

**Angelina College**  
**Division of Science and Mathematics**  
**MATH 1350 – Fundamentals of Math I**  
**General Syllabus Spring 2019**

**I. BASIC COURSE INFORMATION:**

**A. Fundamentals of Math I – MATH 1350**

This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the conceptual development of the following: sets, functions, numeration systems, number theory, and properties of the various number systems with an emphasis on problem solving and critical thinking. Prerequisite: MATH 1314 College Algebra (3 SCH version) or MATH 1414.

**B.** This course is intended for interdisciplinary studies majors, primarily those seeking Grades EC - 6 and Grades 4 - 8 certifications. It does not meet the requirements for many students seeking secondary certification.

**C. Instructor: Rich Geist**

Office Location: S225

Office Hours: as posted on office door

Phone: 936-633-3261

e-mail Address: rgeist@angelina.edu

**II. INTENDED STUDENT OUTCOMES:**

**A. Core Objectives Required for this Course**

**1. Critical Thinking:** to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information

**2. Communication:** to include effective development, interpretation and expression of ideas through written, oral and visual communication

**3. Empirical and Quantitative Skills:** to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

**B. Course Learning Outcomes for all Sections**

Upon successful completion of this course, students will:

1. Explain and model the arithmetic operations for whole numbers and integers.
2. Explain and model computations with fractions, decimals, ratios, and percentages.
3. Describe and demonstrate how factors, multiples, and prime numbers are used to solve problems.
4. Apply problem solving skills to numerical applications.
5. Represent and describe relationships among sets using the appropriate mathematical terminology and notation.
6. Compare and contrast structures of numeration systems.

**III. ASSESSMENT MEASURES**

**A. Assessments for the Core Objectives**

**1. Critical thinking:**

Students will demonstrate the application of critical thinking skills by utilizing reading, creative and appropriate problem solving techniques and estimation skills, and

appropriate mathematical tools to solve problems. These skills will be assessed in embedded test questions using the Angelina College Critical Thinking Rubric.

2. **Communication Skills:**

Students will demonstrate their understanding of mathematical information with regard to a given numeration system using complete and correct notation, written and visual communication skills, and sequential arguments to justify conclusions. The Angelina College Communication rubric will be used to assess written, oral, and visual communication skills.

3. **Empirical and Quantitative Skills:**

Students will use empirical and quantitative skills to draw conclusions from a set of statistical data. This may be assessed as embedded test questions or as a rubric-based problem-solving activity.

**B. Assessments for Course Learning Outcomes**

1. Students will explain the use of problem solving as a tool to reach reasonable conclusions in imbedded test questions.
2. Students will recognize, examine and interpret the basic algorithms and principles of different numeration systems in imbedded test questions.
3. Students will generate models for addition, subtraction, multiplication, and division in imbedded test questions.
4. Students will demonstrate an understanding of the concept of proportionality in imbedded test questions.

**IV. INSTRUCTIONAL PROCEDURES:**

The course is taught using a combination of lectures, discussions, and practice exercises. The amount of time spent using any one technique will vary from class to class and from lesson to lesson as determined to be most appropriate by the instructor.

**V. COURSE REQUIREMENTS AND POLICIES:**

**A. Required textbooks, Materials and Equipment B**

1. Text(s) and supplementary materials Mathematical Reasoning for Elementary Teachers, Seventh Edition, by Long, DeTemple and Millman (Addison Wesley)

MyLabsPlus (Password is bundled with textbook or can be purchased separately in the AC bookstore or online at [angelina.mylabsplus.com](http://angelina.mylabsplus.com) )

Activities for Elementary Teachers, Sixth Edition, by Dolan, Williamson and Muri (Addison Wesley)

2. Specific equipment required of all students

A TI (Texas Instruments) graphing calculator is required or highly recommended. The TI-84 graphing calculator will be used by the instructor in classroom demonstrations.

**TI-89 and TI-92 and TI-INSPIRE CX-CAS calculators are not allowed. (no CAS software)**

3. Additional text(s) and supplementary materials for the individual instructor. The student is expected to have and to use: colored pencils and ruler.

## B. Assignments

1. Specific assignments required for all students (term papers, homework, speeches, participation in community activities, etc.)

See the attached: ASSIGNMENTS/CONTENT/TOPICS

2. Appropriate due dates, schedules, deadlines, etc. as determined by the individual instructor

See the attached: ASSIGNMENTS/CONTENT/TOPICS

3. Additional assignments - NONE

## B. Course Policies – This course conforms to the policies of Angelina College as stated in the Angelina College Handbook.

**Educational Accommodations** – If you have a disability (as cited in Section 504 of the Rehabilitation Act of 1973 or Title II of the Americans with Disabilities Act of 1990) that may affect your participation in this class, you may fill out the Educational Accommodations application within your AC Portal, under the “Student Services” tab. A Student Success team member will contact you once the application is received. At a post-secondary institution, you must self-identify as a person with a disability in order to receive services; for questions regarding the application process you can visit the Office of Student Success and Inclusion in the Student Center (Room 200) or email [access@angelina.edu](mailto:access@angelina.edu). To report any complaints related to accommodations, you should contact Annie Allen, Director of Student Success & Inclusion, in Room 200 of the Student Center. You may also contact Ms. Allen by calling (936) 633-4509 or by emailing [aallen@anglina.edu](mailto:aallen@anglina.edu). To report discrimination of any type, contact Steve Hudman, Dean of Student Affairs, at (936) 633-5292 or [shudman@angelina.edu](mailto:shudman@angelina.edu).

1. **Attendance** – Attendance is required as per Angelina College Policy and will be recorded every day. Any student with three (3) consecutive absences or four (4) cumulative absences may be dropped from the class. Records will be turned in to the academic dean at the end of the semester. Do not assume that non-attendance in class will always result in an instructor drop. You must officially drop a class or risk receiving an F. A student may also be dropped due to lack of participation.
2. **Attendance** – Attendance is required as per Angelina College Policy and will be recorded every day. Any student with three (3) consecutive absences or four (4) cumulative absences may be dropped from the class. Records will be turned in to the academic dean at the end of the semester. Do not assume that non-attendance in class will always result in an instructor drop. **You must officially drop a class or risk receiving an F.**
3. **Additional Policies Established by the Instructor**

Class participation, questions, and discussion are encouraged, appreciated, and expected.

**Students must have their instructor's written permission to use any type of recording device.**

### MAKE-UP EXAMS/QUIZZES

No make-up exams will be offered. The grade on the final exam can replace the lowest exam grade, including the grades from a missed exam. No make-ups quizzes will be offered.

### STUDENT CONDUCT

A positive environment for learning will be maintained by students being courteous to each other and to the instructor. Eating, drinking, sleeping, and distracting conversations during lecture will not be allowed. Repeated tardiness will result in warning; if continued this will result in further action depending on upon seriousness of problem. Regular attendance is also expected as per college policy. Punctuality is considerate and expected behavior.

Cheating on tests is not tolerated as per Angelina College policy and may result in expulsion from the course. Plagiarism is not tolerated and will result in a zero for any assignment in which it is

detected.

## CELL PHONES OR OTHER ELECTRONIC DEVICES

Pagers, cellular phones, earphones, and similar electronic devices should be silent or off and out of sight during the entire class period. Failure to follow this rule **may result in the student being asked to leave the classroom**.

Note: Out of site means in your purse, backpack, or pocket.

No electronic devices, other than approved calculators, may be used during any quiz or test. These prohibited electronic devices may include, but not be limited to: cell phones or smart phones, smart watches or other electronic visual aids, audio players, recorders, tablets, notebooks, Google glass, or any other similar devices, any digital device that can be used to record, transmit, receive, or play back audio, photographic, text, or video content.

Failure to follow this rule may result in the student receiving a grade of zero on the quiz or test. If the student receives a test score of zero due to failure to follow this rule, the zero test score cannot be replaced by the final exam.

Technical issues do not excuse late homework. Please contact Pearson on their 24/7 helpline (888)883-1299. The instructor will not extend due dates that are not met due to technical issues.

**Any student not enrolled in MyLabsPlus by September 6, 2018 will be dropped from the class. Homework must be completed to be successful in this course. If a student has not completed at least 75% of the homework by the first exam, they may be dropped from the course.**

Visitors are not allowed in classrooms as stated in the College's policy.

## VI. COURSE OUTLINE:

See attached SUPPLEMENTAL ASSIGNMENTS

## VII. EVALUATION AND GRADING

### A. **Grading Criteria** (*percents, extra credit, etc. B*)

Grades are determined by numeric scores on the following written components.

1. Three major tests at 100 points each.
2. Three chapter quizzes at 25 points each.
3. A combination of homework, group work (which may be graded using a rubric), and in-class problems valued at 100 points. Homework will be completed on MyLabsPlus and is required. Late work will be assessed a deduction of 10 percent of the total points assigned each day beyond the due date set by the instructor.

\*4. Homework will be completed on MyLabsPlus at [angelina.mylabsplus.com](http://angelina.mylabsplus.com) and is **required**:

- a. MyLabsPlus comes with new books from the Angelina College bookstore. If you do not have MyLabsPlus, it may be purchased with a major credit card at the above website.
- b. MyLabsPlus login and details for computer homework will be distributed in class.
- c. **Homework will have due dates with penalties for late work. The homework will be due the next class meeting for full credit. You will be given a predetermined number of days to complete the homework at a 10%**

- d. The homework should be done on your home computer if possible. If that is impossible, there are campus sites available at the library and the math labs in Rooms S223 and S110. These may be used on a limited space available basis with computer science students having preference. (No printing or surfing may be done except in the library.)
5. A project may be assigned, with a 75 point value. No project will be accepted after the assigned due date.
6. A comprehensive final examination valued at 100 points.
7. The instructor reserves the right to adjust grades upward from this scale.
8. Makeup tests are given only in extreme circumstances and are limited to ONE per student per semester. The instructor reserves the right to determine whether the makeup should be administered or not based on the severity of the circumstance.

**B. Determination of Grade** (*assignment of letter grades*)--

Grades will be assigned according to the scale below.

90% - 100% = A

80% - 89% = B

70% - 79% = C

60% - 69% = D

Below 60% = F

The instructor reserves the right to adjust grades upward from this scale.

**VIII. SYLLABUS MODIFICATION**

The instructor may modify the provisions of the syllabus to meet individual class needs by informing the class in advance as to the changes being made

**Math 1350 Supplemental Assignments**

Lesson	Section	Topic
1	1.1	An Introduction to Problem Solving
	1.2	Pólya's Problem-Solving Principles
2	1.3	More Problem-Solving Strategies
	1.4	Algebra as a Problem-Solving Strategy
3	1.5	Additional Problem-Solving Strategies
	1.6	Reasoning Mathematically
<b>4</b>	<b>Quiz</b>	<b>Chapter 1</b>
5	2.1	Sets and Operations on Sets
6	2.2	Sets, Counting, and the Whole Numbers

7	2.3	Addition and Subtraction of Whole Numbers
8	2.4	Multiplication and Division of Whole Numbers
<b>9</b>	<b>TEST 1</b> 3.1	<b>CHAPTERS 1 &amp; 2 ;</b> Read Numeration Systems Past and Present
10	Activity	Base Five Ping Pong Balls
11	3.2	Nondecimal Positional Systems
12	3.3	Algorithms for Adding and Subtracting Whole Numbers
13	3.4	Algorithms for Multiplication and Division of Whole Numbers
<b>14</b>	<b>Quiz</b> 3.5	<b>Chapter 3 ;</b> Read Mental Arithmetic and Estimation
15	4.1	Divisibility of Natural Numbers
16	4.2	Tests for Divisibility
17	4.3	Greatest Common Divisors and Least Common Multiples
<b>18</b>	<b>TEST 2</b>	<b>CHAPTERS 3 &amp; 4</b>
19	5.1	Representations of Integers
20	5.2	Addition and Subtraction of Integers
21	5.3	Multiplication and Division of Integers
<b>22</b>	<b>Quiz</b>	<b>Chapter 5</b>
23	6.1	The Basic Concepts of Fractions and Rational Numbers
24	6.2	Addition and Subtraction of Fractions
25	6.3	Multiplication and Division of Fractions
26	6.4	The Rational Number System
<b>27</b>	<b>TEST 3</b>	<b>Chapters 5 &amp; 6</b>
28	7.1 7.2	Decimals and Real Numbers Computations with Decimals
29	7.3	Proportional Reasoning
	7.4	Percents
30		<b>Final Exam</b> (per Angelina College Final Exam Schedule)

**NOTE: These dates (lessons) are approximate and may be adjusted by the instructor during the semester.**

