

Global Learning Semesters

Course Syllabus

Course: MATH-480 Real Analysis

Department: Computer Science

Host Institution: University of Nicosia, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
MATH-480	Real Analysis	3
Semester Offered	Contact Hours	Prerequisites
Fall	42	MATH-191: Calculus and Analytic Geometry II
Department	Level of Course	Language of Instruction
Computer Science	Upper Division	English

Course Description

The following topics are covered: basic topology, metric spaces, Heine-Borel theorem, Bolzano-Weierstrass theorem, continuity, uniform continuity, differentiation, the Mean Value Theorem, integration, the Fundamental Theorem of Calculus, Taylor polynomials, sequences and series, absolute and conditional convergence, sequences and series of functions.

Instructor

Dr Katerina Nicolaou

Course Aims and Objectives

The course introduces the basic concepts on real sequences and functions, with special emphasis on developing the student's skill for conjecturing and proving the results.

Teaching Methods

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

Course Teaching Hours

42 hours (42 hours lectures/presentations/tutorials). The course is delivered during the fall semester in 14-weeks (3 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

Belding and Mitchell, Foundations of Analysis, Prentice-Hall, 1991. (ISBN: 0-13-326679-6)