COURSE DETAIL

MATHEMATICAL METHODS
Country Netherlands
Host Institution Utrecht University – University College Utrecht
Program(s) University College Utrecht
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 110
UCEAP Course Suffix
UCEAP Official Title MATHEMATICAL METHODS
UCEAP Transcript Title MATHEMATIC METHODS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

Mathematics is at the same time a conceptual framework, a collection of proven theorems, and a toolbox. In this course, students encounter all three of these aspects by studying one of the central mathematical issues for applications in science and engineering. The general topic of the course is the solution of linear partial differential equations using the separation of variables, Fourier series, and Fourier transforms. The study involves both computational and rigorous mathematical aspects. While the actual computation of solutions is the main objective, students also learn the mathematical theorems establishing the validity and limitation of the different methods. Interested students are also offered the possibility to experiment with numerical approaches. In addition to the contact hours, each student is expected to work nine hours a week on the course. This time should be devoted to reviewing the material of the preceding lecture; finishing the exercises started in the preceding problem session; preparing exercises to hand in; studying the corrections of the previously returned hand-in problems and making sure everything is clear. Entry Requirements: Calculus and Linear Algebra.

Language(s) of Instruction
English

Host Institution Course Number
UCSCIMAT21

Host Institution Course Title
MATHEMATICAL METHODS

Host Institution Course Details
https://cursusplanner.uu.nl/Curriculum

Host Institution Campus
University College Utrecht

Host Institution Faculty
Science

Host Institution Degree
Host Institution Department Mathematics
Course Last Reviewed 2024-2025

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