Mathematics for Elementary/Middle School Teachers I

Disclaimer:
This syllabus is current and accurate as of its posting date, but will not be updated. For the most complete and up-to-date course information, contact the instructor.

Instructor Information:
Instructor: Mrs. Paula Koca
Office: MCS 220L
Office Phone: (325) 486-5437
E-mail: paula.koca@angelo.edu

Office Hours:
Monday: 10:00am – 12 pm; 3 pm – 3:30 pm
Tuesday: 11 am – 12:30 pm
Wednesday: 10:00am – 12 pm; 3 pm – 3:30 pm
Thursday: 11 am – 12:30 pm
Friday: 10:00am – 12 pm

Note: When contacting me via email or phone, allow 24 hours for a response. I do not make it a habit to check email from home.

Major Course Requirements:

TESTS
We will have four tests and a comprehensive final exam. (The final exam will be Wednesday 5/6 from 1pm – 3pm). I do not give make-up exams. If you miss an exam and cannot make arrangements to take it before graded exams are handed back, your final exam will replace it. For those who do not miss an exam, the final exam can replace your lowest test grade if it is to your benefit.

IN-CLASS ACTIVITIES
We will be doing many in-class activities and I usually take a daily grade for your participation. Reading about an activity is very different from experiencing an activity, so it is imperative that you make every effort to attend class. Most of these activities will involve the use of math manipulatives and will be done in small groups. Besides learning mathematical content in an inquiry-based environment, these activities will focus on learning how to communicate your thinking and how to listen to your peers. Hopefully, they will give you a deeper understanding of the content, and also give you ideas on how to teach math to children.

CLASSROOM BEHAVIOR
I expect students to be respectful of all the members of our class. Please refrain from any avoidable distracting behavior such as talking during the lecture, getting off-task during the activity time, leaving your cell phone on, text messaging, etc. If you are caught texting, sleeping, or otherwise off task you will receive a participation grade of zero for that day.
PAPER HOMEWORK AND QUizzes
All paper homework and quizzes should be worked with a #2 pencil and folded in half length-wise with your name, Math 1350, and assignment number on the outside. Please use standard size white notebook paper (or unlined bond) for homework. If you have more than one piece of paper, staple your papers together in the upper left-hand corner. Box in your answers and show your work in an organized readable form. A general rule is to show as much work on your papers as I show on similar problems in class. If you hand in homework with no work shown, you will get a grade of 0.

I will accept 1 set of late homework only. I plan to drop six daily grades before computing your daily average. This is the leeway you are given to allow for unavoidable absences. You need to think of this as your insurance in case you get sick or have a family emergency. Do not waste them! If you know you are going to be absent, bring your homework by my office before class or send it with a classmate. Homework assignments are due promptly at the beginning of the class period. If you come in tardy, your homework will be counted as late. If you are absent, it is your responsibility to look on Blackboard and find out what homework was assigned. I would also appreciate it if you contact me to discuss your absences.

ONLINE HOMEWORK
We will be using an online program called MyMathLab for part of the homework this semester. To access MyMathLab, login to Blackboard and select this course. Next, select the tab “MyMathLab HW”. Then, click the link to begin registration and related homework for MyMathLab. You may access MML anywhere internet is available. Homework is an important part of this class. If you wish to be successful in this class, you must complete the homework.

CENTERS
In a K-8 classroom, centers are hands-on activities that introduce new concepts, enrich or reinforce concepts that have already been taught, or help children make connections between different ideas. Centers are usually done in small groups with little or no teacher assistance. I plan to set up centers for you to do during the semester. It will be your responsibility to do these centers outside of class time. Most (if not all) will require you to do them in our classroom because there will be instructions and materials provided. Times that are available for access to the classroom will be announced soon.

GRADING
Assignments and grades will be posted on Blackboard. Throughout the semester there will be homework, in-class activities, internet assignments, etc. These will all be combined to form the daily average.

Daily average: 20% of the semester average
Each regular exam (4): 15% of the semester average
Final exam: 20% of the semester average

I use the standard: 100 – 90 A, 89 – 80 B, 79 – 70 C, 69 – 60 D, below 60 F. This class is part of the coursework for your major, so a grade of C or better is required to pass.

MATH LAB
There is a free math lab where you can do your homework and get help with it. It is located on the third floor of the library in room C302. Math Lab Hours can be found at this location on the Angelo State University website: http://www.angelo.edu/dept/mathematics/lab_hours.php
PORTFOLIO
A portfolio is a collection of various things for and about each student. It has many purposes: to teach organizational skills, to keep track of assignments, to use as a study guide, to create a resource file for future use, etc. Please bring a 3-ring binder and a package of 8 dividers to the 2nd class period so that we can put your portfolio together. Your divider tabs need to be labeled: Assignments, Test 1 material, Test 2 material, Test 3 material, Test 4 material, NCTM journals, tests, and lab manual. You also need to make a title page that includes: MATH 1350, Mathematics for Elementary/Middle School Teachers I, Spring 2020, and your name. You may leave your textbook at home, but bring your portfolio to class every day.

ATTENDANCE POLICY
0-4 Absences: No change to average
5 + Absences: 3 points will be subtracted from your final average for each absence

Attendance will be taken daily. If you are tardy, it is your responsibility to let me know after class so I can change my records. Do not make tardiness a habit. Also, it is your responsibility to check for missed assignments on Blackboard when you are absent.

PREREQUISITE
College Algebra (Math 1314) OR Finite Mathematics (Math 1324) with a grade of C or better.

REQUIRED TEXT

DROP DATE: The last day to drop a class is Thursday, March 26.

MATERIALS
- Notebook paper
- One 3-inch 3-ring binder
- One packet of 8 tabs
- 1 piece of colored poster board
- The 1350 lab manual (only available at the ASU Bookstore)

University Policies

General Policies Related to this Course: All students are required to follow the policies and procedures presented in these documents:

Angelo State University Student Handbook

Angelo State University Catalog

In the event that the university is closed for a scheduled class time, whatever was scheduled for that day and/or whatever was due that day will be scheduled and/or due on the next scheduled class time.

Student Disability Services

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the
university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA), and subsequent legislation.

The Office of Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by contacting:

Dallas Swafford  
Director of Student Disability Services  
Office of Student Affairs  
325-942-2047  
dallas.swafford@angelo.edu

**Title IX at Angelo State University**

The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance. Students are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

**Michelle Boone, J.D.**  
Director of Title IX Compliance/Title IX Coordinator  
Mayer Administration Building, Room 210  
325-942-2022  
michelle.boone@angelo.edu

You may also file a report online 24/7 at [www.angelo.edu/incident-form](http://www.angelo.edu/incident-form). If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

**Student Absence for Observance of Religious Holy Days:** A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for [Observance of Religious Holy Day](#) for more information.

**Incomplete Grade Policy:** It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 [Grading Procedures](#) for more information.

**Student Conduct Policies**

**Academic Integrity:** Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the Statement of [Academic Integrity](#)
Plagiarism: Plagiarism is a serious topic covered in ASU’s Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality via Turnitin. Resources to help you understand this policy better are available at the ASU Writing Center.

Copyright Policy: Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

Math 1350 – Mathematics for Elementary/Middle School Teachers I

Student Learning Outcomes:

1. Students will gain factual knowledge including the mathematical terminology, classifications, and methods used in this course. Students will use the vocabulary, symbolism, structure, reasoning, and procedures that are needed to teach the mathematical content for grades K-8. See course content for more details.

2. Students will learn the fundamental principles, generalizations, and theories covered in this course. Students will demonstrate understanding of the conservation of area and volume, non-standard and standard measurement, proportionality, similarity, congruence, and basic probability.

3. Students will learn to apply course material. Students will be able to make connections between concepts and also apply knowledge in a new and different setting. In particular, students will learn how to translate course content into K-8 grade appropriate lessons.

4. Students will develop specific skills, competencies, and points of view needed by K-8 mathematics teachers. In addition to learning the mathematical content of this course, students will:
   • become familiar with the Texas Essential Knowledge and Skills (TEKS) and the National Council of Teachers of Mathematics (NCTM) Standards;
   • learn multiple approaches to the teaching of mathematics;
   • use manipulatives to model mathematical concepts;
   • develop communications skills (oral, written, and listening), knowledge of appropriate vocabulary, and various questioning strategies;
   • learn how to use resources (such as the Internet and NCTM journals) in planning classroom activities.

5. Students will gain a broader understanding and appreciation for mathematics.

Course Content:
The following chapters from the textbook are covered:

- Chapter 1: An Introduction to Problem Solving
  - Inductive and deductive reasoning; patterns; problem solving
- Chapter 2: Introduction to Logic and Sets
• Sets; operations on sets; Venn diagrams
• Chapter 3: Numeration Systems and Whole Number Operations
  o Numeration systems; addition, subtraction, multiplication, and division of whole numbers; properties, algorithms, mental computation, and estimation of whole numbers; place value and algorithms in other bases
• Chapter 4: Number Theory
  o Factors; divisibility; prime and composite numbers; common factors and multiplies
• Chapter 5: Integers
  o Addition, subtraction, multiplication, and division of integers; properties of integer operations
• Chapter 6: Rational Numbers and Proportional Reasoning
  o Rational numbers; addition, subtraction, multiplication, and division of rational numbers; properties, estimation, and error patterns with rational numbers.
• Chapter 7: Decimals, Percents, and Real Numbers
  o Place value, estimation, and mental computation with decimals; decimal arithmetic and error patterns; rational, irrational, and real numbers.

Course Schedule

The subject matter schedule listed below is tentative and subject to adaption. For current updated information, contact the instructor.

<table>
<thead>
<tr>
<th>Day#</th>
<th>Date</th>
<th>Subject Matter</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>M 1/13</td>
<td>Syllabus, class expectations, problem solving</td>
</tr>
<tr>
<td>2</td>
<td>W 1/15</td>
<td>Problem solving, inductive and deductive reasoning</td>
</tr>
<tr>
<td>3</td>
<td>W 1/22</td>
<td>Problem solving, sequences</td>
</tr>
<tr>
<td>4</td>
<td>M 1/27</td>
<td>Sequences and patterns</td>
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<tr>
<td>5</td>
<td>W 1/29</td>
<td>Tactile equations, patterns, sets</td>
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<tr>
<td>6</td>
<td>M 2/3</td>
<td>Venn Diagrams, sets</td>
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<tr>
<td>7</td>
<td>W 2/5</td>
<td>Intro to numeration, review</td>
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<tr>
<td>8</td>
<td>M 2/10</td>
<td>Exam 1</td>
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<tr>
<td>9</td>
<td>W 2/12</td>
<td>Rounding, Numeration systems, addition models and properties</td>
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<tr>
<td>10</td>
<td>M 2/17</td>
<td>Numeration systems, subtraction and multiplication models and properties</td>
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<tr>
<td>11</td>
<td>W 2/19</td>
<td>Numeration systems, division models and properties</td>
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<tr>
<td>12</td>
<td>M 2/24</td>
<td>Review categories and properties, order of operations, base 5</td>
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<tr>
<td>13</td>
<td>W 2/26</td>
<td>Base 5/Base 10, numeration review</td>
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<tr>
<td>14</td>
<td>M 3/2</td>
<td>Intro to number theory, review</td>
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<td>15</td>
<td>W 3/4</td>
<td>Exam 2</td>
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<tr>
<td>16</td>
<td>M 3/16</td>
<td>Addition/subtraction algorithms, number theory</td>
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<tr>
<td>17</td>
<td>W 3/18</td>
<td>Multiplication/division algorithms, prime factorization, divisibility</td>
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<tr>
<td>18</td>
<td>M 3/23</td>
<td>Prime numbers, prime factor test, GCF, LCM</td>
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<tr>
<td>19</td>
<td>W 3/25</td>
<td>GCF, LCM, Fraction intro</td>
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<tr>
<td>20</td>
<td>M 3/30</td>
<td>Fractions with pictures, Cuisenaire rods, pattern blocks, and counters</td>
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<td>21</td>
<td>W 4/1</td>
<td>Fraction strips, traditional fraction algorithms, review</td>
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<td>22</td>
<td>M 4/6</td>
<td>Exam 3</td>
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<tr>
<td>23</td>
<td>W 4/8</td>
<td>Fractions, decimal intro</td>
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<tr>
<td>24</td>
<td>M 4/13</td>
<td>Decimals</td>
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<tr>
<td>25</td>
<td>W 4/15</td>
<td>Fraction and decimal conversions</td>
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<tr>
<td>26</td>
<td>M 4/20</td>
<td>Integers, Review</td>
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<tr>
<td>27</td>
<td>W 4/22</td>
<td>Exam 4</td>
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<tr>
<td>28</td>
<td>M 4/27</td>
<td>Integers</td>
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<tr>
<td>Day#</td>
<td>Date</td>
<td>Subject Matter</td>
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<tr>
<td>29</td>
<td>W</td>
<td>4/29 Review for the Final Exam</td>
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<tr>
<td>30</td>
<td>W</td>
<td>5/6 Final Exam @ 1pm</td>
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</tbody>
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2. [http://www.angelo.edu/catalogs/](http://www.angelo.edu/catalogs/)
3. [http://www.angelo.edu/incident-form](http://www.angelo.edu/incident-form)
4. [http://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of](http://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of)
5. [http://www.angelo.edu/content/files/14197-op-1011-grading-procedures](http://www.angelo.edu/content/files/14197-op-1011-grading-procedures)