BIO-447

Stem cells and organoids

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Cursus	Sem.	Type
Life Sciences Engineering	MA1, MA3	Obl.
Minor in life sciences engineering	H	Opt.

Language of teaching	English
Credits	3
Session	Winter
Semester	Fall
Exam	Written
Workload	90h
Weeks	14
Hours	**3 weekly**
Lecture	2 weekly
Exercises	1 weekly
Number of positions	

Summary

This course introduces the fundamentals of stem cell biology, with a particular focus on the role of stem cells during development, tissue homeostasis/regeneration and disease, and the generation of organoids from stem cells

Content

Embryonic stem cells, adult stem cells including hemaotopoietic, skin, intestine, neuronal and cancer stem cells. Concepts of nuclear reprogramming, cloning, and molecular basis of self-renewal.Stem cells and therapy, generation and use of organoids.

Teaching methods

Lectures

Assessment methods

Written exam

Resources

Moodle Link

- https://go.epfl.ch/BIO-447