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Office Hours: MWF 11:00-12:00 or by appointment in FEM 1E	

Math 45-56847: Contemporary Mathematics
Text (Optional): Excursions in Modern Mathematics + MyMathLab Student Access Kit, 7/E, Tannenbaum, 7th ed., **ISBN** 13: 9780321575234
Prerequisite: MATH 103
Basic Skills Advisories: Eligibility for ENGL 125 and ENGL 126

Description
This course provides an introduction to mathematical problem solving in diverse areas of contemporary life such as statistics, social choice, measurement, and management science for students in the arts, humanities, and social sciences.

Expectations / Responsibilities

Instructor
- Provide the necessary instruction for student success.
- To hold students accountable for their achievement in relation to the course outcomes.
- Clearly communicate progress being made in a timely fashion.

Student
- Be properly enrolled on WebAdvisor and Course Compass by Noon Thursday, January, 14, 2010.
- Monitor the class Blackboard site regularly.
- Provide a working e-mail address that you check regularly.
- Learn the material that is assigned and **get help** when necessary.
- Study the material daily and stay current on all assignments.
- Students are responsible for officially dropping the class.

NOTE: If you have a verified need for an academic accommodation or materials in alternate media per the Americans with Disabilities Act or section 504 of the Rehabilitation act please contact me as soon as possible.

Please refer to SCCCD policies for guidance on all matters relating to this course.

Important Dates

January 29, 2010	Friday	Last day to register for a full-term fall class
January 29, 2010	Friday	Last day to drop a fall full-term class to avoid a "W"
March 12, 2010	Friday	Last day to drop a full-term class to avoid a grade

Face to Face Meeting Dates

January 25, 2010	Monday	6:00-8:00 PM	Checkup	Room AC1-145
February 22, 2010	Monday	6:00-8:00 PM	Midterm 1	Room AC1-145
April 5, 2010	Monday	6:00-8:00 PM	Midterm 2	Room AC1-145
May 17, 2010	Monday	6:00-8:00 PM	Final Exam	Room AC1-145

Grading Scale: **A** 90-100%   **B** 80-89%   **C** 70-79%   **D** 60-69%

Homework (20 %):

Online assignments must be completed on the Course Compass website
http://www.coursecompass.com. The program is set up so that you must complete all the
homework of a chapter with at least 70% success to be able to take the chapter exam. **Do
not expect to take the exam and then complete the homework**. Each assignment has a
due date and the assignment will be unavailable to the student after the due date.

Each student is allowed up to 5 homework deadline extensions for the semester.

Written assignments will be collected on Face to Face meeting dates.

Online Tests (10 %):

Online tests will be given regularly. They have a 90 minute time limit. **It is not possible
to stop the exam and return to it later**! Each test has a deadline and each test will
cease to be available after its deadline.

Midterms / Final Exam (70 %):

Students will need to present a valid picture I.D. in order to take each exam. There will
be two Midterm Exams and a Final. Each Exam has a two hour time limit. All significant
work needs to be shown for each problem in order to receive full credit.

If an exam is not taken as arranged, then it will be scored a zero.

There is no extra credit.

Academic Dishonesty

Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.

Plagiarism is a specific form of cheating: the use of another's words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights. Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on the particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.

Objectives

In the process of completing this course, students will:

A. Solve problems from the area of management science by means of linear programming
B. Derive the probability of succeeding at basic games of chance
C. Describe statistical data in a variety of methods as in using mean, median, and standard deviation
D. Use the empirical numbers to answer statistical questions
E. Measure the rate of growth of different systems, example: linear vs. exponential growth
F. Characterize and compare different voting systems, using plurality, borda count, or pair-wise comparison
G. Find the apportionment of a finite number of items
H. Use various procedure to divide items fairly
I. Find the terms of a sequence and series
J. Create geometric shapes using recursive construction rules

Course Outcomes

Upon completion of this course, students will be able to:

1. Demonstrate problem solving skills by applying mathematical principles and techniques in real world areas.
2. Incorporate the mathematics of finance to be consumer-wise.
3. Examine statistical principles used to display, interpret and analyze data.

Course Outline

A. Mathematics of Social Choice
    a. The Mathematics of Voting
    b. Weighted Voting Systems
    c. Fair Division
    d. Apportionment

B. Management Science
    a. Euler Circuits
    b. Hamilton Circuits
    c. Networks
    d. Scheduling

C. Growth & Symmetry
    a. Spiral Growth & Fibonacci's Numbers
    b. Linear & Exponential Growth
    c. Symmetry
    d. Fractals

D. Statistics & Probability
    a. Collecting Data
    b. Descriptive Statistics
    c. Normal distributions
    d. Probability