Instructor: Chance Bradford
Office: Math 326
Email: bradfordwc@sfasu.edu (preferred method of contact)
Office Phone: 936-468-7026
Department: Mathematics and Statistics
Department phone: 936-468-3805

Office Hours: These hours have been set aside specifically to help students. I can guarantee I will be in my office during these times. Other times are available by appointment.

Office Hours:
- MWF 1:00-2:00
- TR 11:30-12:30

Class Meeting Time: Tuesday and Thursday 2:00 – 3:15
Class Meeting Room: Math 214
Final Exam day and time: Tuesday, May 14, 1:00 - 3:00 No exceptions!

Tutoring: The AARC provides tutoring and mentoring services. It is located on the first floor of Steen Library on the right side as soon as you enter. (http://library.sfasu.edu/aarc/).
- **Learning Teams:** A group of 6-8 students meet once a week with a peer tutor. You must enroll during one of the following times:
  - Jan. 23 - 24: 11:00 – 6:00  *Learning teams only*
  - Feb. 20 - 21: 12:00 – 5:00
  - Mar. 27 - 28: 1:00 – 4:00
- **1-on-1:** Register during one of the above times.
- **Termination:** If you do not attend the Learning Team or 1-on-1 tutoring regularly, your appointment will be terminated (see the AARC website for more details).
- **Walk-In Table:** Does not require an appointment.
  - Available MTWR 1:00-8:00 and Sun. 4:00-8:00
- **Class tutor:** Christina Hancock is a tutor from the AARC who will attend one of my classes (110-007) each week. She will be available for tutoring during that class and
  - Weekly Review Session: Thursday at 4:00 in Math 208
  - Power Hour (in AARC): Tuesday 6PM-7PM, Wednesday 4:00-5:00

Grading Policy
5% Attendance and Participation
5% Quizzes
10% MyMathLab Homework
60% Exams (3 at 20% each)
20% Final Exam (Comprehensive)

Course Grade
90% - 100% A
80% - 89% B
70% - 79% C
60% - 69% D
<60% F
There are two approved versions of the text:
- eBook (bundled with MyMathLabAccess): ISBN 032119991X  (recommended)
The textbook is not required for the class, but you may find it very helpful. An older, used version of the textbook is perfectly fine.

MyMathLab Account: Homework is done online through MyMathLab by Pearson. An account is required for the course, and an access code may be purchased:
- Bundled with a new textbook (recommended if you want the textbook)
- Online at the MyMathLab website (recommended if you don’t want the textbook)
- At local bookstores without a textbook (slightly more expensive but doesn’t require credit card).

MyMathLab website: https://www.pearsonmylabandmastering.com/northamerica/
Course IDs:   Section 005: bradford81293
              Section 007: bradford65446

Calculator: The recommended calculator is TI-30XS (retails for under $20)
Other calculator recommendations include TI-30X IIS, or TI-34 Multiview. Graphing calculators equivalent to (and below) a TI-89 are allowed. Calculators on phones, computers, tablets, etc. are not allowed. Students are responsible for learning how to operate their calculators.

Notebook: A notebook designated for this course is required. Your notebook should contain notes, homework, practice exercises, etc. Keep your work neat and organized.

Attendance: Attendance is required.
- Each absence will reduce your attendance/participation grade. Your attendance grade will be the percentage of class days you attend (attending 90% of class days results in a grade of 90, and so on).
- Students who are more than 15 minutes tardy will not be allowed into class. Students who engage in off-task behavior may be marked absent and/or asked to leave class.
- You don’t need to provide any excuses for absences unless it is an official SFA absence. If you are absent, it is your responsibility to study the material on your own and then visit office hours or the AARC if you need additional help.
- 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.
Exams
- Three exams will be given over the course of the semester, and I will notify you at least one week before each test. 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.

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 will be one week from the time the section is discussed in class. However, you should attempt to complete the homework assignments as soon as possible (doing the assignment the night it is due is too late). Any assignments submitted after the due date will receive only receive 70% of the credit.
- 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.

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 messages to the entire class during the semester, so make sure you have regular access to your SFA email and D2L/Brightspace.
- 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.

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.
- 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.

See [http://www2.sfasu.edu/math/docs/syllabi/MTH110Syllabus.pdf](http://www2.sfasu.edu/math/docs/syllabi/MTH110Syllabus.pdf) for elements common to all sections.
<table>
<thead>
<tr>
<th>Course Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic</strong></td>
</tr>
<tr>
<td>Course Introduction</td>
</tr>
<tr>
<td>2.1 Sets</td>
</tr>
<tr>
<td>2.2 Subsets</td>
</tr>
<tr>
<td>2.3 Venn Diagrams</td>
</tr>
<tr>
<td>2.4 Set Equality</td>
</tr>
<tr>
<td>2.5 Application of Sets</td>
</tr>
<tr>
<td>3.1 Statements and Logical Connectives</td>
</tr>
<tr>
<td>3.2 Truth Tables I</td>
</tr>
<tr>
<td>3.3 Truth Tables II</td>
</tr>
<tr>
<td>3.4 Equivalent Statements</td>
</tr>
<tr>
<td>3.5 Symbolic Arguments</td>
</tr>
<tr>
<td>3.6 Euler Diagrams/Syllogistic Arguments</td>
</tr>
<tr>
<td>Review</td>
</tr>
<tr>
<td><strong>Exam 1: Chapters 2 and 3</strong></td>
</tr>
<tr>
<td>Date:</td>
</tr>
<tr>
<td>10.1 Percent</td>
</tr>
<tr>
<td>10.2 Personal Loans and Simple Interest</td>
</tr>
<tr>
<td>10.3 Compound Interest</td>
</tr>
<tr>
<td>10.4 Installment Buying</td>
</tr>
<tr>
<td><strong>Exam 2: Chapter 10</strong></td>
</tr>
<tr>
<td>Date:</td>
</tr>
<tr>
<td>10.5 Mortgages</td>
</tr>
<tr>
<td>10.6 Annuities and Sinking Funds</td>
</tr>
</tbody>
</table>
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: Approximate time spent
- Critical Thinking (Chapter 1) [CO: 1,2,3] 16%
  - Inductive and Deductive Reasoning
  - Problem-Solving with Patterns
  - Problem-Solving Strategies
- Logic (Chapter 2) [CO: 1,2,3] 16%
  - Logic, Statements, and Quantifiers
  - Truth Tables, Equivalent Statements and Tautologies
  - The Conditional and Biconditional
  - The Conditional and Related Statements
  - Arguments
- Set Theory (Chapter 3) [CO: 1,2,3] 16%
  - Basic Properties of Sets
  - Complements, Subsets and Venn Diagrams
  - Set Operations
  - Infinite Sets
- Financial Mathematics (Chapter 11) [CO: 1,2,3] 16%
  - Simple Interest
  - Compound Interest
  - Credit Cards and Consumer Loans
  - Stocks, Bonds and Mutual Funds
  - Home Ownership
- Counting and Probability (Chapter 12) [CO: 1,2,3] 16%
  - The Counting Principle
  - Permutations and Combinations
  - Probability and Odds
  - Addition and Complement Rules
  - Conditional Probability
  - Expectations
- Statistics (Chapter 13) [CO: 1,2,3] 16%
  - Measures of Central Tendency
  - Measures of Dispersion
  - Measures of Relative Position
  - Normal Distributions
  - Linear Regression and Correlation

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