COURSE PROGRAM
Academic Year: 2024/2025

Identification and characteristics of the course			
Code	501639 FEYP 501687 FFP 502873 FFP (bilingüe) 502036 CUSA	ECTS Credits	6
Course name (español)	Conocimiento del Medio Natural en Educación Primaria		
Course name (inglés)	Knowledge of the natural environment in primary education		
Degree programs	BA in Primary Education - 4th year		
Faculty/School	Faculty of Education and Psychology Faculty of Teacher Training Santa Ana University Centre		
Semester	7º	Type of course	Compulsory
Module	– Disciplinary didactic module		
Matter	Subject matter: Teaching and Learning of Experimental Sciences		

Lecturer/s			
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Subject Area	Teaching Experimental Sciences (Science Education)
Department	Teaching Experimental Sciences and Mathematics
Coordinating Lecturer (If more than one)	Isaac Corbacho Cuello (Inter-Faculty and Faculty of Education and Psychology coordinator) Carmen Conde Núñez (Faculty of Teacher Training coordinator)

	Luis Ramírez Manchón (Santa Ana University Centre coordinator)

Competencies
GC1 - To know the curricular areas of primary education, the interdisciplinary relationship between them, the evaluation criteria and the body of didactic knowledge about the respective teaching and learning procedures.
GC2 - To design, plan and evaluate teaching-learning processes, both individually and in collaboration with other teachers and professionals of the school.
GC4 - To design and regulate learning spaces in contexts of diversity that address gender equality, equity and respect for human rights that conform the values of citizenship education.
GC8 - To maintain a critical and autonomous relationship with respect to knowledge, values and public and private social institutions.
GC9 - To value individual and collective responsibility in achieving a sustainable future.
GC10 - To reflect on classroom practices to innovate and improve teaching. To acquire habits and skills for autonomous and cooperative learning and promote them among students.
BC1 - That students have demonstrated to 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 coursebooks, it also includes some aspects that imply knowledge coming from the forefront of his field of study.
BC3 - That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant issues of social, scientific or ethical nature.
BC4 - That students can transmit information, ideas, problems and solutions to a specialized and non-specialized audience.
CCC1.1 - CCC1.1 - To present ideas, problems and solutions publicly, in a logical, structured way, both orally and in writing at level C1 in Spanish, in accordance with the Common European Framework of Reference for Languages.
CCC 1.3 - To use new information technologies as a tool for intellectual work and as an essential element for accessing information, learning and communicating .
CCC 1.4 - To manage and use social and interpersonal skills in relationships with other people and work cooperatively in multidisciplinary groups.
CCC 2.3 – To keepupdated with knowledge in the socio-educational field through research and know how to analyse future trends.
CCC3 - To acquire and manifest an ethical commitment as professionals, a commitment that must promote the idea of comprehensive education, with critical and responsible attitudes, guaranteeing the effective gender equality, equal opportunities, universal accessibility for people with special needs and the values of a culture of peace and democratic values.
SC25 - To understand the basic principles and fundamental laws of experimental sciences (Physics, Chemistry, Biology and Geology).
SC26 - To know the school curriculum of these sciences: (Knowledge of the Natural Environment in Primary Education).
SC 29 - To recognise the mutual influence between science, society and technological development, as well as the relevant civic behaviours, in order to ensure a sustainable future.
SC 30 - To develop and assess curriculum content through appropriate teaching resources and promote the acquisition of basic competences in students: Experimental Sciences.
Contents

Brief description of the content
The content of the course will focus on the following issues: - Study of the immediate environment and its didactics. - Problem solving and practical work in the classroom and laboratory. - The cultural value of science. - Didactic projection of the relationship between science, technology and society. - Projects and didactic units in the classroom. Teaching resources and materials. - Interdisciplinarity in the teaching/learning of science. - Special educational needs in the teaching/learning of science.
Course syllabus
Name of lesson 1: **Current challenges of scientific education.** Contents of lesson 1: Relationship between Science, Technology and Society from a didactic perspective. Science education and /cross-curricular topics. Interdisciplinary teaching and science learning. Description of the practical activities of lesson 1: Learning and teaching activities related to scientific education.
Name of lesson 2: **Learning to teach sciences in Primary School through different strategies.** Contents of lesson 2: School research, visits, problem solving, practical projects, project-based work, etc. Description of the practical activities of lesson 2: Learning and teaching activities related to science teaching in Primary School.
Name of lesson 3: **Scientific educational contents in Primary School. Projects and didactic units based on the Knowledge of the Natural Environment curriculum in Primary School. Didactic materials and resources.** Contents of lesson 3: Teaching and learning activities concerning: The environment and its conservation, Diversity of living organisms, Health and personal development, Matter and Energy, and Technology, objects and machines. Description of the practical activities of lesson 3: Learning and teaching activities related to scientific educational contents in Primary School.

Educational activities

Student workload in hours by lesson		Lectures	Practical activities				Monitoring activity	Homework
Lesson	**Total**	**L**	**HI**	**LAB**	**COM**	**SEM**	**SGT**	**PS**
1	35	12		3				20
2	38	12		6				20
3	75	19		6				50
Assessment[**]	2	2						
TOTAL	150	45		15				90

L: Lectures (85 students)
HI: Hospital internships (7 students)
LAB: Laboratory or field practices (15 students)
COM: Computer room or language laboratory practices (20 students)
SEM: Problem classes or seminars or case studies (40 students)
SGT: Scheduled group tutorials (educational monitoring, ECTS type tutorials)
PS: Personal study, individual or group work and reading of bibliography

** Indicate the total number of evaluation hours of this subject.

Teaching Methodologies

1. Verbal exposition. Directive teaching methodology. Lectures aimed at exposing the different concepts and procedures associated with the subject with the help of bibliographic and audiovisual materials.
2. Discussion and debate. The verbal presentation is combined with discussion activities and questions to be answered by the students so that they can build new concepts based on previous knowledge (related to other subjects already studied or with other topics of the program with which there are important interrelations).
3. Viewing and discussing about audiovisual materials (documentaries, films, etc.).
4. Exams. This activity aims to assess the learning outcomes of students in relation to the objectives or competencies that arise in the syllabus of the courses that that make up a subject area.
5. Analysis and discussion of bibliographic and audiovisual materials.
6. Project Design: This activity aims to guide and coordinate various aspects of the project (defining the scope of the work, selecting bibliographic sources, structuring, etc.) independently, either individually or in small groups.
7. Guidance, decision-making and resolution of the questions raised by the student. Monitoring individual or small groups projects. Individual and group consultation and advising.
8. Reading references before lectures.
9. Study of the subject and exams preparation.

Learning outcomes

- To explain, relate and apply the most relevant concepts and procedures of the general foundations of Natural Sciences.
- To conceptualise and critically analyse aspects related to Science, Technology and Society and their development in Primary School.
- To know the general theories of Didactics of Science necessary to contextualise, adapt and apply the methodology and didactic contents of Natural Sciences in the Primary Education classroom.
- To assess report writing, valuing scientific-didactic knowledge, correct language use, the capacity to interrelate and synthesize, as well as active participation.
- In-depth knowledge of the contents of subjects related to the Knowledge of the Natural Environment in Primary Education and the Didactics of Experimental Sciences.

Assessment systems

In accordance with the Regulations for the Assessment of Official Undergraduate and Master's Degrees of the University of Extremadura (Resolution of 26 October 2020), assessment may be **CONTINUOUS or GLOBAL**:

Evaluation System	Typology of Activities	Weighting
Continuous assessment system	Written test	60%
	Seminars and practical practical activities in class and class and the virtual campus	40%

Global assessment systme	Final exam of a global nature global (which will consist of a written test that covers all the aspects covered in the dealt with in the subject)	100%

- **- Continuous assessment system:** For passing the course it is mandatory to achieve a minimum mark of 5 in each of the two parts. The assessment will consider correct language use, including proper spelling and grammar, both in written tests and in assignments. Seminars and practical activities conducted in class and on the online campus **are not recoverable** in ordinary exams, but they are recoverable in extraordinary exams by means of a specific written test on the contents of the seminars and activities, which must be passed.

- **- Global assessment system:** The final exam in the global assessment system will consist of two parts: a) the same general exam as the continuous assessment students, and b) a specific test on the contents of the seminars and activities. It is mandatory to achieve a minimum score of 5 in both both parts in order to pass

The choice of the overall assessment method is up to the students, who may choose it during the first quarter of the course period, for each of the exam dates (ordinary and extraordinary). To this end, the teaching staff will manage these requests through a specific space created for this purpose on the Online Campus. In the absence of an express request from the student, the modality assigned will be that of continuous assessment.

Bibliography (basic and complementary)

Basic bibliography:

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CAÑAL, P. (Coord.), GARCÍA-CARMONA, A., & CRUZ-GUZMÁN, M. (2016). Didáctica de las Ciencias Experimentales en Educación Primaria . Paraninfo: Madrid.
GARRIDO, J. M.; PERALES, J.J.; y GALDÓN, M. (2008). Ciencia para educadores. Pearson educación: Madrid.
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JIMÉNEZ-ALEIXANDRE, Mª. P. (Coord.). (2003). Enseñar Ciencias (Serie Didáctica de las ciencias experimentales). Graó: Barcelona.
MARTÍN DEL POZO, R. (Coord.). (2013). Las ideas "científicas" de los alumnos y alumnas de primaria: Tareas, dibujos y textos . Universidad Complutense: Madrid.
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PUJOL, R.Mª. (2003). Didáctica de las ciencias en la educación primaria . Síntesis: Madrid.
RIVERO, A., MARTÍN DEL POZO, R., SOLÍS, E. & PORLÁN, R. (2017). Didáctica de las Ciencias Experimentales en Educación Primaria . Síntesis: Madrid.

SEGURA, D.J.; MOLINA, A.; y PEDREROS, R. (1997). Actividades de investigación en la clase de ciencias . Díada editora: Sevilla.
VILCHEZ GONZÁLEZ, J.M. (Coord.) (2014). Didáctica de las Ciencias para Educación Primaria. I- Ciencias del espacio y de la Tierra. Madrid: Pirámide.
VV. AA. (2009). Hacemos ciencia en la escuela . Graó: Barcelona.
WASS, S. (1992). Salidas escolares y trabajo de campo en la educación primaria . Morata:Madrid.

Supplementary bibliography:

ACEVEDO, J.A. (2004). Reflexiones sobre las finalidades de la enseñanza de las ciencias: educación científica para la ciudadanía. Revista Eureka sobre la Enseñanza y Divulgación de las Ciencias, 1(1), 3-16 , http://reuredc.uca.es/index.php/tavira/index .
ACEVEDO, J.A. (2005). Proyecto ROSE: relevancia de la educación científica. Revista Eureka sobre la Enseñanza y Divulgación de las Ciencias, 2(3), 440-447, http://reuredc.uca.es/index.php/tavira/index
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Other resources and complementary educational materials

Relevant LEGISLATION:
- Decreto 103/2014, 10 de Junio. DOE 16 de junio. Por el que se establece el Currículo de Educación Primaria para la Comunidad Autónoma de Extremadura.
- Ley Orgánica 3/2020, de 29 de diciembre, por la que se modifica la Ley Orgánica 2/2006, de 3 de mayo, de Educación.
- Real Decreto 157/2022, de 1 de marzo, por el que se establecen la ordenación y las enseñanzas mínimas de la Educación Primaria.

Science web materials on educational portals.
In the **Virtual Campus** of the subject will appear bibliographic, documentary and webgraphy sources, which allow to find updated material related to the topics worked on.