



## Course Syllabus

<b>Course Code</b>	<b>Course Title</b>	<b>ECTS Credits</b>
BIOD-110	Human Biology	10
<b>Prerequisites</b>	<b>Department</b>	<b>Semester</b>
None	Social Sciences	Spring
<b>Type of Course</b>	<b>Field</b>	<b>Language of Instruction</b>
Compulsory	Psychology	English
<b>Level of Course</b>	<b>Lecturer(s)</b>	<b>Year of Study</b>
1 <sup>st</sup> Cycle	Maria Christofidou	2 <sup>nd</sup>
<b>Mode of Delivery</b>	<b>Work Placement</b>	<b>Corequisites</b>
Distance Learning	None	None

### Course Objectives:

The purpose of the course is to give students an understanding of the basic principles of biology and to raise fundamental questions that will strengthen their interest in the science of life. Students get basic knowledge in the biology of the cell and in the field of human genetics. Topics include the basics of cell structure and functions, as well as the basics of heredity and reproduction.

### Learning Outcomes:

After completion of the course students are expected to be able to:

- Describe the chemical structure of basic biological macromolecules.
- Comprehend what constitutes a living cell and the fundamental differences between prokaryotes and eukaryotes
- Explain the structure and function of several types of eukaryotic cells
- Explain the structure and function of the organelles of a eukaryotic cell
- Understand the ways substances are moved in and out of the cell
- Understand cellular communication and connection
- Understand the basic principles of cell metabolism (cellular respiration)
- Explain the basic processes of the cell cycle, cell division and differentiation
- Describe the basis of Mendelian genetics and the chromosomal basis of inheritance.
- Understand the basic anatomy and physiology of the nervous system
- Know the structure and function of DNA and be able to describe the basic steps involved in gene transcription and translation.

**Course Content:**

- Section A – Introduction to the Chemistry of Biology and Biological Compounds
  1. Chemical Elements
  2. Biological Compounds
- Section B – The Eukaryotic Cell
  3. Introduction to the Cell
  4. Eukaryotic Cell Structure and Functions
  5. Eukaryotic Cell Communication
  6. Cell Specialization Workshop
- Section C – Cell Metabolism
  7. Energy and Enzymes
  8. Cellular Respiration
  9. The Cell Cycle and Mitosis
- Section D – Genetics
  10. Meiosis
  11. Mendelian Genetics and the Chromosomal Theory of Inheritance
  12. Genetics
  13. DNA

**Learning Activities and Teaching Methods:**

Lectures, Workshops

**Assessment Methods:**

Assignments, Midterm, Final Exam

**Required Textbooks / Readings:**

Title	Author(s)	Publisher	Year	ISBN
Campbell Biology	Reece, J.B., et al.	Pearson, Benjamin, Cummings	2011	ISBN: 978-0-321-73975-9

**Recommended Textbooks / Reading:**

<b>Title</b>	<b>Author(s)</b>	<b>Publisher</b>	<b>Year</b>	<b>ISBN</b>
Essential Cell Biology	Alberts, B.B., et al.	Garland Science	2009	ISBN: 978-0-8153-4130-7
Discover Biology	Cain, M.L., et al.	W.W. Norton & Company	2009	-
Biology: Concepts and Connections	Campbell, N.A., & Ervin, N.E.	Benjamin/Cummings	2013	-