

MODULE OUTLINE

1. GENERAL INFORMATION

SCHOOL	SCHOOL OF SCIENCE AND TECHNOLOGY		
PROGRAM COURSE	INFORMATICS		
LEVEL OF STUDY	UNDERGRADUATE		
MODULE CODE	PLI-23	YEAR OF STUDY	4 th
MODULE TITLE	Telematics, Internets and Society		
INDEPENDENT TEACHING ACTIVITIES <i>in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits</i>		HOURS	CREDIS
Weekly teaching hours * 32 weeks		16-18	20 ECTS
COURSE TYPE <i>Background knowledge, Scientific expertise, General Knowledge, Skills Development</i>	Scientific expertise, General Knowledge Optional mandatory instead of PLI40, PLI42 or PLI47		
PREREQUISITE MODULES:	No		
LANGUAGE OF INSTRUCTION AND EXAMS	GREEK		
THE MODULE IS OFFERED TO ERASMUS STUDENTS	No (due to annual duration of the module)		
MODULE WEBSITE (URL)	https://www.eap.gr/education/undergraduate/computer-science/topics/#tilematiki Each module has its own space in the Learning Management System of EAP (http://study.eap.gr), with controlled access (use of code) for students and teaching staff.		

2. LEARNING OUTCOMES

<p>Learning Outcomes</p> <ul style="list-style-type: none"> The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:
<p>On successful completion of the module, students will be able to:</p> <ul style="list-style-type: none"> - Explain and present the basic concepts of modern telematics networks and services. - Analyze and design wireless and mobile (GSM, UMTSetc) networks. - Explain the addressing schemes of the Internet. - Distinguish the routing algorithms and protocols of the Internet. - Associate telematics services with distributed object-oriented technology and service-oriented architecture. - Utilize various web programming technologies and develop a web application. - Gain the ability to judge and choose the appropriate language / technology of web programming. - Recognize the importance of authenticating and authorizing users to access a World Wide Web

application.

- Discuss the architecture of the World Wide Web (WWW).
- Compose methods of the HTTP protocol.
- Create simple WWW pages using HTML and CSS.
- Construct dynamic WWW applications by inserting client-side JavaScript) and server-side (PHP) scripts in HTML code.
- Integrate server-side scripting (PHP) with Data Bases (MySQL).
- Design data descriptions in the WWW with XML.
- Transform XML descriptions by using XSL.
- Measure and evaluate the performance of Internet and WWW.
- Analyze caching and proxy techniques in the WWW.
- Apply web application programming techniques using XML, DTD, DOM, XSL.
- Explain searching and security mechanisms of the WWW.
- Discuss the increasing and diversifying social impact of Information and Communication Technologies.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

<i>Search for, analysis and synthesis of data and information by the use of appropriate technologies,</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for diversity and multiculturalism</i>
<i>Decision-making</i>	<i>Environmental awareness</i>
<i>Individual/Independent work</i>	<i>Social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Group/Team work</i>	<i>Critical thinking</i>
<i>Working in an international environment</i>	<i>Development of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment (Other.....citizenship, spiritual freedom, social</i>	<i>.....</i>
<i>Introduction of innovative research</i>	<i>awareness, altruism etc.)</i>

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Decision-making
Individual/Independent work
Project planning and management
Critical thinking
Development of free, creative and inductive thinking

3. MODULE CONTENT

The main purpose of Module is to acquaint students with the basic conceptual and technological versions of telematics services and internet technologies, to become familiar with the programming languages and to get acquainted with the programming techniques of web applications, as well as to study the social impact of Information and Communications Technology (ICT). The main purpose of the module is to understand the basic concepts of telematics networks, and the estimation of transmitted information, to become familiar with the concepts of data transmission / packets transmission in broadband networks, telematics networks' performance, with the concepts of information management taking into account the technical characteristics of telematics networks, the IP Addressing, to become familiar with the basic concepts of mobile telecommunication systems, the concepts of the offered traffic and the grade of service (GoS), the frequencies reuse etc. It also aims to become familiar with Internet technologies, HTTP protocol and understand the basics of user interaction with Internet pages, to become familiar with the performance of the HTTP protocol, as well as with Internet protocol analysis tools. Also, the module's main goal is the development of simple and advanced websites and portals, to be familiar with the programming languages and the programming techniques of web applications: HTML, CSS, Javascript, PHP, MySQL; to acquire the ability to judge and select the appropriate language / technology of web programming, to recognize the importance of authentication and authorized user access to a web application. Understanding and applying World Wide Web programming techniques using XML, DTD, DOM, XSL.

Cognitive subjects of the module:

1. Telematics
2. Internet - Web
3. Computers and Society, Information society

4. TEACHING METHODS--ASSESSMENT

MODES OF DELIVERY <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc.</i>	Distance education with five Group Counseling Meetings (OSS) during the academic year on weekends.	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>Use of ICT in teaching, Laboratory Education, Communication with students</i>	<p>We use :</p> <p>Remote meetings tools (skype for business), Presentation software (e.g. power point), Specialized software and tools in the subjects under study (XAMP, WAMP, EasyPHP, etc.).</p> <p>Additionally, the students use tools, web browsers and e-reader for digital books.</p>	
MODULE DESIGN <i>Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching,</i>	Activity	Annual Workload
	5 OSS (* 4 hours)	20
	Preparation of Assignments (4 assignments * 10 hours)	40
	Examination	3
	Individual study	449-513
	Total module workload (hours)	512-576

<p><i>Educational visits, projects, Essay writing, Artistic creativity, etc</i></p> <p><i>The study hours for each learning activity as well as the hours of selfdirected study are given following the principles of the ECTS.</i></p>	
<p>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</p> <p><i>Detailed description of the evaluation procedures.</i></p> <p><i>Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other.....etc.</i></p> <p><i>Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students</i></p>	<p>Elaboration of written assignments during the academic year, the average of the grades of which participates in the formation of the final grade of module by 30%, if there is a passable in the final or repetitive examinations. In the final written exams the grade of the written assignments participates in the formation of the final grade of module by 70%.</p> <p>All the criteria are posted, both in each written assignment (in the LMS study.eap.gr), as well as in the general regulation of HOU at: https://www.eap.gr/education/study-regulations/</p>

(6) SUGGESTED BIBLIOGRAPHY

<p><i>- Suggested bibliography:</i></p> <p>HOU Publications: Volume A: Telematics, EAP, Patra 2008. PLI23/1/09 Volume B: Study Manual - Introduction to Web Technology, EAP, Patras 2003. PLI23/2 Volume C: Computers and Society, Information Society, EAP, Patra 2002. PLI23/3</p> <p><i>-Related scientific Journals:</i></p> <p>IEEE Communications Surveys & Tutorials IEEE Access ACM Transactions on the Web (TWEB) International Journal of Human-Computer Studies ACM Computing Surveys (CSUR)</p>
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