

**COURSE DATA****Data Subject**

Code	33678
Name	Teaching proposals for sciences and mathematics
Cycle	Grade
ECTS Credits	6.0
Academic year	2023 - 2024

Study (s)

Degree	Center	Acad. year	Period
1305 - Degree in Primary School Education	Faculty of Teacher Training	3	First term

Subject-matter

Degree	Subject-matter	Character
1305 - Degree in Primary School Education	18 - Specialist in science and mathematics	Optional

Coordination

Name	Department
GUTIERREZ SOTO, JUAN	85 - Mathematics Education
HURTADO SOLER, DESAMPARADOS	90 - Methodology of experimental and social sciences

SUMMARY**English version is not available**

“*Propuestas didácticas con ciencias y matemáticas*” se orienta al análisis de los contenidos en ciencias y matemáticas de la etapa de Educación Primaria, con un enfoque curricular. Se pretende estudiar, fundamentar, seleccionar, diseñar o elaborar y evaluar, propuestas y actividades didácticas que sustenten y favorezcan el la enseñanza y el aprendizaje de las disciplinas científico-técnicas.

Esta asignatura es predominantemente práctica y junto con otras asignaturas conforman el itinerario de *Especialista en Ciencias y Matemáticas*. Enlaza con la materia de “*Didáctica de las Ciencias Naturales*”, “*Didáctica de las Matemáticas*” y el *Practicum* permitiendo a los futuros maestros y maestras aplicar los conocimientos y experiencias adquiridos en ellas.



PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

Ninguno

OUTCOMES

1305 - Degree in Primary School Education

- Express oneself orally and in writing correctly and appropriately in the official languages of the autonomous region.
- Use information and communication technologies effectively as usual working tools.
- Analyse critically the most relevant issues in today's society that affect family and school education: social and educational impact of audiovisual languages and of screens; changes in gender and inter-gender relations; multicultural and intercultural issues; discrimination and social inclusion, and sustainable development; Also, carry out educational actions aimed at preparing active and democratic citizens, committed to equality, especially between men and women.
- Promote cooperative work and individual work and effort.
- Assume that teaching must be perfected and adapted to scientific, pedagogical and social changes throughout life.
- Know the processes of interaction and communication in the classroom.
- Recognise the identity of each educational stage and their cognitive, psychomotor, communicative, social and affective characteristics.
- Design, plan and evaluate teaching and learning classroom activities in multicultural and co-educational contexts.
- Know how to work as a team with other professionals within and outside the school to attend to each student, to plan the learning sequences and to organise work in the classroom and in the play space.
- Know and apply basic educational research methodologies and techniques and be able to design innovation projects identifying evaluation indicators.
- Understand that systematic observation is a basic tool that can be used to reflect on practice and reality, and to contribute to innovation and improvement in education.
- Identify and plan the resolution of educational situations that affect students with different abilities and different learning rates, and acquire resources to favour their integration.
- Use information and communication technologies as a teaching resource for science and mathematics in the primary school classroom.



- Develop and evaluate teaching proposals mathematics curriculum contents.
- Develop and evaluate teaching proposals for sciences curriculum contents.
- Develop and evaluate teaching proposals for the curriculum in areas other than science and mathematics in which concepts and tools specific to science and mathematics are used.
- Know the historical evolution of some mathematical ideas and their reflection in the contents of school mathematics.
- Know the historical evolution of some scientific ideas and their reflection in the contents of school sciences.
- Know the joint historical evolution of some scientific and mathematical ideas and their reflection in school contents.

LEARNING OUTCOMES

English version is not available

WORKLOAD

ACTIVITY	Hours	% To be attended
Theoretical and practical classes	60,00	100
Study and independent work	90,00	0
TOTAL	150,00	

TEACHING METHODOLOGY

English version is not available

EVALUATION

English version is not available

REFERENCES

Basic

- Currículum oficial de Matemáticas de E. Primaria de la Comunidad Valenciana.



- FRIED, A. (2000). Enseñar ciencia a los niños. Ed. Gedisa.
- HARLEN, W. & QUALTER, A. (2009) The teaching of Science in Primary Schools. 5 th edition. David Fulton Ed.
- HARLEN, W. (2007). Enseñanza y aprendizaje de las ciencias. Ediciones Morata Ministerio de Educación y Ciencia.
- JIMÉNEZ ALEIXANDRE, M.P.; A. CAAMAÑO; A. OÑORBE; E. PEDRINACI y A. DE PRO. (2007). Enseñar Ciencias. 2º Edición. Editorial GRAÓ.
- MEMBIELA, P. (2001). Enseñanza de las ciencias desde la perspectiva ciencia-tecnología-sociedad. Formación científica para la ciudadanía. Editorial Narcea.
- PERALES, F. J. y CAÑAL, P. (2000). Didáctica de las ciencias experimentales. Teoría y práctica de la enseñanza de las ciencias. Alcoi: Marfil.
- RAMIRO, Enric. (2010). La maleta de la ciencia. Ed. GRAÓ: Barcelona.

Additional

- Manuales escolares o libros de texto.
- DE PRO BUENO, A. (2010). Competencia en el conocimiento e interacción con el mundo físico: la comprensión del entorno próximo. Madrid: Ministerio de Educación, Subdirección General de Documentación y Publicaciones.
- OECD (2000). Measuring student knowledge and skills: The PISA assessment of reading, mathematical and scientific literacy. París: OECD. Traducción de G. Gil Escudero, J. Fernández García, F. Rubio Miguelsanz, C. López Ramos y S. Sánchez Robles (2001), La medida de los conocimientos y las destrezas de los alumnos: La evaluación de la lectura, las matemáticas y las ciencias en el proyecto PISA 2000. Madrid: INCE/MECD.
- RAMIRO, Enric. (2010). La maleta de la ciencia. Ed. GRAÓ: Barcelona.
- SEP (2003). Taller de diseño de propuestas didácticas y análisis del trabajo docente I y II. Secretaría de Educación Pública, México.
- A lo largo del curso se propondrán direcciones de internet y bibliografía complementaria.