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 Course Details
https://nusmods.com/courses/COS1000/computational-thinking-for-scientists#detai...

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Physics

Course Last Reviewed
2024-2025

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