MTH 110.003)** |
| **10-2/14**   | 3.5 Symbolic Arguments  
|              | 3.6 Euler Diagrams/Syllogistic Arguments  
|              | 10.1 Percent  
|              | 10.2 Personal Loans and Simple Interest |
| **2/17-2/21** | 10.3 Compound Interest |
| **2/24-2/28** | 10.4 Installment Buying  
|              | **EXAM 2 CHAPTER 3 : Tues. Feb. 25th (MTH 110.004), Wed. Feb. 26th (MTH 110.003)**  
|              | 10.5 Mortgages |
| **3/2-3/6**   | 10.5 Mortgages (cont.)  
|              | 10.6 Annuities and Sinking Funds |
| **3/16-3/20** | 11.1 Empirical and Theoretical Probabilities  
|              | 11.2 Odds  
|              | 11.4 Tree Diagrams  
| **3/23-3/27** | 11.4 Tree Diagrams (cont.)  
|              | 11.5 OR and AND Probability  
|              | 11.6 Conditional Probability  
| **3/30-4/3**  | **EXAM 3 CHAPTER 10: Tues. Mar. 31st (MTH 110.004), Wed. Apr 1st (MTH110.003)**  
|              | 11.7 Counting Principle and Permutations  
| **4/6-4/8**   | 11.8 Combinations  
|              | 11.9 Probability and Combinations  
| **4/13-4/17** | Finish Chapter 11  
|              | 12.3 Measures of Central Tendency  
| **4/20-4/24** | **EXAM 4 CHAPTER 11, Tues. Apr 21st (MTH 110.004), Wed. Apr 22nd (MTH 110.003)**  
|              | 12.4 Measures of Dispersion  
|              | 12.5 The Normal Curve  
| **4/27-5/1**  | Dead week : Review and finish material (catch –up days) |
| **5/4-5/9**   | **Finals Week**  
|              | MTH 110.003 Final Exam: Wednesday, May 6th, 1:30 pm- 4 pm  
|              | MTH 110.004 Final Exam: Thursday, May 7th, 8 am – 10:30 am |