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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