MTH 099/110 Mathematics in Society Co-requisite
Syllabus and Course Policy Sheet
Spring 2019

Instructor: John Sullivan  
Email: sullivanjb1@sfasu.edu  
Office: MATH 345  
Phone: 936-468-1547 (office)  
936-468-3805 (Math Dept.)

Class meeting times and rooms:
Section .030: MWF: 8:00 – 8:50 AM, MATH 202,  TR: 8:00 – 9:15 AM, MATH 202
Section .035: MW: 1:00 – 2:15 PM, MATH 202,  TR: 12:30 – 1:45 PM, MATH 202

Office Hours: MW: 2:15 PM – 4:00 PM  TR: 2:00 PM – 4:00 PM

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 (bundled with MyMathLab Access): Purchase at local bookstores, $137
- eBook (bundled with MyMathLabAccess): Purchase Online, $104

MyMathLab Account: Online homework is 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)
   Section .030: sullivan89674
   Section .035: sullivan05947

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-30XS Multiview is recommended (retails for under $20)

Tutoring
- There are multiple options for getting help outside of class. You have already paid for these resources with your tuition money, so take advantage of them!
  1. Instructor office hours (see above) and text/email
  2. “Co-Req Corner”: Room 305 is reserved exclusively for students enrolled in Co-requisite courses like ours. The tutors are all graduate students who have experience with the course material. The times that tutoring is available will be posted the first week of class.
  3. The Academic Assistance Resource Center (AARC) in the Steen Library offers both walk-in tutoring (no appointment needed) “Power Hours” and targeted, small-group Learning Teams.
     a. Power Hour: Our undergraduate tutors Bekah, Avery, and Christina will be holding walk-in tutoring sessions on Monday, Tuesday, and Wednesday each week.
        Monday: 7-8 pm (Bekah)
        Tuesday: 1-2 pm (Bekah), 2-4 pm (Avery), 6-7 pm (Christina)
        Wednesday: 4-5 pm (Christina)
b. A Learning Team is a group of 6-8 students from the same course who are coached by a peer tutor (a fellow student who has completed the course successfully). These are student-led groups, so the students choose the topics covered. The AARC will create these teams based on availability of tutors and student interest. If you’d like to be a part of a Learning Team, you must visit the AARC during an open enrollment period. For the Spring 2019 semester, the open enrollment dates are:

Wednesday/Thursday, January 23/24: 11:00 AM – 6:00 PM
Wednesday/Thursday, February 20/21: 12:00 PM – 5:00 PM
Wednesday/Thursday, March 27/28: 1:00 PM – 4:00 PM

**Grading Policy**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Course Grade</th>
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</thead>
<tbody>
<tr>
<td>Daily Grade (quizzes and other assignments)</td>
<td>10%</td>
<td>90% - 100% A</td>
</tr>
<tr>
<td>MyMathLab (Homework and Summary Assignments)</td>
<td>10%</td>
<td>80% - 90% B</td>
</tr>
<tr>
<td>Exams (3 at 20% each)</td>
<td>60%</td>
<td>70% - 80% C</td>
</tr>
<tr>
<td>Final Exam (Comprehensive)</td>
<td>20%</td>
<td>60% - 70% D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt; 60% F</td>
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</tbody>
</table>

**How Your Course Grade Will Be Computed**

**Daily Grade**

- You will earn a grade for each day of the course. Typically, this grade will be determined by a short quiz, but occasionally it may involve some other assignment. At the end of the semester, I will drop the lowest 10% of your daily grades, and average the remaining to calculate your overall Daily Grade (10% of your overall course grade). I will provide your weekly daily average on D2L to help you keep track of your grade.

**MyMathLab Homework and Summary & Review Assignments**

- Each textbook section covered in the course has a corresponding homework assignment on MyMathLab. Each assignment consists of 10 – 20 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 the calendar on MyMathLab frequently for due dates.

- In addition to MML homework, there will be five Chapter Summary and Review assignments. The Chapter Summary and Review assignments are intended to serve as a review for the exam. As such, they will not include the various help resources that are available on the normal homework. Note: though different, these Chapter Summary and Review assignments are found under the “Homework” tab on MyMathLab, will become available one week before the exam day, and will be due at **11:59 PM the night before each exam.**

- To calculate your overall MyMathLab grade (10% of course grade), first find your average homework grade (drop the 3 lowest grades), and your average summary assignment grade (drop lowest grade), then find the average of those values.
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). However, your final exam grade can only replace one regular exam; if, for example, a student misses two regular exams, one of the scores will be an irreplaceable zero.

- Exam procedure: during exams, you may not (1) share calculators, (2) use your own scratch paper (I will provide scratch paper for you), (3) use your phone or other device, (4) use headphones or earbuds (foam earplugs are ok), or (5) use any unapproved notes or formula sheets.

- 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.

General Education Core Curriculum Assessment

- You will be required to submit an assessment assignment to the Dropbox folder within D2L. Additionally, I will grade your assignment as part of your daily grade (with the same weight as a daily quiz). This is a mandatory assignment. For more information on core curriculum assessment, consult the common course syllabus for MTH 110.

Early Intervention

- Co-requisite classes such as ours offer a great reward for the successful student (completion of your credit-level math requirement in a single semester), but carry a great risk as well (a failing grade counts against your GPA, increased tuition cost, etc). Because of this risk, and because I sincerely want each of you to be successful, I will be monitoring your progress over the course of the semester much more closely than is typical in lower-level undergraduate courses.

- In particular, when I feel a student is not on the path to success, I will refer that student to Early Intervention, beginning the following mandatory process:
  1. The student will meet with me in my office. The purpose of this meeting is for us to determine why the student is unsuccessful, and to develop a plan of action the student can follow to turn their situation around. For example, I may prescribe a certain number of hours in tutoring, or supplemental practice problems, etc.
  2. The student will carry out the plan of action over the next two weeks
  3. I will then reevaluate the student’s progress in the class, and either create a new plan of action, or, if successful, release the student from the obligation. Students who do not successfully complete each of their Early Intervention Plans lose the ability to replace their lowest exam score with the final exam.
• Admittedly, this process is a greater imposition on your time than in a normal class, but ours is not a normal class. The best way to avoid this process is for YOU to intervene before I have to! Come to office hours. Email me your questions. Visit with the GTAs. Meet the undergraduate tutors. As much as all of us wish for your success, it is only possible if YOU TAKE OWNERSHIP of your learning!

**General Policies and Information**

• When you enter the classroom, please remove your notebook, pencils, calculator, etc from your bag, then place your bag (including your silenced phone) on the floor. Our goal is zero distractions during lecture.

• Group work is generally a noisy affair, please keep in mind the other groups (and other classrooms) and keep your talking to a reasonable volume.

• I want to create a relaxed classroom environment, where students feel comfortable asking questions. You should always feel free to stop me during lecture to ask for clarification on some concept that is confusing you; there are no dumb questions. Students who disrespect or belittle their classmates will be asked to leave.

• To communicate with students, either individually or as a group, I may use the Remind app, email, or the News feature on the course D2L page. Make sure you have configured your personal D2L settings so you receive these notifications (you can configure to D2L to send you a text message whenever I post a news item, post an exam grade, etc)

**University Policies**

For further information on the standard university policies below, consult the common syllabus for MTH 110, which can be found at [http://www2.sfasu.edu/math/docs/syllabi/MTH110Syllabus.pdf](http://www2.sfasu.edu/math/docs/syllabi/MTH110Syllabus.pdf)

• Withheld Grades *Semester Grades Policy (A-54)*
• Students with disabilities
• Acceptable Student Behavior
• Academic Integrity (Policy A-9.1)

**Definition of Credit Hour (Policy 5.4)**

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.

<table>
<thead>
<tr>
<th>Tentative Course Schedule (MTH 110C sections)</th>
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<tbody>
<tr>
<td><strong>Week of . . .</strong></td>
</tr>
<tr>
<td><strong>1/21 – 1/25</strong> Course Introduction</td>
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<tr>
<td>2.1 Sets</td>
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<tr>
<td>2/28 – 2/1 2.4 Set Equality 2.5 Applications of Sets</td>
</tr>
<tr>
<td>3.5 Symbolic Arguments 3.6 Euler Diagrams/Syllogistic Arguments</td>
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<tr>
<td>2/11 – 2/15 3.6 (cont.) Review/Extra Instruction</td>
</tr>
<tr>
<td><strong>2/18 – 2/22</strong> Exam I (Ch 2 and 3) Tuesday, Feb 19th</td>
</tr>
<tr>
<td>2/25 – 3/1 10.2 (cont.) 10.3 Compound Interest</td>
</tr>
<tr>
<td>3/18 – 3/22 Review/Extra Instruction</td>
</tr>
<tr>
<td><strong>4/1 – 4/5</strong> 11.6 Conditional Probability</td>
</tr>
<tr>
<td><strong>4/8 – 4/12</strong> 11.8 Combinations 11.9 Probability and Combinations</td>
</tr>
<tr>
<td><strong>4/29 – 5/3</strong> Review/Extra Instruction</td>
</tr>
<tr>
<td><strong>5/6 – 5/10</strong> 1.3 Problem Solving</td>
</tr>
<tr>
<td><strong>Finals Week</strong></td>
</tr>
</tbody>
</table>
MTH 099/110 Co-Requisite Courses Spring 2019 – Student Contract

Please check each of the following items to indicate your understanding, and return the page to me. If you need clarification about any item, feel free to contact me at sullivanjb1@sfasu.edu

1. _____ I understand each of the components of my course grade, and how my course grade is calculated.

2. _____ I understand how to create my MyMathLab account, where to find my assignments on MyMathLab, and how to find the due dates/times for those assignments.

3. _____ I am aware of all the outside-of-class resources that are available to me, and I am aware of how to access them, should I require extra help.

4. _____ I know how to find the class calendar on D2L, and how to change my D2L settings to my preferences.

5. _____ I understand how the Early Intervention process works, how I may come to be referred for Early Intervention, and what my obligations are after referral.

6. _____ I understand that, should I miss class, I am responsible for the material covered, as well as any assignments due.

7. _____ Office meeting with Mr. Sullivan

Signature: ____________________________________________________________

Date: ___________________________   (Due by noon, Monday January 28th)
Course description: Provides an introduction to mathematical thinking emphasizing analysis of information for decision-making.

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

Credit hours: 3

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.

Course Prerequisites and Corequisites: See general course prerequisites.

General Education Core Curriculum: This course has been selected to be part of SFA’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. Assessment of these objectives at SFA will be based on student work from all core curriculum courses. This student work will be collected in D2L, the assessment management system selected by SFA to collect student work for core assessment.

The chart below indicates the core objectives identified by SFA to be assessed in this course. The instructor of each section of the course will provide the assignment(s) that will be used to assess the objectives as well as the date(s) by which the assignments must be completed and uploaded in D2L.

<table>
<thead>
<tr>
<th>Core Objective</th>
<th>Definition</th>
<th>Course Assignment Title</th>
<th>Date Due in D2L</th>
</tr>
</thead>
<tbody>
<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>The instructor of each section will determine the assignment for this assessment.</td>
<td>Only assessed in spring of odd years. (See instructor for due date(s).)</td>
</tr>
</tbody>
</table>
Outline of Suggested Topics: The following is a list of suggested topics. These topics can be augmented or diminished, as long as the objectives for the course are practiced. Decisions concerning order of presentation are left to individual instructors.

Course outline:

- Critical Thinking (Chapter 1) [CO: 1,2,3]
  - Inductive and Deductive Reasoning
  - Problem-Solving with Patterns
  - Problem-Solving Strategies
  - 16%

- 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
  - 16%

- Set Theory (Chapter 3) [CO: 1,2,3]
  - Basic Properties of Sets
  - Complements, Subsets and Venn Diagrams
  - Set Operations
  - Infinite Sets
  - 16%

- Financial Mathematics (Chapter 11) [CO: 1,2,3]
  - Simple Interest
  - Compound Interest
  - Credit Cards and Consumer Loans
  - Stocks, Bonds and Mutual Funds
  - Home Ownership
  - 16%

- Counting and Probability (Chapter 12) [CO: 1,2,3]
  - The Counting Principle
  - Permutations and Combinations
  - Probability and Odds
  - Addition and Complement Rules
  - Conditional Probability
  - Expectations
  - 16%

- Statistics (Chapter 13) [CO: 1,2,3]
  - Measures of Central Tendency
  - Measures of Dispersion
  - Measures of Relative Position
  - Normal Distributions
  - Linear Regression and Correlation
  - 16%

- 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.

  - 4%

Academic Integrity

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 (SFA policy 4.1):
Academic dishonesty includes both cheating and plagiarism. Cheating includes, but is not limited to:

- using or attempting to use unauthorized materials on any class assignment or exam;
- falsifying or inventing of any information, including citations, on an assignment;
- helping or attempting to help other student(s) in an act of cheating or plagiarism.

Plagiarism is presenting the words or ideas of another person as if they were one’s own. Examples of plagiarism include, but are not limited to:

- submitting an assignment as one’s own work when it is at least partly the work of another person;
- submitting a work that has been purchased or otherwise obtained from the Internet or another source;
- incorporating the words or ideas of an author into one’s paper or presentation without giving the author credit.

Withheld Grades

Semester Grades (SFA Policy 5.5)
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 10.4). 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.

Date of document: 01/11/2019