



Didactics of Natural  
and Social Sciences

Master en Bilingual  
Education



UNIVERSIDAD  
NEBRIJA

## TEACHING GUIDE

**Subject:** Didactics of Natural and Social Sciences

**Degree:** Master in Bilingual Education

**Type:** Optional

**Language:** English

**Modality:** Blended and online

**Credits:** 6

**Semester:** 2

**Professor/Available teaching staff::** Dña. Angela Alvarez Cofiño

## 1. COMPETENCES AND LEARNING OUTCOMES

### 1.1. Competences

#### Basic competences

CB6 To possess and understand knowledge that provides the basis and opportunity to be original in the development and application of ideas, often within a research context.

CB7 That students know how to apply the knowledge acquired and the capacity for problem solving in new and lesser-known environments within the broadest (or multi-disciplinary context) in relation to their area of study.

CB8 That students are capable of integrating knowledge and facing the complexity of opinion forming starting from information that, being incomplete or limited, includes reflections on the social and ethical responsibilities that are linked to the application of opinions and judgements.

CB9 That students know how to communicate their conclusions, and the knowledge and reasoning that supports them to a specialist and non-specialist public in a clear and unambiguous manner.

CB10 That students possess the learning ability that allows them to continue studying in a way that will be largely self-directed or autonomous.

#### General competences

CG2 To know about the specific problems of foreign language teaching in both linguistic and cultural terms in a bilingual environment.

CG3 To apply the knowledge acquired in decision making in relation to the different factors involved in the teaching and learning of foreign languages.

CG5 To be capable of transmitting social and cultural values in accordance with the current multilingual and multicultural reality.

CG7 To acquire basic theoretical knowledge designed as the foundation of an informed teaching practice in an environment of bilingual education.

CG8 To know the legislation and regulations with reference to the ordination and organisation of bilingual centres.

#### Specific competencies

CE1 To design integrated syllabuses combined with linguistic content within their area of knowledge to create English/Spanish bilingual teaching programmes.

CE2 To create and adapt didactic materials for English/Spanish bilingual education, modifying the linguistic level with awareness of different rhythms of learning, and adapting authentic materials to transform them into didactic material.

CE3 To know about the instruments for planning and evaluation necessary in the teaching/learning of English/Spanish.

CE4 To develop and apply didactic methodologies adapted to the diversity of students in an English/Spanish bilingual environment.

CE5 To evaluate linguistic as well as social and cultural content in bilingual English/Spanish teaching.

CE6 To incorporate new strategies, teaching materials, and information technology to activities in the English/Spanish bilingual classroom.

CE8 To be capable of using specialist terminology in English and Spanish in the field of second language acquisition.

CE10 To be capable of communicating with fluency at C1 level of the European Common Framework.

CE18 To know the elements of the syllabuses, methodology, and objectives in Natural and Social Sciences in a bilingual environment.

CE19 To be capable of adapting the contents to the diversity of students in Natural and Social Sciences.

CE20 To be capable of using the appropriate didactic techniques in Natural and Social Sciences.

## **1.2. Learning outcomes:**

At the end of the subject, the student must:

- Be capable of integrating knowledge facing the complexity of formulating opinions starting from incomplete knowledge of social and ethical responsibilities related to their area of study
- Be capable of communicating reasonably on themes related to their area of study
- Be capable of acquiring new knowledge in an autonomous manner in their field of study, the teaching/learning of a foreign language
- Know how to base their teaching practice in an informed manner according to the knowledge acquired
- Know how to design integrated syllabuses in the area of teaching/learning English/Spanish
- Know how to design and create didactic materials for bilingual education taking into account the different levels of linguistic competence and different rhythms of learning
- Know the instruments of evaluation necessary in the teaching/learning of English language
- Know how to develop and apply methodologies adapted to the diversity of students in a bilingual environment
- Know how to evaluate linguistic and cultural content in Spanish/English bilingual teaching
- Be capable of incorporating new strategies, materials, and technologies to activities in the English/Spanish bilingual classroom
- Practice and acquire the skills necessary to reach C1 level in English language
- Know the curricular elements, methodologies, and objectives in the area of knowledge of the natural, social, and cultural world in a bilingual environment; to know how to adapt the content to the diversity of the students; to know how to utilise the most appropriate didactic techniques in the area.

## **2. CONTENTS**

### **2.1. Previous requirements:**

None

### **2.2. Description of contents:**

This course focuses on teaching Natural, Social and Cultural Science at Primary Education. The course offers effective and innovative teaching methodologies, strategies and tools that can be applied to the context of bilingual education.

During the course we will explore the teaching of Natural and Social Sciences in a CLIL context from a constructively point of view. Students in this module will be given opportunities to analyze the Science curriculum, develop their planning skills, and discover new approaches, materials and resources in order to broaden their understanding of Science teaching.

### 2.3. Detailed content:

1. The areas of Natural Sciences and Social Sciences in Primary Education. The areas of Biology and Geology and Geography and History in Secondary Education. Learning through competencies.
2. Natural sciences: concept and evolution. Didactic implications. Reflections upon their treatment and knowledge.
3. Development of content, assessment criteria and assessment of standards in Natural Sciences in Primary Education.
4. Social Sciences: contents of the cultural and social environments in Primary and Secondary Education. Implications in Didactics. Reflections upon their treatment and their knowledge.
5. Use of tools and resources.
6. Observation of facts and phenomena of the natural and social environments.
7. Methodology in the areas of Natural and Social sciences. Project Based Learning.

### 2.4. Training activities

#### Blended modality

Training activities	Hours	Percentage of attendance
AF1. Teaching sessions	51,4	34,3%
AF2. Individual and group learning activities outside the teaching sessions	53,6	30%
AF3. Tutorials	15	10%
AF4. Complementary training activities	15	10%
AF7. Evaluation Activities	15	0%

#### Online modality:

Training activities	Hours	Percentage of attendance
AF1. Teaching sessions	51,4	0%
AF2. Individual and group learning activities outside the teaching sessions	53,6	0%
AF3. Tutorials	15	0%
AF4. Complementary training activities	15	0%
AF7. Evaluation Activities	15	0%

### 2.5 Teaching methodologies

An active didactic methodology in which the student is the protagonist of their own learning process, and the teacher an expert in the field. The teacher will possess the knowledge of the materials and resources necessary to help the student in the learning process and to optimise their learning strategies. Through interaction and mutual co-operation the student will achieve the competencies that they can then incorporate within their professional profile.

The teaching methodology will combine real-life and online teaching in the semi-present mode and online teaching in the online mode. This is therefore a mixed methodology that will be supported by the use of ICT as well as collaborative work (forums, chats, video-conferences) in accordance with the teacher's tools (agenda, announcements, files of materials, and links). For this purpose, the Virtual Campus will be used with the Blackboard Ultra platform. This interactive methodology requires the systematic and continuous active participation of the students and teachers.

### 3. SYSTEMS OF EVALUATION :

#### 3.1 Grading

The grading system (R.D. 1125/2003, of 5th September) will be as follows:

- 0 - 4.9 Fail (SS)
- 5.0 - 6.9 Pass (AP)
- 7.0 - 8.9 Good (NT)
- 9.0 - 10 Excellent (SB)

The mention of "honors" may be obtained at the proposal of the professor of the subject after completing a tutored work. The teacher must write a report evaluating the contributions of the work.

#### 3.2 Assessment

##### Ordinary or Extraordinary Calls

##### Blended

Assessment	Percentage
Participation in work groups and discussion	15%
Guided activities	25%
Design of Didactic Unit	60%

##### Online Modalities

Assessment	Percentage
Participation in work groups and discussion	15%
Guided activities	25%
Final exam	60%

#### 3.3 Restrictions

##### Minimum grade

In order to average the above weightings, it is necessary to obtain at least a grade of 5 in the final exam.

#### Attendance

Students who, without justification, fail to attend more than 75% of the face-to-face classes may be deprived of the right to take the exam in the regular exam.

#### Writing standards

Special attention will be paid in the papers, practices and written projects, as well as in the exams, to both the presentation and the content, taking care of the grammatical and spelling aspects. Failure to meet the minimum acceptable standards may result in points being deducted in such work.

### **3.4 Warning about plagiarism**

The Universidad Antonio de Nebrija will not tolerate plagiarism or copying under any circumstances. It will be considered plagiarism the reproduction of paragraphs from texts other than the student's audit (Internet, books, articles, papers of colleagues...), when the original source is not cited. The use of quotations cannot be indiscriminate. Plagiarism is a crime.

If this type of practice is detected, it will be considered a Serious Misconduct and the sanction foreseen in the Student Regulations may be applied.

## **4. BIBLIOGRAPHY**

#### Basic Biography

GAUCH, H.G., Jr.(2003). Scientific method in practice. New York, NY: Cambridge University Press.

GONZÁLEZ, R. (2014) El Trabajo por Proyectos en el Área de Inglés. Madrid: Editorial CCS.

HARLEN, W. & QUALTER, A. (2014) The Teaching of Science in Primary Schools. New York: Routledge.

JOHSON, D.W. & JOHNSON, R.T. (1994) Cooperative Learning in the Classroom. Virginia: Association for Supervision and Curriculum Development.

KRAUSS, J. & BROSS, S. (2013) Thinking Through Project-Based Learning. Guiding Deeper Inquiry. California: Corwin.

MARTÍN, X. (2006) Investigar y Aprender. Cómo Organizar un Proyecto. Barcelona: Horsori Editorial.

SKAMP, K. (2012) Teaching Science Constructively. Melbourne: CENCAGE Learning.

## **5. PROFESSOR**

You can consult the e-mail addresses of the professors and the academic and professional profile of the teaching staff at <https://www.nebrija.com/programas-postgrado/master/ensenanza-bilingue-profesores/#masInfo#profesores>