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 Course Details
https://www.maastrichtuniversity.nl/education/course-finder?search=INT3007+

Host Institution Campus
Maastricht University

Host Institution Faculty
Maastricht Science Program

Host Institution Degree

Host Institution Department

Course Last Reviewed
2022-2023

Print