

COURSE DETAIL

SYSTEMS BIOLOGY

Country

Netherlands

Host Institution

Maastricht University - Center for European Studies

Program(s)

Biological and Life Sciences, Maastricht

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mathematics Biological Sciences

UCEAP Course Number

117

UCEAP Course Suffix**UCEAP Official Title**

SYSTEMS BIOLOGY

UCEAP Transcript Title

SYSTEMS BIOLOGY

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

Systems biology is a new approach to biological and biomedical research based on a more holistic perspective and relies on the use of mathematical and computational models, with complementing experiments in the lab. This course provides an overview of systems biology and its building blocks, experimental approaches, and a variety of mathematical models and tools. Students are introduced to the mathematical basis of dynamic systems, networks, and constraint-based modeling. Examples used in the course include cancer metabolism (molecular modeling), neuroscience (tissue-level modeling), and diabetes (whole-body level modeling). Practical skills are trained by carrying out computer experiments.

Language(s) of Instruction

English

Host Institution Course Number

INT3007

Host Institution Course Title

SYSTEMS BIOLOGY

Host Institution Campus

Maastricht University

Host Institution Faculty

Maastricht Science Program

Host Institution Degree

Host Institution Department

[Print](#)