BIO-491

New tools & research strategies in personalized health

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Cursus	Sem.	Type
Biomedical technologies minor	E	Opt.
Biotechnology minor	E	Opt.
Life Sciences Engineering	MA2, MA4	Opt.
Minor in life sciences engineering	E	Opt.

Language of teaching	English
Credits	4
Session	Summer
Semester	Spring
Exam	During the semester
Workload	120h
Weeks	14
Hours	**4 weekly**
Courses	2 weekly
Project	2 weekly
Number of positions	

Summary

This course introduces the concept of personalized health, exploring its foundational technologies as well as the technological, legal, and ethical challenges the field currently faces. Strategies and approaches used to address these challenges will also be discussed.

Learning Outcomes

By the end of the course, the student must be able to:

- Distinguish the tenents of personalized health
- Discuss new technologies within the context of personalized health
- Identify and explain the core principles of personalized health

Transversal skills

- Write a scientific or technical report.
- Make an oral presentation.
- Take feedback (critique) and respond in an appropriate manner.
- Give feedback (critique) in an appropriate fashion.
- Collect data.

Teaching methods

Ex-cathedra lectures, discussions, coaching, preparation of a project, oral defense of the project.

Expected student activities

- Attend all lectures
- Actively participate in class discussions
- Collaborate effectively within a small group
- Contribute to the preparation and development of a group project
- Present and defend the project in an oral examination

Assessment methods

Written Component:
An individual mid-term assessment in the form of a multiple-choice questionnaire (MCQ), based on lecture content.
Oral Component:
Group presentation of the project, evaluated on the following criteria:

- Quality and clarity of the slides
- Clarity and depth of the oral presentation
- Ability to respond to questions
- Evidence of balanced contribution among group members in the preparation and delivery of the presentation

Project Component:
Assessed based on:

- Relevance to the field of personalized health
- Clear explanation of the scientific and/or clinical background
- Coherent research strategy
- Ability to use feedback from the teaching team
- Integration of a multidisciplinary perspective

Supervision

Office hours	No
Assistant.e.s	Yes
Others	Coach and contact persons for project

Resources

Moodle Link

- https://go.epfl.ch/BIO-491