



UNIVERSITY OF NICOSIA ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

University of Nicosia, Cyprus

Course Code MATH-108	Course Title Finite Mathematics with Applied Calculus	ECTS Credits 6
Department Computer Science	Semester Fall, Spring	Prerequisites MATH-105
Type of Course Required/Elective	Field Mathematics	Language of Instruction English
Level of Course 1 st Cycle	Year of Study 2 nd	Lecturer(s) Dr Marios A. Christou
Mode of Delivery Face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

The main objectives of the course are to:

1. Introduce students to linear models and provide them with the necessary knowledge to set them up using realistic data.
2. Discuss matrix operations and Gauss-Jordan elimination in detail
3. Cover linear systems of m equations with n unknowns.
4. Introduce students to nonlinear problems.
5. Discuss the derivative and its applications in detail
6. Introduce students to the integral and its applications.

Learning Outcomes:

After completion of the course students are expected to be able to:

1. Implement linear model theory to set up and solve problems related to their majors.
2. Use Gauss-Jordan elimination to solve linear systems.
3. Compute derivatives and basic integrals
4. Use derivatives and integrals to solve applied problems

Course Contents:

1. Functions and Linear Models
2. Systems of Linear Equations.
3. Matrix Algebra and Applications.
4. Nonlinear Models.
5. The Derivative and its Applications.
6. The Integral and its Applications.

Learning Activities and Teaching Methods:

Lectures, Handouts and Assignments

Assessment Methods:

Mid-Term Exam; Assignments; Final Exam; Class Participation.

Required Textbook/Reading:

Authors	Title	Publisher	Year	ISBN
Frank C. Wilson	Finite Mathematics and Applied Calculus.	Houghton Mifflin	2007	061833291

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Mizrahi / Sullivan	Mathematics: An Applied Approach, 8 th edition	Pearson-Prentice Hall		