COURSE DETAIL

NUMERICAL ANALYSIS: NUMERICAL LINEAR ALGEBRA

Country
Sweden

Host Institution
Lund University

Program(s)
Lund University

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Mathematics

UCEAP Course Number
142

UCEAP Course Suffix

UCEAP Official Title
NUMERICAL ANALYSIS: NUMERICAL LINEAR ALGEBRA

UCEAP Transcript Title
NUM LINEAR ALGEBRA

UCEAP Quarter Units
6.00

UCEAP Semester Units
4.00

Course Description

This course provides an introduction to numerical linear algebra, including methods and principles for solving fundamental problems in linear algebra. The course covers matrix and vector norms, orthogonalization, projection, matrix factorizations, direct and iterative solvers, condition numbers, stability of a method, and complexity of an algorithm. Students learn to solve problems and are trained in implementing numerical methods in code. This course prepares students for further studies in numerical analysis, statistics, computer science, and image analysis.

Language(s) of Instruction
English

Host Institution Course Number
NUMB11

Host Institution Course Title
NUMERICAL ANALYSIS: NUMERICAL LINEAR ALGEBRA

Host Institution Campus
Lund

Host Institution Faculty
Science/Engineering

Host Institution Degree

Host Institution Department
Mathematics/Engineering

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