**COURSE OUTLINE**

1. **GENERAL**

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| **SCHOOL** | HEALTH SCIENCES | | | | |
| **ACADEMIC UNIT** | BIOLOGICAL APPLICATIONS AND TECHNOLOGY | | | | |
| **LEVEL OF STUDIES** | undergraduate | | | | |
| **COURSE CODE** | ΒΕY501 | **SEMESTER** | | 4th | |
| **COURSE TITLE** | BIOCHEMISTRY II | | | | |
| **INDEPENDENT TEACHING ACTIVITIES** | | | **WEEKLY TEACHING HOURS** | | **CREDITS** |
|  | | | 6 | | 6 |
| **COURSE TYPE** | General background | | | | |
| **PREREQUISITE COURSES:** | - | | | | |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | Greek | | | | |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | yes | | | | |
| **COURSE WEBSITE (URL)** |  | | | | |

1. **LEARNING OUTCOMES**

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| **Learning outcomes** |
| Course aims   * Presentation of additional metabolic pathways * Introduction to pathways of amino acid, nucleotide, lipid and steroid biosynthesis * Analysis of interaction of metabolic pathways to regulate basic functions of live organisms   By the end of the course, the students will:   * Understand how the organisms fulfill their needs for biomolecules * Know how pathways of amino acid, nucleotide, lipid and steroid biosynthesis are regulated * Understand the overall coordination of metabolic pathways and homeostatic mechanisms * Get acquainted with basic laboratory biochemical methods on nucleic acids * Know how to handle and analyze nucleic acids |
| **General Competences** |
| * Collection of scientific information and data using appropriate technologies * Decision making, working independently * Team working |

1. **SYLLABUS**

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| * Pentose phosphate pathway * Glucogen metabolism * Fatty acid metabolism * Amino acid catabolism * Amino acid biosynthesis * Nucleotide biosynthesis * Lipid and steroid hormone biosynthesis * Synopsis of metabolism |

1. **TEACHING AND LEARNING METHODS – EVALUATION**

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| --- | --- |
| **DELIVERY** | Face-to face in the class |
| **USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES** | Ecourse platform  Power point presentations  Communication with students via email & Ecourse |
| **TEACHING METHODS** | |  |  | | --- | --- | | ***Activity*** | ***Semester workload (h)*** | | Lectures | 39 | | Laboratory courses | 18 | | Interactive teaching | 3 | | Individual study | 100 | | Course total | ***160*** | |
| **STUDENT PERFORMANCE EVALUATION** | **Theory (80 %)**  Final exam including open-ended and closed-ended questions  **Laboratory courses (20%)**  Reports for each laboratory session (50%)  Laboratory exams (50%) |

1. **SUGGESTED BIBLIOGRAPHY**

1. Berg JM, Tymoczko JL, Gatto GJ, Stryer L. Bιοχημεία, Πανεπιστημιακές εκδόσεις Κρήτης (9η αμερικάνικη έκδοση)

2. Nelson DL, Cox MM. Lehninger's Βασικές Αρχές Βιοχημείας, Εκδόσεις Πασχαλίδης (7η αγγλική έκδοση)