MTH 099.036/110.036 Mathematics in Society Co-requisite
Department of Mathematics and Statistics
Syllabus and Course Policy Sheet
FALL 2018

Instructor: Danielle Johnson  
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Phone: 936-468-1521 (office)  
936-468-3805 (Math Dept.)

Class meeting time and room:  
Section .036: MWF: 8:00 AM – 8:50 AM, MATH 210  
TR: 8:00 AM – 9:15 AM, MATH 210

Office Hours:  
MW: 1:00 PM – 2:00 PM  
TR: 12:00 PM – 1:30 PM, other hours available 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:
- Custom SFASU Soft-cover edition (bundled with MyMathLab Access):  
- 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 110.036 course id:  
   johnson36286

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.

Drop Policy:  
You are NOT allowed to drop this class.

Note:  
A grade of C or better is required if MTH 099/110 Co-requisite course is a pre-requisite for another course or if a C or better is required by your major.

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
Attendance Policy and Attendance/Participation Grade
- Attendance will be recorded each class day. Students will be marked absent for leaving class early without prior notification. Students will be marked absent if, though physically present, the student refuses to participate in class or class activities (for example, sleeping, using phone, etc). All students receive two free grace day absences before their attendance grade is affected. Students must provide documentation in order to have an absence excused; however, excused or not, all students are responsible for any material missed.

Cell Phone Policy
Cell phone usage is NOT allowed during class. Cell phones must be put away in your bag or backpack and not seen, heard, or used 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. If you are interested in either one-on-one weekly appointments, or in forming a Learning Team, visit the AARC during the first Open Enrollment period, August 29th and 30th.

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.

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]

Grading Policy
<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Grade Range</th>
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</thead>
<tbody>
<tr>
<td>Daily Grade</td>
<td>20%</td>
<td>90% - 100%</td>
</tr>
<tr>
<td>Exams (3 at 20% each)</td>
<td>60%</td>
<td>80% - 89%</td>
</tr>
<tr>
<td>Final Exam (Comprehensive)</td>
<td>20%</td>
<td>70% - 79%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60% - 69%</td>
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<td></td>
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<td>&lt; 60%</td>
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Daily Grade: Includes: MyMathLab Homework and Quizzes, Daily Group Assignments and/or Activities—both in class and outside of class, Individual homework assignments—both in class and outside of class, and other various daily assignments and quizzes. If you are absent from class, you will receive a zero for the work (individual and/or group) done in class the day you were absent. Recall that you can be physically present but be marked absent for various reasons. See Attendance Policy above.
Exams
- Three exams will be given over the course of the semester (approximate dates listed in calendar). Each exam grade comprises 20% 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.

Group Work
- During the first week of class, you will be assigned to a group. Throughout the semester, your group will be assigned various projects and activities, which you work together.

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

Early Intervention Policy: If your instructor recognizes failure warning signs, you will be required to participate in intervention activities. Failure to do so will result in grade reduction.

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.
- 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 remove it from the table.

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 at 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.

<table>
<thead>
<tr>
<th>Core Objective</th>
<th>Definition</th>
<th>Course Assignment Title</th>
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<tbody>
<tr>
<td>Critical Thinking Skills</td>
<td>To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.</td>
<td>NOT assessed this semester</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>To include effective development, interpretation and expression of ideas though written, oral, and visual communication.</td>
<td>NOT assessed this semester</td>
</tr>
<tr>
<td>Empirical and Quantitative 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>
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</table>

There is no Core Assessment assignment for the FALL 2018 semester.

**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.
- 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.

**Tips for a successful math class**

- Measure success as **understanding** and being able to do new problems, not as having completed the assignment. **Trying to memorize all the material is not the same as understanding the material.**
- Take the time to read the book and **review your notes** before and after class.
- Practice homework problems until you can do it without referring to examples or help from your notes.
• Practice explaining big ideas and problem solving procedures in your own words, using complete sentences.
• Treat mistakes as a learning experience.
• Some people take longer to understand things than others. Evaluate how you study and seek to study smarter, not necessarily longer. If you are still stuck, get some help. The AARC and I are here for you!

University Policies

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.

Per SFA policy 5.4, your schedule should reflect that there is (1) an amount of student work per credit hour that reasonably approximates not less than one hour of class or direct faculty instruction and two hours of out-of-class student work per week for fifteen weeks over a long semester, 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. So, for instance, a 3 credit hour face-to-face course in the fall or spring term should approximate 150 minutes of classroom time/direct instruction and at least 6 hours of out-of-class work per week for fifteen weeks.
<table>
<thead>
<tr>
<th>Week of . . .</th>
<th>Tentative Course Schedule MTH 110 036/ MTH 099 036</th>
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</thead>
</table>
| 8/27 – 8/31    | Course Introduction  
Study Skills Unit |
| 9/3-9/7        | 2.1 Set Concepts  
2.2 Subsets  
2.3 Venn Diagrams and Set Operations |
| 9/10-9/14      | 2.4 Set Equality  
2.5 Applications of Sets  
3.1 Statements and Logical Connectives  
3.2 Truth Tables I |
| 9/17-9/21      | 3.3 Truth Tables II  
3.4 Equivalent Statements  
3.5 Symbolic Arguments  
3.6 Euler Diagrams/Syllogistic Arguments |
| 9/24-9/28      | Ch 3 (continued)  
Exam I (Ch 2 and 3) Thurs. Sept. 27  
10.1 Percent  
10.2 Personal Loans and Simple Interest |
| 10/1-10/5      | 10.2 Personal Loans and Simple Interest (cont.)  
10.3 Compound Interest |
| 10/8-10/12     | 10.4 Installment Buying |
| 10/15-10/19    | 10.5 Mortgages  
10.6 Annuities and Sinking Funds |
| 10/22-10/26    | Exam 2 (Ch 10) Tues. Oct 23  
11.1 Empirical and Theoretical Probabilities  
11.2 Odds |
| 10/29-11/2     | 11.4 Tree Diagrams  
11.5 OR and AND Probability  
11.6 Conditional Probability |
| 11/5-11/9      | 11.7 Counting Principle and Permutations  
11.8 Combinations  
11.9 Probability and Combinations |
| 11/12-11/16    | 11.9 Probability and Combinations (cont.)  
Exam III (Ch 11 and 12.3) Thurs. Nov. 15 |
| 11/19-11/23    | Holiday |
| 11/26-12/2     | 12.3 Measures of Central Tendency  
12.4 Measures of Dispersion  
12.5 The Normal Curve |
| 12/3-12/7      | 12.5 The Normal Curve (cont.)  
Review for final exam /Extra Instruction |
| 12/10-12/14    | MTH 110.036/099.036 Final Exam: Wednesday, December 12th  
8 am – 10 am  
Finals Week |