**COURSE OUTLINE**

1. **GENERAL**

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| **SCHOOL** | School of Health Sciences |
| **ACADEMIC UNIT** | Faculty of Medicine |
| **LEVEL OF STUDIES** | Undergraduate |
| **COURSE CODE** | **ΙΑΥ914** | **SEMESTER** | **10th**  |
| **COURSE TITLE** | **INTENSIVE CARE MEDICINE** |
| **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** |
| Academic lectures | **2** h/week x 13 weeks = 26 h | **2** |
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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* | Specialised general knowledge and skills development |
| **PREREQUISITE COURSES:** | Pathophysiology, Nosology |
| **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=435>  |

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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| This course is an introductory course in basics of Intensive Care Medicine. * In academic lectures importance will be given in understanding ICU admission criteria, diagnosis and management of patients with acute respiratory failure, shock, severe infection, traumatic brain injury, coma, stroke, severe trauma, and the management of patients with brain death, together with ethical dilemmas that arise during treatment of patients with irreversible diseases.
* Upon successful completion of academic lectures, students will be able to:
* Identify critically ill patient as well as ICU admission criteria.
* Identify the patient with acute respiratory failure, proceed to proper clinical and laboratory testing required for diagnosis of the underlying cause and perform a differential diagnosis procedure. Also he/she will be able to recommend an initial treatment for acute hypercapnic and hypoxic respiratory failure.
* Know indications for intubation, the general principles of mechanical ventilation and basic indications for non-invasive mechanical ventilation.
* Identify the patient with shock, evaluate hemodynamic monitoring findings, proceed to proper clinical and laboratory tests helping differential diagnosis, and recommend initial therapeutic approaches according to shock’s type.
* Recognize sepsis, classify sepsis severity and apply international guidelines for initial management of septic patients.
* Manage the patient with severe traumatic brain injury, both in Emergency Department and in ICU, recognize indications of intubation, know basics of drug-incused sedation and understand the general principles of diagnosis and medical and surgical interventions for treating patients with brain oedema and focal brain lesions.
* Know the ICU admission criteria for patients with severe stroke, evaluate their prognosis, understand the general therapeutic interventions applied for reducing cerebral oedema together with basic principles of intracranial pressure monitoring; also understand the indications for specific therapeutic interventions such as thrombolysis (ischemic stroke) or surgical interventions such as decompressive craniectomy.
* Evaluate the trauma patient after his ICU admission, proceed to proper clinical and laboratory test necessary for diagnosis of chest-, great vessels-, abdominal-, or traumatic brain-injuries, recognize and treat disseminated intravascular coagulation.
* Assess patient's nutritional status, know indications for enteral or parenteral feeding, calculate patient’s daily caloric needs, decide proper route (enteral vs. parenteral feeding), choose proper feeding regimen and identify potential relevant complications.
* Recognize brain death, and deal with ethical and legal dilemmas arising during organ donation process.
* Recognize the ethical and legal issues arising during the end of life of a critically ill patient, understand accepted international guidelines for treatment withdrawal in the setting of a critically ill patient.
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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…**…….* |
| * Search for, analysis and synthesis of data and information, with the use of the necessary technology
* Decision-making
* Working independently
* Team work
* Production of free, creative and inductive thinking
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1. **SYLLABUS**

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| * ICU admission criteria, ICU organization
* ICU scoring systems
* Enteral and parenteral nutrition, basic principles
* Basic principles of monitoring of respiratory function
* Hemodynamic monitoring
* Acute respiratory failure (ARF)
* Fundamentals of mechanical ventilation
* Non-invasive mechanical ventilation (NIMV)
* Shock
* Sepsis, septic shock, current treatment guidelines
* Traumatic brain injury
* Management of the trauma patient in the ICU
* Serious haemorrhage and ischemic strokes
* Brain death - Organ donation
* Ethical dilemmas and problems about the patient with irreversible disease
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1. **TEACHING and LEARNING METHODS - EVALUATION**

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| **DELIVERY***Face-to-face, Distance learning, etc.* | Academic lectures in Intensive Care Medicine, Intensive Care Unit, University Hospital of Ioannina |
| **USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY** *Use of ICT in teaching, laboratory education, communication with students* | The learning process is supported through the electronic platform http://ecourse.uoi.gr |
| **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***  |
| Academic lectures | **26** |
| Independent study | **40** |
| **Course total**  | ***66******2 ECTS*** |
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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.* | Final written exam which include multiple choice questions. |

1. **ATTACHED BIBLIOGRAPHY**

*Teaching - study material*

**The ICU Book.**

**Author: Paul Marino**

**Evdoxos Identification Number: 122082953**

**ISBN: 978-960-7875-94-5**

**Dimitrios Lagos Editions**

- Related scientific journals:

1. Current Opinion in Critical Care

2. Intensive Care Medicine