

COURSE DETAIL

HUMAN GENETICS

Country

Denmark

Host Institution

University of Copenhagen

Program(s)

University of Copenhagen

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Biological Sciences

UCEAP Course Number

153

UCEAP Course Suffix**UCEAP Official Title**

HUMAN GENETICS

UCEAP Transcript Title

HUMAN GENETICS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course gives students a thorough understanding of pioneering and contemporary research in human genetics with emphasis on human genetic diseases. The course is organized into the following topics: approaches to the analysis of human monogenic disease; polygenic diseases; quantitative genetics; low penetrance alleles; genetic variation in humans; patterns of inheritance in humans; cytogenetics; clinical genetics and genetic counselling; genome stability, fragile sites, translocations, chromosome fusions; strategies for constructing gene editing, zinc finger nucleases (ZFNs), transcription; activator-Like Effector Nucleases (TALENs), the CRISPR/Cas system, and engineered meganuclease re-engineered homing endonucleases; strategies for performing transient gene knockdown, shRNA, RNAi, and morpholino oligonucleotides; animal models and transgenesis; gene therapy; design of research projects and writing of research proposals; cancer genomics; genome-wide association studies; personalized medicine based on genetic profiling.

Language(s) of Instruction

English

Host Institution Course Number

NBIK15014U

Host Institution Course Title

HUMAN GENETICS

Host Institution Course Details

Host Institution Campus

Science

Host Institution Faculty

Host Institution Degree

Host Institution Department

Biology

Course Last Reviewed

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