Course Syllabus: Math 350 – Topics in Mathematics for Elementary Teachers I (Fall 2015)

<table>
<thead>
<tr>
<th>TIME</th>
<th>DEBRA NEWTON</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFFICE</td>
<td>BINNION 319</td>
</tr>
<tr>
<td>PHONE</td>
<td>903-886-5954</td>
</tr>
<tr>
<td>E-MAIL</td>
<td><a href="mailto:DEBRA.NEWTON@TAMUC.EDU">DEBRA.NEWTON@TAMUC.EDU</a></td>
</tr>
<tr>
<td>OFFICE HOURS</td>
<td>MW 8:30-9:30am, TR 8:30-9:15am, and TR 12:30-1:45 or other times by appt.</td>
</tr>
</tbody>
</table>

“All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.”

(Student’s Guide Handbook, Policies and Procedures, Conduct.)

Rude and/or disruptive behavior will not be tolerated.

No electronic devices (except calculators) are allowed during class time.

COURSE INFORMATION

**Material Required:** A variety of supplemental materials will be provided to students throughout this semester. Students will need a three-ring binder to keep and organize course materials, notes, and graded work. Notebook will be checked each exam time. Students will also need a basic calculator, a ruler (with metric and standard measurement), scissors, stapler, and colored pencils. All exams must be completed in pencil.

**Textbook (Optional):** Students are required to have access to *Learning Mathematics in Elementary and Middle Schools (5th or 4th ed.)*, by W.G. Catheart, et al. (ISBN 0132420996 or 0131700596). We will discuss chapters 1-5 along from the textbook.

**Course Description:** Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. **Prerequisite:** Math 1314 with grade of C or better.

As a future teacher, student must be able to explain mathematics to one’s students, and not just teach rote manipulations of numbers and symbols. Students should know and understand more mathematics than what they teach! The goal of this course is beyond teaching simple mathematical computations and to assist students in developing an understanding of mathematics.

Mission for College of Science and Engineering: Innovation and Discovery
Mission for the Department of Mathematics: Discovering the Keys to Success
Student Learning Outcomes: Upon completion of Math 350, students will be able to

- Demonstrate, illustrate, & communicate concepts of whole numbers, fractions, decimals and their operations using manipulative & various models
- Identify patterns and solve problems with the topics of sets and Venn Diagrams
- Develop deeper understanding of mathematics thinking and connect ideas between mathematical concepts of the above topics
- Equip with various strategies and become proficient in solving problems

COURSE REQUIREMENTS

Instruction: Instruction will include lecture, demonstration and models, and hands-on activities in small and/or large group settings. Several types of manipulative will be demonstrated and used to solve problems. Cooperative Learning, inquiry learning and the use of technology will be incorporate to this class. All turned in work should be completed in pencil, please.

Attendance: Attendance will be taken each class. Students need to actively participate in class to receive credits. Every class period will be covering new material that students will be responsible for—even in the event of absence!! It is expected that students follow the guidelines set forth by the Class Attendance Policy in the current Undergraduate Catalogue. If students miss a class, please get notes from classmates and come see me for questions during office hours.

If students represent the university on an athletic team, departmental team, scholastic team, choir, or other group and must miss class, notify me in writing with the appropriate documentation within one week of the absence in order not to be counted absent. Arrangements for make-up work will be made at that time.

Excessive Absences: *** Students who are absent more than 6 times, for whatever reason, are subject to the instructor dropping them from the course or receiving a failing grade from this class.*** Six absences in this course constitutes missing 20% of the course, which is a very large fraction of material for a student to miss. Any student who is close to this number of absences should come to the instructor before they accumulate six absences in the course. I will NOT automatically drop students from the course. Therefore, if students intend to drop the course, students will need to follow the drop procedures of the school. If I intend to drop students from the course, students will receive an email from me at the address students have given me on my student information sheet.

Quizzes: Both individual and group quizzes will be given in class and the grade will be counted toward students’ daily grade. Since regular attendance is expected, NO make-up quizzes will be given. This class covers a variety of important topics that there is not a “good” time to miss a class. Each quiz will be over material to be emphasized on exams. Quizzes will average into students’ daily grade.

Homework: Homework will be assigned most class periods. It is extremely important for students to work all assignments in order to be prepared for the exams. Students can work together with classmates when trying to figure out how to do the problems. Please include classmate(s)’ name(s) on the top of students’ paper if students have worked with another students for an assignment. Late work is not typically accepted and will be graded with reduced credits. Assignments that are turned in a week passed the due date will receive a zero for the grade.
**Binder:** All course materials, notes, activities, assignments, projects, and reflections should be organized in a 3 ring binder. The binder may picked up for grading each time when students take an exam.

**Activities & Projects:** Activities or projects will be assigned for students to work on outside of class periodically. These activities or projects will vary in their scope and should be completed neatly and punctually. An Activity or project is typically counted as twice a homework grade. Please follow the instructions for each activity or project closely and turn in quality work that reflects students’ future profession as a teacher.

**Exams:** There will be three exams which consist of a variety of problems and short answer questions. Partial credit may be given on exams IF all work is neatly shown with clear steps. When pictures are drawn to answer a question, figures need to be clearly labeled and easily understood. Explanations should be explicit and understandable to the audience given. Items should NOT need interpretation if full credit is to be given.

**Replacing a Low Test Grade:** No make-up exams will be given without prior notice of a university excused absence*. At times throughout the semester, emergency situations may arise that affect a student’s performance on an exam or even prevent a student from attending on an exam day. Students can replace the lowest exam grade with their grade on the corresponding portion of the final exam, provided the grade on that section of the final exam is higher. This provision will only be applied to ONE exam, so students should make every effort to be present and well-prepared for all exams.

**TENTATIVE Exam Schedule** is below (please see weekly schedule),

* University Authorized Excuses: 1) Participation in a required/authorized university activity; 2) Verified illness; 3) Death in a student's immediate family; 4) Obligation of a student at legal proceedings in fulfilling responsibility as a citizen; and others determined by individual faculty to be excusable (e.g., elective University activities, etc.)

**Final Exam:** Final exam is a comprehensive and will take place Monday, December 14, from 10:30 -12:30 p.m. Do not expect a makeup exam for the final exam.

**GRADING**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance, Participation, &amp; Quizzes</td>
<td>5%</td>
</tr>
<tr>
<td>Homework, Activities, &amp; Projects</td>
<td>20%</td>
</tr>
<tr>
<td>Exams</td>
<td>50%</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Grade: A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = 59 or below

**TECHNOLOGY REQUIREMENTS**

**Technology Requirements:** A basic scientific calculator is recommended for this class. Students need to check their e-mail regularly with the address that they have provided to the instructor for class announcement. Access of computer with internet along with MS office software and a printer will be needed for some of the class projects.

---

*Mission for College of Science and Engineering: Innovation and Discovery*

*Mission for the Department of Mathematics: Discovering the Keys to Success*
COMMUNICATION AND SUPPORT

Interaction with Instructor Statement: It is important that students are actively engaged in class activities. Questions are welcome in the classroom. Students are welcome to schedule with instructors for extra help outside classroom during office hours.

Getting Help Outside of Office Hours: Students are encouraged to study and work in group. In addition, the free tutoring on campus and from online is also highly recommended. Math Skills Center is located in Binnion 328, is open Monday and Wednesday from 8am – 8pm, Tuesday and Thursday from 8am – 6pm, and Friday from 8am – 12pm. The Mach III/TRIO Program is available for students who qualify for additional resources, such as private tutoring. In order to qualify, students must meet certain conditions, such as being a first-generation college student. For more information, contact Ronnie Brooks at 903-886-5833 or in the Halladay Student Services building, Room 301.

Student Health Services are located at Henderson Hall (Corner of Lee St. and Monroe St.). It offers healthcare to the student body of Texas A&M University–Commerce. It provides primary health care services including treatment of illness, injury, and women’s health. Tel: (903) 886-5853.

University Police Department is located at Henderson Hall. For Emergency, please call: 911
For Non-Emergency, please call: 903.886.5868

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures

Academic Integrity: While majority of students are honest in doing their school work. However, due to recent cheating events, action must be taken to protect the academic integrity of classrooms. There is a NO TOLERANCE policy for cheating and if a student is caught cheating, he/she will either get a zero for the test or fail this course. Cheating in this course is defined as the following:

- Giving or receiving answers during an exam or quiz.
- Viewing the exam or quiz answers of nearby classmates.
- Having notes/practice work available during quizzes or tests.
- Possession or access to test items before the test is given.
- Deception in getting an excused absence to obtain the undeserved opportunity to make-up work.
- Use of cell phones or text messaging technology during exams or quizzes. Students may NOT use the calculator on their cell phones or any other similar electronic devices (such as I-Pods, I-Touch, etc.). IF ONE OF THESE DEVICES IS AVAILABLE, IN ANY WAY, DURING AN EXAM OR QUIZ, THE STUDENT WILL BE GIVEN AN AUTOMATIC “0” ON THE ASSIGNMENT.
- Improper citations in written works, or using another person’s ideas and words as students own without giving proper credit.
- Any method, no matter how well rationalized or accepted, which improves a person’s grade by any means other than study and skillful performances on exams and/or other assignments.

Students found guilty of an act of academic dishonesty in this course will be subject to receiving an “F” in this course.

Classroom Behavior: Appropriate classroom behavior is required to attend this class. All cell phones and electronic devices must be put on silent or turned off during class. NOTE: THIS INCLUDES BLUETOOTH
AND OTHER DEVICES THAT ARE PLACED IN THE EAR. Phones and electronics are distractions for instructor and the other students in the class. All people will be treated with respect and talking that disrupt the class is not allowed. If disruptions occur during class time, a student will be asked to leave class and will earn a zero on any applicable grades for that class period. Serial disrupters will be asked to withdraw from this class.

**Early Intervention for First Year Students:** Early intervention for freshmen is designed to communicate the University’s interest in their success and a willingness to participate fully to help students accomplish their academic objectives. Grades for students in freshmen level classes will be reported to the Registrar’s Office at the end of the fifth week of class during the fall and spring semesters. The Registrar’s Office will report grades to students, Advising Services, Academic Departments (faculty advisors) and mentors. This procedure will allow students to be knowledgeable about their academic progress early in the semester. The university, through Advising Services, faculty advisors and mentors, will take steps to assist students who may be experiencing difficulty to focus on improvement and course completion. Grade reports will be mailed by the end of the sixth week of the semester. University Specific Procedures

**ADA Statement, Students with Disabilities:** The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If students have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services, Texas A&M University-Commerce, Gee Library- Room 132, Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148, StudentDisabilityServices@tamuc.edu

This statement presents the University’s commitment to a safe, accepting environment for all students regardless of sexual orientation, gender identification, or gender expression: A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

**Student Conduct:** *** “All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.” (Student’s Guide Handbook, Policies and Procedures, Conduct.) Rude and/or disruptive behavior will not be tolerated. No electronic devices (except calculators) are allowed during class time. ***

*** By Remaining Enrolled In This Course, All Students Agree To Abide By The Policies Of This Class, As Stated In The Syllabus ***
COURSE OUTLINE

Math 350 MW Tentative Schedule (Fall 2015) For Students

Week 1 Syllabus, Problem Solving and Strategies

Week 2 Numeration, Different Bases

Week 3 Different Bases Operations, Models and Strategies for Addition and Subtraction with Whole Numbers

Week 4 Models and Strategies for Addition, Subtraction, Multiplication, and Division with Whole Numbers

Week 5 Models and Strategies for Addition, Subtraction, Multiplication, and Division with Integers, Compose Whole Number Word Problems (Join, Separate, Part-Part-Whole, Compare Problems), & Three Stages of Child Development for Mental Processing of Whole Number Operations

Week 6 Review for Exam 1, Exam 1, Introduction to Fractions

Week 7 Introduction for Fractions, Fraction Sense, and Models for Fractions Line, Area, and Set Models for Fractions and Equivalent Fractions, Fraction Sense, & Using Manipulatives for Fractions

Week 8 Add and Subtract Fractions Using Line, Area, and Set Models, Four Ways to Subtraction Mixed Fractions

Week 9 Models and Strategies of Multiplication and Division of Fractions, Word Problems for Fractions and Using Pictures and Models to Solve Word Problems with Fractions


Week 11 Exam 2, Introduction of Decimal Numbers, Models for Decimal Numbers, Number Sense of Decimal Numbers, and Models and Strategies for Operations of Decimal Numbers,

Week 12 Scientific Notation, Patterns, Sequences, Factors, G.C.F and L.C.M, Number Theory, Divisibility Rules, Set and Venn diagram

Week 13 G.C.F. and L.C.M., Set and Venn diagram, & Review for Exam 3

Week 14 Exam 3 & Wrap Up

Week 15 Review for Final Exam

Week 16 May 13 Monday FINAL EXAM, 10:30am – 12:30pm, NOTE SPECIAL TIME!

Mission for College of Science and Engineering: Innovation and Discovery
Mission for the Department of Mathematics: Discovering the Keys to Success