**COURSE OUTLINE**

1. **GENERAL**

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| **SCHOOL** | School of Health Sciences |
| **ACADEMIC UNIT** | Faculty of Medicine |
| **LEVEL OF STUDIES** | Undergraduate |
| **COURSE CODE** | **IAY602** | **SEMESTER** | 5th (fifth) |
| **COURSE TITLE** | GENERAL PATHOLOGY |
| **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 | 5 | 6 |
| LABORATORY EXERCISES | 9 |  |
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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* | Scientific area |
| **PREREQUISITE COURSES:** | - |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | Greek |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | YES on demand (in English) |
| **COURSE WEBSITE (URL)** | <https://ecourse.uoi.gr/enrol/index.php?id=253> |

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*
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| Pathology is the medical specialty that constitutes the bridge between basic biomedical sciences and clinical medicine. The area of study includes the diagnosis of diseases, the understanding of disease pathogenesis and the prediction of biological behavior and response to treatment. The Pathologist, in order to achieve these goals, examines both macroscopically and microscopically, as well as with molecular methods cells, tissues and organs, from patients with a wide range of diseases: degenerative, inflammatory, and neoplastic. The methods used are microscopy (usually light microscope, fluorescent microscope and rarely electron microscope), histochemical stains, immunohistochemical stains, *in situ* hybridization, molecular analysis of DNA, RNA and proteins, as well as immunofluorescence. The body of Pathology consists of General and Systems Pathology. General Pathology discusses the fundamental principles of diseases and their pathogenetic mechanisms and correlates these data with morphological and functional alterations of cells, tissues and organs.The aim of the Course of General Pathology is the understanding by the students of the pathogenetic mechanisms of diseases, from the molecular level to the level of cells, tissues and organs and their influence on functions and subsequent clinical manifestations.At the end of the educational process the students:* Understand the pathogenetic mechanisms of disease
* Correlate changes from the molecular level to the macroscopic and microscopic image
* Understand the fundamental role of the Pathology Laboratory in the therapeutic approach of the patient
* Understand and use properly medical terms
* Demonstrate scientific/medical behavior
* Acquire ability for search and internalization of evidence-based knowledge
* Acquire cognitive skills essential for the practice of medicine, such as detailed observation and analysis, as well as ability for clinicοpathologic correlations
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| **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…**…….* |
| * Understanding the complex clinicopathologic parameters in disease
* Inquiring and evaluating all relevant information, with the use of advanced technology and form a diagnostic hypothesis
* Decision making
* Ability for active participation as a member of the diagnostic team
* Ability for team work, but also ability for autonomous work
* Understanding of the pathogenetic mechanisms and ability to recognize scientific fields with research opportunities
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1. **SYLLABUS**

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| * **Introductory notes in General and Systems Pathology**
* **Cellular Adaptation and Cellular Damage**
* **Intracellular and Extracellular Accumulations**
* **Hemodynamic Disorders**
* **Inflammation, Tissue Repair and Regeneration**
* **Principles of Innate and Adaptive Immunity**
* **Hypersensitivity Reactions**
* **Systemic Autoimmune Diseases**
* **Disorders of Cellular Growth/Differentiation**
* **Basic Principles of Neoplasia**
* **Molecular Basis of Cancer**
* **Circulation** (Diseases of Arteries/Veins/ Lymphatic System, Vascular Tumors, Diseases of the Heart and the Pericardium)
* **Respiratory System** (Diseases of the Nose, Pharynx, Larynx, Lung and Pleura)
* **Breast** (Inflammatory Lesions, Fibrocystic Changes, Other Benign/Hyperplastic Diseases, Breast Neoplasms)
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1. **TEACHING and LEARNING METHODS - EVALUATION**

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| **DELIVERY***Face-to-face, Distance learning, etc.* | Face-to-face teaching during lectures and meetings with students.In the laboratory, where students are trained in groups (about 30/group) in the use of light microscope and recognition of specific pathological entities, including neoplasms. Students are also trained in recognition of macroscopic changes, with examination of patient specimens, in the Pathology Laboratory located in the University Hospital.In parallel, the relevant entities are discussed theoretically, with emphasis in diagnostic approach. In addition, optionally, students who show specific interest can follow the everyday pathology work in the University Hospital Pathology laboratory, from the handling of the specimen to the final Pathology diagnosis. |
| **USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY** *Use of ICT in teaching, laboratory education, communication with students* | Power point presentations.Use of computers and optical microscopes for laboratory exercises.Support of the learning process through the electronic platform e-course. |
| **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* |

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| ***Activity*** | ***Workload of each students group (two groups per semester)*** |
| Lectures | 65 |
| Laboratory exercises with the use of histological slides and optical microscope | 30 |
| Educational activities with the use of macroscopic specimens in the University Hospital Pathology Laboratory  | 10 |
| Independent study | 45 |
| **TOTAL****(25 hours per unit)** | ***150 per student*** |

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| **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.* | Language of evaluation: GreekΙ. Written examination at the end of the semester with open-ended questions (90% of grade) ΙΙ. Oral examinations in the Laboratory material (10% of grade) which includes:- Evaluation of knowledge on macroscopic manifestation of diseases, with discussion on power point of relevant characteristic images- Evaluation of knowledge on microscopic manifestation of disease with the use of histologic glass slides and an optical microscope  |

1. **ATTACHED BIBLIOGRAPHY**

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| *Teaching - study material:* |

Originally written in Greek language or translated in Greek

* Power point presentations during lectures are available to students
* Γενική και Ειδική Παθολογική Ανατομική (Μέλη ΔΕΠ Εργαστηρίου Παθολογικής Ανατομικής).

Εκδοτικός οίκος ΘΕΟΔΩΡΙΔΗ.

 ISBN **978-960-8026-02-5.** κωδικός **12309301**

* Γενική και συστηματική παθολογική ανατομική (P. Bass – S. Burroughs – N. Carr – C. Way).

 Επιστημονικές Εκδόσεις ΠΑΡΙΣΙΑΝΟΥ Α.Ε.

 ISBN **978-960-394-634-2.** κωδικός **41734.**

* Εικονογραφημένη Παθολογική Ανατομική (Robin Reid, Fiona Roberts, Elaine Macduff).

 Επιστημονικές Εκδόσεις ΠΑΡΙΣΙΑΝΟΥ Α.Ε.

ISBN **978-960-394-965-7**.