COURSE DETAIL

HUMAN GENETICS
Country Italy
Host Institution University of Bologna
Program(s) University of Bologna
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Biological Sciences
UCEAP Course Number 169
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 is part of the Laurea Magistrale Program and is intended for advanced level students. Enrolment is by consent of the instructor. This course offers an introduction to genetics. The course discusses topics including: the basis of heredity: Mendel's laws, monohybrid crosses (dominance and segregation), dihybrid crosses (independent assortment), and predicting the outcome of genetic crosses; structure and replication of DNA: DNA double helix; gene expression, the central dogma: from DNA to RNA, from RNA to protein, transcription, translation, and the genetic code; the eukaryotic cell cycle, cell division, mitosis, and meiosis and the transmission of chromosomes; chromosome theory of inheritance; sex determination and sex-linked inheritance, Dosage compensation in mammals; organization of the human genome: genome projects and sequencing; genetic variability, mutation and polymorphisms, types of genetic variants, point mutations and their consequences, structural genomic variation, copy number variation, and genotype/phenotype relationship; and genetic analysis of human traits: basic Mendelian pedigree patterns, complications to the basic pedigree patterns, and extensions and modifications of basic mendelian principles.

Language(s) of Instruction
English

Host Institution Course Number
65644

Host Institution Course Title
HUMAN GENETICS

Host Institution Course Details
https://www.unibo.it/en/teaching/course-unit-catalogue/course-unit/2022/423906

Host Institution Campus
BOLOGNA

Host Institution Faculty

Host Institution Degree
LM IN STATISTICAL SCIENCES

Host Institution Department
Statistical Sciences

Course Last Reviewed
2022-2023

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