

Academic Year/course: 2022/23

30134 - Undergraduate Dissertation

Syllabus Information

Academic Year: 2022/23

Subject: 30134 - Undergraduate Dissertation

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

563 - Bachelor's Degree in Industrial Organisational Engineering

ECTS: 12.0

Year: 425 - Bachelor's Degree in Industrial Organisational Engineering: 4

563 - Bachelor's Degree in Industrial Organisational Engineering: 5

Semester: 563 - First semester

425 - Second semester

Subject Type: End of Grade Dissertation

Module:

1. General information

1.1. Aims of the course

The subject and its expected results respond to the following approaches and objectives:

- First, that the student knows the scope and circumstances in which to develop the exercise of their profession and the context in which it develops.
- Second, based on the skills acquired throughout the career, be able to design, develop and execute systems and processes.

Specialization in Defence and in Business: These approaches and objectives are in line with most of the Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/>). The acquisition of the course learning outcomes will contribute in a certain degree to these goals.

1.2. Context and importance of this course in the degree

The purpose of this work is to prepare the student to face professional life and make it clear that, in application of the skills acquired, is able to develop and defend a job with similar characteristics to any of those that may face in his professional life.

Specialization in Defence:

The Undergraduate Dissertation contributes to the academic education of the future Army officers by developing the skills, abilities and attitudes required to cope with their professional responsibilities and duties.

2. Learning goals

2.1. Competences

Upon passing the subject, the student will be more competent to...

1. conceive, design and implement engineering projects.
2. plan, budget, organise, manage and monitor tasks, people and resources.
3. combine both general and specialised engineering knowledge to produce innovative and competitive proposals within the scope of professional practice.
4. solve problems and take decisions with initiative, creativity and critical reasoning.
5. communicate knowledge and skills in Spanish.

6. use techniques, skills and tools necessary to practise engineering.
7. analyse and evaluate the social and ecological impact of technical solutions, behaving ethically, with professional responsibility and social commitment, always striving for quality and continuous improvement
8. work in a multidisciplinary group and in a multilingual setting.
9. manage information; skills to handle and apply technical specifications and the necessary legislation to practise engineering.
10. continue learning and develop self-learning strategies.
11. apply Information and Communication Technologies (ICTs) within the field of engineering.
12. individually produce an original piece of work of a professional nature, and defending it before a university board. Such work must be a project related to the field of Industrial Organization Engineering that shows a harnessing of the competences required of the degree.

2.2. Learning goals

To pass the subject, the student should demonstrate the following results:

1. He/She is able of developing, presenting and defending individually an original exercise of a professional nature in the field of Industrial Organization Engineering as a demonstration and synthesis of the competences acquired in the Degree.
2. He/She applies the acquired skills to the completion of an autonomous work.
3. He/She plans and use the necessary information for a project or academic work based on a critical reflection on the resources used.
4. He/She divides a complex task into sub-tasks and plans its execution.
5. He/She communicates clearly and efficiently in oral and written presentations on complex topics, adapting to the situation, the type of audience and the communication objectives.

2.3. Importance of learning goals

Upon passing the subject, the student will have to present and be able to defend before a university board of an Undergraduate Dissertation, consisting of an exercise of integration of the received formative contents and the acquired skills.

The Undergraduate Dissertation supposes the culmination of the formative process of the student and the beginning of what his professional future can be.

3. Assessment (1st and 2nd call)

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

The student is expected to show their competence with regards to the defined learning goals by means of the oral presentation of the dissertation, to an Examination Board of the University. The dissertation integrates all the formative contents and competences acquired throughout the Degree.

The final mark will be calculated as a weighted average, considering the other marks related to work originality and scientific quality. Additionally, the skills of the student taking the floor and presenting his/her results to the Examination Board will be assessed.

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The evaluation instruments and their estimation in the final mark will be 80% final version of the Dissertation and 20% the oral presentation.

The evaluation criteria and their assessment are structured in four blocks:

- A.- Dissertation contents (50%):
 - A1 Approach (15%)
 - A2 Scientific and technical research (30%)
 - A3 Results (5%)
- B.- Dissertation execution (20%)
- C.- Final version of the Dissertation (10%)
- D.- Oral presentation (20%)

Requested level: Academic supervisors could authorise students to submit their paper if they get a mark of "pass" in the A, B and C items, separately.

The assessment criteria of each block will be defined in an evaluation rubric. This evaluation rubric will be used as a tool for teachers to evaluate the Undergraduate Dissertation and it will serve to orientate the work of students. This rubric will be available in the specific Moodle course.

It is recommended for students to use the template provided in the Moodle course to elaborate the Undergraduate Dissertation.

The oral presentation will be carried out in English. The following aspects will be assessed: the presentation structure,

communication skills, and ability to answer questions (that could be in Spanish), and used support resources and adaptation to the established duration time.

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

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

The teaching methodology is based on a strong interaction teacher / student. This interaction becomes a reality by means of a distribution of task / responsibilities among students and teachers.

1. Classroom activities: There is no teaching.

2. Supervised autonomous activities: These activities will be led by the Director of the Final Year Project and the writing of it will be under the supervision of the Director.

3. Individual tutorials: They can be face-to-face or virtual with each of the teachers of the different subjects.

Teaching-Learning Methodology			
Training activities	ECTS	Teaching-learning Methodology	Relationship with skills to be acquired
Theory lectures	0	Given the particular nature of the subject, a methodology with specialized tutorials and seminars are considered.	
Seminars	0,5		
Supervised practice work	0		
Tutorials	1		
Non-class group work	0		
Non-class individual work	10		From 1 to 12
Assessment	0,5		

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The Undergraduate Dissertation is carried out in a unit, centre or institution of the Spanish Army or Ministry of Defence, within the period of ?Internships? that students must attend.

The student will be guided by a teacher of the CUD, who supervises the academic work. A military tutor will be in charge of the supervision during the Internships.

Expected learning tasks are the following:

- Autonomous work of the student guided by the supervisors.
- Individual tutorials that could be face-to-face or virtual.
- Individual tutorials with experts of the field, either from the CUD or military units.

An informative session could be organised by the responsible of the subject before the beginning of the Undergraduate Dissertation.

4.2. Learning tasks

The course includes the following learning tasks:

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The program that the student is offered to help him achieve the expected goals includes the following activities...

1: It involves the active participation of students, so that for achieving learning outcomes, the following activities, no redundancy intended with the above mentioned, will be developed.

2: Supervised autonomous activities: These activities will be led by the Director of the Final Year Project and the writing of it will be under the supervision of such Director.

3: Individual tutorials: They can be face-to-face or virtual with each of the teachers of the different subjects.

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As described in 4.1.

4.3. Syllabus

Essential Contents of the subject for the achievement of learning outcomes.

When referring to the Final Year Project, we will make reference to the contents of all the subjects that have been studied throughout the student's training.

4.4. Course planning and calendar

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Classroom session Scheduling and presentation of works
It will be scheduled by the Project Director, with personalized nature, depending on the evolution of the work itself, always adapted to the dates of the calls that are set in each academic year (<http://eupla.unizar.es/asuntos-academicos/trabajo-fin-de-grado>).

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The main dates of the work development and its defence will be established in the academic course schedule published in the CUD website.

The academic supervisors will be in charge of programming individual tutorials with their students.

4.5. Bibliography and recommended resources

No bibliographic records for this subject.

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The following resources are available to the students in Moodle:

- Guidelines report for realization and assessment of the Undergraduate Dissertation.
- Template to elaborate the writing dissertation.
- Evaluation rubric of the Undergraduate Dissertation.