COURSE DETAIL

GENETICS
Country Netherlands
Host Institution Maastricht University - Center for European Studies
Program(s) Biological and Life Sciences, Maastricht
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Biological Sciences
UCEAP Course Number 112
UCEAP Course Suffix
UCEAP Official Title GENETICS
UCEAP Transcript Title GENETICS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

The course discusses the principles of genetics with application to the study of biological function at the level of molecules, cells, and multicellular organisms, including humans. The topics include the structure and function of genes; chromosomes and genomes; biological variation resulting from replication and recombination, mutation and selection; DNA repair and the genetic basis of disease inheritance. The following topics are covered as well: the chemical structure of DNA and the molecular mechanisms of DNA replication; the basic principles how information stored in genes is converted to a (cellular) phenotype in the form of RNA and protein; the concepts of genome structure, comparative genomics, and functional genomics; the molecular basis of single gene inheritance (Mendel's first law), sex-linked single gene inheritance and, human pedigrees; the concepts of Darwin's theory of Natural Selection, molecular evolution, and the origin of new genes and species. The prerequisite course is Cell Biology.

Language(s) of Instruction
English

Host Institution Course Number
BIO2007

Host Institution Course Title
GENETICS

Host Institution Course Details
https://curriculum.maastrichtuniversity.nl/meta/485664/genetics

Host Institution Campus
Maastricht University

Host Institution Faculty
Maastricht Science Program

Host Institution Degree

Host Institution Department

Course Last Reviewed
2024-2025

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