COURSE DETAIL

INTRODUCTION SCIENTIFIC COMPUTING
Country Netherlands
Host Institution Utrecht University
Program(s) Utrecht University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics Computer Science
UCEAP Course Number 106
UCEAP Course Suffix
UCEAP Official Title INTRODUCTION SCIENTIFIC COMPUTING
UCEAP Transcript Title SCIENTIFC COMPUTING
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description
This course gives an introduction to Scientific Computing, using a number of case-studies from different fields. The complete Scientific Computing procedure, from mathematical modeling to visualization of the numerical solutions (simulation), through discretization, algebraic solution methods, and implementation is covered. The focus is on techniques from Numerical Differential Equations and Fourier theory. These are applied to the simulation of pattern formation in hydrological models, as well as reconstruction of images from MRI scan data. Both theoretical and practical, software-related, aspects are covered. Prerequisites include: Linear Algebra and Calculus. Knowledge of Numerical Mathematics recommended.

Language(s) of Instruction
English

Host Institution Course Number
WISB356

Host Institution Course Title
INTRODUCTION SCIENTIFIC COMPUTING

Host Institution Course Details

Host Institution Campus
Science

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mathematics

Course Last Reviewed

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