

Degree	Type	Year	Semester
2500890 Genetics	OB	3	1

## Contact

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## Use of languages

Principal working language: catalan (cat)  
Some groups entirely in English: No  
Some groups entirely in Catalan: Yes  
Some groups entirely in Spanish: No

## Prerequisites

To have some basic knowledge on genetics.

## Objectives and Contextualisation

Human Genetics studies the phenomena of heredity and variation both normal and pathological on human species. It is a fundamental and applied subject that integrates all levels of organization, from molecular genetics to evolution genetics.

The main objectives of this course are: understanding the rules and the mechanisms of inheritance, the knowledge of genome variability (normal and pathological) in individuals and human populations and the factors responsible for it, the ability to perform tests for genetic diseases, knowing their treatment and ethical aspects that are derived from treatment, and finally the application of knowledge obtained for development of research projects.

## Content

Chapter 1. Organization of the human genome

Chapter 2. Chromosomal alterations

Chapter 3. Mutations and polymorphisms .

Chapter 4. Mapping and identifying genes related to diseases

Chapter 5. Epigenetics

Chapter 6. Developmental genetics

Chapter 7. Cancer Genetics

Chapter 8. Pharmacogenetics

Chapter 9. Nutritional Genomics

Chapter 10. Prenatal Diagnosis

Chapter 11. Forensic Genetics

Chapter 12. Tests for genetic diseases and genetic counseling

Chapter 13. Treatment of genetic diseases

Chapter 14. Ethical issues in human genetics