COURSE DETAIL

BIOLOGICAL PHYSICS
Country Netherlands
Host Institution Utrecht University
Program(s) Utrecht University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Physics
UCEAP Course Number 102
UCEAP Course Suffix
UCEAP Official Title BIOLOGICAL PHYSICS
UCEAP Transcript Title BIOLOGICAL PHYSICS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course examines the fundamental laws of physics to biological problems. This concept-context course is structured around two weekly plenary lectures and two tutorials during which relevant biological case studies and examples are used to introduce the fundamental physical concepts essential in the study of biological phenomena. For instance, c lassical mechanics is applied to investigate oscillations important for the perception of sound, continuum mechanics to describe the flow of developing tissue, and statistical physics to investigate random motion of molecules. Although the language of physics is mathematics, the emphasis of the course is on physics, not mathematics. Students are introduced to the fundamental tools for quantitative descriptions, study different branches of physics, and learn to apply them to biological problems. Throughout the course, students engage with the material in a diverse set of assignments and computational exercises. This learning-by-doing strategy teaches students how to use considerations based on fundamental physical principles to develop a quantitative intuition about biological systems. Individual e-assessments enable students and teachers to monitor knowledge and understanding as the course progresses.

Language(s) of Instruction
English

Host Institution Course Number
MBLS-106

Host Institution Course Title
BIOLOGICAL PHYSICS

Host Institution Course Details
https://osiris-student.uu.nl/#/onderwijscatalogus/extern/cursus?cursuscode=MBLS...

Host Institution Campus

Host Institution Faculty

Host Institution Degree
Host Institution Department
Course Last Reviewed 2022-2023

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