BIO-447

Stem cell biology and technology

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Cursus	Sem.	Type
Life Sciences Engineering	MA1, MA3	Opt.

Language of teaching	English
Credits	3
Session	Winter
Semester	Fall
Exam	Written
Workload	90h
Weeks	14
Hours	**3 weekly**
Courses	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.

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, emerging concept in stem cell bioengineering.

Teaching methods

Lectures and exercices

Assessment methods

Written exam