

**EASTERN CONNECTICUT STATE UNIVERSITY  
DEPARTMENT OF MATHEMATICS & COMPUTER SCIENCE  
MATHEMATICS 135 – MATH FOR LIBERAL ARTS (ONLINE)  
FALL SEMESTER 2008**

**CHARACTERISTICS OF THE SUCCESSFUL ONLINE STUDENT**

Before registering for this online course verify that you are sufficiently prepared for the demands of an online course. This online course requires:

- Computer literacy
- Time
- The ability to work independently
- The ability to read notes and examples from the textbook
- Experienced users of email with attachments
- Experienced navigators of the World Wide Web
- Willingness to contact WebCT support at [webctsupport@easternct.edu](mailto:webctsupport@easternct.edu) if necessary when encountering technical difficulties
- The ability to download files, save files and upload files
- The ability to download and install free software from the Internet
- Access to and the ability to use/learn Excel

## INSTRUCTOR INFORMATION

Name: Dr. K. Y. Ward  
Title: Assistant Professor of Mathematics  
Email: WardK@Easternct.edu

## COURSE INFORMATION

Title: Math for Liberal Arts (ONLINE)  
Credit: Three Hours  
Section: E25

## PRE-REQUISITES

MAT 101 or placement or SAT score

## REQUIRED TEXTBOOK

Comap, *For All Practical Purposes*, 7<sup>th</sup> edition, W. H. Freeman and Company

## SUPPLEMENTARY TOOLS AND SERVICES

- 1). TI-83 graphing calculators or equivalent (no cell phone calculators)

## COURSE DESCRIPTION

Mathematics applied to solving practical problems in political science, sociology, ecology, geography, visual arts and geometry. Mathematical methods are used to examine how groups make voting decisions, achieve power, divide resources, resolve conflicts, to study landscape species patterns, economic and biological population growth, and artistic and mosaic patterns.

## COURSE DELIVERY

All course related materials will be posted in Blackboard. Course material will be uploaded every Monday, Wednesday, and Friday by 8 am. All notes will be located under the "Learning Modules" tab and all homework assignments will be located under the "Assignments" tab. **Students are required to check the tabs every Monday, Wednesday, and Friday.**

## LEARNING MODULES

The course material is divided into five learning modules. Within each learning module there will be several lectures followed by respective homework assignment(s). The content of the learning modules are as follows:

- 1). **Module 1: Identification Numbers** We will cover sections from Chapter 16 which covers composing/validating identification numbers.
  
- 2). **Module 2: Linear Programming** We will cover sections from Chapter 6 which covers the topic of maximizing and minimizing problems.
  
- 3). **Module 3: Voting** We will cover sections from Chapter 9 which looks at various techniques of voting.
  
- 4). **Module 4: Fair Division** We will cover sections from Chapter 13 which include topics about strategies to divide items.
  
- 5). **Module 5: Finance** We will cover sections from Chapters 21 and 22 which include topics about saving and borrowing money.

## LEARNING MODULE 1: IDENTIFICATION NUMBERS

ORDER OF ACTIVITY	TOPIC
Lecture 1 .....	Check Digits
Lecture 2 .....	UPC
Lecture 3 .....	U.S. Banking System
Lecture 4 .....	Codabar Method
Homework Assignment 1 .....	Material from Lectures 1 - 4
Lecture 5 .....	ISBN
Lecture 6 .....	Zip Codes, Zip + 4 Codes
Lecture 7 .....	Bar Codes and Zip Code Bar Code
Lecture 8 .....	Decimal Digits and Several Examples
Lecture 9 .....	Delivery Point Bar Code and UPC Bar Code
Lecture 10 .....	Soundex Coding System
Lecture 11 .....	Driver's License Schemes
Homework Assignment 2 .....	Material from Lectures 5 - 11

## LEARNING MODULE 2: LINEAR PROGRAMMING

ORDER OF ACTIVITY	TOPIC
Lecture 1 .....	Review Graphing Techniques
Lecture 2 .....	Review Graphing Linear Equations
Lecture 3 .....	Review Graphing Linear Inequalities
Lecture 4 .....	Review System of Linear Equations
Lecture 5 .....	Feasible Regions, Corner Points, Profit Formula
Homework Assignment 3.....	Material from Lectures 1 - 5
Lecture 6 .....	Mixture Problem (Skates and Dolls)
Lecture 7 .....	Mixture Problem (Juices)
Lecture 8.....	Mixture Problem (More than two products)
Homework Assignment 4.....	Material from Lectures 6 - 8

### LEARNING MODULE 3: VOTING

#### ORDER OF ACTIVITY

#### TOPIC

Lecture 1 .....	Introduction
Lecture 2 .....	Plurality Voting and Condorcet winner
Lecture 3 .....	Borda Count
Lecture 4 .....	Sequential Pairwise Voting
Lecture 5 .....	Hare System
Homework Assignment 5.....	Material from Lectures 1 - 5

### LEARNING MODULE 4: FAIR DIVISION

#### ORDER OF ACTIVITY

#### TOPIC

Lecture 1 .....	Taking Turns
Lecture 2 .....	Adjusted Winner Procedure
Lecture 3 .....	Knaster Inheritance Procedure
Homework Assignment 6.....	Material from Lectures 1 - 3

### LEARNING MODULE 5: FINANCE

#### ORDER OF ACTIVITY

#### TOPIC

Lecture 1 .....	Simple Interest
Lecture 2 .....	Compound Interest
Lecture 3 .....	Compounded continuously
Homework Assignment 7.....	Material from Lectures 1 - 3
Lecture 4 .....	Saving: Example for needing an annuity
Lecture 5 .....	Borrowing: car loan
Lecture 6 .....	Borrowing: credit cards
Homework Assignment 8.....	Material from Lectures 4 - 6
Lecture 7 .....	Borrowing: home loans (30 vs. 15 yr.)
Lecture 8 .....	Borrowing: home loans (paying additional to 30 yr. vs. biweekly)
Homework Assignment 9.....	Material from Lectures 7 - 9

## COMMUNICATION TOOLS

### A. BLACKBOARD MAIL

All students will send email using the Blackboard mail tool. I will respond to all email messages within 48 hours, except on weekends.

### B. DISCUSSION BOARD

In order to encourage communication and collaboration with classmates, we will have online discussions about the course material. I will post a question for each learning module of the course under the "Discussions" tab in Blackboard. This question will encourage students to think about the "big picture" of how mathematics can be applied to everyday life. In your responses, you may initiate the discussion or respond to another student's entry. This is the class participation part of the course and you will be evaluated on the quality, relevance, and clarity of your responses. In addition to your formal contributions to the Discussion Board, you are encouraged to use the Discussion Board to find answers to your course related questions and provide answers to the questions of your classmates on an informal (not graded) basis.

### SUBMITTING YOUR WORK

All coursework will either be submitted to me directly under the **Assignment** tab or placed under the **Discussion Board** tab in Blackboard. In order for me to effectively manage an online course, I am requiring all students to use the following file naming system when submitting work: **FirstName.LastName.AssignmentNumber**. For example, if your name is John Smith and you are completing Assignment 1, then name your file **JohnSmith[1]** before submitting. The turnaround time for homework assignment results will be 48 hours.

### EVALUATION

Your progress in this course will be evaluated using homework assignments and discussion board participation.

Homework Assignments.....	90%
Discussion Board Participation.....	10%

The **Grading Scale** is as follows:

95	-	100	A
90	-	94	A-
87	-	89	B+
84	-	86	B
80	-	83	B-
77	-	79	C+
74	-	76	C
70	-	73	C-
65	-	69	D+
60	-	64	D
0	-	59	F

### **MAKEUP POLICY**

Late homework assignments **will not** be accepted and there will be **no makeup** homework assignments given. When computing the final course grade, the lowest homework assignment grade will be dropped.

### **ACADEMIC INTEGRITY**

Violations of academic integrity will be penalized in one of the following ways; failing grade on assignment, failing grade in course, and/or student meeting with department chair.

### **SPECIAL ARRANGEMENTS**

If you are a student with a disability and believe you will need accommodations for this class, *it is your responsibility* to contact the Office of AccessAbility Services at (860) 465-5573. To avoid any delay in the receipt of accommodations, you should contact the Office of AccessAbility Services as soon as possible. Please understand that I cannot provide accommodations based upon disability until I have received an accommodation letter from the Office of AccessAbility Services. Your cooperation is appreciated.

### **A FEW IMPORTANT DATES**

First day of classes  
Midterm Grade dues  
Class Withdrawal Deadline  
Thanksgiving Recess-no classes  
Last day of classes  
Final Exams

### **FALL 2008**

September 2 (Tues.)  
October 20 (Mon.)  
November 7 (Fri.)  
November 26 - 30 (Wed. - Sun.)  
December 11 (Thurs.)  
December 13 – 19 (Sat. – Fri.)

## **WHAT TO DO ON THE FIRST DAY OF THE SEMESTER**

### **I. READ DOCUMENTS**

During the first week of class, all students must read the information located under the "Course Content" tab in Blackboard. Topics covered include

- The Characteristics of the Successful Online Student
- Course Details
- The Learning Modules Master Lesson Plan
- What to Do on the First Day of the Semester

### **II. COMPUTER READINESS**

Make sure your computer is ready for use. Contact WebCT support at [webctsupport@easternct.edu](mailto:webctsupport@easternct.edu) when encountering technical difficulties or acquiring MS Word, Excel, or PowerPoint.

### **III. SEND EMAIL TO INSTRUCTOR**

All students must send an email (using the Blackboard mail tool) confirming that you have read the information located under the "Course Content" tab in Blackboard.

### **NOTE ABOUT ATTACHMENTS**

All documents are to be sent by email (using the Blackboard mail tool) using MS Word. Refer to page 6 of this document for file naming system for submitting your work.