COURSE DETAIL

NUMERICAL LINEAR ALGEBRA
Country United Kingdom - Scotland
Host Institution University of Edinburgh
Program(s) University of Edinburgh
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 135
UCEAP Course Suffix
UCEAP Official Title NUMERICAL LINEAR ALGEBRA
UCEAP Transcript Title NUM LINEAR ALGEBRA
UCEAP Quarter Units 4.00
UCEAP Semester Units 2.70

Course Description

Linear Algebra is one of the most widely used topics in the mathematical sciences. At lower levels students are taught standard techniques for basic linear algebra tasks including the solution of linear systems, finding eigenvalues/eigenvectors, and orthogonalization of bases. However, these techniques are usually computationally too intensive to be used for the large matrices encountered in practical applications. This course introduces students to these practical issues, and presents, analyzes, and applies algorithms for these tasks which are reliable and computationally efficient. The course includes significant lab work using an advanced programming language. The course studies three main topics: the solution of linear systems of equations, the solution of least squares problems and finding the eigenvectors and/or eigenvalues of a matrix.

Language(s) of Instruction
English

Host Institution Course Number
MATH10098

Host Institution Course Title
NUMERICAL LINEAR ALGEBRA

Host Institution Course Details
http://http://www.drps.ed.ac.uk/22-23/dpt/cxmath10098.htm

Host Institution Campus
University of Edinburgh

Host Institution Faculty

Host Institution Degree

Host Institution Department
Outline School School of Mathematics

Course Last Reviewed

2022-2023

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