SMTE 1350.B01 Syllabus
Fundamentals of Math I
Fall, 2014

I. COURSE INFORMATION

Instructor: Marcia Venzon
Meeting Time and Place: MW 11-11:50, CS 107
Office Address: CI 367
Office Phone: 825-2844
E-mail Address: marcia.venzon@tamucc.edu
Office Hours: MW 10-11, Tuesday 11-2

II. COURSE DESCRIPTION

This course provides the conceptual framework for understanding and applying properties, models and operations of number systems. Related topics are studied in problem solving settings. Most students in this course have learned mathematics through a rule-based, abstract instructional program. This course is designed to emphasize in-depth basic understandings of number systems and arithmetic patterns, which are core ideas in the elementary mathematics curriculum. Communicating concepts, processes or solutions effectively, in oral and written forms, will be emphasized.

III. PREREQUISITES FOR THE COURSE

MATH 1314: College Algebra or equivalent, or placement beyond College Algebra on the departmental placement test.

IV. TEXTBOOKS AND MATERIALS REQUIRED

- *Mathematical Reasoning for Elementary Teachers*, Long, Temple, Millman, 6th Edition. Students will need to purchase registration for MyLabsPlus (comes packaged with the textbook at the campus Barnes and Noble bookstore and the Islander Book Store). Any scientific calculator, TI-83, or elementary calculators TI –10 or TI-15 Explorer, or TI-35 ($10 at Walmart)
- The course will cover Chapters 1-6 of the textbook. Homework will mostly be online in MyLabsPlus.
- Website for MyLabs Plus is [www.tamucc.mylabsplus.com](http://www.tamucc.mylabsplus.com). Technical number to call for problems is 1-888-883-1299. Sign in with you're A# and birthday ( or SAIL password)
V. INSTRUCTIONAL METHODS

The syllabus will provide an outline of course topics, supported by the textbooks. Students are responsible for their own learning, using resources and technology. The course will be a combination of lectures, individual, and group work. Students are expected to participate in group and whole class discussions by contributing with knowledge and thoughtful evaluation of the contribution of others. A substantial portion of the class instructional plan will be using physical models to teach the content topics, and understanding how learning occurs through their use. Students will be using My Math Lab (online) to do a majority of their homework assignments.

Important Dates:
1. Last day to drop a class Friday, November 7th
2. The last day of class is Tuesday, December 2nd.
3. Final Exam — Friday, December 5th. From 11-1:30

VI. ASSESSMENT AND EVALUATION

<table>
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<tr>
<th>HOMEWORK - My Math Lab online assignments, Qwizdom, class participation</th>
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<tbody>
<tr>
<td>Quizzes - Chapter tests</td>
<td>25%</td>
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<td>TEST - Final Exam</td>
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<td>Attendance/Online work</td>
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<th>90 – 100 A</th>
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<td>70 – 79 C</td>
<td>60 – 69 D</td>
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Participation: Each student is expected to be fully involved in class. Absences will affect this part of your grade. Attendance will be recorded and counts 12.5% of your grade. The maximum number of unexcused absences allowed will be one for a class that meets only ten times during Summer 1. To be qualified to make up work, students need to email Mrs. Venzon within 24 hours of absence with reason for missing class. Some classwork cannot be made up. Please be present.

Quizzes & Chapter tests: There will be chapter tests some online and some in class, and a cumulative final. Grades will be posted in the gradebook of MyLabsPlus.

Portfolio: Each student should keep a portfolio, in a three ring binder with dividers and labeled tabs, representing the work they have done for the class. This portfolio will be submitted to the professor at the midterm and the end of the semester. Most homework will consist of in class assignments, which will be due
by the next class period. **This class is called a Blended course meaning that online work will count for 55 minutes each week of classtime (No class on Friday). Work will consist of readings and other activities.**

**VII. CLASS POLICIES**

**Cell phones, pagers, and earpieces:** Please turn cell phones off during class. Please remember to bring your calculator; no cell phones, pagers, or earpieces will be allowed in sight during quizzes and exams (please put them in your bag).

**Written work:** Written hardcopy assignments must be typewritten or neatly printed with pages stapled together (no folding, paper clips, or plastic covers please). The professor reserves the right to penalize sloppy, unorganized, unstapled, misspelled or poor grammatical work. The Writing Center is available for help with written assignments.

**Late Work:** Students are encouraged to always turn in work on time. However, if situations dictate that work will be late, please notify the instructor and turn it in as soon as possible. Late work deadlines and points awarded may be adjusted at the discretion of the instructor.

**Make-up Work:** In the case of an **excused** absence, make-up work may be allowed. Homework deadlines and points awarded may be adjusted at the discretion of the instructor. Students must email instructor within 24 hours of an absence with a reason in order to qualify to make up work. Some daily work cannot be made up because it happens in class.

**Dropping the course:** Should you find yourself in the situation where you are considering dropping the course, you are highly encouraged to discuss this matter with the instructor.

**Registration:** You are the only person responsible for your registration in this class. If for some reason you decide to not continue with the course, you will need to see your advisor or the registrar to drop the course. If you quit coming to class and do not drop, you will be assigned a grade based on the work you have completed, usually an F.

**Help:** The best source of help for this course is the people directly involved in this course: your peers or the professor, in class or during office hours. Don’t wait for the last minute to get HELP.

**Attendance:** Plan to attend all sessions. Students are expected to be present and on time for all class meetings. I assume pre and in-service teachers to be professional learners, with maturity to understand the importance of being present in the classroom. If you must be absent,
please communicate with the instructor within 24 hours to be able to make up work. Not all work can be made up Email is encouraged marcia.venzon@tamucc.edu or you may call my office at 825-2844 and leave a message. You are responsible for any work missed. You can get free medical attention at the University Health Center (825-2601)

**Academic Integrity/Plagiarism**

University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in zeros. Professor will follow Student Code of Conduct procedures.

**Dropping a Class**

I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Friday, November 7th is the last day to drop a class with an automatic grade of “W” this term.

**Classroom/professional behavior**

Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

**Statement of Civility (can be in place of classroom/professional behavior)**

Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you
will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

**Grade Appeals (College of Science and Engineering Version)**

As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html), and the College of Science and Engineering Grade Appeals webpage ([http://sci.tamucc.edu/students/GradeAppeal.html](http://sci.tamucc.edu/students/GradeAppeal.html)). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

**Disabilities Accommodations**

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 believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

**Statement of Academic Continuity**

In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students
need to make certain that the course instructor has a primary and a secondary means of contacting each student.

VIII. COURSE OBJECTIVES

This course is designed to enable students to achieve mathematics content and process goals as specified below. These are the Educator Standards prescribed by the State Board for Educator Certification (SBEC) for Texas. Some of the goals are related to specific content and will be focused on during one or more classes, while other goals are overarching in nature and will be addressed throughout the course.

Standard I: Number Concepts

The mathematics teacher understands and uses numbers, number systems and their structure, operations and algorithms, quantitative reasoning, and technology appropriate to teach the statewide curriculum (TEKS) in order to prepare students to use mathematics.

Standard V: Mathematical Processes

The mathematics teacher understands and uses mathematical processes to reason mathematically, to solve mathematical problems, to make mathematical connections within and outside of mathematics, and to communicate mathematically.

Standard VI: Mathematical Perspectives

The mathematics teacher understands the historical development of mathematical ideas, the interrelationship between society and mathematics, the structure of mathematics, and the evolving nature of mathematics and mathematical knowledge.

IX. STUDENT LEARNING OUTCOMES

Sequences

• Identify patterns, predict next term, find and apply formulas for arithmetic, geometric, Fibonacci, “see-and-say”, exponential (n^x), and power sequences (2^n)

• Model sequences concretely, symbolically and abstractly

Functions
Syllabus 1350

- Illustrate concepts of relations and functions using concrete models, tables, graphs, and symbolic expressions
- Move from sequences to functions – model algebraically, geometrically and graphically

Number systems

- Compare and contrast number systems (additive, subtractive, character, place value)
- Identify the structure of the real number system
- Describe the roles of zero, face and place value in the base ten system
- Model whole numbers using Base 10 blocks
- Analyze, explain and model binary operations on whole numbers using Base 10 blocks
- Recognize and analyze standard and non-standard algorithms for binary operations on whole numbers
- Analyze error patterns of students working standard algorithms for binary operations on whole numbers
- Recognize and apply properties of real numbers

Prime and composite numbers

- Explain two or more reasons why one is not a prime number
- Develop full definitions of prime and composite numbers
- Identify prime numbers between 1-100 and how to find prime numbers greater than 100
- Determine the prime factorization of any given whole number
- Find GCF/LCM for a given set of whole numbers
- List all factors of a given number

Integers, exponents and roots

- Model integers using 2-color chips
- Analyze, explain and model binary operations on integers using 2-color chips
- Apply operations and properties of exponents and roots for rational numbers
- Simplify roots and approximate using a calculator
- Explore historical/cultural scenarios using powers of two

Rational numbers

- Model fractions using Cuisenaire rods
- Model binary operations on fractions using Pattern blocks, Cuisenaire rods, Fraction bars and Fraction grids (area models)
Syllabus 1350

• Explain and justify traditional algorithms for binary operations on fractions
• Create equivalent fractions using paper or manipulatives
• Explain why rational numbers are dense on the real numbers and give an example of a number set that is not dense and explain
• Put a set of fractions in order from smallest to greatest
• Find at least two fractions between a given pair of fractions

Communication

• Communicate mathematical ideas and concepts in age-appropriate oral, written and visual forms for a class presentation

Technology

• Use appropriate technology such as calculators and computers to explore, research, solve, and compare mathematical situations and problems