SUBJECT TEACHING GUIDE

G1247 - Teaching the Natural Environment II

Double Degree in Teaching in Early Childhood Education and Primary Education
Degree in Primary Education Teaching

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Double Degree in Teaching in Early Childhood Education and Primary Education Degree in Primary Education Teaching			Type and Year	Compulsory. Year 5 Compulsory. Year 4
Faculty	School of Teacher Training				
Discipline	Subject Area: Teaching and Learning of Experimental Sciences Module: Training in Teaching and the Discipline				
Course unit title and code	G1247 - Teaching the Natural Environment II				
Number of ECTS credits allocated	6	Term		Semester based (1)	
Web					
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. CIENCIAS DE LA TIERRA Y FISICA DE LA MATERIA CONDENSADA
Name of lecturer	JAIME BONACHEA PICO
E-mail	jaime.bonachea@unican.es
Office	Facultad de Ciencias. Planta: + 2. DESPACHO 2010 (2010)
Other lecturers	JOSE MARIA FERNANDEZ LOPEZ

3.1 LEARNING OUTCOMES
- Students will understand the importance of science (geology and biology) as an integral part of the natural environment and its interactions with technology, society and the environment.
- Students will be able to design educational interventions for facilitating the teaching-learning students, resulting in students with a critical and responsible attitude.
- Students will be involved in studying problems and proposing possible solutions that science education arises from its origins.
- Students will be able to generate attitudes and behaviors for environmental protection and sustainable development.
- Students will be able to correct the most common misconceptions regarding the basic knowledge in Natural Sciences.

4. OBJECTIVES
To know the role of natural sciences in the curriculum of Primary Education Teaching.
To understand the basic principles and fundamental laws of experimental sciences, in particular, geology and biology.
Propose and solve problems linked to the natural sciences.
To integrate the contents of natural sciences within our natural, social and cultural context.
To recognize the reciprocal influence between science, society and technological development, as well as the principles of sustainable development.
To develop and evaluate curriculum contents through appropriate teaching resources and learning to promote the acquisition of basic skills in students.
To promote an attitude of searching educational resources in all contexts in which future teachers taught their lessons.
To learn the importance of teaching natural science outside the classroom.
To promote the scientific curiosity and general interest in Natural Sciences.
To promote the scholar research.
To know the importance of scientific literacy as the basis for personal training and on its application in the classroom.
To promote the use, performance and keeping of laboratories by students.
To introduce students to the use of basic laboratory instruments.

6. SUBJECT PROGRAM	
CONTENTS	
1	Teaching of Natural Sciences, Science and Society. What is science? Concepts of theory, hypotheses and paradigms in science; the scientific method; science literacy. The natural environment in the curriculum of Primary Education Teaching.
2	The Universe and the Solar System. Origin of the Universe. Origin and composition of the Solar System; teaching examples. Formation of the Earth.
3	The Earth system. Atmosphere, hydrosphere, geosphere and biosphere. The Climate. Teaching natural systems.
4	Geology and Paleontology. Basic concepts and principles in geology. Minerals and rocks. External and internal geological processes. Plate tectonics. Paleontology. Brief history of the Earth. Didactical examples for teaching geology and paleontology.
5	Biology and Ecology. Ecosystems: components and interactions; terrestrial ecosystems. Biomolecules. The cell. Origin and evolution of living beings. Types of organisms; domains and kingdoms; biological diversity. The human body. Didactical examples for teaching biology and ecology.
6	Environment. Environmental concept. Main environmental problems. Sustainable development. Environmental teaching.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Working group: 20%; Students, during the teaching period, will carry out a work group, including a minimum of three, and a maximum of six people. This work will consist of the elaboration of a didactic guide, aimed to primary school students, that include	Work	No	Yes	20,00
Exam: 50%; It is an essential requirement to obtain a minimum score of 5 in the exam in order to make the average with other evaluable parts. The exam will consist of questions about theoretical and practical topics developed during the course.	Written exam	Yes	Yes	50,00
Lab practices:30%; The laboratory practices ARE MANDATORY, and due to their own peculiarity, THEY ARE NOT RECOVERABLE, as they require specific material and are developed in the lab. They will be done by pairs. Students must submit, at the end of the educ	Laboratory evaluation	No	No	30,00
TOTAL				100,00

Observations

Laboratory practices require the use of particular types of infrastructure and materials, which are available at specific times throughout school term. Due to the intrinsic characteristics of such practices, they can not be performed on other different periods to the established.
In addition, to laboratory practices, whenever possible, didactic external activities, related to the natural environment, such as school trips or visits to museums, could be carried out. These activities will be optional.

SPELLING RULES, PLAGIARISM AND CITATION RULES THAT WILL BE CONSIDERE IN THE DIFFERENT TASKS DONE BY STUDENTS

SPELLING:
It is understood that university students have assumed linguistic abilities in relation to oral and written expression. Therefore, orthographic correction (spelling, accentuation and punctuation), grammar and lexical in the works and exams carried out as essential to overcome the subject is essential.

PLAGIARISM:
Regarding the fraudulent performance (plagiarism) of the evaluation tests, the qualification will be adjusted to the established in the article 54.1 of the Regulation of the evaluation processes in the University of Cantabria: 'The fraudulent realization of the tests or activities evaluation will directly involve the grade of '0' in the subject '.

CITATION RULES:
Finally, the School Board approved that the Faculty assumes the APA RULES for all academic work as citation criteria .
Although these standards have different editions , as an initial reference we attach the BUC link, hoping that this will be helpful and a reference for its development: http://web.unican.es/buc/recursos/guias-y-tutoriales/guia ? g = 28

Observations for part-time students

Partial-time students must:
- take the final exam,
- deliver a portfolio including laboratory practices,
- Individual thematic work indicated by the teacher.

8. BIBLIOGRAPHY AND TEACHING MATERIALS
BASIC
Curtis, H., Barnes, N.S., Schnek, A. y Massarini, A. (2008) □ Biología. Editorial Médica Panamericana, Buenos Aires: 1160 pp.
Luffiego, M. (coord.) (2005) - Ciencias de la Tierra y del Medio Ambiente. Consejería de Educación del Gobierno de Cantabria, Santander: 337 pp.
Monroe, J.S., Wicander, R. y Pozo, M. (2008) □ Geología. Dinámica y evolución de la Tierra. Paraninfo Cengage Learning, Madrid: 726 pp.
Perales Palacios, F.J. y Cañal de León, P. (2000) □ Didáctica de las Ciencias Experimentales. Colección Ciencias de la Educación. Marfil, Alcoy: 704 pp.
Rocard, M., Csermely, P., Jorde, D., Lenzen, D., Walwerg-Henriksson, H. y Hemmo, V. (2007) - Science Education Now: A Renewed Pedagogy for the Future of Europe. European Commission. Community Research.
Tarbuck, E.J. y Lutgens, F.K. (2005) □ Ciencias de la Tierra. Una introducción a la geología física. Pearson Education, Madrid: 710 pp.