

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 Campus

BOLOGNA

Host Institution Faculty

Host Institution Degree

LM IN STATISTICAL SCIENCES

Host Institution Department

Statistical Sciences

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