

## 29981 - Legal responsibility and profesional ethics

### Información del Plan Docente

<b>Academic Year</b>	2017/18
<b>Faculty / School</b>	110 - Escuela de Ingeniería y Arquitectura
<b>Degree</b>	430 - Bachelor's Degree in Electrical Engineering
<b>ECTS</b>	4.0
<b>Year</b>	4
<b>Semester</b>	Half-yearly
<b>Subject Type</b>	Optional
<b>Module</b>	---

### **1.General information**

#### **1.1.Introduction**

Elective subject of 4 ECTS that correspond to 100 total hours of work of the student, of which 40 hours will be classroom presence.

The focus of the subject is professional and practical. On the one hand, it aims to familiarize students with the risks associated with professional practice in the different types of engineering and architecture activities, their legal and personal consequences, and mechanisms to cover possible situations of legal liability. On the other hand, the subject wants to offer to the students of engineering and architecture the development of own criteria to identify and to face ethical problems in real situations of its future work activity.

#### **1.2.Recommendations to take this course**

There are no prerequisites to take this course, it is recommended to any student of engineering or architecture of the EINA. In order to study this subject, it is only necessary to have motivation to know aspects of real life in the professional practice of the engineer or architect, and to acquire ethical and socially responsible abilities to act in the situations and conflicts that may arise.

#### **1.3.Context and importance of this course in the degree**

The subject is offered as an elective to all students of the School of Engineering and Architecture, where students can complete the technical training previously received through a subject of eminently applied to their professional future.

Responsibility and ethics in professional performance are essential elements of the formative curriculum of the new Spanish and European University, supported by the Bologna Declaration of 1999 (although the importance of the teaching of values and attitudes is made explicit from the Declaration of Berlin 2003). Future professionals must develop, in their university education, in addition to cognitive and technical skills, other social and ethical.

#### **1.4.Activities and key dates**

The subject is taught in the first semester. At the beginning of the semester, the teacher will inform about the planning of the planned teaching activities and the key dates of the practical exercises and presentations to be developed.

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### 2.Learning goals

#### 2.1.Learning goals

- \* Know the context of the professional practice of engineering and architecture in their different activities and values the implicit responsibility in each one.
- \* Be aware of the risks associated with professional decision-making and how to manage them properly.
- \* Know the existence and the mechanisms of application of the deontological norms of the professions.
- \* Acquires criteria for the analysis of practical cases of ethical dilemma in the exercise of professional activities.

#### 2.2.Importance of learning goals

Training in ethical and civic competences is an essential part of university education, since it is an interpersonal transversal competence in the performance of any profession. In professional practice, decision-making is often a complex process, since it must be taken with limited information, sometimes with little time, and trying to balance competing interests. The subject aims to introduce to the ethical and responsible professional practice, which offers students of engineering and architecture the possibility of developing their own criteria to identify and face ethical problems in real situations of their future work activity, and to collaborate in the integration of values in the decision structures of organizations. The subject also aims to make future professionals aware of the risks associated with the professional practice in the different types of engineering and architecture activities, their legal and personal consequences, and the mechanisms to cover possible situations of legal liability.

### 3.Aims of the course and competences

#### 3.1.Aims of the course

- Encouragement of the students' critical capacity for the evaluation and weighting of different ethical criteria in their professional activity.
- Approximation to the reality of the future professional exercise, knowing the different types of activities developed by engineers and architects and the associated personal and legal responsibility.

#### 3.2.Competences

##### GENERIC COMPETENCES

1. Ability to communicate and transmit knowledge, skills and abilities in Spanish.
2. Ability to analyze and evaluate the social and environmental impact of technical solutions, acting with ethics, professional responsibility and social commitment, always looking for quality and continuous improvement.

##### SPECIFIC COMPETENCES

1. Ability to identify, evaluate and cover the risks associated with the professional practice of the various engineering and architectural activities.
2. Ability to incorporate the ethical aspects in the decision making in the professional activity.

### 4.Assessment (1st and 2nd call)

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

The acquisition of competences by the student will be evaluated continuously throughout the course through:

1. Written resolution of two case studies (50%)
2. Oral presentations (50%)

Following the regulations of the University of Zaragoza in this regard, a global assessment test will be programmed for those students who decide to opt for this second system.

### **5. Methodology, learning tasks, syllabus and resources**

#### **5.1. Methodological overview**

The subject LEGAL RESPONSIBILITY AND PROFESSIONAL ETHICS will be very practical, with application to real cases of professionals and companies.

An active learning methodology will be developed through seminar-type classes, with practical case proposals for open discussion in the classroom. Students will be offered materials and readings that are useful for the follow-up of the seminars and the resolution of the practical cases. Particular attention will be given to current topics during the semester, which may be subject to practical cases. Finally, the students will be asked to perform and orally present two small teamwork as an application of the knowledge acquired in the subject.

#### **5.2. Learning tasks**

##### **1 Seminars**

Professional responsibility in the design and calculation of projects, in the direction of work, in paid positions, by signing documents, by accepting orders, writing technical or expert reports, adjudications and management systems.

Code of ethics and codes of business ethics. Principles, obligations. Examples.

##### **2 Practical cases**

Practical cases of responsibility and ethical conflicts in the exercise of the profession, in work in company, in project management and contracts, conflicts of veracity, conflicts of independence, relationship with other professionals, relationship with clients.

##### **3 Teamwork**

Analysis of a case of professional activity where to distinguish and evaluate the different types of personal responsibility.

Analysis of a situation of ethical dilemma in the exercise of the profession.

#### **5.3. Syllabus**

##### **1. Professional and Criminal Liability**

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- Engineering and architecture as a profession.
- Types of professional activities. Types of projects. Relations with administrations and processing of documents.
- Professional Liability.
- Personal Risk Management: risk estimation, what to insure and how.
- Possible procedures or ways of claim: civil, labor, administrative, criminal.
- Responsibility according to the function: Designer, Director of Work, employee, corporate responsibility. Practical examples.
- Responsibility of the Engineer and the Architect in the current legal system Spanish: Law 38/1999 and others.

### 2. Ethics and Professional Deontology

- Fundamental ethics and applied ethics. Approaches to professional ethics.
- The Principle of Responsibility in the professional exercise.
- Deontological norms: professional codes, ethics of business organizations, ethics of public administrations, etc.
- Examples of codes of professional organizations.
- Structures and regulatory development for the application of ethical codes in professional and business organizations.
- Tools for making decisions in the professional practice. Practical cases of ethical dilemmas.

### 5.4.Course planning and calendar

The schedule of planned activities and the date of presentation of the team work will be communicated in a timely manner at the beginning of the course.

### 5.5.Bibliography and recommended resources

Galo Bilbao, Javier Fuertes, José M<sup>a</sup> Guibert: *Ética para Ingenieros*. Desclée De Brouwer, 2006

Rafael Escolá, José Ignacio Murillo: *Ética para Ingenieros*. Eunsa, 2000

Augusto Hortal: *Ética general de las profesiones*. Desclée De Brouwer, 2002

Domingo Pellicer Davia, Antonio García Valcarce: *Deontología para arquitectos*, CIE Inversiones Editoriales Dossat-2000, 2004