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## **COURSE GUIDE**

### **Universidad Católica de Valencia**

Specific Modul to Technology

Didactics of Technology

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## COURSE GUIDE TO DIDACTICS OF TECHNOLOGY

		ECTS
<b>MODULE:</b> Specific Modul to Technology		24
<b>FIELD:</b> Learning and Education in Technology		12
<b>Subject:</b> Didactics of Technology		6
<b>Type of learning:</b> Compulsory	<b>YEAR:</b> MPS <b>Semester:</b> 1st	
<b>Teacher:</b> José M <sup>a</sup> Nalda	<b>Department:</b> Interdepartmental	
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## SUBJECT ORGANIZATION

Specific Module to Technology				Nº ECTS: 24
Duration and temporal location within the curriculum:				
Subjects and Courses				
Subject	ECTS	Courses	ECTS	Course/ semester
Subject 1	6	Technology in Secondary Education	6	
Subject 2	12	Didactics of Technology	6	
		Didactic resources in teaching Technology	6	
Subject 3	6	Innovation and research in Didactics of Technology	6	
<b>COURSE GUIDE TO THE SUBJECT: Learning and Teaching Technology / Didactics of Technology</b>				



<b>Prerequisites:</b> There are not prerequisites				
<b>GENERAL GOALS</b>				
a. To know the theoretical - practical developments of the education and the learning of the corresponding matters. b. To transform the curriculum into programs of activities and of work. c. To foment an atmosphere that facilitates the learning and puts in value the contributions of the students d. To know strategies and technologies of evaluation and to understand the evaluation as an instrument of regulation and stimulus to the effort.				
<b>CROSS-SECTIONAL COMPETENCES</b>	<b>Competence measuring scale</b>			
<b>Instrumental</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1. G6 To plan, develop and evaluate the process of teaching and learning promoting educational processes that facilitate the acquisition of the own competitions of the respective educations, attending to the level and previous formation of the students as well as the orientation of the same ones, so much individually like in collaboration with other teachers and professionals of the center.				X
2. G8 To make concrete the curriculum that is going to be implanted in a teaching institution taking part in the collective planning of the same one; so many grupales develops and to apply didactic methodologies as personalized, adapted to the diversity of the students				X
3. G10 To acquire strategies to stimulate the effort of the student and to promote his aptitude to learn for yes same and with others, and to develop skills of thought and of decision that facilitate the autonomy, the confidence and initiative personnels.				X
4. G11 To know the processes of interaction and communication in the classroom, to dominate skills and social necessary skills to foment the learning and the living together in the classroom, and to approach problems of discipline and resolution of conflicts				X
<b>Interpersonal</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
5. G9 To design and to develop spaces of learning with special attention to the equity, the emotional education and in values, the equality of rights and opportunities between men and women, the civil formation and the respect of the human rights that facilitate the life in society, the capture of decisions and the construction of a sustainable future	X			
<b>Systemic</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
6. G13 Know the regulation and institutional organization of the educational system and models of improvement of the quality with application to the centers of education	X			
<b>SPECIFIC COMPETENCES</b>				



<b>Disciplinary</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
7. E4 Know the theoretical - practical developments of the education and the learning of the corresponding matters				<b>X</b>
8. E1 To know the formative and cultural value of the matters corresponding to the specialization and the contents that are dealt in the respective educations.			<b>X</b>	
9. E9 To know strategies and technologies of evaluation and to understand the evaluation as an instrument of regulation and stimulus to the effort.				<b>X</b>
<b>Professional</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
10. E5 To transform the curricula into programs of activities and of work.		<b>X</b>		
11. E6 To acquire criteria of selection and production of educational materials.				<b>X</b>
12. E7 To foment a climate that facilitates the learning and puts in value the contributions of the students			<b>X</b>	

<b>Attitudinal</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
13. E12 To identify the problems relative to the education and learning of the matters of the specialization and to raise alternatives and solutions		<b>X</b>		

<b>LEARNING OUTCOMES</b>	<b>COMPETENCES</b>
R-1 El alumno experimenta situaciones de clase relacionadas con las edades a las que se enfrentará.	<b>E4</b>
R-2 The student is capable of detecting and correcting the previous concepts of the student	<b>E4</b>
R-3 The student is capable of designing activities in the classroom on the educational environment	<b>E5</b>
R-4 The student is capable of managing the classroom creating a climate that favors the communication and the environment of work	<b>E7</b>
R-5 The student knows strategies and technologies of evaluation and understands them as an instrument of regulation and stimulus to the effort	<b>E9</b>



ON-CAMPUS EDUCATIONAL ACTIVITIES			
ACTIVITY	Teaching-Learning Methodology	Relationship With Learning Outcomes for the subject	ECTS
ON-CAMPUS CLASS	Teacher presentation of contents, analysis of competences, explanation and in-class display of skills, abilities and knowledge.	R- 1, 2, 3, 4, 5	0,8
PRACTICAL CLASSES	Group work sessions supervised by the professor. Case studies, diagnostic tests, problems, field work, computer room, visits, data search, libraries, on-line, Internet, etc. Meaningful construction of knowledge through interaction and student activity. Microteaching.	R- 1, 3, 5	0,5
LABORATORY	Activities carried out in spaces with specialized equipment.	R-3	0,2
SEMINAR	Supervised monographic sessions with shared participation	R-1	0,1
GROUP PRESENTATION OF PAPERS	Application of multidisciplinary knowledge	R-1, 3	0,2
OFFICE ASSISTANCE	Personalized and small group attention. Period of instruction and/or orientation carried out by a tutor to review and discuss materials and topics presented in classes, seminars, readings, papers, etc.	R- 1, 2, 3, 4, 5	0,1



ASSESSMENT	Set of oral and/or written tests used in initial, formative or additive assessment of the student	R- 1, 2, 3, 4, 5	0,5
Total			(2,4*)

INDEPENDENT WORK ACTIVITIES			
ACTIVITY	Teaching-Learning Methodology	Relationship of Course with Learning Outcomes	ECTS
GROUP WORK	Group preparation of readings, essays, problem solving, seminars, papers, reports, etc. to be presented or submitted in theoretical lectures, practical and/or small-group tutoring sessions.  Work done on the university e-learning platform ( <a href="http://www.plataforma.ucv.es">www.plataforma.ucv.es</a> )	R- 1, 2, 3, 4, 5	1,6
INDEPENDENT WORK	Student study: Group Individual preparation of readings, essays, problem solving, seminars, papers, reports, etc. to be presented or submitted in theoretical lectures, practical and/or small-group tutoring sessions.  Work done on the university e-learning platform ( <a href="http://www.plataforma.ucv.es">www.plataforma.ucv.es</a> )	R- 1, 2, 3, 4, 5	2
Total			(3,6*)

SYSTEM FOR ASSESSING THE ACQUISITION OF THE COMPETENCES AND ASSESSMENT SYSTEM		
Assessment Tool	LEARNING OUTCOMES ASSESSED	Allocated Percentage



Multiple-choice test	R- 1, 2, 3, 4, 5	40 %
Activities	R- 1, 2, 3, 4, 5	20 %
Attendance to practice sessions	R-1, 3, 5	20 %
Practical laboratory	R-3, 4	20 %
Class participation	R- 1, 2, 3, 4, 5	20 %

Note: In order to pass the subject the student must pass both the theoretical and the practical content separately.

**MENTION OF DISTINCTION:**

The mention of Distinction will be awarded to students who have achieved a score equal to or greater than 9.0. The number of Distinctions granted will not exceed 5% of students enrolled in a subject in the corresponding academic year unless enrollment is under 20, in which case only one Distinction may be granted. (Royal Decree 1125/2003).

**DEVELOPMENT OF THE SUBJECT IN SECOND AND SUBSEQUENT ENROLLMENTS:**

There will be a special group for students who are not enrolling for the first time if they exceed the occupancy limit of the classroom and a teacher is assigned to that group.

The professor in charge of this group will conduct 4 follow-up sessions and tutoring for 2 hours each. Assessment of skills and abilities will be done through the scheduled practice sessions. In each session the subject will be developed so as to reinforce the work on the skills that each student needs to pass the course.

Assessment of content and skills will be made during the examination set in the official calendar for this course.

DESCRIPTION OF CONTENTS	COMPETENCES
Introduction to didactics: the teaching-learning process.	E4



Microteaching. Simulation in the classroom.	<b>E4</b>
Previous knowledge: detection and management. Development of ad hoc strategies.	<b>E9</b>
Design of activities in the classroom: adaptation to the course, type of student, center, extension, reinforcement, etc. Cover the widest range of cases possible.	<b>E6</b>
Classroom management: promoting communication and the work environment	<b>E7</b>
Evaluation: bases, tools and application	<b>E9</b>

## REFERENCES

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- [2] DOCV, Decreto 102/2008 de 11 de julio
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- [6] Aguayo, F. y Lama, J. R. (1998). Didáctica de la Tecnología. Ed. Tebar. Madrid.
- [7] Luri, G. (2020). *La escuela no es un parque de atracciones*. Barcelona: Editorial Ariel.
- [8] L'Ecuyer, C. (2020). *Educación en el asombro*. Barcelona: Plataforma Editorial.
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- [13] Guardini, R. (2015). Las etapas de la vida. Madrid: Ediciones Palabra S.A.
- [14] Luri, G. (2014). *Mejor educados*. Barcelona: Ariel.
- [15] Meeker, M. (2009). *Padres fuertes, hijas felices*. Ciudadela Libros S.L.





- [16] Neuvel, K. (2008). *Por qué los niños no son niñas*. Madrid: Cristiandad.
- [17] Contreras, José M. (2001). *Hablar con los hijos*. Barcelona: Ediciones Martínez Roca

**TEMPORAL ORGANIZATION OF LEARNING:**

	CONTENT/TEACHING UNIT
1	Introduction to didactics: the teaching-learning process.
2	Microteaching. Simulation in the classroom.
3	Previous knowledge: detection and management. Development of ad hoc strategies.
4	Design of activities in the classroom: adaptation to the course, type of student, center, extension, reinforcement, etc. Cover the widest range of cases possible.
5	Classroom management: promoting communication and the work environment
6	Evaluation: bases, tools and application



## **Addendum to the Course Guide of the Subject**

### **(Master en Formación del Profesorado de E. Secundaria)**

Due to the exceptional situation caused by the health crisis of the COVID-19 and taking into account the security measures related to the development of the educational activity in the Higher Education Institution teaching area, the following changes have been made in the guide of the subject to ensure that Students achieve their learning outcomes of the Subject:

**Situation 1: Teaching without limited capacity** (when the number of enrolled students is lower than the allowed capacity in classroom, according to the security measures taken).

In this case, no changes are made in the guide of the subject.

**Situation 2: Teaching with limited capacity** (when the number of enrolled students is higher than the allowed capacity in classroom, according to the security measures taken).

In this case, the following changes are made:

#### **1. Educational Activities of Onsite Work:**

**All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject will be made through a simultaneous teaching method combining onsite teaching in the classroom and synchronous online teaching.**



Students will be able to attend classes onsite or to attend them online through the telematic tools provided by the university (videoconferences). In any case, students who attend classes onsite and who attend them by videoconference will rotate periodically.

In the particular case of this subject, these videoconferences will be made through:



Microsoft Teams



Blackboard Collaborate Ultra



Kaltura

### **Situation 3: Confinement due to a new State of Alarm.**

In this case, the following changes are made:

#### **1. Educational Activities of Onsite Work:**

**All the foreseen onsite activities described in this section of the Course Guide,** as well as the group and personalized tutoring, will be done with the telematic tools provided by the University, through:



Microsoft Teams



Blackboard Collaborate Ultra



Kaltura



*Explanation about the practical sessions:*

## 2. System for Assessing the Acquisition of the competences and Assessment System

### ONSITE WORK

#### Regarding the Assessment Tools:

- ☒ The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus.
- ☐ The following changes will be made to adapt the subject's assessment to the online teaching.

Course guide		Adaptation	
Assessment tool	Allocated Percentage	Description of the suggested changes	Platform to be used

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

**Comments to the Assessment System:****ONLINE WORK****Regarding the Assessment Tools:**

- ☒ The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus.
- ☐ The following changes will be made to adapt the subject's assessment to the online teaching.

Course guide		Adaptation	
Assessment tool	Allocated Percentage	Description of the suggested changes	Platform to be used

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.