30131 - Project Office

Información del Plan Docente

Academic Year	2017/18
Faculty / School	175 - Escuela Universitaria Politécnica de La Almunia 179 - Centro Universitario de la Defensa - Zaragoza
Degree	425 - Bachelor's Degree in Industrial Organisational Engineering 457 - Bachelor's Degree in Industrial Organisational Engineering 563 - Bachelor's Degree in Industrial Organisational Engineering
ECTS	6.0
Year	4
Semester	First semester
Subject Type	Compulsory
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

The learning process that is designed for this subject is based on the following:

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- **Lectures** : theoretical activities conducted by the teacher, so that the theoretical support of the subject is given, highlighting the major issues, structuring them on chapters and / or sections and connecting them to each other.
- **Classroom practice work/seminars/workshops:** Theoretical discussion activities or practice work preferably performed in the classroom and requiring high student participation
- **Lab Practice work** : The total group of master classes will be divided into several groups according to the number of students enrolled, but never more than 20 students, so that smaller groups are formed. CAD-CAE Practical Activities with the relevant software will be made in the Technical Office classroom.
- **Individual/Group tutorials:** These are made on a one-to-one basis, at the department. They aim to help solving problems that are the students might have, particularly those which for several reasons cannot attend group tutorials or need a more personalized attention. These tutorials may be face-to-face or virtual (Moodle or e-mail) in a timetable published on the EUPLA website

Defence profile

The focus of the subject is primary practical and oriented to enable the student with the necessary professional engineering skills.

The subject consist of 6 ECTS representing 150 working hours of the student during the semester (15 weeks). The teaching activities of the subject are structured into the following main points:

- Theory

- Case studies and practical work in class

- Experts seminars

- Group and individual office hours

5.2.Learning tasks

The program that the students are offered to help them achieve the expected results involves the following activities...

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... which involve the active participation of the students, so that, to achieve the learning outcomes (Considering the experimental level is high,which means a 2h a week for Theory, 2h for practice work and 6 for other activities),no redundancy intended with the above mentioned, the following activities will be developed

- **Theoretical-Practical classes (30h)** : The concepts and procedures of the subject will be developed and practical examples as support will be developed. Also, problems and case studies will be done to complement the theoretical concepts studied
- **Lab practice work (30h)** : Students will be divided into several groups not bigger than 20 students / being monitored by the teacher and they will develop the concepts and procedures in CAD-CAE
- **Tutorials:** Monitored autonomous activities: Although they will rather have a mixed nature between face-to-face and non-class tuition they have been considered separately and will be focused mainly to seminars and tutorials under the supervision of the teacher.

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- **Personal Study** : Assimilation of the concepts and procedures for a proper learning process

Defence profile

The final practical project of the Project Management subject consists of the realization of a practical work applied to the degree context, showing the skills and knowledge acquired by the student in the subject. The project will be a written as an academic report (Pdf format) and an oral presentation explaining the key facts of the project should be done in class (PowerPoint).

The final project will be carried out in groups of 3 or 4 people maximum who will undertake the specific roles of the project. Practical work sessions will be carried out in class with the supervision of the professor after the corresponding project management theory explanation. The remaining work will be self done by the group.

Several control points of the final project will be established by the professor as a continuous assessment during the semester. Soft and hard copies of the final project will be sent to the corresponding professor in the requested dates of presentation.

The oral presentation will be done to an advisory board integrated by multidisciplinary professors of the Centro Universitario de la Defensa. The presentation will take 15 minutes maximum per group and it will finished with a 5 minute round of questions to be carried out by the board. The presentation could make use of a PowerPoint file and additional material such as videos or documents. The language of the presentation will be English.

5.3.Syllabus

Essential Contents of the subject for the achievement of learning outcomes

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Part 1.- Theory on Methodology, Planning and Project Regulations

1 THE TECHNICAL OFFICE

- Technical role in the company
- T.O. Functions: Demand forecast and upon request
- T.O Organization
- T.O. Relation with Departments.
- T.O. Role in the client-company relationship

2 THE PROJECT

- The project: Concepts and Classification
- Project Factors
- Project Stages
- Methodology

3 PROJECT DOCUMENTS

- UNE Standards

- Project Documents: Memory, Plans, P.C., Budget Annexes, and Planning

4 DRAWING IN THE PROJECTS

- General Plans
- Systems and Subsystems
- Group Drawings (UF). Lists
- S ubgroup Drawings. Lists
- Workshop Drawings. Lists
- Welded Parts. Lists
- Information and Basic Engineering

5 PROJECT MANAGEMENT

- General Issues
- Tasks and Dependencies. Reports
- Resources and Workloads. Reports
- Monitoring and Control. Reports

6 QUALITY AND LEGAL ISSUES

Part 2: Theory-Practice Knowledge and Application of Computer Tools for the Design Drawings

- Application in the development of CAD / CAE (I) (Plans)
- Application in the development of CAD / CAE (II) (Solid Modeling)
- Application in the development of CAD / CAE (III) (Schemes)

Defence profile

The syllabus of the subject is following explained:

- Unit 1: Introduction.
- Unit 2: Project integration analysis.
- Unit 3: Stakeholders management.
- Unit 4: Project scope definition.
- Unit 5: Time management.
- Unit 6: Risk management.
- Unit 7: Procurement management.
- Unit 8: Quality management.
- Unit 9: Cost management.
- Unit 10: Human resources management.
- Unit 11: Communication management.

5.4.Course planning and calendar

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The lectures and practical sessions in the laboratory are given according to the schedule set up by the School and it is published, prior to the start date of the course, on the EUPLA website, as well as the tutorial schedule.

The rest of activities (handing-in of tasks, assessment tests, etc.) will be planned according to the planning of the Subject and will be communicated to the students at the beginning of the course.

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The planning and calendar of the subject will be announced by the professor of the subject via Moodle platform. Project management is a compulsory subject to be taught in the first semester of the fourth year of the study plan, being common to all the branches offered in the degree. It consist of 6 ECTS credits.

This subject focuses on project management methodology as a key tool for an engineer. This methodology provides the student with the necessary skills to be able to understand, plan and solve any technical or management project in the industrial, civil or military field. It fosters the development of general competences like team work, self-learning and the capacity for theoretical concept application. Case studies and practical work will be carried out in class or by the students (self-study) during the term. They will be used for discussion in the practical sessions so that the students could have an active role in their learning curve process. The analytical and synthesis skills developed by the student, being able to analyze obtained results within a project, will be key points to take into account for their assessment.

According the syllabus included in the chapter 5.3, the hourly distribution of the theory units and practical sessions is explained in the following schedule:

ID	Unit	Hours	Total hours
1	Introduction	1	3
2	Introduction	2	3
3	Introduction	3	3
4	Project integration analysis	1	2
5	Project integration analysis	2	2
6	Stakeholders management	1	1
7	Gestión del alcance	1	2
8	Gestión del alcance	2	2
9	Time management	1	4
10	Time management	2	4
11	Time management	3	4
12	Time management	4	4
13	Risk management	1	3
14	Risk management	2	3
15	Risk management	3	3
16	Procurement management	1	2
17	Procurement management	2	2
18	Procurement management	3	3
19	Quality management	1	2
20	Quality management	2	2
21	Cost management	1	3
22	Cost management	2	3

23	Cost management	3	3
24	HR management	1	1
25	Communication management	1	2
26	Communication management	2	2
Theory			26
Practicum			24
Total			50

5.5.Bibliography and recommended resources

RESOURCES:

- Access to the subject documentation using the Moodle platform

BIBLIOGRAPHY (SPECIALIZATION IN BUSINESS):

THE UPDATED BIBLIOGRAPHY OF THE SUBJECT CAN BE CONSULTED THROUGH THE LIBRARY WEB PAGE http://psfunizar7.unizar.es/br13/eBuscar.php?tipo=a

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BC	Auría Apilluelo, José M.. Dibujo Industrial : conjuntos y despieces / José M. Auria Apilluelo, Pedro Ibáñez Carabantes, Pedro Ubieto Artur . - 2ª ed., 2ª reimp. Madrid : Thomson, 2008
BC	Brusola Simón, Fernando. Oficina técnica y proyectos / Fernando Brusola Simón. - 1edc Valencia : Universidad Politécnica de Valencia, D.L. 1999,2011
BC	Chatfield, Carl.. Project 2007 : paso a paso / Carl Chatfield, Timothy Johnson.. - 1 edc Madrid : Anaya Multimedia, [2007]
BC	Cos Castillo, Manuel de. Teoría general del proyecto. vol.I, Dirección de proyectos = Project Engineering / Manuel de Cos Castillo . - 1ª ed., 4ª reimp. Madrid : Síntesis, 2007
BC	Cos Castillo, Manuel de. Teoría general del proyecto. vol.II, Ingeniería de proyectos / Manuel de Cos Castillo . - [1a. ed.] Madrid : Síntesis, D.L.1997
BC	Diseño e ingeniería con Autodesk Inventor / Javier Suárez Quirós ... [et al.] ; con la colaboración de Alfonso Iglesias Sánchez Madrid : Pearson Educación, D. L. 2006
BC	Mata, Julián. Dibujo Mecánica 2 / Julián Mata, Claudino Alvarez, Tomás Vidondo. - Reimpresión Barcelona : Edebé, 1986
BC	Mata, Julián. Dibujo Mecánica 4 / Julián Mata, Claudino Alvarez, Tomás Vidondo. -

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BC	1ª edición Barcelona : Edebé, 1987 Piedrafita Moreno, Ramón. Ingeniería de la automatización industrial / Ramón Piedrafita Moreno . - 2a ed. amp. y act. Madrid : Ra-Ma, D.L. 2003 [cop. 2004]
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BC	Rodriguez de Abajo, F.Javier. Normalización del dibujo industrial / F.Javier Rodriguez de Abajo, Roberto Galarraga Astibia San Sebastián : Editorial Donostiarra, D.L. 1993
BC	Rodríguez Mata, Antonio. Desarrollo de sistemas secuenciales / Antonio Rodríguez Mata, Julián Cócera Rueda [Madrid] : Paraninfo : Thomson learning, D.L. 2000
BC	Serrano Nicolás, Antonio. Neumática práctica / Antonio Serrano Nicolás Madrid : Paraninfo, 2009
BC	Vidondo, Tomás.. Tecnología mecánica 3 / Tomás Vidondo, Claudino Alvárez.. 1ªedición Barcelona : Edebé, 1995.

LISTADO DE URLs:

Autodesk electrical - [http://www.autodesk.com/products/autodesk-autocad-electrical/overview]
Manual electrotécnico Telesquemario Schneider Electric España, S.A. - [http://www.schneider-electric.com.co/documents/soporte/telesquemario.pdf]

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- A guide to Project management body of knowledge (PMBok guide) - 5th Edition. Project Management Institute Inc.
- Manual para Project managers. Cómo gestionar proyectos con éxito. Daniel Echeverría Jadraque. Wolters Kluwer.
- Preparación para el examen PMP. Rita Mulcahy. RMC publications
- Head First PMP, 3rd Edition. A Learner's Companion to Passing the Project Management Professional Exam. Jennifer Greene, Andrew Stellman. O'Reilly media, December 2013.
- Curso de gestión de proyectos. Manual del alumno J.L Cano, R. Rebollar, M.J. Saenz. AEIPRO Asociación española de ingeniería de proyectos.
- Dirección de programas, proyectos e ingeniería de Sistemas. Manfredo Monforte. 2016. Ministerio de Defensa. Secretaría General Técnica.
- UNE ISO 21500 Directrices para la dirección y gestión de proyectos. AENOR. Marzo 2013