

COURSE DETAIL

NUMERICAL ANALYSIS

Country

China

Host Institution

Tsinghua University

Program(s)

Tsinghua University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mathematics

UCEAP Course Number

154

UCEAP Course Suffix**UCEAP Official Title**

NUMERICAL ANALYSIS

UCEAP Transcript Title

NUMERICAL ANALYSIS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course offers a comprehensive exploration of scientific computing, covering essential topics crucial for solving mathematical problems encountered in scientific and engineering fields. Beginning with an introduction to the fundamentals of numerical methods, including error analysis and computational complexity, students explore solving systems of linear equations using various techniques such as direct and iterative methods. The course further aims to eigenvalue computation methods and approaches for solving nonlinear equations. Interpolation techniques for approximating functions from discrete data points are also covered in detail. Through hands-on exercises and computational assignments, students develop practical skills in numerical analysis, enabling them to tackle diverse mathematical challenges in scientific computing effectively.

Language(s) of Instruction

English

Host Institution Course Number

60420254

Host Institution Course Title

NUMERICAL ANALYSIS

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

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