# UNIVERSIDAD DE CASTILLA - LA MANCHA

# GUÍA DOCENTE

## 1. General information

**Course:** AQUATIC ECOSYSTEMS
**Code:** 37335
**Type:** ELECTIVE
**ECTS credits:** 4.5
**Degree:** 340 - UNDERGRADUATE DEGREE PROGRAMME IN ENVIRONMENTAL SCIENCES
**Academic year:** 2019-20
**Center:** 501 - FACULTY OF ENVIRONMENTAL SCIENCES AND BIOCHEMISTRY
**Group(s):** 40
**Year:** 4
**Duration:** First semester
**Main language:** Spanish
**Second language:** English
**Use of additional languages:**
**English Friendly:** Y
**Web site:**
**Bilingual:** N

Lecturer: **IVAN TORRES GALAN** - Group(s): **40**

| Building/Office | Department | Phone number | Email | Office hours |
|---|---|---|---|---|
| Sabatini/0.35 | CIENCIAS AMBIENTALES | 5472 | ivan.torres@uclm.es | Lunes de 11:00 a 12:00 y de 13:00 a 14:00, Martes y Jueves de 12:00 a 14:00h (previa cita por e-mail) |

## 2. Pre-Requisites

Not established

## 3. Justification in the curriculum, relation to other subjects and to the profession

Not established

## 4. Degree competences achieved in this course

**Course competences**

| Code | Description |
|---|---|
| CB01 | Prove that they have acquired and understood knowledge in a subject area that derives from general secondary education and is appropriate to a level based on advanced course books, and includes updated and cutting-edge aspects of their field of knowledge. |
| CB02 | Apply their knowledge to their job or vocation in a professional manner and show that they have the competences to construct and justify arguments and solve problems within their subject area. |
| CB03 | Be able to gather and process relevant information (usually within their subject area) to give opinions, including reflections on relevant social, scientific or ethical issues. |
| CB05 | Have developed the necessary learning abilities to carry on studying autonomously |
| CB06 | Students have developed the ability to work as a team and lead, direct, plan and supervise multidisciplinary teams |
| E01 | Ability to understand and apply basic knowledge. |
| E02 | Capacity for multidisciplinary consideration of an environmental problem |
| E03 | Awareness of the temporal and spatial dimensions of environmental processes |
| E04 | Ability to integrate experimental evidence found in field and/or laboratory studies with theoretical knowledge. |
| E05 | Capacity for qualitative data interpretation |
| E06 | Capacity for quantitative data interpretation |
| E13 | Ability to handle software. |
| G01 | Proficiency in a second foreign language at level B1 of the Common European Framework of Reference for Languages. |
| G02 | Knowledge of Information and Communication Technologies (ICT). |
| G03 | Good oral and written communication |
| G04 | Ethical commitment and professional deontology |

## 5. Objectives or Learning Outcomes

**Course learning outcomes**

Description

Knowledge of the basic aspects related to energy and matter flows in communities.

Description of the populations of organisms and the processes that affect them, such as competitive or predation interactions between them, including the modelling of these.

Determination of individual agency responses in relation to their environment, i.e., their conditions and resources

To apply these concepts to the different ecosystems of the Earth (terrestrial and aquatic), assessing them in relation to the morphological and functional adaptations of the organisms and the functioning of the system as a whole.

## 6. Units / Contents

**Unit 1:**
- **Unit 1.1**
- **Unit 1.2**

**Unit 2:**
- **Unit 2.1**
- **Unit 2.2**

**Unit 2.3**

**Unit 3:**

**Unit 3.1**

**Unit 3.2**

**Unit 3.3**

**Unit 3.4**

**Unit 4:**

**Unit 4.1**

**Unit 4.2**

**Unit 4.3**

**Unit 4.4**

**Unit 5:**

**Unit 5.1**

**Unit 5.2**

**Unit 5.3**

**Unit 5.4**

**Unit 6:**

**Unit 6.1**

**Unit 6.2**

**Unit 6.3**

**Unit 6.4**

## 7. Activities, Units/Modules and Methodology

| Training Activity | Methodology | Related Competences (only degrees before RD 822/2021) | ECTS | Hours | As | Com | R | Description |
|---|---|---|---|---|---|---|---|---|
| Class Attendance (theory) [ON-SITE] | Lectures | CB03 E01 E02 E03 E04 | 0.84 | 21 | N | - | - | |
| Class Attendance (practical) [ON-SITE] | Practical or hands-on activities | CB01 CB03 CB05 CB06 E01 E03 E04 E05 E06 E13 G04 | 0.6 | 15 | Y | Y | N | |
| Practicum and practical activities report writing or preparation [OFF-SITE] | Self-study | CB01 CB02 CB03 CB05 E01 E03 E04 E05 E06 E13 G03 G04 | 0.9 | 22.5 | Y | Y | Y | |
| Workshops or seminars [ON-SITE] | Cooperative / Collaborative Learning | CB01 CB02 E01 E03 E05 E06 E13 G01 G02 G03 | 0.24 | 6 | Y | Y | Y | |
| Writing of reports or projects [OFF-SITE] | Self-study | CB01 CB02 CB05 E01 E03 E05 E06 E13 G01 G02 G03 G04 | 0.64 | 16 | Y | N | N | |
| Study and Exam Preparation [OFF-SITE] | Self-study | CB03 E01 E02 E03 E04 E05 | 1.16 | 29 | N | - | - | |
| Progress test [ON-SITE] | Assessment tests | CB01 E01 E02 E03 E05 G03 | 0.04 | 1 | Y | N | N | |
| Final test [ON-SITE] | Assessment tests | CB01 E01 E02 E03 E05 G03 | 0.08 | 2 | Y | Y | Y | |
| | | **Total:** | **4.5** | **112.5** | | | | |
| | | **Total credits of in-class work: 1.8** | | | | | | **Total class time hours: 45** |
| | | **Total credits of out of class work: 2.7** | | | | | | **Total hours of out of class work: 67.5** |

As: Assessable training activity
Com: Training activity of compulsory overcoming
R: Rescheduling training activity

## 8. Evaluation criteria and Grading System

| | Grading System | | |
|---|---|---|---|
| **Evaluation System** | **Face-to-Face** | **Self-Study Student** | **Description** |
| Practicum and practical activities reports assessment | 25.00% | 0.00% | |
| Final test | 60.00% | 0.00% | |
| Other methods of assessment | 15.00% | 0.00% | |
| **Total:** | **100.00%** | **0.00%** | |

## 9. Assignments, course calendar and important dates

| **Not related to the syllabus/contents** | |
|---|---|
| **Hours** | **hours** |

## 10. Bibliography and Sources

| Author(s) | Title/Link | Publishing house | Citv | ISBN | Year | Description |
|---|---|---|---|---|---|---|
| Barnes & Hughes | An Introduction to Marine Ecology | Wiley-Blackwell | | ISBN13: 978086542834 | 1999 | |

| | | | | |
|---|---|---|---|---|
| Levinton, J.S. | Marine Biology: function, biodiversity, ecology | Oxford University Press | 0-19-508573-6 | 1995 |
| Dodds, W.K. | Freshwater Ecology | Academic press | | 2001 |
| Dodds, Walter K. | Freshwater ecology concepts and environmental applications o | Elsevier, | 978-0-12-374724-2 | 2010 |
| Margalef, R. | Limnología | Omega | | 1983 |
| Mitsch W.J. & Gosselink J.G. | Wetlands | Wiley & sons | | 2000 |
| Wetzel, Robert G. | Limnology: lake and river ecosystems | Academic Press | 0-12-7444760-1 | 2001 |
| Wetzel, Robert G. | Limnología | Omega | 84-282-0601-5 | 1981 |