

Mathematics I

ETH Zurich 406-0251-AAL

Lecturer: Ana Cannas

Abstract

This course covers mathematical concepts and techniques necessary to model, solve and discuss scientific problems - notably through ordinary differential equations.

Content

- I. Differential Calculus
- II. Integral Calculus and Ordinary Differential Equations
- III. Linear Algebra
- IV. Introduction to Systems of Linear Differential Equations

Main Bibliography

For course parts I and II:

Thomas, G. B.: *Thomas' Calculus Early Transcendentals Part 1*, Pearson Addison-W.

For course parts III and IV:

Bretscher, O.: *Linear Algebra with Applications*, Pearson Prentice Hall.

Assistance (October - December and March - May):

Tuesdays and Wednesdays afternoon; please see website below for room and times.

Suggested Readings and Exercises

people.math.ethz.ch/~acannas/Teaching/mathematics_I.html

This self-study course in English is parallel to the ETH course in German 401-0251-00L.