

MAT 205 - Finite Mathematics

Course Credit: 3 semester hours

Course Description: A study of mathematics for business, management and economics. Topics include applications of functions to include exponential and logarithmic, mathematics of finance, systems of equations and matrices, and linear optimization. Since this course presumes a strong background in algebra, students should have successfully completed the prerequisite within the previous five years.

Rationale: Quantitative techniques have become widely used in recent years for business analysis and as an aid in business decision-making processes. This course will provide students with the study of certain mathematical concepts and emphasizes their application to business and finance. It is a required course for some majors and a good elective for others.

Prerequisites: MAT 111, ACT MAT subscore greater than 20, or the equivalent

Learning Objectives: Upon successful completion of this course, the student will be able to use algebraic functions to construct models for business applications, understand and analyze financial formulas including compound interest, amortization, and sinking funds, apply basic matrix operations to various mathematical models, and maximize/minimize objective functions given linear constraints.

Instructional Procedures/Techniques:

The method of instruction may include lecture, group problem solving, individual problem solving, demonstrations, computer lab assignments, quizzes and examinations.

Outline of Topics:

- Equations of lines
- Functions and their graphs
- Linear functions
- Quadratic functions
- Mathematical models
- Exponential and logarithmic functions
- Compound Interest
- Annuities
- Amortization and sinking funds
- systems of linear equations
- Matrix operations
- Graphing systems of linear inequalities
- Method of corners
- Simplex method

Materials Required: Applied Mathematics for the Managerial, Life, and Social Sciences by Soo T. Tan, 7th ed.

Attendance and Make-up tests: Any student whose absences, whether excused or unexcused,

accumulate to 12 in semester classes meeting 3 times per week or 8 in semester classes meeting 2 times per week or 4 in semester classes meeting once a week automatically receives a grade of F in the course. The responsibility for missed work rests entirely with the student.

Academic Integrity: Students are expected to do their own work. Refer to the following website: www.mc.edu/publications/policies/219.html.