

Course Descriptions Bachelor 2022-2023

Course Title Biotechnology

Course Code BENC2005

ECTS Credits 5,0

Assessment Whole/Half Grades

Period	Start	End	Mon	Tue	Wed	Thu	Fri
1	5-9-2022	21-10-2022		X		X	L

Level Introductory/Intermediate

Coordinator Luisa Bortesi For more information: luisa.bortesi@maastrichtuniversity.nl

Language of instruction English

Goals

- * Describe how biological systems are built and the basic principles of molecular biology
- * Explain the relationship between genotype, phenotype and environment
- * Illustrate the latest techniques and approaches used in biotechnology
- * Give examples of commercially successful biotechnological processes in different fields of application
- * Present about a scientific topic to an audience of peers

Description PLEASE NOTE THAT THE INFORMATION ABOUT THE TEACHING AND ASSESSMENT METHOD(S) USED IN THIS COURSE IS WITH RESERVATION. A RE-EMERGENCE OF THE CORONAVIRUS AND NEW COUNTERMEASURES BY THE DUTCH GOVERNMENT MIGHT FORCE COORDINATORS TO CHANGE THE TEACHING AND ASSESSMENT METHODS USED. THE MOST UP-TO-DATE INFORMATION ABOUT THE TEACHING/ASSESSMENT METHOD(S) WILL BE AVAILABLE IN THE COURSE SYLLABUS.

This course aims at introducing students to the field Biotechnology and to make them aware of how biotechnological applications affect our daily lives. Starting from the definition of life, students understand the basic characteristics and functioning of biological systems. They then learn how the genetic information of an organism relates to its phenotype, and how modification of this information –using recombinant DNA technology or genome editing tools- allows us to harness biological processes. By being confronted with cutting-edge examples of applications in different fields, ranging from agriculture to medicine to materials science, students understand the potential of biotechnology in driving innovation. They also reflect on some of the current and future ethical questions and dilemmas dealing with biotechnology and society.

Literature There is no specific textbook associated with this course. It is based on individual lectures by the coordinator and guest lecturers. The annotated lectures slides, students notes and the tutorial group discussions are the most important study materials. Searching for academic publications (e.g. via Pubmed at <https://www.ncbi.nlm.nih.gov/pubmed/>) will be required to obtain all the necessary information for the tutorial tasks and to prepare the presentation. Specific literature for specific assignments will be provided by the coordinator during the course. Useful information can be found in: Campbell, Biology. 11th edition (international edition) 2018; ISBN-10: 1292170433 or ISBN-13: 9781292170435

Prerequisites

Keywords

Teaching methods PBL / Presentation / Lecture / Groupwork / Skills

Assessment methods Attendance / Written Exam / Computer test / Presentation

Evaluation in previous academic year For the complete evaluation of this course please click <http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM>

This course belongs to the following programme / specialisation

Bachelor Business Engineering	Year 2 Elective Course(s)
SBE Exchange Bachelor	Bachelor Exchange Courses
SBE Exchange Master	Bachelor Exchange Courses