COURSE DETAIL

ADVANCES IN BIOMEDICAL SCIENCES
Country Netherlands
Host Institution Maastricht University – University College Maastricht
Program(s) Biological and Life Sciences, Maastricht,University College Maastricht
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Biological Sciences
UCEAP Course Number 119
UCEAP Course Suffix
UCEAP Official Title ADVANCES IN BIOMEDICAL SCIENCES
UCEAP Transcript Title ADVANCES BIOMED SCI
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course introduces students to recent breakthroughs in the physical and biological sciences that are now being explored for biomedical applications. The topics come directly from the research expertise of the lecturers, all of whom are young principal investigators in the new research institutes at the University of Maastricht: MERLN and M4I. The course covers a broad range of topics, including nanomaterials for regenerative medicine, supramolecular biomaterials, big data and computer learning, electron microscopy, imaging and diagnostic mass spectrometry, and structural biology of tuberculosis. Each of these fields has the potential to address some of society's greatest challenges, including the health and vitality of our aging population, and this is discussed in both the lectures and the tasks. Students gain firsthand experience of scientific research taking place at the University of Maastricht and have the opportunity to visit research laboratories as part of a demonstration of some of the topics discussed in the lectures. Students experience unrestricted access to a firsthand account of a new generation of research lines with a new generation of labs. In addition to a final content-based oral exam, there are two papers for evaluation. For their midterm, students choose a recent discovery reported in the press and investigate the scientific claims and integrity of the reporting. In the final paper, the student acts as the reporter, and writes an opinion piece on a topic of research in either MERLN or M4I; this report is informed by an interview with one of the lecturers. This course is designed for top students with a concentration in the sciences who wish to advance their learning to the next level, beyond textbooks. Students benefit from close contact with young scientists from diverse fields and are expected to read scientific literature to enhance their learning. Skills learned within this course are highly applicable for more advanced degrees (Master's, PhD) within the sciences, and within the competitive job market.

Language(s) of Instruction
English

Host Institution Course Number
SCI3050

Host Institution Course Title
ADVANCES IN BIOMEDICAL SCIENCES

Host Institution Course Details
https://curriculum.maastrichtuniversity.nl/education/contract/public-health-med…

Host Institution Campus
Maastricht University

Host Institution Faculty
University College Maastricht

Host Institution Degree

Host Institution Department
Sciences

Course Last Reviewed
2023-2024

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