MATH 1350
Mathematics for Elementary/Middle School Teachers I

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Office: MCS 220H

Office Hours: 9:00 am – 10:30 am, Tuesdays and Thursdays; 11:00 am – 12:00 pm, Monday, Tuesday, Wednesday, Thursday, and Friday; 2:30 pm – 3:00 pm, Tuesday; 4:00 pm – 4:30 pm, Monday, Tuesday, and Wednesday.

Teaching Philosophy
I believe that all students can learn mathematics given appropriate instruction and by appropriate practice. I understand that each student is unique and possesses a variety of experiences which they can bring to bear on their learning and interactions with classmates. I recognize that all individuals have a right to mutual respect and to be accepted by others without biases based on differences of any kind.

Course Information

Course Description
Sets and relations, the system of whole numbers, numeration systems, the system of integers, elementary number theory, fractions and rational numbers, decimals and real numbers. Lab activities will include making and using math manipulatives, comparing different problem solving techniques, making interdisciplinary connections, and experiencing math concepts through auditory, visual, and kinesthetic approaches to inquiry-based activities.
Prerequisite and Co-requisite Courses
Mathematics 1324 or equivalent.

Prerequisite Skills
Accessing Internet websites and proficiency with a scientific calculator are expectations of this course.

Student Learning Outcomes
Upon completion of this course, students will be able to:

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

Course Delivery
To maintain academic quality while accommodating social distancing needs this semester, this course will use a split delivery model that combines face-to-face teaching with remote instruction.
The goal is to provide face-to-face instruction to students who want to return to campus, while also allowing students who may need to learn remotely to participate via virtual class sessions.

**How Does It Work?**
Your class will be divided and you will be placed into a smaller group of students to maintain physical distancing requirements in our assigned classroom space.

Your assigned group will receive a schedule of in-person class meetings. This schedule is not flexible. For instance, if you are supposed to attend class on a Monday, you cannot elect to go on Wednesday with another class group instead.

When you are not in the physical class, you will be responsible for completing assigned coursework in Blackboard. This work can be completed any time before the posted deadline.

Please refer to this Health and Safety web page for updated information about campus guidelines as they relate to the COVID-19 pandemic.

**Required Texts and Materials**
To successfully complete this course, students need *A Problem Solving Approach to Mathematics for Elementary School Teachers* access card through Pearson’s MyMathLab.

*A Problem Solving Approach to Mathematics for Elementary School Teachers*, 13th Edition by Billstein, Libeskind, & Lott is the required text but you are not required to have a physical copy as an etext is part of the MyMathLab course.

Math 1350 (Fall 2019-Summer 2020) Lab Manual (Note the dates of the lab manual. Due to campus shutdown last spring, a new lab manual was not created for this school year so we will be using last year’s manual)

**Technology Requirements**
To successfully complete this course, student needs to have regular and reliable access to a computer, webcam, and printer. Please note that tablets and phones will not always support the online tools utilized in this course. A reliable internet connection is also required. Further, student will need to have access to a scanner or a scanner application for turning in pencil/paper assignments. If you are planning to use campus
owned technology, get a copy of the hours of operation for the various locations and set your study schedule accordingly. For technology assistance, contact the IT Service Center, which is located in MCS 111. Their phone number is (325) 942-2911 or check out their web page at https://www.angelo.edu/services/technology/support/.

Communication
Faculty will respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

Written communication via email: All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails to faculty, include the course name and section number in your subject line.

Virtual communication: Office hours may be done with the assistance of Collaborate, which is included in Blackboard.

Grading
Evaluation and Grades
Course grades will be determined as indicated in the table below.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percent of Total Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments and homework</td>
<td>15</td>
</tr>
<tr>
<td>Discussion Posts</td>
<td>5</td>
</tr>
<tr>
<td>Exam 1</td>
<td>15</td>
</tr>
<tr>
<td>Exam 2</td>
<td>15</td>
</tr>
<tr>
<td>Exam 3</td>
<td>15</td>
</tr>
<tr>
<td>Exam 4</td>
<td>15</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Grading System
Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

   A = 89.5 -100 points
   B = 79.5 – 89.5 points
C = 69.5 – 79.5 points  
D = 59.5 – 69.5 points  
F = 0-59.4 points

Assignment and Activity Descriptions

Attendance
Attendance will be taken daily. If you are absent without accepted excuse, you will not receive credit for in-class activities for that day. If you arrive after attendance has been taken, you should check with me at the end of class to see that I updated your attendance status. Excused absences will require you to participate in an online activity to make up for the missed in-class activities.

Assignment and Homework Policy
- Assignments will be accessed through Blackboard, lab manual, and MyMathLab. Students will be expected to print out any files assigned.
- Due dates will be shown in the course calendar in Blackboard. Any student who is having trouble meeting set deadlines must contact the instructor before the assignment is due during regular business hours.
- Pencil and paper assignments will be submitted through Gradescope.
- At the end of the semester, the three lowest assignment/homework scores will be dropped.

In-class Activities
Class activities are an essential part of this course. As such, a daily grade is given for your participation. Those who are not present for class will receive a grade of zero for those activities unless absence is excused. If excused, students will participate in an online activity to make up for the missed in-class activity. Students who are present but spend class time texting, sleeping, or are engaged in other off-task behavior will also receive a grade of zero for those activities.

Paper Homework and Quizzes
Assignments will be made from the lab manual. If you need additional paper to complete the assignment, please use standard sized paper. Submission of all paper assignments will be through Gradescope. Upload the pages, in sequential order.
order. Box in your answers and show your work. No work = no credit.
Assignments are due at the beginning of class and will not be graded if submitted late.

**Online Homework**
We will be using an online program called MyMathLab for part of the homework this semester. The course is linked through Blackboard. The due dates and times are associated with the assignments in MyMathLab as well as on the course calendar in Blackboard.

**Centers**
Centers are hands-on activities that are used to introduce new concepts, enrich or reinforce concepts that have already been taught, or help children make connections between different ideas. Centers in this course will usually be 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. You will need to purchase one piece of colored poster board for one of the activities.

**Portfolio**
A portfolio is a collection of various things for and about a student. It serves 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, and as an assessment of mastery. You will create a portfolio for this course using a three inch, three-ring binder and a set of eight tabbed dividers. The tabs are to be labeled: Assignments, Exam 1 material, Exam 2 material, Exam 3 material, Exam 4 material, Journal Articles, Tests, and Lab Manual. You will also create a title page that will include: MATH 1350, Mathematics for Elementary/Middle School Teachers I, Fall 2020, and your name. The portfolio should be with you in class every day.

**Exams**
There will be four unit exams and a comprehensive final exam. The final exam will be Tuesday, November 24, from 10:30 am to 12:30 pm. If you know that you are going to miss a test, make arrangements to take the test prior to the tests being returned to students. If such arrangements are not made, then your final exam will be used to replace it. If you do not miss any tests, your final exam may be used to replace your lowest test score should it be to your benefit.
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

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 university’s Statement of Academic Integrity.

Accommodations for Students with Disabilities

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.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student’s responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the Student Disability Services website.

The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Houston Harte University Center, Room 112
**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.

**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. Resources to help you understand this policy better are available at the [ASU Writing Center](#).

**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.

**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
Required Use of Masks/Facial Coverings by Students
As a member of the Texas Tech University System, Angelo State University has adopted the mandatory Facial Covering Policy to ensure a safe and healthy classroom experience. Current research on the COVID-19 virus suggests there is a significant reduction in the potential for transmission of the virus from person to person by wearing a mask/facial covering that covers the nose and mouth areas. Therefore, in compliance with the university policy students in this class are required to wear a mask/facial covering before, during, and after class. Faculty members may also ask you to display your daily screening badge as a prerequisite to enter the classroom. You are also asked to maintain safe distancing practices to the best of your ability. For the safety of everyone, any student not appropriately wearing a mask/facial covering will be asked to leave the classroom immediately. The student will be responsible to make up any missed class content or work. Continued non-compliance with the Texas Tech University System Policy may result in disciplinary action through the Office of Student Conduct.

Modifications to the Syllabus
This syllabus, including grade evaluation and course schedule, is subject to modification. In particular, the COVID-19 pandemic may require significant changes in course delivery and content on potentially short notice.
# Course Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/18</td>
<td>Syllabus, class expectations, problem solving</td>
</tr>
<tr>
<td>8/20</td>
<td>Inductive and deductive reasoning, Working Backwards</td>
</tr>
<tr>
<td>8/25</td>
<td>Sequences and patterns</td>
</tr>
<tr>
<td>8/27</td>
<td>Sequences and Intro to sets</td>
</tr>
<tr>
<td>9/1</td>
<td>Venn Diagrams, sets</td>
</tr>
<tr>
<td>9/3</td>
<td>Intro to numeration, review</td>
</tr>
<tr>
<td>9/8</td>
<td>Exam 1</td>
</tr>
<tr>
<td>9/10</td>
<td>Rounding, Numeration systems, addition models and properties</td>
</tr>
<tr>
<td>9/15</td>
<td>Numeration systems, subtraction and multiplication models and properties</td>
</tr>
<tr>
<td>9/17</td>
<td>Numeration systems, division models and properties</td>
</tr>
<tr>
<td>9/22</td>
<td>Review categories and properties, order of operations, base 5</td>
</tr>
<tr>
<td>9/24</td>
<td>Base 5/Base 10, numeration review</td>
</tr>
<tr>
<td>9/29</td>
<td>Intro to number theory, review</td>
</tr>
<tr>
<td>10/1</td>
<td>Exam 2</td>
</tr>
<tr>
<td>10/6</td>
<td>Addition/subtraction algorithms, number theory</td>
</tr>
<tr>
<td>10/8</td>
<td>Multiplication/division algorithms, prime factorization, divisibility</td>
</tr>
<tr>
<td>10/13</td>
<td>Prime numbers, prime factor test, GCF, LCM</td>
</tr>
<tr>
<td>10/15</td>
<td>GCF, LCM, Fraction intro</td>
</tr>
<tr>
<td>10/20</td>
<td>Fractions with pictures, Cuisenaire rods, pattern blocks, and counters</td>
</tr>
<tr>
<td>10/22</td>
<td>Fraction strips, traditional fraction algorithms, review</td>
</tr>
<tr>
<td>10/27</td>
<td>Exam 3</td>
</tr>
<tr>
<td>10/29</td>
<td>Fractions, decimal intro</td>
</tr>
<tr>
<td>11/3</td>
<td>Decimals</td>
</tr>
<tr>
<td>11/5</td>
<td>Fraction and decimal conversions</td>
</tr>
<tr>
<td>11/10</td>
<td>Real numbers,</td>
</tr>
<tr>
<td>11/12</td>
<td>Integers, review</td>
</tr>
<tr>
<td>11/17</td>
<td>Exam 4</td>
</tr>
<tr>
<td>11/19</td>
<td>Review for the final exam</td>
</tr>
<tr>
<td>11/24</td>
<td>Final Exam 10:30 – 12:30 pm</td>
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</tbody>
</table>