

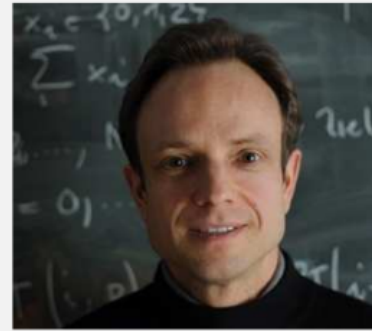
ETH Lectures 401-0663-00L Numerical Methods for Computer Science
401-2673-00L Numerical Methods for CSE

Course Video Chapter 0: Introduction

Prof. R. Hiptmair, SAM, ETH Zurich

Date: August 22, 2024

(C) Seminar für Angewandte Mathematik, ETH Zürich



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Numerical Methods for Computational Science and Engineering

Prof. R. Hiptmair, SAM, ETH Zurich

(with contributions from Prof. P. Arbenz and Dr. V. Gradinaru)

Autumn Term 2024, Version of August 20, 2024
(C) Seminar für Angewandte Mathematik, ETH Zürich

[Related to Section 0.1. & 0.2 of Lecture Document;
please read those!]

Lecture Document:

https://www.sam.math.ethz.ch/~grsam/NumMeth/NumCSE_Lecture_Document.pdf

Homework collection:

https://www.sam.math.ethz.ch/~grsam/NumMeth/HOMEWORK/NCSEFL_Problems.pdf

Code repository:

<https://gitlab.math.ethz.ch/NumCSE/NumCSE.git>

Download directory:

<https://www.sam.math.ethz.ch/~grsam/NumMeth/>

Polybox Link:

<https://polybox.ethz.ch/index.php/s/6Xx0tTpAlMpIISZ>, PW: NumCS(E)

Moodle Page:

<https://moodle-app2.let.ethz.ch/course/view.php?id=203007> (NumCSE)

Video download:

<https://people.math.ethz.ch/~grsam/NumMeth/Videos/>

Tablet notes download:

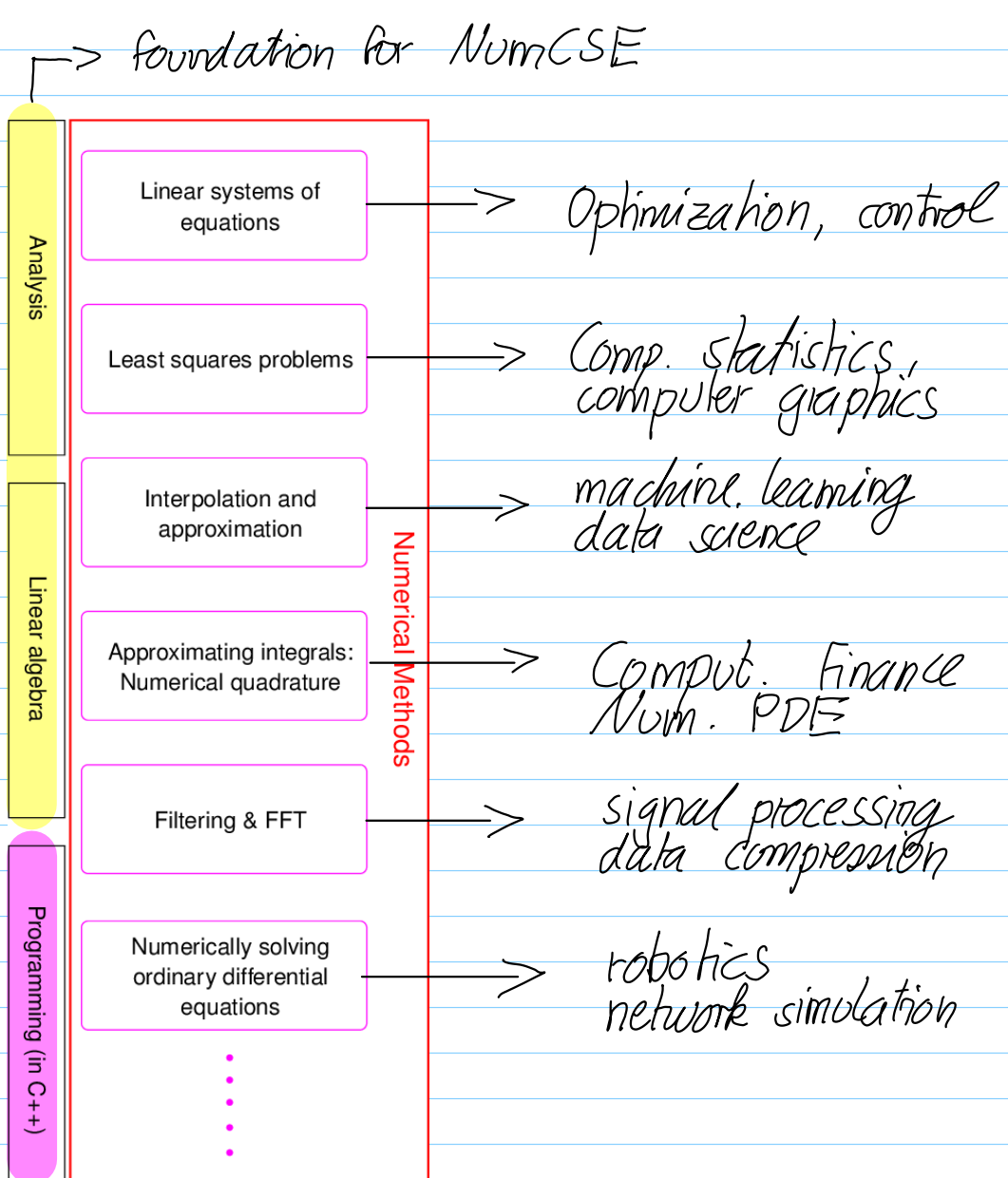
<https://people.math.ethz.ch/~grsam/NumMeth/TabletNotes/>

Edited videos: <https://polybox.ethz.ch/index.php/s/SYA7PbKmBq2whkP>, PW: numCSE20

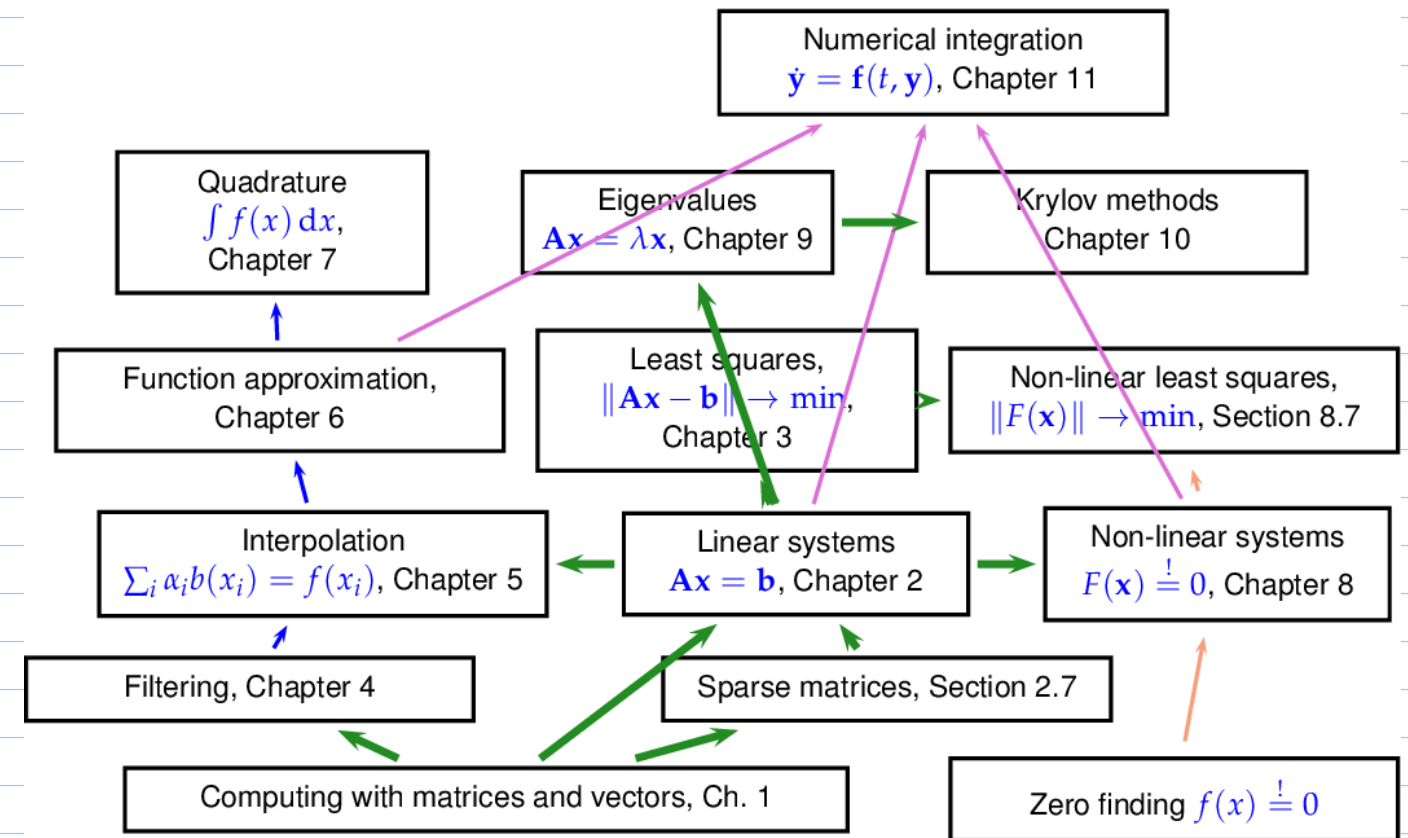
Contents

Algorithms for evaluating functions and solving
equations in the real numbers.

②



Diverse topics:



▷ A toolkit course!

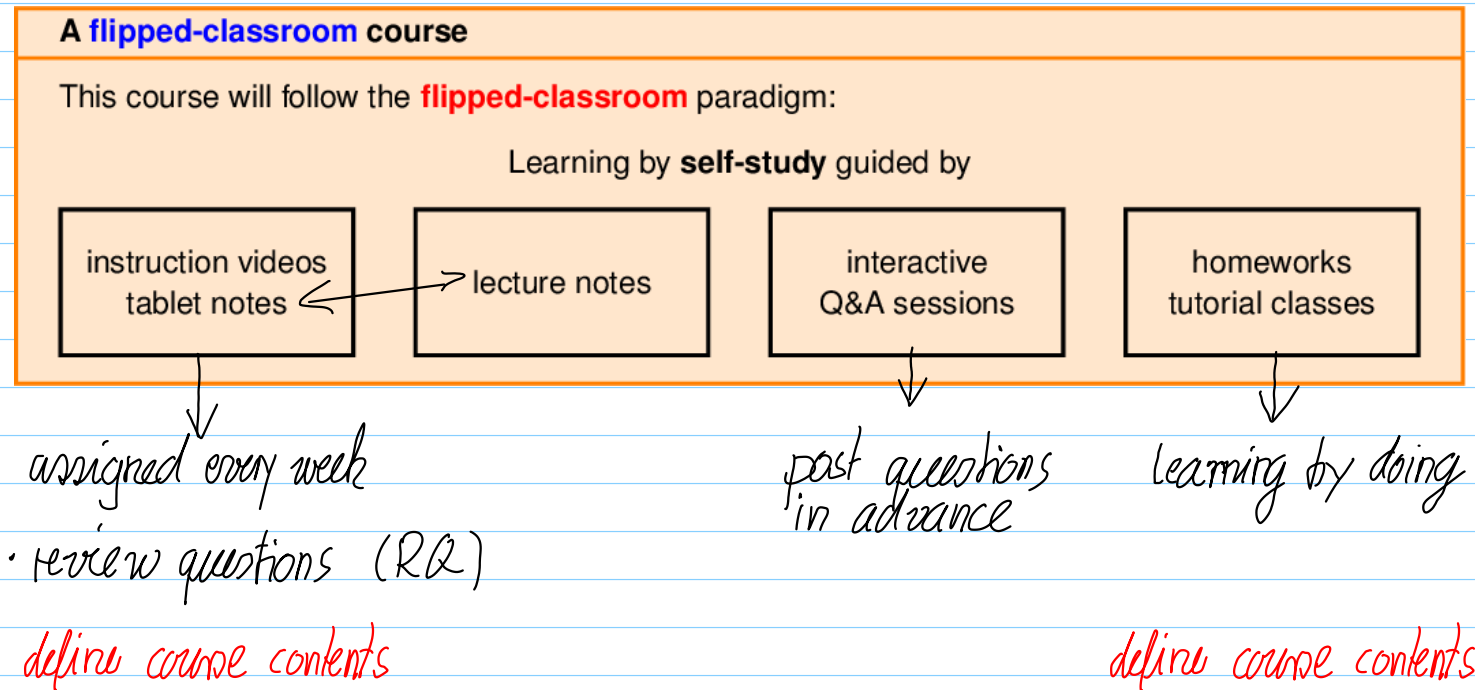


▷ Fragmented

Hardly anyone will need everything covered in this course, but *most of you will need something*.

③

Teaching Format : Flipped Classroom



Flipped classroom advice :

- Follow the course closely
- Reserve time slots
- Take breaks / tackle RQs
- Group study

$$270 \text{ hours} = \underbrace{180 \text{ hours}}_{\text{during term}} + \underbrace{90 \text{ hours}}_{\text{exam preparation}},$$

average workload $\approx$ 10 – 14 hours per week.

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