



Teaching Guide Advanced web programming

PCA-27-F-01 Ed.00

---

**TEACHING GUIDE**  
**ADVANCED WEB PROGRAMMING**  
Multimedia and Digital Arts  
**Catholic University of Valencia**

---

Course 2023/24

## GUÍA DOCENTE DE LA MATERIA Y/O ASIGNATURA

		ECTS
<b>SUBJECT:</b> Advanced web programming		6
<b>Subject :</b> Web Design		18
<b>Module:</b> Web Design and Multimedia		30
<b>Type of Training</b> <sup>1</sup> : Basic	<b>COURSE:</b> 4th <b>Semester:</b> 1st	
<b>Teaching:</b> David Ponce Segura	<b>Department:</b> Multimedia	
	<b>E-mail:</b> <a href="mailto:Staffdavid.ponce@ucv.es">Staffdavid.ponce@ucv.es</a>	

### ORGANIZATION OF THE MODULE

AUDIOVISUAL CREATION				ECTS No. 12
<b>Duration and temporal location within the study plan:</b>				
<b>Subjects and Subjects</b>				
Subject	ECTS	SUBJECT	ECTS	Course / semester
<b>Business initiatives</b>	6	Development of business initiatives	6	4/1
<b>Animation in 3 Dimensions</b>	6	Animation in 3 Dimensions	6	4/1
<b>Web</b>	6	ProgrammingAdvanced Web Programming	6	4/1
<b>Storyboard and Graphic Narration</b>	6	Storyboard and Graphic Narration	6	4/1

<sup>1</sup> Basic training (common subject), Compulsory, Electives, External practices, Final Degree Project.

**COURSE GUIDE SUBJECT / SUBJECT:** Programming of Interactive / Web Projects

**Prerequisites:** They have not been established.

**GENERAL OBJECTIVES**

1. Mastering the different languages and media specific to the field of web programming and access to data.
2. Analyze and design workflows in web application programming environments.
3. Know the different technical options available for the development of web projects.
4. Obtain criteria to identify the technical needs of the client.
5. Acquire knowledge of the different phases of launching a dynamic website.
6. Know the different parts that make up a dynamic website.
7. Acquire knowledge about advanced web development techniques.
8. Understand and design data containers and communication between them.

**BASIC COMPETENCES**

	1	2	3	4
CB1 That students have demonstrated that they possess and understand knowledge in an area of study that starts from the base of general secondary education, and is usually found at a level that, although supported by advanced textbooks , also includes some aspects that involve knowledge from the forefront of their field of study		x		
CB2 That students know how to apply their knowledge to their work or vocation in a professional way and possess the competencies that are usually demonstrated through the elaboration and defense of arguments and problem solving within their study area				x
CB3 That students have the ability to gather and interpret relevant data (usually within their study area) to make judgments that include a reflection on relevant issues of a social, scientific nature o ethics		x		
CB4 That students can transmit information, ideas, problems and solutions to a highly specialized audience or as non-specialized			x	
CB5 That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.				x

GENERAL COMPETENCES	Weighting of competence			
	1	2	3	4
1. Capacity for analysis and synthesis.			x	
2. Capacity for organization and planning.		x		
5. Computer skills related to the field of study.				x
6. Information management capacity. Know how to obtain information effectively from books and specialized magazines, and other documentation.				
10. Teamwork.			x	
11. I work in an interdisciplinary team.				x
18. Independent learning and motivation for training throughout your professional life				
19. Adaptation to new situations			x	
22. Ability to collaborate with other professions and especially with professionals from other fields. Identify the appropriate professionals to adequately develop creative work.			x	

SPECIFIC COMPETENCES <sup>3</sup>				
Conceptual	1	2	3	4
E8. Ability to organize and process the information that will later be included in the project.			x	
E9. Ability to plan and direct projects and developments of technological content, in particular related to art, multimedia design and communication.		x		
E17 Understanding of the characteristics of the digital production sector and its operation and the trends that mark its current and future evolution.		x		

E18. Know, assess and understand the deontological obligations of the multimedia creation professional and the implications of adjusting to them in professional performance.		x		
---	--	---	--	--

PCA-27-F-01 Ed.00

LEARNING OUTCOMES <sup>4</sup>	COMPETENCES
R-1 Mastery of object programming and vector animations.	CB: 1, 2, 3, 4, 5 CG: 1,2,3,4,5,9,10,11,12, CE: E17, E18
R-2 Knowledge of object-oriented programming and procedural	CB : 1, 2, 3, 4, 5 CG: 1,2,3,4,6,7,8,11, CE: E8, E9, E17, E18
R-3 Skill in advanced server programming	CB: 1, 2, 3, 4, 5 CG: 1,2,3,4,5,9,10,11, CE: E17
R-4 Mastery of techniques in content managers	CB: 1, 2, 3, 4, 5 CG: 1,2,3,4,5,6,7,8,9,10,12, CE: E8, E18
R-5 Installation of the project on the corresponding servers.	CB: 1, 2, 3, 4, 5 CG3,6,9Correlatively list CE: E17

<sup>4</sup> the learning outcomes following the proposed nomenclature.

**Important note:** The competences are expressed in a generic sense, so it is necessary to include the learning results in the teaching guide. These results constitute a specification of one or more competencies, making explicit the degree of mastery or performance that the student must acquire and contain in their formulation the criteria with which they will be evaluated. The learning results show what the student will be able to demonstrate at the end of the subject or subject and also reflect the degree of acquisition of the competence or set of competencies.

WORK TRAINING ACTIVITIES			
ACTIVITY	Teaching-Learning Methodology Learning	Relationship with Results of the subject	ECTS <sup>5</sup>
PRESENTIAL CLASS Presentation	of contents by the teacher, analysis of competences, explanation and demonstration of abilities, skills and knowledge in the classroom.	R1, R2, R3, R4, R5	1
PRACTICAL CLASSES	Group work sessions supervised by the teacher. Case studies, diagnostic analysis, problems, field study, computer room, visits, data search, libraries, network, Internet, etc. Meaningful construction of knowledge through the interaction and activity of the student.	R1, R2, R3, R4, R5	1
TUTORING	Personalized attention in a small group. Period of instruction and / or orientation carried out by a tutor in order to review and discuss the materials and topics presented in classes, seminars, readings, completion of work, etc.	R1, R2, R3, R4, R5	0.15
EVALUATION	Set of oral and / or written tests used in the initial, formative or additive evaluation of the student.	R1, R2, R3, R4, R5	0.25
Total			(2.4 *)

<sup>5</sup> The subject and / or subject is organized in **TRAINING ACTIVITIES OF IN-HOUSE WORK** and in **TRAINING ACTIVITIES OF SELF-EMPLOYED STUDENT WORK**, with an estimated percentage in ECTS. An **adequate distribution** is as follows: **35-40%** for Face-to-Face Training Activities and **65-60%** for Self-Employment. (For a 6 ECTS subject: 2.4 and 3.6 respectively).

The teaching-learning methodology is described in this guide in a generic way, being specified in the didactic units in which the subject and / or subject are organized

TRAINING ACTIVITIES OF WORK SELF-EMPLOYED STUDENT			
ACTIVITY	Teaching-Learning Methodology Learning	Relationship with Results of the subject	ECTS
SELF-EMPLOYED WORK	<p>Student study: Individual preparation of readings, essays, problem solving, seminars, work, reports, etc. To expose or deliver in the theoretical classes, practical classes and / or small group tutorials.</p> <p>Work carried out on the university platform (<a href="http://www.plataforma.ucv.es">www.plataforma.ucv.es</a>)</p>	R1, R2, R4, R5, R6	3.6
Total			(3.6*)
ASSESSMENT SYSTEM FOR THE ACQUISITION OF SKILLS AND GRADING SYSTEM			
Assessment instrument 6	EVALUATED LEARNING OUTCOMES	Percent age awarded	
Written tests. (It will be essential to pass these tests to average the rest of the evaluation instruments)	R1, R2, R4, R5, R6	50%	
Delivery of individual works. (It will be essential to deliver it on an agreed date and time to average the rest)	R1, R2, R4, R5, R6	40%	
Active participation in class. (Presence, interventions in debates, practical sessions)	R1, R2, R3, R4, R5, R6	10%	

A minimum of passing (50% of the grade in said test) must be obtained in the final exam of 1st or 2nd call and averaging scores for practices and attendance.



<sup>6</sup> Assessment techniques and instruments: oral exam-presentation, written tests (objective tests, development tests, concept maps...), supervised works, projects, case studies, observation notebooks, portfolio, etc.

The marks for attendance and practices can only be obtained in the first call and will be saved for the second call exam to average with this in case of not exceeding the first call.

By virtue of the regulations governing the evaluation and qualification of UCV subjects, article 8.1 establishes that students who have not attended at least 50% of the classes in this subject will not be able to take the exam in First call. Both justified and unexcused absences will be considered non-attendance.

Those students who previously and after communicating their personal situation to the teacher receive permission from the teacher to take the exam on first call will be excluded from this regulation if the teacher considers the absence justified, either for work reasons, subject coincidences, second license plates, serious illnesses, etc. To qualify for this exemption, it is absolutely essential to have discussed it with the teacher at the beginning of the course and to have accepted the evaluation procedure that the teacher deems most appropriate. In no case may appeal by default or at the end of the course to these situations to breach the rule.

On the other hand, the teacher can establish as criteria for non-attendance the repeated delay, the lack of attention in the classroom (use of mobile phones without authorization, lack of participation, etc.) and can be added to the general count of non-attendance and consequently contributing to exceed the limit that prevents examinations as well as affect the percentage established in the teaching guide for attendance and participation.

This rule is complementary to the percentages of evaluation of non-attendance and participation, as well as the evaluation and completion of assignments or cases in the classroom or during the course that will follow their own evaluation criteria. Both percentages are included in this teaching guide.

### **CRITERIA FOR THE GRANTING OF HONOR REGISTRATION:**

*Specify specific criteria indicated for the subject and faculty to which the title is assigned and in accordance with the general regulations that indicate that only one honor registration can be given for every 20 students, not per fraction of 20, with the exception of the case of groups of less than 20 students in total, in which an enrollment can be given.*

DESCRIPTION OF CONTENTS	COMPETENCES
server languages	CB: 1, 2, 3, 4, 5 CG: 1,2,3,4,5,6,7,8,9,10,12, CE: E8, E18
1. Client concepts /server 2. PHP 3. Forms 4. Sending / receiving data with PHP	
Databases	CB: 1, 2, 3, 4, 5 CG: 1,2,3,4,5,6,7,8,9,10,12, CE: E8, E18

5. Databases 6. SQL language 7. Queries from PHP	
Charts	CB: 1, 2, 3, 4, 5 CG: 1,2,3,4,5,6,7,8,9,10,12, CE: E8 , E18
8. Graphics on web	

TEMPORARY LEARNING ORGANIZATION (First-time students):		
	CONTENT BLOCK / DIDACTIC UNIT	NUMBER OF SESSIONS
1	Client / server concepts	1
2	PHP	8
3	Forms	2
4	Sending / receiving data with PHP	2
5	Databases	6
6	SQL Language	4
7	Queries from PHP	1
8	Graphics on the web	1

BIBLIOGRAFÍA
<p>BERNERS-LEE, MARK FISCHETTI: "Weaving the Web : The Original Design and Ultimate Destiny of the World Wide Web by its Inventor". Paw Prints,</p> <p>THY BORONCZYK, MARTIN E. PSINAS: "PHP y MySql". Anaya Multimedia/Wrox. Enero 2009. I.S.B.N: 978-84-415-2516-0</p> <p>SKLAR: "Introducción a PHP 5". Anaya Multimedia/O'reilly. Enero 2005. I.S.B.N: 978- 84-415-1803-2</p> <p>WELLING, LAURA THOMSON: "Desarrollo web con PHP y MySql". Anaya/Programación. Abril 2009. I.S.B.N: 978-84-415-2553-5</p> <p>press</p> <p>TOPHE AUBRY: "WordPress 3 un CMS para crear su sitio Web". ENI Editorial. ISBN :</p>

978-2-7460-6849-0

- CARAZO GIL, FRANCISCO JAVIER: "*Domine wordpress. Manual practico*". Ra-ma editorial. 2011. ISBN 978-84-9964-063-1
- YOANI SÁNCHEZ: "*Wordpress. Un blog para hablar al mundo*". Anaya/Títulos Especiales. Mayo 2011. I.S.B.N: 978-84-415-2892-5
- <http://codex.wordpress.org/>

### ADDITIONAL INFORMATION:

### COURSE OF THE SUBJECT IN SECOND AND SUBSEQUENT ENROLLMENTS:

There will be a specific group for students who are not first enrollment and a teacher in charge of that group.

In this group there will be a number established by the UCV of monitoring and tutoring sessions (6 of 2 hours each) in which the work on the competencies that the students of the group need to acquire to pass the course will be reinforced.

These sessions are included in the attached schedule in this guide and are detailed in the description of the Didactic Units of the subject.

### TEMPORARY ORGANIZATION OF LEARNING (Second or successive enrollment students):

	CONTENT BLOCK / DIDACTIC UNIT	NUMBER OF SESSIONS (they must add up to 6)
1	Norms for the delivery of practices related to units 4 and 12	1
2	Review of theoretical contents of units 1 -3	1
3	Review of theoretical content of units 4-9	1
4	Review of theoretical content of unit 10	1
5	Assessment of units 11-14	1