UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Altre attività - Livellamento di Analisi Matematica (Clamses)

2425-1-F8204B028-LA

Learning objectives

The objective of the course is to provide the students with the main notions of mathematical analysis.

Contents

The course will cover the following topics (in the following order): multivariate differentiable functions and partial derivatives, non-constrained extrema of multivariate functions, Jacobian matrix and composite function rule for differentiation, constrained extrema of multivariate functions, double integrals.

Detailed program

Class 1

- Partial derivatives e differentiation of multivariate functions
- Higher-order derivatives
- Examples and exercises

Class 2 and 3

- Non-constrained extrema of multivariate functions
- Differential calculus for vector-valued functions
- Constrained extrema of 2-variate functions
- Examples and exercises

Class 4

- Integrals of 2-variate functions
- Examples and exercises

Class 5

- Exercises

Prerequisites

Familiarity with main concepts of Mathematical Analysis 1.

Teaching methods

Lecture

Assessment methods

There will be a written exam where you will be required to solve some exercises.

Attending and passing this course guarantees the acquisition of 2 credits related to "Other educational activities" for the CLAMSES master's degree: Altre attività formative- 2 CFU - Scienze Statistiche ed Economiche (unimib.it).

You can only take this exame once and the exam will be in October 2023.

Textbooks and Reading Materials

- The notes written during the class will be uploaded at the end of the class
- Bramanti, Pagani, Salsa. Analisi matematica 2. Second edition

Semester

Classes will be held from 16/09/2024 to 20/09/2024.

Teaching language

Italian

Sustainable Development Goals

QUALITY EDUCATION