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
L

UCEAP Official Title
MOLECULAR BIOLOGY SKILLS

UCEAP Transcript Title
MOLECULAR BIO SKILL

UCEAP Quarter Units
2.00

UCEAP Semester Units

1.30

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
SKILLS: MOLECULAR BIOLOGY

Host Institution Course Details
https://www.maastrichtuniversity.nl/meta/347849/molecular-biology?print=1

Host Institution Campus
Maastricht University

Host Institution Faculty
Host Institution Degree
Host Institution Department Maastricht Science Program
Course Last Reviewed 2018-2019

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