COURSE DETAIL

INTRODUCTION TO PROGRAMMING AND NUMERICAL ANALYSIS
Country Denmark
Host Institution University of Copenhagen
Program(s) University of Copenhagen
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Economics
UCEAP Course Number 107
UCEAP Course Suffix
UCEAP Official Title INTRODUCTION TO PROGRAMMING AND NUMERICAL ANALYSIS
UCEAP Transcript Title PROGR&NUM ANALYSIS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course provides an introduction to programming in order to numerically solve simple economic models and perform basic data analysis. The first part of the course introduces programming using the general-purpose Python language. It teaches how to write conditional statements, loops, functions, and classes; print results; and produce static and interactive plots. It provides an opportunity to solve simple numerical optimization problems; draw random numbers; run simulations; test, debug, and document code; and use online communities proactively when writing code. The second part of the course instructs how to import data from offline and online sources, structure it, produce central descriptive statistics, and estimate simple statistical models on the data. The third part of the course introduces the concept of a numerical algorithm to write simple searching, sorting, and optimization algorithms, solve linear algebra problems, solve non-linear equations numerically and symbolically, find fixed points, and solve complicated numerical optimization problems relying on function approximation. The course provides hands-on experience with applying the above techniques to solve well-known microeconomic and macroeconomic problems through both a small data analysis project and a larger model analysis project based on a well-known economic model.

Language(s) of Instruction
English

Host Institution Course Number
AØKA08232U

Host Institution Course Title
INTRODUCTION TO PROGRAMMING AND NUMERICAL ANALYSIS

Host Institution Course Details
https://kurser.ku.dk/course/a%c3%98ka08232u/2021-2022

Host Institution Campus

Host Institution Faculty

Faculty of Social Sciences

Host Institution Degree
Bachelor/Master

Host Institution Department
Department of Economics

Course Last Reviewed
2021-2022

Print