

MA5233 Computational Mathematics

Lecture 0: Introduction

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Introduction

Course outline

Big topics:

- ▶ Linear systems and eigenvalues
- ▶ Ordinary differential equations
- ▶ Partial differential equations

Small topics:

- ▶ Rounding errors
- ▶ Fast Fourier transform
- ▶ Newton's iteration for nonlinear equations
- ▶ Polynomial approximation
- ▶ Quadrature

Introduction

Assessment

- ▶ 25% weekly homework assignments
- ▶ 15% recess week project
- ▶ 60% final exam

Homework will include programming assignments in Julia.

Homework schedule

- ▶ Friday, week x : homework sheet published online
- ▶ Thursday, week $x + 1$, 11.59pm:
recommended due date (new sheet gets published)
- ▶ Thursday, week $x + 2$, 11.59pm:
final due date (reference solution gets published)

See LumiNUS for further details.