

COURSE DETAIL

DEVELOPMENTAL BIOLOGY

Country

Netherlands

Host Institution

Utrecht University

Program(s)

Utrecht University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Biological Sciences

UCEAP Course Number

130

UCEAP Course Suffix**UCEAP Official Title**

DEVELOPMENTAL BIOLOGY

UCEAP Transcript Title

DEVELOPMENT BIOL

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course addresses the normal development as well as disorders of development of the animal organism, and pays specific attention to the genetic, hormonal, and environmental variables that influence the proliferation and differentiation of cells. Topics covered include: conception, cleavages, gastrulation, neurulation, formation of axes, Hox-genes, cell differentiation, sex determination and differentiation, reproduction, organogenesis, evolution and development, recombinant/knock-out/transgene animals, teratology. The course also covers the following: embryonic development of the model systems used in developmental biology: mouse, zebra fish, Xenopus, Drosophila, and C. elegans; how molecular and genetic information of DNA is translated into the developmental plan of an embryo, cell differentiation, formation of organs, growth of an embryo to a mature individual, and the relationship between developmental biology and evolution; how disturbances of these processes can lead to a deregulation in cell growth or cell differentiation and to impairment of development. Textbook: PRINCIPLES OF DEVELOPMENT by L Wolpert. Prerequisites for the course include: basic knowledge of transcription, translation, cell-cell-interaction, signal transduction, cell cycle control, embryo genesis.

Language(s) of Instruction

English

Host Institution Course Number

BMW20705

Host Institution Course Title

DEVELOPMENTAL BIOLOGY

Host Institution Campus

Utrecht University

Host Institution Faculty

Medicine

Host Institution Degree

Host Institution Department

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