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Politecnico di Torino

Academic Year 2009/10 (first time established in A.Y.1999/00)

01LQHDR, 01LQHAX, 01LQHJA

Calculus I

1st degree and Bachelor-level of the Bologna process in Mechanical Engineering - Vercelli (I FACOLTA' DI INGEGNERIA)

1st degree and Bachelor-level of the Bologna process in Civil Engineering - Vercelli (I FACOLTA' DI INGEGNERIA)

1st degree and Bachelor-level of the Bologna process in Electronic And Computer Engineering - Vercelli (III FACOLTA' DI INGEGNERIA)

Teacher	Status	SSD	Les	Ex	Lab	Years Stability
Ferrarotti Massimo	AC	MAT/03	20	30	0	0

SSD	CFU	Activities	Area context
MAT/05	5	A - Di base	Matematica, informatica e statistica

Objectives of the course

Basic concepts of mathematical analysis, focusing in particular on elementary properties of single variable functions.

Expected skills

The student has to know in an effective way main properties of single variable functions, with particular stress on limits, continuity and differentiability.

The student has also to acquire basic knowledge on complex numbers and power series.

Prerequisites

Elementary logic. Elementary functions properties. Basic analytic geometry and trigonometry.

Syllabus

Complex numbers. Functions: fundamental properties and elementary functions.

Function limits and continuity. First order derivatives. Higher order derivatives and convexity. Taylor expansion. Power series.

Laboratories and/or exercises

An exercise course will be held.

Bibliography

Book : R.A.Adams 'Calculus: a complete course' Pearson Education Canada .

Sheets with exercises will be available.

Revisions / Exam

Final written examination consisting in exercises and theoretical questions.

Programma definitivo per l'A.A.2009/10

