

Internet and Applications in Agriculture [3721]

COURSE OUTLINE

(1) GENERAL

SCHOOL	ANIMAL BIOSCIENCES		
ACADEMIC UNIT	DEPARTMENT OF ANIMAL SCIENCE		
LEVEL OF STUDIES	Undergraduate [Free Elective]		
COURSE CODE	3721	SEMESTER	7 th
COURSE TITLE	INTERNET AND APPLICATIONS IN AGRICULTURE		
INDEPENDENT TEACHING ACTIVITIES <i>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</i>		WEEKLY TEACHING HOURS	CREDITS (ECTS)
Theory: Lectures		2	2
Laboratory: Use of Software Tools		3	3
Total		5	5
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Scientific area		
PREREQUISITE COURSES:	-		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS:	-		
COURSE WEBSITE (URL):	https://oeclass.aua.gr/eclass/courses/AOA246/		

(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	
Upon completing the course, the student will: - be able to understand the Internet basic terms and concepts, - be able to understand the Internet architecture and its technological infrastructure, - be able to understand the Internet services and web enabled applications, - be able to describe Web 2.0 and Web 3.0 technologies and their use, - acquire practical knowledge on web design, - acquire skills in writing HTML code and CSS rules for website development, - be able to develop mobile apps for the agricultural sector, - acquire knowledge in the use of cloud computing technology, - be able to understand cyber security issues, - be able to provide advisory services on the development of websites and mobile apps, and the use of online applications to agribusinesses.	
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	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

Working in an interdisciplinary environment Production of new research ideas	 Others...
- Search, analysis and synthesis of data and information with the use of necessary technologies. - Individual work. - Team work. - Work in a multidisciplinary environment. - Generation of new research ideas. - Advancement of free, creative and deductive thinking.	

(3) SYLLABUS

Theory 1. Introduction to the Internet basic terms and concepts. 2. Internet protocols and technologies. 3. Internet basic services and applications. 4. World Wide Web: Web 2.0 and Web 3.0 technologies 5. Introduction to HTML for web development. 6. Basic structure, formatting, tables, HTML frames. 7. Webpage layout formatting using Cascading Style Sheets (CSS). 8. Innovative web-based applications for agriculture. 9. Use of cloud computing technologies. 10. Cyber security issues. 11. Mobile apps for agriculture. Laboratory 1. Using HTML and CSS for web development. 2. Evaluation of websites using Web 2.0 tools. 3. Development of mobile apps for agriculture using the free software App Inventor of MIT.

(4) TEACHING and LEARNING METHODS - EVALUATION

TEACHING METHOD <i>Face-to-face, Distance learning, etc.</i>	In Classroom (theory) and in Laboratory (laboratory exercises) or distance learning for theory and laboratory exercises (if required)	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	• Exploitation of Information and Communication Technologies in teaching, laboratory training and the communication with students. • Use of specialized free software. • Use of the electronic services of the integrated course management platform eClass (e.g. posting of educational material, exercises, tasks, useful links, announcements, chat, Wiki system). • Communication with students via the eClass platform and e-mail. • Use of the eClass online services for distance learning if required, with additional use of the teleconferencing tool Big Blue Button (eClass platform) or MS Teams or Webex.	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>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.</i> <i>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</i>	Activity	Semester workload
	Lectures	26
	Laboratory exercises	39
	Group and/ or individual projects	13
	Autonomous study	47
	Course total (25 h of workload per ECTS)	125
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report,</i>	I. Theory Final written examination of graded difficulty in theory, including multiple choice questions and short answer questions. II. Laboratory Assignment in which each student or group will be asked to: (a) propose and develop a mobile electronic application related to agriculture, (b) prepare a relevant presentation	

<i>oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	to be submitted electronically and (c) make an oral presentation. The final grade is the sum of the above individual evaluations. Rating Scale: 0-10 Minimum Grade: 5 The assessment criteria are explicitly defined and students can have access to their written examination and software records. If required, students' evaluation can also be realized remotely through the eClass platform for the written examination, and through video conferencing tools for presentation of projects or oral examinations.
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(5) ATTACHED BIBLIOGRAPHY

- Proposed Literature:

- Douligieris, C., Mavropodi, R., Kopanaki, E., Karalis, A., (2021) Technologies and Programming in World Wide Web. New Technologies Editions, 2nd Edition/2021
- Jennifer Kyrnin, Julie C. Meloni (2021). Learn HTML 5, CSS and JavaScript All in One. Giourdas Editions, 3rd Editon/2021
- Castro E., Hyslop B. (2013). HTML5 and CSS3 with Images, Kleirarithos Editions. 7th Edition/2013
- Georgiadis, C. (2015). Word Wide Web and Electronic Commerce Technologies [Undergraduate textbook]. Kallipos, Open Academic Editions. <https://hdl.handle.net/11419/2288>
- Paraskevas, M., Asimakopoulos, G., & Triantafyllou, V. (2015). Information Society [Undergraduate textbook]. Kallipos, Open Academic Editions. <https://hdl.handle.net/11419/378>
- Gavalakis, N. (2023). Introduction to Cybercrime [Undergraduate textbook]. Kallipos, Open Academic Editions.

- Related scientific journals:

- Internet Research
- Journal of Internet Services and Applications, Springer
- ACM Internet Technology
- IEEE Internet Computing
- Journal of Internet Technology
- Computer and Electronics in Agriculture