

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

Code	33104
Name	Project elaboration and management
Cycle	Grade
ECTS Credits	4.5
Academic year	2021 - 2022

Study (s)

Degree	Center	Acad. year	Period
1104 - Degree in Environmental Sciences	Faculty of Biological Sciences	3	Second term

Subject-matter

Degree	Subject-matter	Character
1104 - Degree in Environmental Sciences	166 - Development and management of projects	Obligatory

Coordination

Name	Department
FUENTES BARGUES, DANIEL	245 - Chemical Engineering

SUMMARY

The subject "Development and Project Management" is a required character that is given quarterly in the third degree course of Environmental Sciences at the University of Valencia. The course, 4.5 ECTS, has a theoretical and a practical point of view, so the basic theoretical knowledge is complemented by both the resolution of questions as well as reports.

The project implementation requires the mastery of a set of techniques, which make use of the multidisciplinary knowledge acquired in other subjects in the degree, in order to give effective resolution of specific technical issues raised by the Administration or a promoter. The course aims to give students the knowledge and skills necessary to compose, organize, implement, manage and evaluate projects, focusing mainly on the environmental aspects. Thus, the student will acquire a good basis both for the development of their final thesis as to the development and management of projects in their future careers.



PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

OUTCOMES

1104 - Degree in Environmental Sciences

- Capacidad de organizar y planificar el trabajo individual, grupal y el estudio.
- Capacidad de manejar el inglés para la lectura de documentos y elaboración de informes.
- Capacidad de comunicación oral en las exposiciones públicas y de argumentación de opiniones personales.
- Capacidad de manejo de las fuentes expertas en contenidos científicos.
- Capacidad de usar de forma adecuada los términos científicos ambientales.
- Capacidad de planificar, diseñar, desarrollar y coordinar proyectos.
- Motivación por la calidad.
- Capacidad de análisis crítico y síntesis.
- Compromiso ético en el ejercicio de la profesión de ambientólogo.
- Conocimientos básicos sobre los planteamientos y enfoques de la educación ambiental y dominio de la terminología específica.
- Conocer y saber aplicar las diversas técnicas de comunicación, interpretación y educación ambiental.
- Conocer y saber utilizar las diferentes fuentes de información y documentación especializada en educación ambiental disponible en todos los ámbitos.
- Conocimiento y capacidad de aplicación de técnicas y estrategias para hacer más efectiva la comunicación y divulgación de contenidos científicos sobre temas ambientales.

LEARNING OUTCOMES

- To understand the methodology and documentation, both the technical project and the documents associated with it.
- To learn the techniques of project optimization and evaluation.
- To know the methods of planning.
- To meet other techniques for assessing products and processes from the environmental point of view.
- To assess the different facets and aspects involved in a project.



DESCRIPTION OF CONTENTS

1. The project and its documents

Types of projects.

Project documents: Memory. Attached memory. Projects and complementary documents. Plans. Specifications. Budget.

The drafting aspects of a project.

2. The project-building process

Description of the process.

Law on public sector contracts.

3. Project Management

Basic Principles.

Human Resource Management: Project Manager. Teamwork.

Evaluation and selection of alternatives: economic indicators. Feasibility studies. Environmental economic analysis.

Planning and programming techniques: Gantt Chart. Pert Method. Critical Path Method.

Control and monitoring of environmental projects.

4. Case studies

Development of blueprint for the application of integrated environmental authorization for a particular activity or facility.

Development of a project to recover a degraded space.

Develop a project management and conservation of natural resources.

Development of a project to implement a management system.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	19,00	100
Classroom practices	16,00	100
Computer classroom practice	8,00	100
Tutorials	2,00	100
Development of group work	27,00	0
Study and independent work	20,00	0
Preparing lectures	13,00	0
Preparation of practical classes and problem	7,50	0
TOTAL	112,50	

TEACHING METHODOLOGY

The development of the course is structured around four axes: the lectures, practical lessons, carrying out group work and tutoring.

Theory lessons: We will use the lecture model, where the teacher will give an overview of the issue impacting on the key to understanding it. Also will recommend adequate resources for the further deepening of the subject by the student.

Practical lessons: Practical classes will include classes of problems in the classroom or computer lab and seminar sessions.

- **Classes of problems:** The professor will explain a number of problems-type that allow students to acquire the necessary skills to analyze and solve problems of the same type. Also, it dealt a series of problems that students must meet and deliver on the dates specified individually.
- **Computer classroom:** The teacher will explain the basic operation of two tools for development and project management: MS Project 2007 and Presto. Students will become familiar with these programs to perform a series of simple examples.
- **Seminar:** In item 4, from a base information provided by the teacher, students should address groups (7-10 people) to develop the fundamental aspects of a project for environmental reasons. The core of these projects will be developed in workshop sessions where the teacher will guide the work of students. After the project, each group will conduct a classroom presentation showing the key aspects of the work performed.

The kinds of problems as well as the seminar sessions will enhance the student's skills for decision-making, as key to development and project management.

Tutoring: The tutoring sessions will be raised as to resolve any doubts arising in the problem solving or project that students must perform on their own. In addition, the teacher will guide the student on the most appropriate methodology for learning the fundamentals of the subject. Tutorials will develop individual and group level. The mentoring group will be scheduled by the teacher.



To develop all these activities both students and the teacher will use the Virtual Classroom platform.

EVALUATION

The assessment of student learning will take place through continuous assessment and final evaluation.

Continuous assessment:

An evaluation of the problems that the teacher has posed to students in the classes of problems and computer classroom. These exercises will involve 30% of the final mark. For this evaluation, students will need to attend 75% of the provided computing and problems sessions.

Final assessment:

- Project. Students must submit the documents that make up the project in their group. Also, they should make a presentation of the project where they must engage all members of the group. To evaluate this part (30% of the final grade) it will be considered both the quality of the documents (with 25%) as the quality of its presentation (with 5%). For the evaluation of the project, students will need to attend 75% of the planned seminar sessions.
- Exam. Students will conduct a review at the end of the semester that will be valued at 40% of the final grade. This examination consists in solving a series of theoretical and practical issues, in order to verify that they have assimilated the basics of the subject.

To pass the course it will be needed an average score of 5 out of 10, reaching a minimum score of 5 points on each part of the exam as well as on the project. Students who fail the course in the first call should repeat the failed parts for the second call.

To apply for advance examination of this subject, students should be aware that they are required to fulfil all the mandatory activities outlined in this guide.

REFERENCES



Basic

- de Cos Castillo, M. Teoría General del Proyecto: Volumen I: Dirección de Proyectos/Project Management. Volumen II: Ingeniería de Proyectos/Project Engineering. Editorial Síntesis. Madrid 1997.
- Gómez-Senent, E y otros. Cuadernos de Ingeniería de Proyectos. Vol II: Del diseño de detalle a la realización. Vol III: dirección, gestión y organización de proyectos. UPV Servicio de Publicaciones. Valencia 2004.
- Lock, D. Fundamentos en la gestión de proyectos. Ediciones AENOR. Madrid 2003.
- Pereña, J. Dirección y gestión de proyectos. Editorial Díaz de Santos 1996.
- Viñoles, R. Programación y Control de Proyectos con Microsoft Project. UPV Servicio de Publicaciones. Valencia 2009.
- Viñoles, R., Fuentes, J.L., Vivancos, J.L. Cuestiones resueltas de oficina técnica y gestión de proyectos. Editorial UPV. Valencia 2013

Additional

- Fiksel, J. Ingeniería de diseño medioambiental. Editorial McGraw-Hill. New York 1996
- Gómez-Senent, E. El proyecto. Diseño en Ingeniería. UPV Servicio de Publicaciones. Valencia 2003
- Lock, D. Gestión de proyectos. Editorial Paraninfo 1994
- Sánchez Romero, M.A. y otros. Cuestiones y problemas resueltos de dirección y gestión de proyectos. UPV Servicio Publicaciones. Valencia 2008. Nº 106

ADDENDUM COVID-19

This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council

Como norma general, la modalidad de docencia se adaptaría a la situación sanitaria del momento y a lo que las autoridades sanitarias y académicas acuerden en este sentido.

Content

The contents initially collected in the teaching guide are maintained.

Workload and temporary teaching planning



Regarding the workload:

The activities described in the Teaching Guide are maintained with the intended dedication.

Regarding the temporary planning of teaching

The material for the follow-up of classroom theory/practice classes makes possible to continue the temporary teacher planning both days and hours, whether there is an in-person class or not.

Teaching methodology

The exceptional situation created by Covid-19 implies the adaptation of teaching to a hybrid or mixed system, in which, in general, the teaching of theoretical, practical and laboratory classes will be in online format in those groups where, by their size, compliance with health recommendations cannot be guaranteed.

If there is a closure of the facilities for health reasons that totally or partially affects the classes of the subject, they will be replaced by non in-person sessions following the established schedules or adapting the schedules for an asynchronous teaching.

Evaluation

The evaluation system described in the Teaching Guide of the subject in which the various evaluable activities have been specified as well as their contribution to the final grade of the subject is maintained.

If there is a shutdown of the facilities for health reasons affecting the development of any in-person evaluable activity of the subject it will be replaced by a test of a similar nature that will be carried out online using the computer tools licensed by the University of Valencia. The contribution of each evaluable activity to the final grade of the subject will remain unchanged, as set out in this guide.

Bibliography

The recommended bibliography is maintained in the Teaching Guide and complemented by presentations.