**COURSE OUTLINE**

1. **GENERAL**

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| **SCHOOL** | School of Engineering |
| **ACADEMIC UNIT** | Department of Computer Engineering & Informatics |
| **LEVEL OF STUDIES** | Undergraduate |
| **COURSE CODE** | CEID\_ΝΥ5178 | **SEMESTER** | **7th 9th**  |
| **COURSE TITLE** | Telematics and New Services |
| **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 tutorial exercises | 2(L) 2 (TE) | 3 |
| *Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).* | TOTAL | 3 |
| **COURSE TYPE***general background, special background, specialised general knowledge, skills development* | Direction / consolidation in the specialty of the subject |
| **PREREQUISITE COURSES:** | Recommended prerequisite knowledge on Telecommunications and Networks |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | Greek |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | Yes |
| **COURSE WEBSITE (URL)** | <https://eclass.upatras.gr/courses/CEID1089/><http://ru6.cti.gr/ru6/bouras/undergraduate-courses/thlematikh>  |

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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| **Upon completion of the course, students will be able to:*** Know the encoding of multimedia data for transmission and storage.
* Use real time protocols
* Designing telework, teleworking, e-learning
* Be aware of the use of social networks, the usefulness of eGovernment and e-commerce
* Use virtual reality.
* Make use of virtualization
* Get to know the IoT

**Upon completion of the course, students will have developed the following skills:**1. Be able to choose the appropriate new service depending on the application2. Implementing virtualization3. Have the ability to choose to design new services4. Implement IoT |
| **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, analyze and synthesize data and information, using the necessary technologies• Adjustment to new situations• Decision making• Promote free, creative and inductive thinking |

1. **SYLLABUS**

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| Transmission - coding of multimedia dataReal Time ProtocolsTelework - Telework - TelemedicineE-learning (synchronous - asynchronous)E-commerce - Electronic bankingEGovernmentSocial NetworksMobile applicationsVideo on demandVirtual Reality - Network virtual environmentsNetwork VirtualizationCloud computing - Internet of Things |

**(4) TEACHING and LEARNING METHODS - EVALUATION**

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| **DELIVERY***Face-to-face, Distance learning, etc.* | Face-to-face |
| **USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY** *Use of ICT in teaching, laboratory education, communication with students* | **The slides of the course and additional auxiliary material are available from the website to the enrolled students. Lectures are also available as Open Courses** |
| **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*** | ***Semester workload*** |
| Lectures | *13Χ2=26* |
| Tutorial exercises | *13Χ2=26* |
| Self-study | *13Χ1=13* |
| Study Weekends | *13Χ2=26* |
| Exam preparation week + 2 weeks of vacation | *4Χ1=4* |
| Course total  | 107 |

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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: GreekFinal examination (100% of total score).Written, graduated difficulty, covering all matterThere is the possibility of optional bibliographic work as a technical reference. All papers are posted on the course's website. They contribute 10% to the final score. |

**(5) ATTACHED BIBLIOGRAPHY**

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| *- Suggested bibliography:**- Related academic journals:*Slides that have been posted on the course's website |