

COURSE DETAIL

MOLECULAR AND CELL BIOLOGY II

Country

Netherlands

Host Institution

Utrecht University - University College Utrecht

Program(s)

University College Utrecht

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Biological Sciences

UCEAP Course Number

101

UCEAP Course Suffix**UCEAP Official Title**

MOLECULAR AND CELL BIOLOGY II

UCEAP Transcript Title

MOLEC&CELL BIOL II

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

Understanding the molecular biology of cells is an active area of research that is fundamental to almost all biological sciences. This is also true for a growing number of practical applications in agriculture, biotechnology, and medicine. This course focuses on the molecular biology of cells as a unifying theme, examining specialized topics that epitomize general principles. The course is divided into four self-contained parts. Part one provides an introduction to basic genetic mechanisms. Part two focuses on the methods used in modern molecular biology. Part three is devoted to the internal organization of the cell and part four focuses on cells in their social context, i.e. in the development and the immune system. Additionally, the class highlights some of the most dramatic advances in recent years that originate from the understanding of the molecular and cellular basis of human diseases. Students write a paper and give an oral presentation on a molecular cell biological topic such as the principles and possibilities of gene therapy, muscular dystrophy and the cytoskeleton, the role of mitochondria in aging, the role of apoptosis in cancer treatment, biological clocks, cloning, etc. Students are asked to prepare a news item, in which they link a report from the public domain (newspapers, documentaries) to the subjects treated in the course. Students must have completed an introductory level Molecular Cell Biology course as a prerequisite for this course.

Language(s) of Instruction

English

Host Institution Course Number

UCSCIBIO21

Host Institution Course Title

MOLECULAR CELL BIOLOGY II

Host Institution Campus

Science

Host Institution Faculty

Host Institution Degree

Host Institution Department

Biology

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