COURSE DETAIL

NUMERICAL ANALYSIS: COMPUTATIONAL PROGRAMMING WITH PYTHON

Country Sweden

Host Institution Lund University

Program(s) Lund University

UCEAP Course Level Upper Division

UCEAP Subject Area(s) Mathematics Computer Science

UCEAP Course Number 153

UCEAP Course Suffix

UCEAP Official Title NUMERICAL ANALYSIS: COMPUTATIONAL PROGRAMMING WITH PYTHON

UCEAP Transcript Title COMP PROGRAM PYTHON

UCEAP Quarter Units 6.00

UCEAP Semester Units

Course Description

The course gives an introduction to programming in Python and has a strong orientation towards computational mathematics. Python is a modern scripting language with ties to Scientific Computing due to powerful scientific libraries like SciPy, NumPy and Matplotlib. The course covers elementary programming concepts (arithmetic expressions, for-loops, logical expressions, if-statements, functions and classes) that are closely connected to mathematical/technical problems and examples, as well as mathematical manipulations and problem solving (e.g. setting up matrices, solving linear problems, solving differential equations, finding roots). A final lecture covers syntactical differences between Python/SciPy and MATLAB, to facilitate the transition to MATLAB, if needed.

Language(s) of Instruction

English

Host Institution Course Number NUMA01

Host Institution Course Title NUMERICAL ANALYSIS: COMPUTATIONAL PROGRAMMING WITH PYTHON

Host Institution Campus

Science

Host Institution Faculty

Host Institution Degree

Host Institution Department

Mathematics

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