

Global Learning Semesters

Course Syllabus

Course: MATH-270 Calculus and Analytic Geometry III

Department: Computer Science

Host Institution: University of Nicosia, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
MATH-270	Calculus and Analytic Geometry III	3
Semester Offered	Contact Hours	Prerequisites
Fall	56	MATH-191: Calculus and Analytic Geometry II
Department	Level of Course	Language of Instruction
Computer Science	Lower Division	English

Course Description

The following topics are covered: Three-dimensional space (rectangular, cylindrical and spherical coordinate systems, lines and planes, surfaces), vectors (dot product, projections, cross product), introduction to vector-valued functions, calculus of vector-valued functions, functions of two or more variables (limits and continuity, partial derivatives, differentiability and chain rules, directional derivatives and gradients, maxima and minima, Lagrange multipliers), multiple integrals, topics in vector calculus.

Instructor

Dr Katerina Nicolaou

Course Aims and Objectives

This course provides the student with the concepts of vector calculus including both theory and 3-D applications. It also provides the student with the necessary background for advanced mathematics courses.

Teaching Methods

The course is delivered through a mixture of lectures, handouts, tutorials, practical exercises and assignments.

Course Teaching Hours

56 hours (56 hours lectures/presentations/tutorials). The course is delivered during the Fall semester in 14-weeks (4 hours/week).

Evaluation and Grading

Class Participation/Homework/Quizzes: 0-30%

Mid-Term(s): 30-50%
Final Exam: 40-50%

Readings and Resources

Required Textbook

Howard A. Anton, Irl Bivens, Stephen Davis, Calculus, Seventh Edition, Wiley 2002. ISBN: 0-471-38157-8.