

COURSE DETAIL

MOLECULAR BIOLOGY SKILLS

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)

Biological Sciences

UCEAP Course Number

113

UCEAP Course Suffix

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UCEAP Official Title

MOLECULAR BIOLOGY SKILLS

UCEAP Transcript Title

MOLECULAR BIO SKILL

UCEAP Quarter Units

2.00

UCEAP Semester Units

Course Description

Through this skills course students obtain detailed knowledge about the techniques that can be applied to address molecular processes in cell signaling and control of gene expression. Topics include: the activation of intracellular signaling pathways; analysis of cellular responses; analysis of gene expression; analysis of protein activation; in silico analysis of signaling pathways; and the culmination of the above elements in an essay and assignment to indicate active understanding of the above processes. The skills days are designed to provide a perspective of how cutting edge molecular biological techniques are applied to tackle major research questions in modern biomedical research. Through these lessons students are provided with: the contextual setting which animal models are commonly used in Molecular Life Sciences; techniques to apply DNA cloning, transfection and imaging procedures using prokaryotic and eukaryotic cells; how to perform quantitative analyses on (non)coding RNA species and proteins from cell culture and organ biopsies; procedures for applying molecular biological principles to a pre-assigned task and present the findings to a larger audience. Students interpret scientific results and to write a scientific proposal on a Molecular Biological approach to relevant human disorders and defend it in a larger audience. Prerequisites for this course are Cell Biology and Genetics.

Language(s) of Instruction

English

Host Institution Course Number

PRA3003

Host Institution Course Title

MOLECULAR BIOLOGY SKILLS

Host Institution Campus

Maastricht University

Host Institution Faculty

Host Institution Degree

Host Institution Department

Maastricht Science Program

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