Information about the subject

Degree: Master's Degree in Teacher Training for Secondary Education, Baccalaureate, Vocational Training and Language Teaching

Faculty: Teaching and Educational Sciences

Code: 1020043 **Name:** Didactics resources for technology education

Credits: 6 **ECTS** **Year:** 2024-25 **Semester:** 2

Module: Specific Module

Subject Matter: Learning and Teaching Technology **Type:** Basic formation

Department: General Didactics, Theory of Education and Technological Innovation

Type of learning: Classroom-based learning

Language(s) in which it is taught: Spanish

Lecturer/-s

Name and surname: **Dra. Dña. Rocío Fernández Piqueras** rocio@ucv.es

Module organization

BASIC THEORETICAL TRAINING

Subject Matter	ECTS	Subject	ECTS	Year/semester
Complements for disciplinary training	6	Technology in Secondary Education	6	1/1
Learning and teaching of the corresponding subjects	12	Didactics of Techonology	6	1/1
		Didactic Resources for Teaching in Technology	6	1/2
Innovation in teaching and introduction to educational research	6	Innovation and Research in Didactics of Technology	6	1/2

Recommended Knowledge

Not required

Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

Code	Learning outcomes
RA	Understand, in its broadest sense, the concept of an educational resource, in order to critically analyse resources and didactic materials.
RB	Use networks of analysis as a tool for critical critical analysis of teaching materials and resources.
RC	Creation and/or adaptation of resources and materials resources and materials for an ordinary classroom, a workshop classroom and a for a virtual classroom in the area of technology
RD	Recognize the importance of the project method for the area of technology and to distinguish the various project models in the area of technology.
RE	Knowing how to work in a technology workshop classroom (equipment, educational methodologies, team building equipment, educational methodologies, team building, standards and safety, etc.).
RF	Acquire criteria for the selection of classroom materials teacher, ICT materials and textbooks
RG	Know how to use a virtual classroom under the platform, providing it with resources and activities for students. Idem for the Classroom platform.

Competences

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

Code	Generals	Weighting			
		1	2	3	4
CG1	Competence in the application of acquired knowledge and problem solving abilities, encountered in new or unfamiliar environments; and, initiated within broader contexts or multidisciplinary scopes relative to one's field of study;			X	
CG2	Capability to integrate knowledge and determine complex judgment calls based on information which incorporates, but is not limited to, reflections on social and ethical responsibilities associated with pertinent knowledge and judgments;			X	
CG3	Knowledge of effectively communicating summations (and sustaining relative rational or arguments) to specialized and unspecialized audiences, in a clear and unambiguous manner.				X
CG4	Having learned skills that enable them to continue studying in a self-directed or autonomous manner within the majority of circumstances;			X	
CG5	To Know the curriculum related to the specialization and the didactics of teaching and learning. A knowledge of the different professions will be included for vocational training.				X
CG6	To plan, develop and evaluate the teaching and learning process enhancing educational activities to facilitate the acquisition of the different competences, taking into account the level and previous training of students to guide them, both individually and in collaboration, with other teachers and school professionals.				X
CG7	To look for, obtain, process and communicate information (oral, printed, audiovisual, digital, or multimedia), transforming it into knowledge that will be applied in the teaching and learning process.				X
CG8	To set the curriculum that will be established in a school. Develop and implement teaching methodologies, for both groups and individually, taking into account the diversity of students.		X		
CG9	To design and develop learning processes with special attention to equity, education and emotional values, equal rights and opportunities between men and women, civic education and respect for human rights that make life easier in our society, making decisions and building a sustainable future.		X		
CG10	To acquire strategies to encourage student effort and enhance their capacity to learn by themselves and with others, and develop thinking skills and decision-making abilities to facilitate autonomy, confidence and personal initiative.				X
CG11	To know the processes of interaction and communication in the classroom, mastering social skills necessary to promote learning and coexistence together in the classroom, dealing with problems of discipline and conflict resolution.		X		

CG12	To design and carry out formal and informal activities that make the center a place of participation and culture in the environment where it is located. Perform the functions of mentoring and guiding students in a collaborative and coordinated way. Participate in the evaluation, research and innovation of teaching and learning.			X	
CG13	To know the rules and institutional organization of the education system and models of quality in schools.	X			
CG14	To know and analyze the historical characteristics of the teaching profession, its current status, perspectives and interaction with the social reality of the time.	X			
CG15	To inform and advise families about the process of teaching and learning and personal counseling, to know the academic and professional development of their children.	X			

Code	Specifics	Weighting			
		1	2	3	4
CE1	To know the cultural and educational value of the specific subjects and the content that is taught.			X	
CE2	To know the history and perspectives of the classroom subjects in order to transmit a dynamic point of view.		X		
CE3	E3. To know contexts and situations in which the various course content is used or applied.		X		
CE4	To know the theoretical and practical processes in teaching and learning different classroom subjects.	X			
CE5	To transform the educational plan in work activities.			X	
CE6	To acquire some criteria to select and develop educational resources.				X
CE7	To foster a climate that facilitates learning and evaluates the contributions of the students.		X		
CE8	To integrate in the teaching-learning process a training for the use of media studies.				X
CE9	To learn strategies and evaluation techniques and to understand the evaluation as a tool to regulate and encourage the effort	X			
CE10	To know and apply innovative teaching proposals in the field of specialization.		X		
CE11	To analyze critically the process of teaching, the practicum and the direction using quality indicators.		X		
CE12	To identify the problems of teaching and learning and to propose alternatives and solutions.			X	
CE13	To understand and apply methods and techniques of research and evaluation and to be able to design and develop research, innovation and evaluation.	X			X

Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
RA, RB, RC, RD, RE, RF, RG	40%	Summative and final theoretical-practical test (open questions, objective test questions, practical case solutions, single case, etc.).
RC, RD, RE, RG	40%	Process evaluation: portfolios, presentation of work, guides, oral and written evidence of all types of activities.
RB, RC, RE, RG	10%	Oral presentation of group and individual works.
RA, RB, RC, RD, RE, RF, RG	20%	Continuous evaluation: individual monitoring of attendance at face-to-face sessions and active participation in theoretical-practical classes, seminars, tutorials and field work.

Mention of Distinction: *In accordance with the regulations governing the assessment and grading of subjects in force at UCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to students who have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours with Distinction) may not exceed five percent of the students enrolled in the group for the corresponding academic year, unless the number of enrolled students is fewer than 20, in which case a single "Matrícula de Honor" (Honours with 9 Distinction) may be awarded.*
Exceptionally, these distinctions may be assigned globally across different groups of the same subject. Nevertheless, the total number of distinctions awarded will be the same as if they were assigned by group, but they may be distributed among all students based on a common criterion, regardless of the group to which they belong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determined according to the guidelines stipulated by the professor responsible for the course, as detailed in the "Observations" section of the evaluation system in the course guide.

Single evaluation: *Exceptionally, those students who, for unforeseen, justified and accredited reasons, cannot undergo the continuous evaluation system and request it from the Coordination of the specialty, within the first month of teaching, may opt for this evaluation system.*
In this case, it will be evaluated as follows: the student will submit, through UCVnet, all the work carried out during the course, within the established deadlines. Likewise, you will take the evaluation test on the date assigned for this purpose.

Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

M1	Supervised monographic sessions with shared participation
M2	Application of interdisciplinary knowledge
M3	Personalized and small group attention. Period of instruction and/or orientation carried out by a tutor with the objective of reviewing and discussing the materials and topics presented in classes, seminars, readings, completion of assignments, etc.
M4	Set of oral and/or written tests used in the initial, formative or additive evaluation of the student.
M5	Group preparation of readings, essays, problem solving, seminars, papers, reports, etc. to present or deliver in theoretical classes, practical classes and/or small group tutorials. Work done on the UCVnet
M6	Student study: Individual preparation of readings, essays, problem solving, seminars, papers, reports, etc. To present or deliver in theoretical classes, practical classes and/or small group tutorials. Work done on the UCVnet
M7	Presentation of content by the teacher, analysis of competencies, explanation and demonstration of capabilities, skills and knowledge in the classroom.
M8	Group work sessions in groups supervised by the teacher. Case studies, diagnostic analysis, problems, field study, computer classroom, visits, data search, libraries, online, Internet, etc. Meaningful construction of knowledge through student interaction and activity.

IN-CLASS LEARNING ACTIVITIES		
Activity	**Learning Outcomes**	**ECTS**
IN-PERSON CLASS: Presentation of content by the teacher, analysis of competencies, explanation and demonstration of capabilities, skills and knowledge in the classroom.	RA, RB, RC, RD, RE, RF, RG	1
PRACTICAL CLASSES: Group work sessions in groups supervised by the teacher. Case studies, diagnostic analysis, problems, field study, computer classroom, visits, data search, libraries, online, Internet, etc. Meaningful construction of knowledge through student interaction and activity.	RB, RC, RD, RE, RF, RG	1
SEMINAR: Supervised monographic sessions with shared participation	RE, RG	0,2
EXHIBITION OF GROUP WORKS: Application of interdisciplinary knowledge	RB, RC, RE, RF, RG	0,1
TOURING: Personalized and small group attention. Period of instruction and/or orientation carried out by a tutor with the objective of reviewing and discussing the materials and topics presented in classes, seminars, readings, completion of assignments, etc.	RC, RE, RF, RG	0,05
EVALUATION: Set of oral and/or written tests used in the initial, formative or additive evaluation of the student.	RA, RB, RC, RD, RE, RF, RG	0,05
	Total	**2,4**

LEARNING ACTIVITIES OF AUTONOMOUS WORK		
Activity	**Learning Outcomes**	**ECTS**
Group preparation of readings, essays, problem solving, seminars, papers, reports, etc. to present or deliver in theoretical classes, practical classes and/or small group tutorials. Work done on the UCVnet	RA, RB, RC, RD, RE, RF, RG	2,3
Student study: Individual preparation of readings, essays, problem solving, seminars, papers, reports, etc. to present or deliver in theoretical classes, practical classes and/or small group tutorials. Work done on the university platform	RA, RB, RC, RD, RE, RF, RG	2,3
	Total	**3,6**

Description of the contents

Description of the necessary contents to acquire the learning outcomes:

CONTENT BLOCK	Contents
Definition of a teaching resource and its relationship to the area of Technology.	Structure and functions of teaching resources. Typology of resources/learning aids. Analysis networks as an example of a teaching resource. Analysis of on-line materials and resources in the area of technology.
Classroom resources.	Materials for the technology teacher. ICT resources in the area of technology. Analysis and development of resources and materials for technology classes.
The project method as a teaching resource.	The teaching-learning process through the implementation of projects in the technology workshop classroom. Project models in the area of Technologies. Analysis and development of resources and materials for the Technology project.
Resources for the classroom technology workshop.	Description and characteristics of the technology workshop in secondary schools, distribution of materials and equipment of a technology workshop. Safety in the technology workshop. Group work methodologies for the technology workshop classroom. Team building resources. Analysis and development of resources and materials in the technology workshop classroom.
The virtual classroom in the teaching-learning process, applied to the area of technology.	Approach to e-learning, basic notions of LMS platforms. The free distribution platform moodle. Analysis and development of resources and materials from a moodle course for the teaching-learning process of technology in secondary school. Analysis, use and development of resources and materials from the Classroom platform.

Temporary organization of learning

BLOCK OF CONTENT/DICACTIC UNIT	Number of sessions	Hours
Definition of a teaching resource and its relationship to the area of Technology.	1	2,5
Classroom resources.	3	7,5
The project method as a teaching resource.	3	7,5
Resources for the classroom technology workshop.	2	5
The virtual classroom in the teaching-learning process, applied to the area of technology.	4	10

References

Esteban, V. C. (2021). Medios, recursos didácticos y tecnología educativa. Editorial UNED.

Gómez Gilaberte, A., Parramón Ponz, E. y Sánchez-Seco, C. (2022). Tecnología y digitalización. Proyecto STAR. Ed. Donostiarra.

Luz, C. G. M. (2018). Educación y tecnología: estrategias didácticas para la integración de las TIC. Editorial UNED.

Moguel, C. (2014). Recursos didácticos y tecnológicos en educación.