Course: Project Cell Biology & Oncology — credits: 10

Course code	BOVH25RPRJCELL
Name	Project Cell Biology & Oncology
Study year	2025-2026
ECTS credits	10
Language	English
Coordinator	O.Y. Wouters

Modes of delivery	Lecture Practical / Training Tutorial
Assessments	Ethics, Data Security and Scientific Integrity - Other assessment Project Oncology - Other assessment

Learning outcomes

- You can apply cell biological techniques individually as well as part of a team, for the purpose of diagnostic and scientific research on cancer within a biomedical laboratory setting.
- You will implement an experimental design and research strategy, independently and as part of a team, in which you will be considering the specific safety, environmental, and hygiene aspects.
- You can analyze, interpret, and evaluate self-obtained research results, which you will report and present through work meetings, presentations, and a scientific report.
- You can manage data according to the FAIR data principles and ensure that the data is properly disclosed.
- You have processed the data according to the following ethical, integral, and scientific principles: honesty, care, transparency, independence and responsibility.
- You demonstrate that you can actively participate in career-enhancing activities, such as visiting and evaluating poster presentations, attending a job application training including the creation of a CV and cover letter, and participating in a Meet and Greet with professionals. You reflect on these experiences and can clearly explain how these developments contribute to your professional growth and preparation for the job market during a mentoring session.

Content

During this project assignment, students develop independence and creativity by planning and executing a research project in pairs and groups. The projects are related to oncology and, in addition to conventional 2D cell culture, sometimes also include 3D cell culture techniques and trans-differentiation techniques. They go through the entire process, from literature research and protocol selection to experimental execution and data analysis. They present their progress and results in work meetings, where they also receive feedback from lecturers and fellow students. The project, spread over 9 practical days, requires thorough preparation in the first weeks, followed by experimental execution and reporting.
In addition to their development of practical research skills, this project also places a strong emphasis on the principles of good data management and scientific integrity. The students learn to manage their data according to the FAIR principles (Findable, Accessible, Interoperable, Reusable), which is essential for the transparency and reproducibility of scientific research.
Furthermore, students are expected to adhere to the ethical standards and values that apply within science. This includes honesty (not falsifying or fabricating data), diligence (handling data and methods accurately and critically), transparency (openly sharing data and methods so that research is verifiable), independence (avoiding conflicts of interest and conducting research objectively), and responsibility (taking responsibility for the integrity of the research and the ethical implications of the work).
By integrating these principles into the project, students are not only trained in research methods, but also in the essential values of scientific integrity.
The possibilities of generative AI will also be explored, and students will learn to work with generative AI in a transparent and responsible manner.
Finally, you participate in career-enhancing activities that help with your professional development. You visit and evaluate poster presentations by fellow students. Additionally, you attend a job application training where you work on your CV and cover letter. During a Meet and Greet, you get to know professionals from the field. By reflecting on these experiences and discussing them during a mentoring session, you gain insight into your own growth and preparation for the job market.

Included in programme(s)

Major Biology and Medical Research

School(s)

Institute for Life Science & Technology

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