COURSE OUTLINE

(1) GENERAL

SCHOOL	Social Sciences		
ACADEMIC UNIT	Cultural Technology and Communication		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	**KPLR 127**	**SEMESTER**	**6th**
COURSE TITLE	Programming in WWW		
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	2	3
	Laboratories	2	2
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		4	5
COURSE TYPE *general background, special background, specialised general knowledge, skills development*	Optional/Special Background		
PREREQUISITE COURSES:	Internet Technologies		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	https://eclass.aegean.gr/courses/131310/		

(2) LEARNING OUTCOMES

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*

At the end of this course, the students will have knowledge of:

- JavaScript script programming language
- Programmatic data management for Web of data: XML, JSON

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	*Project planning and management*
Adapting to new situations	*Respect for difference and multiculturalism*
	Respect for the natural environment
	Showing social, professional and ethical

Decision-making	*responsibility and sensitivity to gender issues*
Working independently	*Criticism and self-criticism*
Team work	*Production of free, creative and inductive thinking*
Working in an international environment	*……*
Working in an interdisciplinary environment	*Others…*
Production of new research ideas	*…….*

- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Working independently
- Production of free, creative and inductive thinking
- Transfer of know-how in other environments
- Working in an interdisciplinary environment
- Practice Critical Thinking

(3) SYLLABUS

The course focuses on the Internet and WWW technologies, emphasizing the programming/development of Web applications. An initial overview of technologies related to computer networks, the Internet, WWW, browsers, Web servers, etc. is provided. Later on, the distinction between client-side and server-side programming is presented. The emphasis is given to both technologies (sides). In addition, different technologies for the description of data that are used in Web environments/systems are presented (XML, JSON, JSON-LD), and applications for the access of those data (using JavaScript, AJAX) are developed.

1. Introduction to internet technologies
2. JavaScript-1: Introduction and tools
3. JavaScript-2: operators, loops, data structures
4. JavaScript-3: events, handlers, actions, forms
5. JS HTML DOM
6. XML
7. JS AJAX
8. JS JSON
9. jQuery
10. React.js
11. D3.js, AI and JS
12. Node.js
13. FTP, Free-Hosting, Final Project

(4) TEACHING and LEARNING METHODS - EVALUATION

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*	Use of open-source software for laboratory education or software with free license for universities. Use ICT in teaching and communication with students. Also, the practice with W3Schools tutorials is proposed and demonstrated (https://www.w3schools.com/).
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*	

Activity	***Semester workload***
Lectures	13 *2 hours =26 hours
Lectures' study	13*5 hours = 65 hours
Laboratory Practice	13*2 = 26 hours
Laboratory Preparation and semester assignment	30 hours

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*	<table><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td>Course total</td><td>***147 hours***</td></tr></table>
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.*	Project-based assessment: Intermediate project (20%) Final project (50%) Written exam (30%) Students are familiar with the evaluation criteria from the first course lecture. All notes are stored in the course's area in e-Class platform (eclass.aegean.gr).

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

1. Αρχίστε να Προγραμματίζετε με JavaScript: *https://www.brokenhill.com.cy/ell/product/arxiste-na-programmatizete-me-javascript*

- *Κωδικός Βιβλίου στον Εύδοξο: 122074514*
- *Έκδοση: 1/2024*
- *Συγγραφείς: Miles R.*
- *ISBN: 9789925588008*
- *Τύπος: Σύγγραμμα*
- *Διαθέτης (Εκδότης): BROKEN HILL PUBLISHERS LTD*

2. ***Προγραμματισμός για το Web, 3η έκδοση*** *Randy Connolly, Ricardo Hoar Χ. Γκιούρδα & ΣΙΑ 2015 Αθήνα,*

ISBN ***9789605127565,*** *Κωδικός Βιβλίου στον Εύδοξο: 122075105 https://www.mgiurdas.gr/biblia/programmatismos-gia-web-3i-ekdosi*

3. ***Online resources***

- *W3Schools tutorials www.w3schools.com*
- *Begin to Code with JavaScript, Rob Miles https://www.begintocodewithjavascript.com/*

- Related academic journals:

- International Journal of Web Engineering and Technology
- Journal of Web Engineering, ACM

- IEEE Internet Computing
- Journal of Internet Services and Applications
- International Journal of Internet Science
- Internet Research