**COURSE OUTLINE**

1. **GENERAL**

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| **SCHOOL** | School of Health Sciences | | | | |
| **ACADEMIC UNIT** | Faculty of Medicine | | | | |
| **LEVEL OF STUDIES** |  | | | | |
| **COURSE CODE** | ΙΑΥ202 | **SEMESTER** | | **3rd** | |
| **COURSE TITLE** | Physiology II | | | | |
| **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 and laboratory exercises | | |  | | 7.5 |
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| *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* | General background | | | | |
| **PREREQUISITE COURSES:** |  | | | | |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | Greek | | | | |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | Yes | | | | |
| **COURSE WEBSITE (URL)** | https://ecourse.uoi.gr/enrol/index.php?id=3088 | | | | |

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* | |
| **Objective:** Structure and functions of the respiratory, urogenital and circulatory system.  **Teaching / aims:** Lectures and laboratory projects by small groups of students. Laboratory practice with simulation software.  The combination of the above methods ensures the understanding of the respiratory, urogenital and circulatory systems functions and pathophysiology by the students.  Learning outcomes for Physiology II: Upon successful completion of the course, students will: a) Know the function of the respiratory system (lung volumes and capacities, exchange of gases, how to interpret spirometry and oxygen-haemoglobin dissociation results), b) use anatomically terminology to identify the major organs of the urinary system and describe its function (filtration, selective reabsorption and secretion) and c) describe the organs of the circulatory system, the role of the pulmonary and systemic circulation, as well as the role of the cellular content of blood.  Training hours per student: 104  Semester: 3rd  ECTS: 7.5 | |
| **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 international environment  Working in an interdisciplinary environment  Production of new research ideas | |

1. **SYLLABUS**

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| Respiratory system: Anatomy. Breathing and lung mechanics. Lung capacity. Gas exchange. Inspiration and expiration. Control of respiration. Stimulation of breathing (chemoreceptors). Disorders of acid/base balance. Respiratory failure.  Urogenital system: Anatomy. Renal blood flow. Glomerular filtration. Proximal and distal tubule functions. Renal mechanisms for dilution and concentration of the urine. Regulation of sodium, potassium, chlorine balance. Urine formation. Acid/base balance regulation by the kidneys. Renal failure.  Circulatory system: Functional Anatomy and Basic Principles of Circulatory System. Cardiac Function - Cardiac Cycle. Pressure-Volume Diagram Frank-Starling Law. Conductive System of the Heart. Electrocardiogram Basics. Blood Pressure. Circulation and Regulation of blood in the periphery. Neural and chemical mechanisms for blood pressure regulation. Special circulation networks  Books   1. Τίτλος: Guyton & Hall Ιατρική Φυσιολογία   Συγγραφείς: John E. Hall  Διαθέτης (Εκδότης): ΠΑΡΙΣΙΑΝΟΥ ΜΟΝΟΠΡΟΣΩΠΗ ΑΝΩΝΥΜΗ ΕΚΔΟΤΙΚΗ  Έκδοση: 14η αγγλική/2023  ISBN: 9789605837167  Κωδικός Εύδοξου: 112700887   1. Τίτλος: Ιατρική Φυσιολογία-Κυτταρική και Μοριακή Προσέγγιση (2η έκδ.)   Συγγραφείς: Boron F. Walter, Boulpaep L. Emile  Εκδότης/Διαθέτης: Broken Hill Publishers Ltd  Έκδοση: 2/2019  ISBN: 9789925563579  Κωδικός Εύδοξου : 77107185   1. Τίτλος: Vander's Φυσιολογία του Ανθρώπου   Συγγραφείς: Eric P. Widmaier, Hershel Raff, Kevin T. Strang  Εκδότης/Διαθέτης: UTOPIA ΕΚΔΟΣΕΙΣ Μ. ΕΠΕ.  Έκδοση: 16η αμερικανική-3η ελληνική/2022  ISBN: 9786185173807  Κωδικός Εύδοξου: 112699188 |

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

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| **DELIVERY** *Face-to-face, Distance learning, etc.* |  |
| **USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY** *Use of ICT in teaching, laboratory education, communication with students* | Use of ICT, laboratory education |
| **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 | 52 | | Laboratory practice | 40 | | Project | 30 | | Essay writing | 16 | | Study hours | 74 | |  |  | |  |  | |  |  | |  |  | |  |  | | Total | ***212*** | |
| **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.* | Greek  Methods of evaluation  Written examination, critical thinking and short-answer questions  Project and essay writing  Examinations after each laboratory course (accounts for 10% of the final grade) |

1. **ATTACHED BIBLIOGRAPHY**

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| *Teaching - study material:*   1. Τίτλος: Guyton & Hall Ιατρική Φυσιολογία   Συγγραφείς: John E. Hall  Διαθέτης (Εκδότης): ΠΑΡΙΣΙΑΝΟΥ ΜΟΝΟΠΡΟΣΩΠΗ ΑΝΩΝΥΜΗ ΕΚΔΟΤΙΚΗ  Έκδοση: 14η αγγλική/2023  ISBN: 9789605837167  Κωδικός Εύδοξου: 112700887   1. Τίτλος: Ιατρική Φυσιολογία-Κυτταρική και Μοριακή Προσέγγιση (2η έκδ.)   Συγγραφείς: Boron F. Walter, Boulpaep L. Emile  Εκδότης/Διαθέτης: Broken Hill Publishers Ltd  Έκδοση: 2/2019  ISBN: 9789925563579  Κωδικός Εύδοξου : 77107185   1. Τίτλος: Vander's Φυσιολογία του Ανθρώπου   Συγγραφείς: Eric P. Widmaier, Hershel Raff, Kevin T. Strang  Εκδότης/Διαθέτης: UTOPIA ΕΚΔΟΣΕΙΣ Μ. ΕΠΕ.  Έκδοση: 16η αμερικανική-3η ελληνική/2022  ISBN: 9786185173807  Κωδικός Εύδοξου: 112699188 |