Course Description
Properties of the natural numbers, integers, rational, and real number systems, and number theory, with an emphasis on problem solving and critical thinking
http://www2.sfasu.edu/math/courses/syllabi/MTH127Syllabus.pdf

Course Prerequisites
A minimum math score of 230 on THEA, 19 on ACT, 500 on SAT or a C or better in MTH 099. The Department of Mathematics and Statistics strongly recommends a minimum math score of 270 on THEA, 21 on ACT, 500 on SAT or a C or better in MTH 099 before taking any credit-level mathematics course.

Course Time and Meeting Place
Bright Space (D2L)

COVID-19 MASK POLICY
Masks (cloth face coverings) must be worn over the nose and mouth at all times in this class and appropriate physical distancing must be observed. Students not wearing a mask and/or not observing appropriate physical distancing will be asked to leave the class. All incidents of not wearing a mask and/or not observing appropriate physical distancing will be reported to the Office of Student Rights and Responsibilities. Students who are reported for multiple infractions of not wearing a mask and/or not observing appropriate physical distancing may be subject to disciplinary actions.

Instructor
Stacia Prince
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Email: princes@sfasu.edu (please use this email as the primary email)
Office Hours: Tuesday: 9:30am-11:00am; 1:00pm-2:00pm
       Wednesday: 4:00pm -5:00pm
       Thursday: 11:00am-12:30pm
       All office hours are virtual, email for an appointment

Current Text and Materials
The required textbook for this course is Mathematics for Elementary Teachers, 5th ed., by Sybilla Beckman. You will not need to purchase access to MyMathLab. The textbook is available in hardback (ISBN 9780134392790), loose-leaf (ISBN 9780134423319), or electronic “Ebook” (ISBN 9780134423401) formats. Any format is acceptable. This textbook will also be used in both MATH 1351 and MATH 1352.

Course Goals
- To understand the mathematics essential to successful teaching in the elementary school classroom.
- To acquire a foundation in numeration systems, number theory and properties of the natural numbers, integers, rational, and the real number system.
- To gain skill in problem solving and critical thinking.

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]

**Program Learning Outcomes**
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.

**Calculators**
Although no calculator is required for MATH 1350, a simple four-function calculator might be useful. We encourage you to bring your calculator to class with you every day. However, you should not rely on computers and calculators to such an extent that they keep you from developing your own skills. Technology should be used as an aid, but without a good understanding of the underlying mathematical concepts, the calculator will quite happily mislead you without your even knowing it. In general, technology is a good thing, but as with everything, sometimes too much of a good thing can lead to problems.

**Grading and Exams**
There will be three 75 minute exams during the semester and a 2.5 hour comprehensive final exam. Your course grade will be determined as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Date</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>Class assignments due according to dates on MTH 1350 Half-Term Online Calendar</td>
<td>20%</td>
</tr>
<tr>
<td>Exam I</td>
<td>Exam dates are on MTH 1350 Half-Term Online Calendar</td>
<td>20%</td>
</tr>
<tr>
<td>Exam II</td>
<td>Exam dates are on MTH 1350 Half-Term Online Calendar</td>
<td>20%</td>
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<tr>
<td>Exam III</td>
<td>Exam dates are on MTH 1350 Half-Term Online Calendar</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Exam dates are on MTH 1350 Half-Term Online Calendar</td>
<td>20%</td>
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</tbody>
</table>

Semester numerical scores will be converted into letter grades according to the following method.

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

**Exam Policy**
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 Office of Student Rights and Responsibility 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. 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 and Quizzes
Homework assignments from the textbook can be found on the MTH 1350 Half-Term Online Calendar.

Homework will be assigned from our textbook and graded. Your daily average is based on your grades from homework from the textbook and any other daily grades that are assigned for a grade. The lowest homework grade will be dropped. Late homework will not be accepted.

Making Your Homework Easy to Read and Easy to Grade
- Make sure your handwriting is legible.
- Homework with multiple pages should be stapled in the upper left-hand corner.
- In the upper right-hand corner you should write (in this order)
  - Your name
  - MTH 127.003
  - The homework set number
  - The due date of the homework
- Problems should be clearly labeled and numbered on the left side of the page. There should also be a visible separation between problems. Don’t forget to staple your homework together if you are submitting several pages.
- You should leave the entire left margin blank so that the grader can use this space for scoring and comments.
- To ensure that each problem is graded, problems and solutions should be written in the order that they are assigned.
- It is good practice to first work out the solutions to homework problems on scratch paper, and then to neatly write up your solutions. This will help you turn in a clean finished product.
- You should write up your solutions by yourself. You should always acknowledge any help received at the top of the assignment or in the right-hand margin.

The Classroom
Any questions you ask in class will likely be ones that other students will want answered as well, so get over any hesitation you might have and ask questions as the material is presented. You will not be penalized for doing this, no matter how trivial or simple you think your questions might seem. Remember, the class is being held for you to learn the material, not just to give you a time to copy notes off of a blackboard, so be sure to get help when you need it and stay involved in your class. Please be respectful of your fellow students and your instructor. Cell phone use and texting are not allowed in class.

Remember to turn your cell phone off or place it in quiet mode before entering the classroom.

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.
- Take advantage of office hours.

Course Outline:  

- Techniques of problem solving and estimation skills  
  - Approximate time spent  
  - 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 and Numbers
- Develop Estimation Skills with Mental Arithmetic
- Investigate temperature as a form of measurement

- Whole Numbers and Numeration: Concepts and Algorithms 25%
  - Define the Set of Whole Numbers
  - Model Whole Number Operations using a Variety of Methods
  - Verify Properties of Operations: Commutative, Associative, Distributive Property-Multiplication over Addition, Multiplication by Zero; Division Algorithm
  - Explore Place Value in Base-10 System
  - Develop and Apply Algorithms for Whole Number Operations
  - Develop Definition and Properties for Whole Number Exponents

- Number Theory: An Introduction 10%
  - Define and Explore Primes and Composites
  - Explore Basic Divisibility Properties of Sums and Products
  - Define the GCD and LCM and Use Algorithms for Finding Each

- Integers: Concepts and Algorithms 25%
  - Model Integer Operations Using a Variety of Methods
  - Investigate Extensions of Whole Number Operations and their Properties: Commutative, Associative, Distributive Property of Multiplication over Addition, Multiplication by Zero

- Real Numbers: Concepts and Algorithms 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

Credit Hours
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.

Attendance Policy
Regular attendance is expected in Math 1350. Attendance in an online class is based on class participation in an online course is based on participation on the Discussion Boards. Attendance and Excused Absences Policy can be found at http://www.sfasu.edu/policies/class_attendance_excused_abs.asp

Add/Drop Policy
The Add/Drop Policy can be found at http://www.sfasu.edu/policies/add_drop.asp

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](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](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](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.