

GUÍA DOCENTE DE LA ASIGNATURA

(curso 2022/23)

Titulación	GRADO DE MAESTRO EN EDUCACIÓN PRIMARIA
Plan de Estudios	ORDEN ECI/3857/2007, de 27 de diciembre, por la que se establecen los requisitos para la verificación de los títulos universitarios oficiales que habiliten para el ejercicio de la profesión de Maestro en Educación Primaria (BOE 29/12/2007). https://www.boe.es/boe/dias/2007/12/29/pdfs/A53747-53750.pdf

Asignatura		Créditos ECTS	6
Código	800456	Idioma	Inglés
Carácter	Optativa	Curso	2º
Módulo			
Materia			

EQUIPO DOCENTE		
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1.- PRESENTACION

Las Ciencias de la Tierra en la Escuela, or Earth Sciences at School, is a subject that is carried out in English in the second year of the primary teachers degree.

This subject deals with the scientific and didactic foundations necessary to develop the contents related to the Earth Sciences in primary education.

Students will understand the basic principles of Earth Sciences, address and solve problems of everyday life related to these sciences and develop and evaluate the contents of the curriculum with appropriate didactic resources.

2.-COMPETENCIAS

Generales	CG8. Diseñar estrategias didácticas adecuadas a la naturaleza del ámbito científico concreto, partiendo del currículo de Primaria, para el área de Ciencias Experimentales.
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Transversales	CT4. Dominar estrategias de comunicación interpersonal en distintos contextos sociales educativos. CT7. Valorar la importancia del trabajo en equipo y adquirir destrezas para trabajar de manera interdisciplinar dentro y fuera de las organizaciones, desde la planificación, el diseño, la intervención y la evaluación de diferentes programas o cualquier otra intervención que lo precisen. CT10. Conocer y utilizar las estrategias de comunicación oral y escrita y el uso de las TIC en el desarrollo profesional. CT12. Conocer y aplicar los modelos de calidad como eje fundamental en desempeño profesional CT13. Adquirir la capacidad de trabajo independiente, impulsando la organización y favoreciendo el aprendizaje autónomo. CT14. Aplicar el uso oral y escrito de una lengua extranjera en el desarrollo de la titulación. CT15. Reconocer la mutua influencia entre ciencia, sociedad y desarrollo tecnológico, así como las conductas ciudadanas pertinentes, para procurar un futuro sostenible.
Módulo	CM 8.13 Aplicar los conocimientos científicos al hecho educativo, profundizando en el ámbito didáctico disciplinar en diversos campos del saber, dirigidos especialmente a la resolución de problemas de la vida diaria.
Materia	CM8.13.1 Conocer la utilización del trabajo de tipo experimental como un recurso importante en la Enseñanza de las Ciencias Naturales CM8.13.2 Analizar la importancia de la Educación Ambiental como imprescindible para mejorar la calidad de vida.

3.- RESULTADOS DE APRENDIZAJE

Al superar la asignatura se espera que el alumnado:

Specific training in the process of teaching and learning Earth Sciences in the primary education stage.

Understanding of the basic principles and fundamental laws of natural sciences applied to complex phenomena that affect us.

Knowledge of the school curriculum of Nature Sciences in the Primary Education stage.

Development and evaluation of the curriculum contents through appropriate didactic resources to achieve the development of the corresponding competences in primary students.

Ability to understand science as a cultural fact.

Awareness of the mutual influence between science, society and technological development, as well as the necessary citizen behavior to ensure a sustainable future.

According to the CEFR, the level B2's user should be capable of carrying out the following linguistic skills:

• Understanding:

o Listening:

- Can understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar.

- Can understand most TV news and current affairs programmes.

- Can understand the majority of films in standard dialect.
- o Reading:
 - Can read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints.
 - Can understand contemporary literary prose.
- Speaking:
 - o Spoken interaction:
 - Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible.
 - Can take an active part in a discussion in familiar contexts, accounting for and sustaining my views.
 - o Spoken production:
 - Can present clear, detailed descriptions on a wide range of subjects related to my field of interest.
 - Can explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.
- Writing:
 - o Writing:
 - Can write clear, detailed text on a wide range of subjects related to my interests.
 - Can write an essay or report, passing on information or giving reasons in support of or against a particular point of view.
 - Can write letters highlighting the personal significance of events and experiences.

4.- CONTENIDOS

- UNIT 1. Earth Sciences in Primary Education.
- UNIT 2. Earth in the Universe.
- UNIT 3. Atmosphere and weather.
- UNIT 4. Ecosystems.
- UNIT 5. Natural resources and sustainability.

5.- METODOLOGÍA DOCENTE Y ACTIVIDADES DE APRENDIZAJE

Autonomous and student-centered learning will be promoted, taking into account previous knowledge to favor meaningful, integrated and functional learning. The development of the scientific competence of the students will be promoted through meaningful learning situations.

In the classroom, the contents and development of the skills associated with this subject will be worked on through active methodologies and thinking routines.

Tools to make the learning process visible as well as its results, such as the portfolio, will be used to favor the development of students' metacognition and simultaneously provide them with a resource to improve their training process making the most of it.

The development of interdisciplinary activities seeking holistic and comprehensive knowledge of the world will be promoted.

The 5E methodology for learning natural sciences will be used and studied in this subject.

Science Bits tool will be required to follow the work of the subject.

5.1.- Actividades formativas

ACTIVIDAD/ TIPOLOGÍA	DESCRIPCIÓN GENERAL	COMPETENCIAS ASOCIADAS	ECTS ¹ (horas)
Exposición (presencial)	Exposición de los contenidos mediante presentación del profesor de los aspectos esenciales de las materias.	CM1.1.1; CM 1.1.2; CM1.1.3; CM1.2.4; CM 1.1.6; CM 1.2.1; CM 1.2.2.; CM 2.1.2; CM2.1.4; CM 2.1.5; CM 2.1.8; CM 2.1.9	15% de la carga del módulo 172,5h/ECTS
Actividades prácticas (presencial)	Clases prácticas en el aula, laboratorio o seminario, individuales o en pequeño grupo, para la realización de actividades y resolución de problemas propuestos por el profesor.	CM 1.2.4; CM 1.1.5; CM 1.1.7; CM 2.1.1.; CM 2.1.5; CM 2.1.6; CM 2.1.7	10% de la carga del módulo 115h/ECTS
Tutorías (presencial)	Tutorías iniciales de proceso y finales para el seguimiento de los logros de aprendizaje	CM 2.1.6	2,5% de la carga del módulo 28,75h/ECTS
Trabajos tutelados (no presencial)	Trabajo de campo y realización de proyectos tutelados individuales o en pequeño grupo	CM 2.1.3; CM 2.1.7; CM 2.1.8	10% de la carga del módulo 115h/ECTS
Estudio independiente (no presencial)	Trabajo independiente del alumno para la consulta de bibliografía y el estudio de los contenidos de las materias	CM1.1.1; CM 1.1.2; CM1.1.3; CM1.2.4; CM 1.1.6; CM 1.2.1; CM 1.2.2.; CM 2.1.2; CM 2.1.4; CM 2.1.5; CM 2.1.8; CM 2.1.9; CM 2.1.6	60% de la carga del módulo 690h/ECTS
Campus Virtual (no presencial)	Utilización de las Tic para favorecer el aprendizaje, como instrumento de consulta, tutoría online y foro de trabajo.	CM 2.1.8	2,5% de la carga del módulo 28,75h/ECTS

6.- EVALUACIÓN

6.1. Sistema de Evaluación

El sistema de calificación se realiza según los criterios descritos en el **RD1125/2003**

<https://www.boe.es/buscar/pdf/2003/BOE-A-2003-17643-consolidado.pdf>

6.2. Técnicas de Evaluación

TÉCNICA	TIPO DE PRUEBA	PONDERACIÓN
Pruebas escritas	Examination at the end of the semester of all the contents worked in the semester.	40%

¹ Conforme el reparto de créditos ECTS que aparece en la memoria verificada en la materia a la que pertenece esta asignatura.

	It will have two parts: a multiple choice one that applies for 60-70% of the final mark, and an open question part for the 30-40% left. 50% will be required to pass the course.	
Proyectos	From 1 to 3 projects will be carried out in groups during the semester. Both the development and final result will be evaluated. When the projects are in groups, individual aspects will be included for the final grade of this evaluation technique. The requirements of the project will be specified in class and/or on the virtual campus. 50% will be required to pass the course	30%
Debates y exposiciones		
Casos prácticos		
Otros	Individual or group activities will be performed: content search, analysis, critical thinking, estimates, reasoning, etc. Between one and four activities for each unit. The value of each activity will be allocated taking into account the number of activities performed as well as their complexity and duration. 50% will be required to pass the course	30%

6.3.- Criterios de Evaluación

GENERALES:

- Para obtener la nota final aprobada, es necesario alcanzar al menos el 50% de la puntuación máxima en cada una de las técnicas de evaluación.
- Para la cita y referencia de fuentes de información de los trabajos académicos, los alumnos deben seguir las recomendaciones de las normas APA 7ª ed.
- El plagio y los intentos de engaño en las técnicas de evaluación supondrá la pérdida de la convocatoria en curso.
- Entendemos que el alumnado universitario tiene asumidas las capacidades lingüísticas en relación a la expresión oral y escrita. Por tanto, es primordial y obligatorio la corrección ortográfica (ortografía, acentuación y puntuación), gramatical y léxica en los trabajos y exámenes realizados como condición imprescindible para superar la asignatura. Este criterio será detallado en cada una de las técnicas de evaluación

Sin embargo, quedarán exentos de la aplicación de este criterio de calificación todas aquellas personas que acrediten presentar una Necesidad Específica de Apoyo Educativo acreditados a través del SQUAE.

Assessment and grading will be considered according to how well the work of the student suits what is requested. The requirements of each activity will be specified when it is proposed.

Deadlines and channels for delivery must be considered. They will be established and communicated in class or in the virtual campus. Students must be aware of the need to handle this information in order to take it into account. In exceptional and justified cases, some works may be collected after the deadline as long as it makes sense within the educational process at the discretion of the teacher and with a penalty of 5% on the final grade as a general criterion.

Attendance and participation will be considered when in class activities are carried out. When a student misses any of these activities due to a major cause that can be academically justified, the student should contact the teacher as soon as possible to justify it and find out how to make up the activity considered: in advance when the absence can be foreseen, or afterwards within a maximum period of three days if it was due to something that happened at the last minute. Students are expected to attend

class. Students' commitments that fight this attendance will not be considered justified absences for the purposes of the evaluation of in class activities.

In the presentation of activities and works, the following features will be positively valued:

- rigorous employment of the subject theoretical contents;
- good verbal and/or written communication skills;
- active and respectful participation towards the rest of the students and the teaching staff;
- contextualization of the concepts studied and recognition of their evidence in daily life;
- careful, clean and ordered look, in both written and oral presentations;

"Those students who hold a language certificate from the following Table, obtained less than 5 years before, with a higher level than the one from the course, have two options:

a) Not to attend lessons: Their final mark will be 5.

b) Attend lessons: Their final mark will be the average of the final exam (50%) and a final paper (50%).

- critical thinking based on knowledge;
- good attitude towards topical scientific and technological issues like the interaction and degradation of the environment;
- correct use of technological tools for achieving concrete objectives;
- relevant use of resources and knowledge of other disciplines, promoting interdisciplinarity;
- creativity.

If the student does not reach 5 in some of the evaluation techniques and therefore does not overcome the subject, but the final weighted average mark is higher than 4.9, a symbolic 4 will be assigned to the final numerical value.

CRITERIOS PARA 2ª CONVOCATORIA

La nota de todas las técnicas aprobadas se guarda para segunda convocatoria teniendo que recuperar las técnicas suspensas.

If the first call is not passed, the approved evaluation techniques will be saved for the second call. The failed evaluation techniques in the first call must be re-evaluated in the second call in order to pass the course.

To pass the written test it will be necessary to take a similar one in the second call.

To pass the other evaluation techniques, an individual assignment will be required. The teacher will share with the students the necessary instructions for its completion through the virtual campus.

ALUMNOS DE SEGUNDAS Y SUCEVAS MATRÍCULAS

Students of second or subsequent enrollment who cannot attend classes on a regular basis will have to pass an exam

that will account for 60% of the final grade of the subject and present an individual research work to be specified by the teacher that will cover the remaining 40% of the final grade of the subject.

Students of second or subsequent enrollments who can attend classes on a regular basis may choose to be evaluated using the same assessment techniques as students of first enrollment.

In any case, students in this situation must contact the teacher at the beginning of the corresponding semester.

* Para el alumnado de segundas y sucesivas matrículas se tendrán en cuenta los criterios generales de evaluación.

7.- DOCUMENTACIÓN Y RECURSOS

7.1.- Bibliografía Básica

Scientific contents and concepts:

Hall, A., Palmer, E., Millar, R., Whitehouse, M. & others (2011). GCS Science. Oxford University Press.

Tarbuck, E.J., Lutgens, F.K. (2013). Earth Science. Ed. Pearson

Earth Sciences teaching and learning:

Friedl, A.E. (2004). Teaching science to children: an inquiry approach. McGraw-HillBybee, R. (2015), *The BSCS 5E Instructional Model: Creating Teachable Moments*, National Science Teaching Association

Harlen, W., Qualter, A. (2018). The Teaching of Science in Primary Schools. New York: Routledge

Martí Freixas, J. (2012). Aprender ciencias en educación y primaria. Ed. Graó

7.2.- Otros recursos

Webgrafía

- El CSIC en la escuela (<http://www.csicenlaescuela.csic.es/proyectos/proyectosdid.htm>)

- Science in school (<http://www.scienceinschool.org>)

- Science Bits (<http://www.science-bits.com>)

REVISADO Y CONFORME:

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