Math 351.001
COURSE SYLLABUS: Summer 2015

Instructor: Debra Newton
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COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings:

Text: Learning Mathematics in Elementary and Middle Schools, 4th (or 5th) edition, by W. George Cathcart, et al. Published by Pearson Merrill Prentice Hall.

Supplies Needed: Basic calculator and a three-ring binder or folder for handouts. You may also want a ruler (metric and standard), a protractor, scissors, glue stick, stapler, and colored pencils. **Please also use ONLY pencil (no pens) on all exams**.

Course Description:

This course will include content and pedagogy for teaching ratio and proportion, percent, probability, statistics, geometry, and measurement. This course will also address applications of the algebraic properties of real numbers with an emphasis on problem solving and critical thinking. Students should already have substantial skills in these areas. Problem solving is interwoven in all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts.   Prerequisite: a "C" or better in Math 350.

Course Content:

The last chapters in the textbook will be discussed (Chapters 10 – 17). ***You should already know how to do the computations for most of the material. Therefore the goal of this course is NOT to teach simple mathematical computations but to assist you in developing an understanding of mathematics. As a future teacher you must be able to explain mathematics to your students, not just teach rote manipulations of numbers and symbols. You should know and understand more mathematics than what you teach.***

Course Objectives:

Develop understanding of mathematics
Connect ideas within and between mathematical concepts
Develop mathematical thinking
Review manipulation of numbers in fraction and decimal form
Become proficient in solving problems

Student Learning Outcomes:

Upon completion of this course, the successful student will be able to:

1. Demonstrate their ability to solve problems, particularly those dealing with fractions, decimals, percent, ratio, proportion, probability, statistics, geometry, and measurement;
2. Demonstrate a judicious use of technology and manipulatives in the classroom; and
3. Explain material to a child through the appropriate use of words, reasoning, drawings, and manipulatives.

COURSE REQUIREMENTS

Instructional / Methods / Activities Assessments

Instructional Methods:

The goal of this course is to develop understanding of the mathematics covered. We are constantly going to deal with WHY more than HOW. As a future teacher, you must be able to explain mathematics to your students, not just show them how to carry out the mathematical procedures. We will focus on underlying structures and development of ideas. In addition, problem solving is a major component of this course. As a future mathematics teacher, you need to become familiar with and skilled in various types of problem solving techniques that are commonly used in mathematical thinking. Class consists of various styles of presentation and interaction. You will be active participants regardless of the mode of instruction. You should come to class ready to participate, both in terms of preparation as assigned and with a positive attitude toward class and colleagues. Instruction will include lecture, demonstration and models, and hands-on activities in small and/or large group settings. Many types of manipulatives will be demonstrated and used to work with the material.

Daily Work:

Homework: will be assigned most class periods. This work should be done in groups when possible. **It is extremely important for you to work all homework in order to be prepared for the exams.** We will also be working on assignments from Activities books and Supplemental Assignments which will often have to be completed as homework. Selected papers will be turned in for a grade. If you work on these assignments in a group, one paper should be handed in for the entire group, with all names clearly marked. The total number of assignments that are completed and turned in (punctually) by the student will be reflected in the supplemental assignments grade. A grade will be taken on select problems from each assignment. **Late work will not be accepted, no matter what the cause.**

Quizzes: Homework and quizzes will be averaged together. Both individual and group quizzes may be given; a daily quiz of some kind will be recorded. Since regular attendance is expected, **NO make-up quizzes will be given**. This class covers enough material that there is no time to be missed that is a "good time", and each quiz will be over material to be emphasized on exams. Quizzes will average into your homework grade.

Attendance: I will be taking roll every day. All students are expected to be present daily. If you miss a class, come see me <u>AFTER class</u> for any missed assignments. **Please do not approach me before class**, unless it is an emergency, so that we might start ON TIME.

Teaching Assignments/Projects/Labs:

Approximately every other week (with the exception of the first week having multiple Projects), I will assign special projects for students to work on outside of class, preferably in groups. These projects will vary in their scope and should be completed neatly and punctually.

Tests:

Tests will be given after a complete chapter or subject area. There will be three "chapter" exams which may consist of a variety of problems and short answer questions. However, students should expect the bulk of the questions on each test to be problem solving. Partial credit may be given on exams IF all work is neatly shown so that I can easily determine the student's mistakes. When pictures are drawn, students should be careful that figures are clearly marked 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: I realize that 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 a test day. However, **make-up exams will NOT be given**. Therefore, I am willing to replace the student's ONE lowest exam grade with the student's 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.

Minimum Competency Requirement: There is not a "competency exam" for this course. Instead, due to the important role fractions and decimals play in a child's mathematical career, this course includes a minimum competency requirement over the material on the first exam. All students in this course **must achieve a grade of 75 or higher on the first exam in order to receive a grade of "C" or higher in the course.** If the mastery level of 75% is not achieved on this exam, a retest will be administered outside of class. If the 75% competency is still not achieved, I will look at the section on the final exam which covers fractions and decimals. If the student achieves a 75% mastery on the section of the final exam that covers the first exam, the student will be considered to have mastered the material. However, each student should think carefully about the pressure that will be added by depending on the final exam.

Tentative Test Schedule:
Test 1 - Week of June 19th
Test 2 - Week of June 26th
Test 3 – Week of July 2nd

Final:

Our final is a comprehensive exam. The Class Schedule gives our time to have our final exam as **Thursday, July 9th, 9:00am – 11:00am. Do not expect a makeup exam for the final.**

Grading Policy:

Section:	Total:
Daily Work	10%
Teaching Assignments/Projects/Labs	15%
Tests (3 exams)	50%
Comprehensive Final	25%

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Grading Scale:

90-100+	A
80-89	B
70-79	C
60-69	D
59-below	F

TECHNOLOGY REQUIREMENTS

Internet access

Word processing software (Microsoft Word preferred/compatibility required)

Email access is required. Please utilize your A&M-Commerce email address, or make me aware of your alternate email address.

A TI-83 calculator (or equivalent) is RECOMMENDED, but not required, for this course.

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement:

Students will be expected to interact with the instructor(s) in class or via electronic means in an appropriate manner. All instructor contact information is listed on this syllabus and should be used. Please use email to facilitate a quick response.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures:

Getting Help Outside of Office Hours: The Math Skills Center, located in Binnion 328, is open Monday-Thursday, 8am – 3pm; Friday. While the department does its best to place quality tutors in the lab, please understand that not all tutors are trained in techniques used in the Elementary Education Math courses. For information on which tutors would be best to help, and when they are working, feel free to see me or the bulletin board outside the lab.

Comments: I will do my best to make a quality presentation each day and, in return, I expect that you will do your best to learn the material presented in class and in the text. This course will be taught as hands-on as possible, and student participation is necessary daily. It is important that you be actively engaged in any group activities. Questions are welcome in the classroom, and I will gladly schedule outside help sessions if necessary. I know that together, these efforts can contribute significantly to your education in this class. Appropriate classroom behavior is required to attend this class. *All cell phones and other similar devices must be put on silent during class.* Phones are a distraction for me and the other students in the class. All people will be treated with respect and I will not allow talking that will disrupt my lectures. If disruptions occur during class lectures, you 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 my class.

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Students who are absent more than 4 times, for whatever reason, are subject to the instructor dropping them from the course. Four absences in this course constitutes missing 1/5 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 four absences in the course. I will NOT automatically drop you from the course. Therefore, if you intend to drop the course, you will need to follow the drop procedures of the school. If I intend to drop you from the course, you will receive an email from me at the address you have given me on my student information sheet.

As stated in the Student Handbook, academic dishonesty in the class will not be tolerated. If any materials or equipment are found to be available to the student at any time which is considered inappropriate by the instructor, the very fact that the materials are inappropriately available to the student is grounds for an accusation of academic dishonesty. The instructor reserves the right to fail the student for the assignment or the course, as well as report the student to the Academic Dean, the Dean of Students, and the Committee for Academic Retention in Teacher Education. The above committee and deans have the ability to terminate a student's participation in the teacher education program. They also have the ability to terminate the student's enrollment in the University. The instructor considers this an extremely serious matter. Please make sure you are not in a situation that could be viewed negatively.

I find that a majority of students are honest in doing their school work. However, we must take measures to protect the academic integrity of the classroom**. Some forms of academic dishonesty include, but are not limited to:**
- Giving or receiving answers during an exam or quiz.
- Viewing the exam or quiz answers of nearby classmates.
- Having notes/practice work/etc. 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. **You may not use the calculator on your cell phones or other such devices. These must be put away during exams and quizzes. HAVING THESE AVAILABLE DURING AN EXAM OR QUIZ WILL CONSTITUTE GROUNDS FOR RECEIVING A ZERO.**
- Improper citations in written works, or using another person's ideas and words as your 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, as well as the above-mentioned disciplinary actions.

Specific additional disciplinary action for these offenses may include any combination of the following:

- Point deduction of an assignment
- Failure of an assignment
- A grade of zero for an assignment
- Failure of this course
- Referral to the Academic Integrity Committee or department head for further action
- Referral to the Dean of the College of Education and Human Services, and other Deans   as appropriate
- Referral to the University Discipline Committee

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- Communication of student's behavior to the Teacher Certification Office as constituting a reason to bar student from entering into or continuing in a teacher certification program (Procedures A 13.04, 13.12, 13.31, and 13.32

University Specific Procedures:

ADA Statement: 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 you have a disability requiring an accommodation, please contact:

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

Supplemental Instructions: Throughout the course of your work in this class, you will be given additional written instructions that govern the look, content and scope of your projects. These supplemental instructions have the same force as the syllabus for grading purposes.

Student Conduct:

Basic Tenets of Common Decency: All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See *Code of Student Conduct from Student Guide Handbook).*

All students are expected to exercise self-discipline and respect for the rights of others at all times. Behavioral disruptions that interfere with the business of the classroom or with an individual's ability to learn may be referred to the Dean of Students.

Please be sure that cell phones and other electronic devices are off or silent. If you expect to have to get up, please select an inconspicuous position to minimize disruptions. Courtesy to others is important. That means respecting the opinions of others, and in general, doing your part to make this a positive learning environment for all students. Food and beverages, while acceptable, should be consumed as quietly as possible, and you must clean up after yourself.

Tentative Schedule for 351:

Week 1	Introduction to Fractions/Fraction Sense, Fraction Operation Review, Introduction to Decimals/Terminating and Non-Terminating
Week 2	Decimal Operation Review, Exam #1, Ratio/Proportion
Week 3	Applications with Ratio and Proportion, Introduction to Percent, Applications with Percent/Probability and Statistics

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Week 4   Probability and Statistics, Exam #2, Introduction to Geometry, Projects with
                Geometry

Week 5   Applications with Geometry/Introduction to Measurement, Measurement
                Applications, Test #3 and FINAL

Remaining enrolled in this course constitutes acceptance of all policies contained in this syllabus.

Any changes to this syllabus will be communicated directly to you in class by the instructor. You
are responsible for being aware of any such changes.
Good luck and work hard!!