Linfield College Syllabus

Department: Continuing Education (DCE)

Course Number: MAT 151

Course Title: Introduction to Finite Mathematics/2

Credits: Two (2) Credits

Instructor: M. Malek Daaboul

Instructor Contact:
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Term: Winter 2008

Dates/Time/Location: Monday: 1/7/08 - 2/4/08, 6-9:30pm, PETH 106.
Friday: 1/11/08 & 1/25/08, 6-9:30pm, PETH 106.

Department Approval: _____

I. Course Description:

A major objective of this course is to give the student substantial experience in modeling and solving real-world problems. The course begins with the development of a library of elementary algebraic functions (Chapters 1 and 2), including their properties and uses. Students are expected to investigate mathematical ideas and processes graphically and numerically, as well as algebraically. This development lays a firm foundation for studying mathematics both in this course and in future endeavors. Then the course will introduce the student to the subject of Finite Mathematics which can be thought of as three units: Mathematics of Finance (Chapter 3); Linear Algebra, including matrices, linear systems, and linear programming (Chapters 4 and 5).

Chapter 3 presents a thorough treatment of simple and compound interest and present and future value of ordinary annuities. Chapter 4 covers linear systems and matrices with an emphasis on using row operations and Gauss-Jordan elimination to solve systems and to find matrix inverses. This chapter will cover applications of mathematical modeling utilizing systems and matrices. Chapter 5 provides broad and flexible coverage of linear programming. Graphing technique will be covered to solve linear programming problems.

II. Prerequisites, Helpful Knowledge and skills:
The student should have a sound knowledge of College Intermediate Algebra (MAT 115) or equivalent.

III. Learning Objectives/Outcomes:
After completing this course the student should have the knowledge of the principles, concepts and applications of finite mathematics. Many of these principles and concepts are applicable to solving problems in business and economics, life science, and social science as well as other aspects of the student's professional and personal life. Consequently, the student should expect the benefits of studying Finite Mathematics to serve him/her in those areas as well.

IV. Methodology:
The mode of delivery for learning are lectures, homework assignments, and two examinations. Class discussion of the subject matter concepts and interactive dialogue among students and the instructor is expected/encouraged to ensure clear understanding of finite mathematics concepts and its applications to problem-solving, decision making in business and economics, life science and social science areas.

V. Resources:
Text: College Mathematics for Business, Economics, Life Sciences, and Social Sciences. 11th Edition
By: Raymond Barnett, Michael Ziegler, and Karl Byleen.
ISBN: 0-13-157225-3, Prentice Hall.

VI. Evaluation & Grading:
The student's learning is evaluated continuously through class interactions, assignments, and two examinations. The course grade is based on the student performance on the two examinations and class participation.

Exam 1:	**45%**
Exam 2:	**45%**
Class Attendance/Participation	**10%**

Grading scale:

How points and percentages equate to grades

100-95	A		76-73	C
94-90	A-		72-70	C-
89-87	B+		69-67	D+
86-83	B		66-63	D
82-80	B-		62-60	D-
79-77	C+		59 or <	F

COURSE POLICIES

Incompletes A grade of Incomplete (I) is given only in emergency situations. The student must request an Incomplete in writing and must obtain my permission. All uncompleted work must be completed within the time limits I set. If you simply don't turn in the final assignments or the final exam, your course grade will be calculated with the missed portion counting for 0 points.

Academic honesty: Cheating and plagiarism will not be tolerated. Any student found to be engaging in either of these activities at any point in the course will receive a failing grade for the assignment and/or entire course and may be subject to further college sanctions.

Rules of Discussion: The classroom should be a safe haven within which individuals can discuss the widest possible range of topics without fearing retribution, ridicule, or attack. In order for this to happen, we must assume that we are all persons of intelligence and good will who may ultimately disagree, sometimes to a profound degree, with one another but whose characters are not impugned or intelligence disparaged because of this disagreement. The classroom is not a forum for proselytizing, nor it is a soapbox for diatribes by either students or faculty. For the academic endeavor to succeed, we must treat each other with civility, courtesy, and respect. All perspectives and questions are welcome, as long as they are impelled by a genuine desire for knowledge, can be articulated thoughtfully, and supported by sound reasoning.

VII. Tentative Course Outline:

Week 1

1. Elementary Functions **Chapters 1**

Week 02:

2. Elementary Functions Chapter 2
3. Mathematics of Finance Chapter 3

Week 03:

EXAM I (two hours, 100 points), Chapters 1, 2, & 3 .....45% of grade.

4. Systems of Linear Equations: Matrices Chapter 4

Week 04:

5. Linear Inequalities and Linear Programming Chapter 5

Week 05:

Review

EXAM II (two hours, 100 points), Chapters 4 & 5 .....45% of grade.

CLASS ATTENDANCE/PARTICIPATION .....10% of grade.

Biography: Malek Daaboul has a broad industrial background with a record of contribution in marketing, sales, customer support, engineering, manufacturing, information technology, and business management. Strong planning and management skills complemented with a thorough technical and analytical background. Worked at Owens Illinois in Toledo, Ohio for about nine years in different capacities: Manufacturing Engineer, Senior Operations Research Analyst, and Systems Software & Technical Supervisor. He then worked for Tektronix in Beaverton, Oregon for about Six years as Technical Services Manager before joining Sequent Inc. in Beaverton, Oregon for about four years as Computer Resources Group Manager and Later as Rightsizing Marketing Manager. Then He worked for IBM Global Services in Portland, Oregon for about four years as a Senior Business Management Consultant/Solutions Manager and for Oracle Corporation in Portland, Oregon for about two years as Consulting Services Practice Manager. Responsibilities at IBM and Oracle included business development in Oregon, marketing, and selling consulting services as well as overall management of consulting engagements and executive relationships. Malek has been teaching undergraduate and graduate (MBA) courses since 1974. Courses taught include Strategic Marketing Management, Industrial Marketing, Services Marketing, International Marketing, Management Decisions Making, Decision and Executive support Systems, Economic Decision Making, Managerial Forecasting, Operations Research, Operations Management, Information Technology and Mathematics. He has masters degrees in electrical and industrial engineering and done Ph.D. work (two years) in systems engineering.