Fundamentals of Mathematics II
Mathematics and Statistics
Spring 2015

A. COURSE INFORMATION

Course number/section: SMTE 1351.002
Class meeting time: TR 2:00-3:15
Class location: CS 107
Course Website:

B. INSTRUCTOR INFORMATION

Instructor: Marcia Venzon
Office location: CI 367
Office hours: MWF 10-11, TR 11:30-12:30
Telephone: 361 825-2844
e-mail: Marcia.venzon@tamucc.edu
Appointments: For appointment please email.

C. COURSE DESCRIPTION

The conceptual framework for understanding and applying properties, models and operations related to various data systems in problem solving settings.
This research-based course provides the conceptual framework for increased understanding and application of rational numbers, probability, and statistics. Communicating concepts, processes or solutions effectively, in oral and written forms, will be emphasized. Using physical models to teach the content topics and understanding how learning occurs through their use will be a substantial portion of the class instructional plan.
The course will cover chapters 7, 11, and 13 in the textbook.

D. PREREQUISITES AND COREQUISITES

MATH 1314: College Algebra or equivalent
SMTE 1350: Fundamentals of Math I

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required:
• Help line for MyLabsPlus is 1- 888-883-1299.. Students will log into mylabsplus using A# and if new, asking for password.
• Calculator
F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

SMTE 1351 – Fundamentals of Mathematics II

Student Learning Objectives.

If the student meets the expectation of the instructor for completing assigned tasks, reflecting on the daily activities, studying the key concepts discussed during class, and getting additional help when needed, then the student will be able to:

1) Use, model, justify and explain relationships, operations and algorithms involving rational numbers, ratios, proportions and percent; as well as compare and contrast proportional and non-proportional relationships.

2) Create, use and explain a variety of appropriate data displays (tables, charts, graphs) and compare and contrast the various representations.
4) Create, use and evaluate simulations and models that explore simple and compound experimental probability events. Use, justify and explain counting techniques, including permutations and combinations, to determine theoretical probabilities. Discuss the similarities and differences between experimental and theoretical probabilities.

5) Identify correct and incorrect mathematical reasoning, and analyze error patterns present in EC-6 student work, and suggest remediation for these errors.

6) Write, and solve mathematical problems that involve proportional, probabilistic, and statistical reasoning, as well as basic ideas of mathematical modeling, in a variety of mathematical or non-mathematical settings.

7) Communicate mathematical ideas appropriately through multiple representations, including oral and written words, concrete manipulatives and pictures, graphs, tables, and symbols.

By the end of this course, students should be able to:

1. Mathematical processes
2. Recognize that a mathematical problem can be solved in a variety of ways, evaluate the appropriateness of various strategies, and select an appropriate strategy for a given problem
3. Evaluate the reasonableness of a solution to a given problem
4. Use physical and numerical models to represent a given problem or mathematical procedure
5. Recognize that assumptions are made when solving problems and identify and evaluate
those assumptions
6.
7. Mathematical Perspectives
8. Understand and apply how mathematics progresses from concrete to representation to abstract generalizations
9.
10. Communication
11. Communicate mathematical ideas and concepts in age-appropriate oral, written and visual forms for a class presentation
12. Use mathematical processes to reason mathematically, solve mathematical problems, make mathematical connections within and outside of mathematics, and communicate mathematically
13. Reflect on personal learning, change of attitude and beliefs, and growth in understanding through mathematical journaling
14. Translate mathematical statements among developmentally appropriate language, standard English, mathematical language, and symbolic mathematics
15.
16. Technology
17. Use appropriate technology such as calculators, computer software, and the Internet to explore, research, solve, create and compare mathematical situations and representations
18.
19. Professional Development

Be familiar with the National Council of Teachers of Mathematics and the Principles and Standards for School Mathematics, the NCTM website, and NCTM journals

G. INSTRUCTIONAL METHODS AND ACTIVITIES

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. Using physical models to teach the content topics, and understanding how learning occurs through their use, will be a substantial portion of the class instructional plan.

MAJOR COURSE REQUIREMENTS AND GRADING

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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</thead>
<tbody>
<tr>
<td>Final Exams</td>
<td>25%</td>
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<tr>
<td>Quizzes</td>
<td>25%</td>
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<tr>
<td>Homework</td>
<td>25%</td>
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<tr>
<td>Presentations/Attendance</td>
<td>25%</td>
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<tr>
<td>Final Exam</td>
<td>Tues, May 12, 1:45</td>
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H. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DATE (WEEK)</th>
<th>TOPIC</th>
<th>CHAPTER(S)</th>
<th>ASSIGNMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to decimals</td>
<td>Chapter 7.1</td>
<td>In class and MyLabsPlus</td>
</tr>
<tr>
<td>2-3</td>
<td>Decimals numbers</td>
<td>7.2, 7.3</td>
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<tr>
<td>4-5</td>
<td>Percent</td>
<td>7.4</td>
<td></td>
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<tr>
<td>6</td>
<td>Ration and proportion</td>
<td>7.3</td>
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<td></td>
<td>Exam 1…</td>
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<tr>
<td>7-9</td>
<td>Statistics: the interpretation of data</td>
<td>13.1, 13.2, 13.3</td>
<td></td>
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<tr>
<td>10-14</td>
<td>Probability</td>
<td>14.1, 14.2, 14.3</td>
<td></td>
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<tr>
<td>15</td>
<td>Review for final</td>
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</tr>
<tr>
<td></td>
<td>Final Exam</td>
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<td>May 12th</td>
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Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

I. COURSE POLICIES

Students are expected to be fully involved in class. Absences will affect your grade. Attendance will be recorded and counts 12 1/2% of your grade. Students must email or call me within 24 hours of missing class in order to be able to make up assignments. Classwork often cannot be made up. Students need to be respectful of their peers and not distract others during class time.

J. COLLEGE AND UNIVERSITY POLICIES

- Academic Integrity (University)
  It is expected that university students will demonstrate a high level of maturity, self-direction, and ability to manage their own affairs. Students are viewed as individuals who possess the qualities of worth, dignity, and the capacity for self-direction in personal behavior.
  See Full University Policy at http://catalog.tamucc.edu/content.php?catoid=10&navoid=313#Academic_Integrity

- Classroom/Professional Behavior
  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 and will be handled per the student handbook.

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.

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.

- **Deadline for Dropping a Course with a Grade of W (University)**
  The grade of W will be assigned to any student officially dropping a course by Friday, April 10, 2015. No student is eligible to receive a W without completing the official drop process by this deadline. Visit the Office of the University Registrar for the Course Drop Form that must submitted. After April 10, 2015 a student will not be allowed to drop a course.

- **Grade Appeals (College of Science and Engineering)**
  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, and the College of Science and Engineering Grade Appeals webpage at 
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.

- **Disability Services**
  Disability Services (DS) is the hub for coordinating services and accommodations to ensure accessibility and utilization of all programs for all Texas A&M University-Corpus Christi students with disabilities. Our services are designed to meet the unique educational needs of enrolled students with documented permanent or temporary disabilities. DS provides intake and consultation services to students seeking to register with our office. DS reviews an individual’s documentation of disability and assesses eligibility for services and the determination of reasonable accommodations. For more information visit the Disability Services Office at 116 Corpus Christi Hall or go to http://disabilityservices.tamucc.edu/

**K. OTHER INFORMATION**

**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.

**GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.