

COURSE OUTLINE

(1) GENERAL

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| SCHOOL | NATURAL SCIENCES | | |
| ACADEMIC UNIT | BIOLOGY | | |
| LEVEL OF STUDIES | UNDERGRADUATE | | |
| COURSE CODE | BIO_ZE02 | SEMESTER | 5/7 |
| COURSE TITLE | Special Course in Human Physiology | | |
| INDEPENDENT TEACHING ACTIVITIES <i>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</i> | | WEEKLY TEACHING HOURS | CREDITS |
| Lectures | | 3 (lec) | 3 |
| | | | |
| <i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i> | | | |
| COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i> | Field of Science Skills Development | | |
| PREREQUISITE COURSES: | There are no prerequisites. However, a good knowledge of Animal Physiology I & II and Biochemistry is recommended . | | |
| LANGUAGE OF INSTRUCTION and EXAMINATIONS: | Greek | | |
| IS THE COURSE OFFERED TO ERASMUS STUDENTS | NO | | |
| COURSE WEBSITE (URL) | https://eclass.upatras.gr/courses/BIO229 | | |

(2) LEARNING OUTCOMES

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| <p>Learning outcomes</p> <p><i>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.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i> | | | | | | | | |
| <p>At the end of this course the student should be able to :</p> <ul style="list-style-type: none"> - acquired knowledge on subjects related to Human Physiology . - Familiarised themselves with medical terms and the use of novel high-throughput techniques for studying the pathophysiology of diseases. | | | | | | | | |
| <p>General Competences</p> <p><i>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?</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td style="width: 50%; border: none;"><i>Project planning and management</i></td> </tr> <tr> <td style="border: none;"><i>Adapting to new situations</i></td> <td style="border: none;"><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td style="border: none;"><i>Decision-making</i></td> <td style="border: none;"><i>Respect for the natural environment</i></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;"><i>Showing social, professional and ethical responsibility and</i></td> </tr> </table> | <i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> | <i>Project planning and management</i> | <i>Adapting to new situations</i> | <i>Respect for difference and multiculturalism</i> | <i>Decision-making</i> | <i>Respect for the natural environment</i> | | <i>Showing social, professional and ethical responsibility and</i> |
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| <i>Adapting to new situations</i> | <i>Respect for difference and multiculturalism</i> | | | | | | | |
| <i>Decision-making</i> | <i>Respect for the natural environment</i> | | | | | | | |
| | <i>Showing social, professional and ethical responsibility and</i> | | | | | | | |

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| <i>Working independently</i> | <i>sensitivity to gender issues</i> |
| <i>Team work</i> | <i>Criticism and self-criticism</i> |
| <i>Working in an international environment</i> | <i>Production of free, creative and inductive thinking</i> |
| <i>Working in an interdisciplinary environment</i> | |
| <i>Production of new research ideas</i> | <i>Others...</i> |
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At the end of the course, students should have accomplished the following abilities:

- 1. to comprehend subjects related to special courses in Human pathophysiology (tissue/organ pathophysiology, bone physiology, reproductive System of man and woman, artificial organs, nutrition and metabolism regulation of food intake and its related diseases etc. Subjects related to novel, high-throughput techniques and their application to human diseases/diagnosis (e.g. microarrays, proteomics).
- 2. to retrieve related scientific information on Human Physiology.
- 3. to write essays on Human Physiology
- 4. team-working
- 5. to prepare power-point presentations.

(3) SYLLABUS

Special aspects of human physiology such as:

- Tissue/organ pathophysiology (e.g. skin immunology, atherosclerosis, connective tissue pathologies, blood diseases etc)
- Bone physiology, Reproductive System of man and woman
- Artificial organs
- Nutrition and metabolism
- Regulation of food intake and its related diseases etc.
- Subjects related to novel, high-throughput techniques and their application to human diseases/diagnosis (e.g. microarrays, proteomics).

(4) TEACHING and LEARNING METHODS - EVALUATION

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| DELIVERY <i>Face-to-face, Distance learning, etc.</i> | Face to face | |
| USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i> | Lectures (using power-point presentations). | |
| TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>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.</i> <i>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</i> | Activity | Semester workload |
| | Lectures (13 weeks x 3 hours per week) | 39 |
| | Home study | 36 |
| | Course total | 75 |
| STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>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</i> | Written exams at the end of semester (60% and oral presentations 40 % or 100 % without assay and oral presentation). Final Course Grade: Theory Grade x 0.6 + x 0.4 assay and oral presentation or only Theory Grade | |

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| <p>presentation, laboratory work, clinical examination of patient, art interpretation, other</p> <p>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</p> | <p>Grading scale: 1-10. Passing grade ≥ 5</p> <p>Grading ≤ 3 correspond to ECTS grade F.</p> <p>Grade 4 corresponds to ECTS grade FX.</p> <p>Passing grades correspond to ECTS grades as follows: 5=E, 6=D, 7=C, 8=B, ≥ 9=A.</p> |
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(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

- Related academic journals:

1. Boron W.F. & Boulpaep E.L. «*Medical Physiology- cellular & molecular approaches*», Part I, II, & III, Medical Publisher Pasxalidis, Athens 2006 (in greek, selected issues).
2. Vander, A., Sherman, J., Luciano, D. & Tsakopoulos, M. «*Human Physiology*». Parts I & II, Medical Publishing Pasxalidis, Athens 2001 (in greek, selected issues).
3. Kumar V., Cotran R.S. & Robbins S.L. «*Basic Pathology-Anatomy*». Scientific Publishing Gr. Parisianos, Athens 2000 (in greek, selected issues).
4. Berne R.M. & Levy M.N.: «*Principles of Physiology*». Parts I & II. Crete University Publishing, Crete 1999 (in greek, selected issues).
5. Guyton A, «*Human Physiology*», 3rd Edition. Medical Publishing Litsas, Athens 1984 (in greek, selected issues).
6. Karlson P., Gerok W. & Grob W.: «*Clinical Pathological Biochemistry*», Medical Publishing Litsas, Athens 1980 (in greek, selected issues).