Professor: Dr. Brittney Falahola  
Office: 324 Mathematics Building  
Email: falaholabl@sfasu.edu  
Office Phone: 936.468.1722  
Office Hours: For the times in the table below, no appointment is needed; simply come by as your schedule allows. In addition, appointments may also be scheduled by emailing me in advance.

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<td>2:30 – 3:30</td>
<td>9:00 – 10:30</td>
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Course description: Elementary concepts of sets, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking.

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


Exam Calendar: Below are the dates for the exams throughout the semester. Please note that the date and time of the final exam are NOT the date and time listed on the university’s final exam schedule.

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>Wednesday, February 13</td>
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<tr>
<td>Exam 2</td>
<td>Wednesday, March 13</td>
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<tr>
<td>Exam 3</td>
<td>Wednesday, April 24</td>
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<tr>
<td>Final Exam</td>
<td>Tuesday, May 14, 6:45pm – 8:45pm in Kennedy Auditorium</td>
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Course Requirements:
- **Three in-class exams**—Exams are scheduled far in advance, and it is impossible to move the time or date. However, in rare cases where it is impossible for an individual to take the exam at the scheduled time, we will work with you to make other arrangements. Exceptions for taking the exam out of sequence are the following:
  1. A medical excuse. Please provide proper documentation according to university rules.
  2. A University sponsored event such as an athletic tournament, a play, or a musical performance. Your coach or director must contact us in advance. Athletic practices and rehearsals do not fall into this category.
  3. A religious holiday. Please send a short email explaining the situation.
  4. Extreme hardship such as a family emergency. Please have the proper university office notify us.

The above are the only allowable excuses for taking the exam before the scheduled time. Under no circumstances do we give late exams. Since we can only accommodate a limited number of students taking the exam at an earlier time, please make sure that you fall into one of the above categories before you contact us. If you miss an exam due to illness or a family emergency, you will not be penalized. The missed exam will be replaced with the final exam grade.

Calculator and cell phone use is **not permitted** in or out of the classroom during all exams (including the final exam). If you bring your cell phone to the exam venue, please remember to turn it off. Violation of this policy will be considered as academic dishonesty and dealt with accordingly.
• **Comprehensive Final Exam**—The final exam for all MTH 127 classes is on **Tuesday, May 14, 2019 at 6:45-8:45pm in Kennedy Auditorium**. Students having another exam at this time will schedule an earlier time to take the MTH 127 final. If you have a conflict with the final exam (other than another exam at the same time), you must contact the Registrar. Only the Registrar can schedule an out-of-sequence final exam.

• **Homework**—Completing the assigned online homework exercises is a requirement in this course. Online homework exercises are located on the WeBWorK math homework system at [webwork.sfasu.edu](http://webwork.sfasu.edu). Your WeBWorK login username is the same as your D2L username. If you run into a technical issue or error with WeBWorK (during submissions, for instance), email me a screenshot of the error you receive. In general, late submissions to WeBWorK will not be accepted, and deadlines are set in stone.

Homework will also be assigned from our textbook and turned in at the beginning of class. For more information about textbook homework submissions and policies, see the Homework Policy document and the tentative calendar (both available on D2L).

• **Class attendance and participation**—Students are expected to attend all class meetings, arriving on time and actively participating in class discussions. If you are absent, you are responsible for determining what you missed and for being prepared for class when you return. Students are strongly encouraged to ask questions (no matter how trivial or simple the question may seem!) as the material is presented and discussed in class. Remember, the class is being held for you to learn the material, not just to give you a time to copy notes off the board. Please be respectful of your fellow classmates and your instructor. Cell phones and other devices that have the potential to distract you, me, or your classmates should be put away and silenced.

• **Preparing for class**—Students should be prepared to invest several hours per day outside of class reading the text, practicing examples, and working textbook exercises. *Material to be discussed in class should be read before coming to class.* Check your university email regularly, as I may send reminders, assignments, or announcements.

**Grading:** As discussed above, there will be three 75-minute exams during the semester and a 2-hour comprehensive final exam. Your course grade will be determined as follows:

<table>
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<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Online Homework &amp; TEKS Writing Assignments</td>
<td>5%</td>
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<tr>
<td>Textbook Homework</td>
<td>15%</td>
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<tr>
<td>Three Mid-Semester Exams (20% each)</td>
<td>60%</td>
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<tr>
<td>Comprehensive Final Exam</td>
<td>20%</td>
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Semester numerical scores will be converted into letter grades according to the following method:

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Corresponding Letter</th>
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<tbody>
<tr>
<td>90% - 100%</td>
<td>A</td>
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<tr>
<td>80% - 89%</td>
<td>B</td>
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<tr>
<td>70% - 79%</td>
<td>C</td>
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<tr>
<td>60% - 69%</td>
<td>D</td>
</tr>
<tr>
<td>0% - 59%</td>
<td>F</td>
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</table>

When we calculate your final grade at the end of the course, we will calculate a score on a 0-100 point scale using the scores that you have obtained during the course, and the grade breakdown given above. Your course grade will then be obtained using this table.

*Resurrection Policy:* If you score a 70% or better on the final exam, we will replace your lowest midterm grade with your final exam grade if the midterm grade is lower. The resurrection policy does not apply to your homework or WeBWorK grade.

**Getting Help with Math 127:** Individual and group help is available at the Academic Assistance and Resource Center (AARC), which is located on the first floor of the Steen Library. Also available through the AARC is participation in Learning Teams. In a learning team, you will meet with five to seven other students who are also taking MTH 127 and a
“coach” to review material and discuss the class as your team and/or coach lead. To join a learning team, you must sign up in person at the AARC during designated Open Enrollment periods. The open enrollment periods are:
- Wednesday, January 23 and Thursday, January 24 from 11am to 6pm
- Wednesday, February 20 and Thursday, February 21 from 12pm to 5pm
- Wednesday, March 27 and Thursday, March 28 from 1pm to 4pm
Finally, the AARC also hosts “power hours” for MTH 127, which are slots of time when there will be a tutor with experience in MTH 127 available. Those times are: Mondays from 4-6pm, Tuesdays from 1-3pm, Wednesdays from 6-8pm, and Thursdays from 6-8pm.

I also encourage each of you to take advantage of office hours.

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/MTH127Syllabus.pdf for elements common to all sections.

NOTE: I, Dr. Falahola, reserve the right to make changes to any part of this syllabus as necessary, in the interest of the class. Students will be notified of any changes via email and in class.
Course description: Elementary concepts of sets, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking.

Core Objectives (CO):
1. Critical Thinking [CO 1]: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
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Credit hours: 3

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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.
Course outline:

- Techniques of problem solving and estimation skills [CO 1, 2, 3] 15%
  - 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 numbers and operations. 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. The following topics will be threaded throughout the course in order to develop the habits of mind necessary to be successful in mathematics:
    - Introduce Polya’s Problem Solving Process: Understand the Problem, Devise a Plan, Carry Out Plan, Look Back
    - Explore Basic Problem Solving Strategies
    - Explore Patterns in Language, Figures, Numbers, Sequences and Geometry
    - Develop Estimation Skills with Mental Arithmetic
    - Investigate temperature as a form of measurement

- Whole Numbers and Numeration: Concepts and Algorithms [CO 1, 2, 3] 25%
  - Define the Set of Whole Numbers
  - Model Whole Number Operations using a Variety of Methods
  - Verify Properties of Operations: Binary Operation; Closed, Commutative, Associative, Distributive Property of Multiplication over Addition, Identities, Multiplication by Zero; Division Algorithm
  - Explore Place Value Systems using Base Five Arithmetic
  - Develop and Apply Algorithms for Whole Number Operations
  - Develop Definition and Properties for Whole Number Exponents

- Number Theory: An Introduction [CO 1, 2, 3] 10%
  - Define and Explore Primes and Composites
  - Explore Basic Divisibility Properties of Sums and Products
  - Explore Applications of the Fundamental Theorem of Arithmetic
  - Define the GCD and LCM and Use Algorithms for Finding Each

- Integers: Concepts and Algorithms [CO 1, 2, 3] 25%
  - Model Integer Operations Using a Variety of Methods
  - Investigate Extensions of Whole Number Operations and their Properties: Closed, Commutative, Associative, Distributive Property of Multiplication over Addition, Identities, Additive Inverse, Multiplication by Zero

- Real Numbers: Concepts and Algorithms [CO 1, 2, 3] 25%
  - Investigate Practical Uses for Fractions
  - Explore Connections between Fractions, Rational Numbers, Decimals, and Percents
  - Investigate Order of Numbers in Decimal Form
  - Illustrate the Pythagorean Theorem
  - Develop Proportional Thinking to Include Ratio and Proportion, Properties of Proportions, Fundamental Law of Fractions

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 numbers and operations. 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.

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):
Math 127 – Introduction to Mathematics for Elementary Teachers  
Syllabus Continuation

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](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](https://www.sfasu.edu/policies/student-conduct-code)). 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 127, a student who has studied and learned the material should be able to:
1. Solve a variety of problems using multiple problem-solving techniques. [CO 1,3]
2. Demonstrate understanding of core concepts underlying standard and non-standard algorithmic procedures for performing operations on subsets of real numbers. [CO 1,3]
3. Communicate his/her knowledge effectively in multiple formats – verbally, concretely, and in writing. [CO 2]
4. Define, identify, and use the fundamental properties of real number operations. [CO 3]
5. Provide logical justification of mathematical thinking. [CO 1]
6. Use mathematical language and notation appropriately to communicate ideas. [CO 2]

*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*