DEPARTMENT OF CLINICAL SCIENCE, INTERVENTION AND TECHNOLOGY

H9F6065, Medical Developmental Biology, 2 credits (hec)

Medicinsk utvecklingsbiologi, 2 högskolepoäng

Third-cycle level / Forskarnivå

Approval

This syllabus was approved by the The Committee for Doctoral Education on 2025-02-22, and is valid from autumn semester 2025.

Responsible department

Department of Clinical Science, Intervention and Technology, Faculty of Medicine

Prerequisite courses, or equivalent

No prerequisite courses, or equivalent, demanded for this course.

Purpose & Intended learning outcomes

Purpose

The main purpose of the course is to enable a better understanding of issues, including ethical ones, in developmental and stem cell biology with direct implications for human development, disease and therapies. Furthermore, the course will expose the students to international collaboration and provide an opportunity to build an international network.

Intended learning outcomes

After the course, the doctoral student is expected to be able to critically reflect on and discuss:

- basic biology, definitions, and therapeutic application of embryonic and fetal stem cells,

- the most fundamental genetic and epigenetic/transcriptional regulatory mechanisms guiding the development of the essential organs,

- the basic principles of regenerative medicine and perinatal physiology.

Course content

Medical developmental biology including molecular mechanisms, cell biology, genetics and

epigenetics of development in general and more specifically in a wide variety of organs, with a particular bias towards human development and disease.

Forms of teaching and learning

The course is based on lectures from morning to lunch by prominent lecturers. There are practical workshops and clinical visits in the afternoons. The course is considered demanding and requires full-time presence and attention.

Language of instruction

The course is given in English

Grading scale

Pass (G) /Fail (U)

Compulsory components & forms of assessment

Compulsory components

Presence is required at all scheduled activities. Necessary absence will be regulated with the course leader and given as extra tasks.

Forms of assessment

Every student needs to make either an individual presentation or to present their projects by poster presentation. Every student will in addition write a report that is handed in for evaluation at the end of the course. All students are also required to peer-review another student's examination report. The individual performance of each student will be evaluated separately.

Course literature

Recommended literature:
Pediatrics and Perinatology. The Scientific Basis. Ed. P Gluckman & MA Heyman
Two review or research articles per lecture (c:a 20 lectures, 40 articles) to be listed by the lecturers.

Other information

Replacing syllabus H9F3081(1,5 hp).