Math 135 – Finite Mathematics Course Syllabus

Instructor: Mr. Simmons

Course Description:

This course is for students whose programs do not require trigonometry or the Calculus sequence. The topics that will be included are linear, exponential, quadratic, polynomial and logarithmic functions and models; systems of linear equations; linear regression; mathematics of finance and financial modeling; matrices, linear programming; permutations; combinations, probability theory; probabilistic simulations; decision theory; descriptive statistics; and Markov chains.

Prerequisite(s): Math 035, 131 or PRE INST

Please note: In order to be enrolled in Math 135, you must have received a 2.0 or better in Math 035 or131 (or its equivalent).

Performance Objectives:

I. Core Course Objectives

1. Demonstrate conceptual understanding of various types of functions; sketch or identify their graphs both by hand and with the aid of a graphing calculator.
2. Explain and use the relationship between exponential and logarithmic function to sketch their graphs and apply their properties in solving applied problems.
3. Demonstrate and apply the concepts associated with the mathematics of finance: simple interest, compound interest, annuities, and sinking funds as they pertain to mortgages, loans, car payments, and savings accounts.
4. Solve application problems with mathematical modeling that involve linear systems, matrices, linear inequalities, graphical techniques, and the Simplex Method.
5. Demonstrate an understanding of the relationships between linear equations, linear inequalities, and discrete optimization problems with occur in business, life, and the social sciences.
6. Solve problems involving counting by using basic counting principles, permutations, and combinations.
7. Demonstrate an understanding of the difference between: theoretical and empirical probability, the various rules of probability, and the relationship between probability and matrices in the use of Markov Chains to study long term behavior.
8. Use appropriate technology as part of their completing the objectives above

FINAL GRADE: The final grade is calculated by adding:
(20% of the homework and Quiz average)+(60% of the exam average)
(20% of the final exam score).

Grading Information:

A 2.0 or "C" is a passing grade. Only courses with passing grades count toward graduation. Other colleges transfer in only courses with passing grades. Many financial aid sources, including most employers, require passing grades. Additionally, earning less than a 2.0 in a class results in being unable to participate in the next level of courses in a discipline which requires this course as a pre-requisite. Registering for the next course sequence without passing the pre-requisite course may result in you being dropped from that class.

GRADES WILL BE BASED APPROXIMATELY ON THE FOLLOWING SCALE:

Weighted Average	Course Grade
90 - 100	4.0
85 - 89	3.5
80 - 84	3.0
75 - 79	2.5
70 - 74	2.0
65 - 69	1.5
60 - 64	1.0
50 - 59	0.5
0 - 49	0.0

Math 135 Class Calendar Summer 2014

Schedule is tentative and subject to change to meet time constraints.

	Day	Date	Sections	Topic
1	M		1.1 1.2	Course Introduction Linear Equations and Inequalities and Applications Graphs and Lines and Applications
2	W		1.2 1.3	Graphs and Lines and Applications Linear Regression and Applications
3	M		4.1 4.2	Review: Systems of Linear Equations in Two Variables and Applications Systems of Linear Equations and Augmented Matrices
4	W		4.3	Gauss-Jordan Elimination and Applications (Show by hand.Do on calculator)
5	M		4.3 4.4	Gauss-Jordan Elimination and Applications (Show by hand.Do on calculator) Matrices: Basic Operations and Applications (Show by hand.Do on calculator)
6	W		4.5 4.6	Inverse of a Square Matrix and Applications (Show by hand.Do on calculator) Matrix Equations and Systems of Linear Equations and Applications
7	M		***Review***	***Exam #1 Review - Chapters 1 and 4***
8	W		***Exam***	***Exam #1 - Chapters 1 and 4***
9	M		5.1	Inequalities in Two Variables and Applications
10	W		5.2	Systems of Linear Inequalities in Two Variables and Applications
11	M		5.3	Linear Programming in Two Dimensions: A Geometric Approach and Applications
12	W		5.3	Linear Programming in Two Dimensions: A Geometric Approach and Applications
13	M		***Review***	***Exam #2 Review of Chapter 5***
14	W		***Exam***	***Exam #2 – Chapter 5***

	Day	Date	Sections	Topic
15	M		3.1 3.2	Simple Interest and Applications Compound and Continuous Compound Interest and Applications
16	W		3.2	Compound and Continuous Compound Interest and Applications
17	M		3.3	Future Value of an Annuity; Sinking Funds and Applications
18	W		3.3 3.4	Future Value of an Annuity; Sinking Funds and Applications Present Value of an Annuity; Amortization and Applications
19	M		3.4	Present Value of an Annuity; Amortization and Applications
20	W		***Review***	***Exam #3 Review of Chapter 3***
21	M		***Exam***	***Exam #3 – Chapter 3***
22	W		7.2	Sets and Applications
23	M		7.3	Basic Counting Principles and Applications
24	W		7.4	Permutations and Combinations and Applications
25	M		8.1	Sample Spaces, Events, and Probability and Applications
26	W		8.2	Union, Intersection, and Complement of Events; Odds and Applications
27	M		8.3	Conditional Probability, Intersection, and Independence and Applications
28	W		8.4	Bayes' Formula and Applications
29	M		***Review***	***Comprehensive Final Exam Review***
30	W		***Exam***	***Final Exam***