COURSE DETAIL

COMPUTATIONAL THINKING FOR SCIENTISTS
Country Singapore
Host Institution National University of Singapore
Program(s) National University of Singapore
UCEAP Course Level Lower Division
UCEAP Subject Area(s) Computer Science
UCEAP Course Number 14
UCEAP Course Suffix
UCEAP Official Title COMPUTATIONAL THINKING FOR SCIENTISTS
UCEAP Transcript Title COMPUTATIONAL THINK
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

The course introduces computational thinking as applied to problems in science, with special emphasis on their implementation with Python/Python Notebook. A selection of examples illustrate (a) fundamentals of algorithm design in computer programming (b) solution interpretation, as well as (c) analysis of the computational solutions and data visualization using state-of-the-art tools in Python. These cover different types of approaches typically used in scientific computational thinking, including deterministic, probabilistic and approximation methods. The course highlights scientific computational issues such as accuracy and convergence of numerical results.

Language(s) of Instruction
English

Host Institution Course Number
COS1000

Host Institution Course Title
COMPUTATIONAL THINKING FOR SCIENTISTS

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Physics

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