



Math 350.001 and 003 - Topics in Mathematics for Elementary Teachers Part 1
COURSE SYLLABUS: Spring 2014

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COURSE INFORMATION

Materials – Textbook: *Learning Mathematics in Elementary and Middle Schools: A Lesson-Centered Approach*, 5th Edition; by Cathcart, Pothier, Vance, and Bezuk, publ. Pearson, Merrill, Prentice Hall. (4th Edition will work also.)

Supplies: notebook paper (8½ X 11 in., wide- or college-ruled, no spiral), **pencil**, **colored pencils** (no markers), scissors, tape, stapler, 1/2-inch 3-ring notebook for project. (All work must be completed in pencil or colored pencil.)

Course Description: Class time will be spent in lecture, demonstrations, group activities, and tests. Announcements, assignments, notes, and other important documents will be posted outside my office and / or Mrs. S's faculty website.

Student Learning Outcomes

Students who successfully complete this course should be able to develop the concepts taught in the elementary and middle school mathematics classroom: numeration, whole number, fraction, decimal, and integer representations and operations, and number theory.

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 the why of 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 REQUIREMENTS

Course Placement:

To be placed in this course, you should have passed Math 1314 College Algebra with at least a C.

Attendance: Attendance is one of the keys to success in this course. Each class period will cover new material that is important, therefore, attendance will be checked each class period. All students are expected to be present daily. If you miss a class, you are still expected to come to the next class period PREPARED. A written copy of assignments is posted outside the instructor's office door. Assignments will be sent via email when requested. **There are no “excused” or “unexcused” absences in this class**, although I do appreciate knowing why you missed if you feel you can share that with me. Please put it in writing.

If you represent TAMU-Commerce on an athletic team, band, choir, debate, or other group and must miss class, notify me in writing with the coach's / sponsor's signature one week before the anticipated absence in order to not be counted absent. Arrangements for make-up work will be made at that time.

If a student has no absences and less than three tardies per test unit, the student will receive 5 points extra credit on that major exam. If a student has no absences during the entire semester and fewer than 3 tardies, he / she will receive 5 points on the final exam. NOTE: 2 tardies during a test unit count as one absence, resulting in the loss of the extra credit points.

*******As future teachers, each student in this class should understand and appreciate that attendance has a great effect on performance. The state of Texas has a truancy policy for this reason. If a student misses 20% (6 absences) or more of this class, he / she will be considered “truant” and will not receive credit for this course. The highest grade assigned to any student who has been truant without documenting extenuating circumstances will be a D. *******

GRADING

3 MAJOR TESTS 60%: Problem Solving, Numeration & Whole Number and Integer Add & Subtract 20%; Whole Number and Integer Multiplication & Division and Number Theory 20% ; Fraction Representations and Operations 20%; Decimals will be on the Final Exam.

The majority of the questions on each test will be problem-solving, although short answer may be included. Partial credit may be given IF all work is NEATLY shown. Items should NOT need interpretation if full credit is to be given.

Because emergency situations may occur that affect a student's performance on an exam or may even prevent a student from attending on a test day, I will replace the lowest test grade with the percentage correct on the final exam that covers the same material. This provision will only be applied to ONE exam, so students should make every effort to be present and well-prepared for each exam. This will only apply to the lowest test grade and only if the final exam percentage is higher.

Make-up tests because of an absence on a test date are generally NOT given. Make-up occurs on the final exam day. The zero received for the missed test is the lowest grade, so no other test may be replaced.

ACTIVITIES:

- Activities (Act) are activities usually started in class and completed on an individual basis. Activities will NOT be graded. Answer keys are available on Mrs. Singleton's website.

NON-TEST GRADES 15%: (approximately 750 points)

- **LESSON NOTEBOOK:** (individual) The purpose of the notebook is to help you, the preservice teacher, accumulate resources for when you have your own classroom. (See additional handout; 280 points)
- **REVIEWS:** Reviews of professional articles. 10 points each (40 points total) Completed on an individual basis.
- **DAILY GRADES:** Handouts that reflect and review your understanding of the material covered in class and the textbook. Completed on an individual basis.
- **QUIZZES:** Quizzes will be taken at the beginning of class, usually on Monday / Tuesday, in the first 10 minutes. The content will be from the previous week's material. (10 quizzes @ 10 points = 100 points)
- **WRITING APPLICATIONS (Word Problems)** (190 points, handouts will be given later) Completed on an individual basis.

FINAL EXAM 25%:

The Final Exam will be a comprehensive exam. MW-9:30 class on Mon, May 5, 10:30 am - 12:30 pm, TR-8 class on Tues, May 6, 8:00 - 10:00 am in Binnion 329.

Grading Scale: A: [90, 100+), B: [80, 90), C: [70, 80), D: [60, 70), F: [0, 60) **A "C" in this course is required in order to take Math 351.**

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement

For help with assignments, classroom activities, or any thing else, please feel free to drop in during my posted office hours, or call me. Outside these hours, please email me. I will check my email several times a day in order to reply as promptly as possible.

The MATH LAB was created to provide tutors to students who need extra help in a math course. Tutors are available according to the following schedule:

Monday, Wednesday: 8 a.m. – 8 p.m. Tuesday, Thursday: 8 a.m. – 6 p.m.
Friday: 8 a.m. – Noon.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures

Academic Integrity: Because the majority of students are honest in their school work, I accept the responsibility to take measures to protect you, an honest student, from the few students who would take advantage of you and obtain grades by fraudulent or deceptive means. Please understand that the efforts to prevent cheating in this class are made out of respect and obligation to you as an honest person, not as an insult. Your cooperation will reduce the inconvenience and encourage the person who is tempted to cheat to do his/her work honestly. Academic dishonesty takes many forms:

- Giving or receiving answers during an exam or quiz.
- Viewing the exam or quiz answers of a nearby classmate.
- 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.
- **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.**
- **PRESENCE of ELECTRONIC DEVICES during a quiz or test.** If cell phones, texting devices, or music players are IN SIGHT during a quiz or test, the owner will receive a zero on the quiz or test.

Students found guilty of an act of academic dishonesty in this course will be subject to the following actions in this course: A first violation in a class will result in a zero on the task/assignment/quiz/test. No make-up will be allowed nor will you be allowed a final exam substitution in the case of an exam. A second violation in a class will result in an "F" in the course, regardless of current average. Appropriate offices will be notified in all incidents

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 you 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

Student Conduct

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*).

Classroom Environment: RESPECT

We are all here to learn. Therefore, to minimize the disruptions and distractions that detract from and interrupt the learning environment, all electronic devices will be turned off or set to silent, all caps and hats will be removed, appropriate dress for future teachers followed, and all people treated with respect. Students who do not abide by this policy will be asked to leave, counted absent, and receive a zero(s) for any daily work.

COURSE OUTLINE / CALENDAR

General Schedule

| Week | Topic | Week | Topic |
|------|--|------|--|
| 1 | Introduction to Course Problem Solving steps and strategies Sets | 9 | Prime & Composite numbers Prime factorization GCF and LCD |
| 2 | Attributes, Venn diagrams Ancient Numeration systems | 10 | Fractions - Length model Fractions - Set model |
| 3 | Numeration (Counting) Base 10 representations | 11 | Test # 2 in Testing Center Fractions - Area model Equivalent fractions |
| 4 | Addition & Subtraction models Addition mechanics | 12 | Improper fractions, Mixed numbers Ordering Fractions Adding & subtracting fractions |
| 5 | Subtraction mechanics Addition & Subtraction of integers P-1 Writing + / - Applications due | 13 | Multiplying & Dividing fractions |
| 6 | Test # 1 Multiplication & Division models | 14 | Decimal Representations Lesson notebook due Test # 3 (Fractions) available in Testing Center |
| 7 | Multiplication mechanics Division mechanics | 15 | Decimal Operations Test # 3 |

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| 8 | Multiplication & Division of integers Properties of Numbers Divisibility Rules P-2 Writing MD Applications due | | 16 |
| | | | Final exams |