

# COURSE DETAIL

## INTRODUCTION TO COMPLEX SYSTEMS

**Country**

Netherlands

**Host Institution**

Utrecht University

**Program(s)**

Utrecht University

**UCEAP Course Level**

Lower Division

**UCEAP Subject Area(s)**

Computer Science

**UCEAP Course Number**

11

**UCEAP Course Suffix****UCEAP Official Title**

INTRODUCTION TO COMPLEX SYSTEMS

**UCEAP Transcript Title**

INTRO:COMPLEXSYSTEM

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

Complex Systems consist of many interacting constituents and their collective behavior, such as the brain, cities, climate, ecosystems, economy, and traffic. While these systems seem vastly different on first sight they share many features. To familiarize students with all properties of complex systems, this course consists of three pillars: network theory, evolution in spatially extended ecosystems, and collaboration. The course uses computer models to study conflict of interest. This course uses computer programs coded in Python, although working knowledge in Python is not a prerequisite. Each of the three parts concludes with an exam and hand-in exercises. The course concludes with a report written over a small project carried out in a group.

### Language(s) of Instruction

English

### Host Institution Course Number

BETA-B1CS

### Host Institution Course Title

INTRODUCTION TO COMPLEX SYSTEMS

### Host Institution Campus

Undergraduate School Bètawetenschappen

### Host Institution Faculty

Faculty of Science

### Host Institution Degree

### Host Institution Department

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