**COURSE OUTLINE**

1. **GENERAL**

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| **SCHOOL** | School of Health Sciences | | | | |
| **ACADEMIC UNIT** | Faculty of Medicine | | | | |
| **LEVEL OF STUDIES** | Undergraduate | | | | |
| **COURSE CODE** | **ΙΑΕ710** | **SEMESTER** | | **7th-8th** | |
| **COURSE TITLE** | Advanced Surgical Specialties | | | | |
| **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 practical sessions | | | 25 | | 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* | Scientific area | | | | |
| **PREREQUISITE COURSES:** |  | | | | |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | Greek | | | | |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | YES | | | | |
| **COURSE WEBSITE (URL)** | http://ecourse.uoi.gr/enrol/index.php?id=1791 | | | | |

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* | |
| The course is the main course in the key surgical disciplines of Vascular Surgery, Thoracic-Cardiac Surgery, Neurosurgery and Plastic Surgery, which have become independent medical specialties, each dealing exclusively with a wide range of diseases.  The course material is equally divided among the above four specialties and aims at introducing the students to the basic concepts of the relevant diseases, their diagnosis and their conservative or surgical treatment.  It brings also the students in contact with patients suffering from diseases belonging to the above subjects in order to understand the clinical picture, the diagnostic algorithms, the therapeutic protocols, as well as specific surgical techniques for their treatment.  Aim of the course presents the acquaintance and understanding from the students of the significance of the diseases related to the above 4 surgical specialties, so that they are able to include them in their differential diagnosis, as well as to know the basic methods of their diagnosis and treatment. Finally, the students are familiarized with the subject of each of these surgical specialties, in order to encompass it as a possible future option for specialization.  Upon successful completion of the lessons the student will be able to:  **Α Vascular Surgery**   * How to take a clear and oriented medical history from a vascular patient * Physical examination of a vascular patient, palpating all peripheral arteries and estimate ankle -brachial index * make differential diagnosis of usual vascular diseases * make decision for biochemical test and learn which are necessary for every vascular patient * learn the importance of aneurysmatic disease and the aorta rest diseases, the indications and how to treat them * learn how to identify and diagnose peripheral arterial disease, indications for medical or surgical treatment while he describes and perform conservative treatment (indicated drugs, exercise and prevention) * learn the significance of carotid disease, it’s indications and the treatment of it * make a diagnosis of acute arterial occlusion and suggest the appropriate treatment * learn the importance of thrombo-embolic disease, preventive methods, how to diagnose the disease and it’s treatment   **B Cardiothoracic Surgery**   * have the ability to take a patient history regarding the most important pathologies of Cardiothoracic Specialty, the necessity of intervention and the risk stratification (e.g. Euroscore), * understand the terminology of the most important pathologies of Cardiothoracic Specialty, * interpret the basic image diagnostic examinations as the Chest x-ray (face +profile), heart ECHO, coronary angiography and CT scan, * have knowledge of the principles of surgical therapy for the treatment of a) lung cancer, b) coronary revascularization, c) aortic valve disease and d) endocarditis, * understand the basics for cardiopulmonary bypass as the necessary tool for cardiac operations and the complications arising in various systems from the use of cardiopulmonary bypass, * have the knowledge to examine a multyinjured patient following the ATLS directives, * have the knowledge to examine a heart operated patient regarding the function of the various organ systems.   **C Neurosurgery**   * History taking in neurosurgical patient * Neurological examination * Identification of symptoms and signs requiring neurosurgical intervention * Diagnosis and differential diagnosis of neurosurgical diseases and conditions * Recognition and Management of neurosurgical emergency conditions * Decision making for ordering further radiological investigations * Recognition and management of traumatic brain injury patients * Evaluation and management of increased intracranial pressure * Degenerative spine conditions, indications for surgical and non-surgical treatment * Central nervous system tumors - Classifications, Symptoms, Diagnosis and Treatments   **D Plastic Surgery**  The students, with their practical participation in the daily operation of the clinic (Inpatients, Outpatient clinics, Emergency Department, Theatre) and the theoretical teaching of the specialty subject, will have the following knowledge and skills after the completion of the courses:  • Ability to take a clear and oriented history in plastic surgery patients  • Ability to perform a full clinical examination in Plastic Surgery patients  • Complex diagnosis and differential diagnosis in plastic surgery patients  • Knowledge of the basic principles of use of flaps and grafts in reconstructive plastic surgery  • Diagnostic approach, staging and surgical treatment of benign skin tumors  • Diagnostic approach, staging and surgical treatment of skin cancers  • Diagnostic approach, staging and surgical treatment of melanoma  • Knowledge of the methods of breast reconstruction after mastectomy  • Ability to diagnose and clinically assess the severity of burns  • Knowledge of the principles of the conservative treatment of burns  • Knowledge of the principles of the surgical management of burns  • Knowledge of the basic principles of aesthetic plastic surgery | |
| **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…* |
| Autonomous work  Teamwork  Decision-making | |

1. **SYLLABUS**

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| The course encompasses the following lectures:  **Α Vascular Surgery**   * Anatomy and physiology of vessels * Aneurysm of aorta and peripheral arteries * Thoracic aorta diseases * Carotid arterial disease * Peripheral arterial disease- Diabetic limb, amputations * Acute arterial occlusion * Conservative treatment of Vascular Diseases * Thromboembolic Disease * Anticoagulant treatment   **Β Cardiothoracic surgery**   * the basics for cardiopulmonary bypass * thoracic trauma in a multyinjured patient from the aspect of ATLS directives * principles of surgical therapy for the treatment of lung cancer * principles of surgical therapy for the treatment of coronary disease * principles of surgical therapy for the treatment of aortic valve disease * principles of surgical therapy for the treatment of endocarditis   **C Neurosurgery**   * The Central Nervous System – Anatomy, Physiology and Pathophysiology * Intracranial pressure and Hydrocephalus * Traumatic brain injury * Spine and Spinal Cord Injuries * Degenerative Spine Disease * Brain tumors * Spine and spinal cord tumors * Vascular disorders of the brain and spinal cord   **D Plastic Surgery**   * History of plastic Surgery * Basic principles of Plastic Surgery * Clinical examination and diagnostic approach of the Plastic Surgery patients * Structure, anatomy and physiology of the skin * Management of trauma of the skin * Reconstructive plastic surgery using flaps and grafts * Benign skin tumors * Skin cancer * Melanoma * Breast reconstruction after mastectomy * Burns * Special categories of burns * The basic principles of aesthetic plastic surgery |

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

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| **DELIVERY** *Face-to-face, Distance learning, etc.* | Lectures in room. |
| **USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY** *Use of ICT in teaching, laboratory education, communication with students* | Slides and Bibliography are provided in electronic form. Continuous online update of the relevant knowledgebase. |
| **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 | 40 | | Workshop | 80 | | Group project | - | | Educational visit / practice projects | - | |  |  | |  |  | |  |  | |  |  | | Self-study | 32 | | Total | ***155*** | |
| **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.* | I. Written examination (80%) which comprises  -Multiple Choice Questions  - Written essay answers  II. Presence and performance during the course (20%) |

1. **SUGGESTED BIBLIOGRAPHY**

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| *-Suggested study material:*  *-Relevant medical Journals:*  **Α Vascular Surgery**   * ABC Of Arterial and Vein diseases (2010), Richard Donnelly, Nick JM. London Editing of Greek edition: Athanasios Giannoukas, Miltiadis Lazaridis, Published by PARISIANOS, ISBN: 978-960-394-606-9, CODE OF EVTHOXOS: 41708 * Vascular and endovascular surgery (2015), Jonathan D. Beard, Peter A. Gaines, Ian Loftus, Editing of Greek edition: Giannoukas A, Lazaridis M, Tsolakis J, Published by PARISIANOS, ISBN: 978-960-394-992-3 * Basic principles of vascular Surgery (2010), Ktenidis Kiriakos, Published by Univesity Studio Press, ISBN: 960-12-1985-4 * Vascular Surgery (2008), Liapis C.D. et all, Published by Parisianos, ISBN: 978-960-394-530-7   **Β Cardiothoracic surgery**   * “Introduction in Cardiothoracic Surgery” by Prof. Stratis Apostolakis, University of Ioannina Publications, 2013. * “Thoracic Surgery” by: Foroulis X and Papakonstantinou X, University Studio Press, Thessaloniki, 2012. * “Cardiac Surgery” by : Anastasiadis K, Tosios P, Foroulis X, Antonitsis P, Tagarakis and Karapanagiotidis G, University Studio Press, Thessaloniki, 2015. * “Cardiac Surgery” by: Mikroulis D and Mpougioukas G, University Studio Press, Thessaloniki, 2018.   **C Neurosurgery**   * Neurosurgery (3rdEdition 2015).F. Tsitsopoulos, P. Tsitsopoulos. Parisianou Publishers, ISBN: 978-960-394-948-8.   **D Plastic Surgery**   * Plastic Surgery (1990). Ioanovic I., Litsas Publications * Plastic Reconstructive and Aesthetic Surgery (1996) Papadopoulos O., Paschalidis Publishers, ISBN: 960-7398-44-0 |

