**COURSE OUTLINE**

1. **GENERAL**

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| **SCHOOL** | School of Health Sciences | | | | |
| **ACADEMIC UNIT** | Faculty of Medicine | | | | |
| **LEVEL OF STUDIES** |  | | | | |
| **COURSE CODE** | IAE614 | **SEMESTER** | | **6th** | |
| **COURSE TITLE** | NUTRITION AND EXERCISE PHYSIOLOGY | | | | |
| **INDEPENDENT TEACHING ACTIVITIES** *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits* | | | **WEEKLY TEACHING HOURS** | | **CREDITS** |
| LECTURES | | | 2 | | 2 |
|  | | |  | |  |
|  | | |  | |  |
| *Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (4).* | | |  | |  |
| **COURSE TYPE**  *general background,  special background, specialised general knowledge, skills development* | SPECIFIC BACKGROUND (SP) | | | | |
| **PREREQUISITE COURSES:** | NO | | | | |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | GREEK | | | | |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | NO | | | | |
| **COURSE WEBSITE (URL)** | https://ecourse.uoi.gr/enrol/index.php?id=1860 | | | | |

1. **LEARNING OUTCOMES**

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| **Learning outcomes** | |
| *The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.*  *Consult Appendix A*   * *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area* * *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B* * *Guidelines for writing Learning Outcomes* | |
| **Aims**: Nutrition, Exercise and Health. Energy transfer at rest and during exercise. The physiological support systems and exercise: neuromuscular, cardiovascular and pulmonary systems. Ergometry  **Learning outcomes**: To understand the physiological effects of exercise on the body systems  Lectures (hours): 26  Semester: 6th  ECTS: 2 | |
| **General Competences** | |
| *Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?* | |
| *Search for, analysis and synthesis of data and information, with the use of the necessary technology*  *Adapting to new situations*  *Decision-making*  *Working independently*  *Team work*  *Working in an international environment*  *Working in an interdisciplinary environment*  *Production of new research ideas* | *Project planning and management*  *Respect for difference and multiculturalism*  *Respect for the natural environment*  *Showing social, professional and ethical responsibility and sensitivity to gender issues*  *Criticism and self-criticism*  *Production of free, creative and inductive thinking*  *……*  *Others…*  *…….* |
| Working independently  Team work  Working in an interdisciplinary environment  Production of new research ideas | |

1. **SYLLABUS**

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| 1.Energy release from food, energy production, energy transfer at rest and during exercise.  2. Regulation of body temperature, thermoregulation.  3. The motor unit, comparison of skeletal, cardiac and smooth muscle, muscle fiber types, chemical and mechanical events during muscle action and relaxation.  4. Muscle contraction, lactic acid production. Extraction of oxygen, maximum cardiac output and VO2max, cardiovascular adjustments, resting and exercise cardiac output.  5. Ergometry. Adaptations to exercise training. Work load and fatigue.  6. Macronutrients: energy fuel and building blocks for tissue synthesis. Micronutrients: facilitators of energy transfer and tissue synthesis. Optimal nutrition for exercise and sports.  7. The role of nutrition in the prevention and treatment of disease. Nutritional requirements throughout the lifecycle.  Books:  SCOTT K. POWERS, EDWARD T. HOWLEY, JOHN QUINDRY. Εκδότης/Διαθέτης: ΠΑΡΙΣΙΑΝΟΥ ΜΟΝΟΠΡΟΣΩΠΗ ΑΝΩΝΥΜΗ ΕΚΔΟΤΙΚΗ. Έκδοση: 1/2023. ISBN: 9789605836832. Κωδικός Εύδοξου: 122093868 |

1. **TEACHING and LEARNING METHODS - EVALUATION**

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| **DELIVERY** *Face-to-face, Distance learning, etc.* | Face to face  Class presentation – face to face |
| **USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY** *Use of ICT in teaching, laboratory education, communication with students* | Use of ICT in teaching |
| **TEACHING METHODS**  *The manner and methods of teaching are described in detail.*  *Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.*  *The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS* | |  |  | | --- | --- | | ***Activity*** | ***Workload of each students group (two groups per semester)*** | | Lectures | 26 | | Project | 12 | | Essay writing | 8 | | Study hours | 14 | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | | Sum | ***60*** | |
| **STUDENT PERFORMANCE EVALUATION**  *Description of the evaluation procedure*  *Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other*  *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.* | Multiple choice questionnaires  Written work / Class presentation |

1. **ATTACHED BIBLIOGRAPHY**

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| *Teaching - study material:*  SCOTT K. POWERS, EDWARD T. HOWLEY, JOHN QUINDRY. Εκδότης/Διαθέτης: ΠΑΡΙΣΙΑΝΟΥ ΜΟΝΟΠΡΟΣΩΠΗ ΑΝΩΝΥΜΗ ΕΚΔΟΤΙΚΗ. Έκδοση: 1/2023. ISBN: 9789605836832. Κωδικός Εύδοξου: 122093868 |