

## 1. BASIC INFORMATION

<b>Subject</b>	History, Practice and Professional Deontology
<b>Titulación</b>	Degree in Aerospace Engineering in Aircrafts
<b>School/Faculty</b>	School of Architecture, Engineering and Design
<b>Year</b>	Third Year
<b>ECTS</b>	6 ECTS
<b>Type</b>	Mandatory
<b>Language/s</b>	English
<b>Format</b>	Face-to-face
<b>Semester</b>	Second Semester
<b>Academic Year</b>	2019/2020
<b>Professor</b>	Rubén Dapica Tejada

## 2. PRESENTATION

This course belongs to the “Transversal Knowledge to Engineering” module:

- Modern Language 6 ECTS (first year)
- History, Practice and Professional Deontology 6 ECTS (first year)
- Entrepreneurial Leadership 5 ECTS (second year)
- Budgetary Control 6 ECTS (second year)
- Creation of Companies 6 ECTS (optional)
- Multidisciplinarity I 6 ECTS (optional)
- Multidisciplinarity II 6 ECTS (optional)

The content of the subject is classified within the so-called transversal knowledge. Such knowledge is necessary to provide the engineer with the analytical capacity, business vision and mental structure adequate to face the challenges that modern society demands.

The knowledge of the history of the aerospace engineering allows to understand the rapid development that this one has experienced. An aerospace engineer must understand that aerospace technological advances have emerged as a concrete response to specific problems and that the creativity and innovation of many engineers, together with systematic studies and trials, have made possible the advancement of society. Creativity and innovation are increasingly necessary to drive the progress of aerospace technology and its applications in society.

But the progress cannot be at any price, hence the importance of ethics and deontology as tools that allow modulate and balance the equation progress vs. consequence, always considering that we live in society.

### 3. COMPETENCIES AND LEARNING OUTCOMES

#### Core Competencies:

- CB1: Students have demonstrated to possess and understand the knowledge in an area of study that starts from the base of general secondary education, and is usually found at a level that, although supported by advanced textbooks, also includes some aspects that imply knowledge coming from the forefront of their field of study.
- CB4: Students can transmit information, ideas, problems and solutions to both a specialized and non-specialized public.

#### Cross-curricular Competencies:

- CT7: Ability to analyze and assess the social and environmental impact of technical solutions.
- CT9: Knowledge and ability to apply business management techniques and labor regulations, especially taking into account the principles of equality between men and women, solidarity, and the culture of peace.
- CT10: Knowing the history of aeronautical engineering and analyze and assess the different elements and activities that make up the aeronautical sector.
- CT11: Understand the social, ethical and professional responsibility of the engineer's activity, in his field.

#### Specific Competencies:

- CE30: Knowing the history of engineering, in its field.
- CE31: Knowing the fundamentals of business ethics and corporate social and corporate responsibility

#### Learning Outcomes:

- Discerning against an ethical dilemma through reasoned and justified arguments.
- Issuing judgments of critical appraisal about own and other people's behaviors.
- Understanding the legal, economic and social aspects related to the use of information, and access and use information in an ethical and legal manner.
- Using resources in a sustainable way and prevent negative impacts on the natural and social environment.

The table below shows the relationship between the competences that are developed in the subject and the learning outcomes that are pursued:

Competencies	Learning Outcomes
CB1, CB4, CT9, CT11, CE31	Discerning against an ethical dilemma through reasoned and justified arguments
CB1, CB4, CT11, CE31	Issuing judgments of critical appraisal about own and other people's behaviors
CB1, CB4, CT10, CE30	Understanding the legal, economic and social aspects related to the use of information, and access and use information in an ethical and legal manner
CB1, CB4, CT7, CE31	Using resources in a sustainable way and prevent negative impacts on the natural and social environment

## 4. CONTENTS

The subject matter is divided into five learning units:

### Unit 1. History of Aerospace Engineering

- 1.1 Early Aviation
- 1.2 World War I
- 1.3 Golden Age
- 1.4 World War II
- 1.5 Cold War and Space Race
- 1.6 Current advances and future projects

### Unit 2. Ways to practice the profession

- 2.1 Job outlook and Career path
- 2.2 Aerospace Engineering positions

### Unit 3. Engineering Ethics and Deontology

- 3.1 Responsibility of engineers
- 3.2 Organization and structure of companies from an ethical point of view
- 3.3 Deontology of Engineering

## 5. TEACHING-LEARNING METHODOLOGIES

The following are the types of teaching-learning methodologies that will be applied:

- Survey of objectives and interests
- Lecture-based class
- Laboratory practices
- Research by groups or problem solving by groups
- Case studies

## 6. TRAINING ACTIVITIES

The types of training activities to be carried out and the amount of hours devoted by the student to each of them are identified in the next table:

Training Activities	hours
Lecture-based class	20
Integrative team work	60
Self-study	50
Mentoring, academic monitoring and assessment	20
<b>TOTAL</b>	<b>150</b>

## 7. EVALUATION

In this section, the evaluation systems are related, as well as their weight on the total grade of the subject:

Evaluation System	Weight
Exams, tests and other knowledge tests	30%
Elaboration of articles and reports	30%
Alternative evaluation techniques	20%
Field experiences, conferences and visits	10%
Transversal skills	10%

In the Virtual Campus, when you access the subject, you will be able to consult in detail the evaluation activities that you must carry out, as well as the delivery dates and the evaluation procedures of each one of them.

### 7.1. Ordinary Session

The evaluation of the subject in Ordinary Session is based on the grades obtained in the next evaluation items that will be assessed taking into account the weights (percentages) indicated below:

- Team Project (History Trivia and Study Cases): 30%
- Final Exam: 30%
- Presentations and debates: 20%
- Visit and Conference Reports: 10%
- Attendance and Transversal Skills: 10%

An **attendance** record greater than or equal to 50% is an essential requirement to be allowed to take the final exam in ordinary session.

A **midterm exam** will take place in the middle of the semester. If passed, the student will not have to take the matter included in said exam in the final exam. The final exam grade will average with the midterm for the evaluation of the subject. If the student does not pass the final exam, the whole matter of the subject must be taken in the extraordinary session, even if he/she had passed the midterm exam.

An **integrative project** will be developed throughout the course in teams, but the grade will be individual, being a function of the global outcome and also the work done by the particular student. The latter will be evaluated taken into account the assessment of the rest of the team mates. This means that if a student is poorly evaluated by their peers at the end of the job, he or she may not pass the activity, even if the global grade is high.

To pass the subject in the ordinary session, the student must meet all the following conditions as a minimum:

- A grade greater than or equal to 5.0 out of 10.0 in the final grade (weighted average) of the subject.
- A grade greater than or equal to 5.0 out of 10.0 in the final exam
- A grade greater than or equal to 5.0 out of 10.0 in the project

When the minimum required to perform the weighted average of the evaluable activities is not met (the minimum is not reached in any of the above points), the final grade will be:

- the weighted average if its value is less than or equal to 4
- 4 if the weighted average value is greater than 4

The grade in ordinary session will be considered as **NP** (not presented) when the student has not submitted any evaluable activity of those that are part of the weighted average.

## 7.2. Extraordinary Session

The evaluation of the subject in Extraordinary Session is based on the grades obtained in the next evaluation items that will be assessed taking into account the weights (percentages) indicated below:

- Final Exam: 30%
- Individual Project: 30%
- Presentations: 20%
- Visit and Conference Reports: 10%
- Attendance compensatory activity: 10%

Those items that were passed in ordinary session will not have to be submitted again, and they will be taken into account for the final grade in the extraordinary session. In this session, the student shall submit only those items that remain pending or were not passed in the ordinary session.

To pass the subject in extraordinary session, the student must meet all the following conditions as a minimum:

- A grade greater than or equal to 5.0 out of 10.0 in the final grade (weighted average) of the subject.
- A grade greater than or equal to 5.0 out of 10.0 in the final exam
- A grade greater than or equal to 5.0 out of 10.0 in the project
- A grade greater than or equal to 5.0 out of 10.0 in the attendance compensatory activity

When the minimum required to perform the weighted average of the evaluable activities is not met (the minimum is not reached in any of the above points), the final grade will be:

- the weighted average if its value is less than or equal to 4
- 4 if the weighted average value is greater than 4

The grade in extraordinary session will be considered as **NP** (not presented) in this session when the student has not submitted any new activity with respect to what was submitted in the ordinary session.

## 8. TIMELINE

This section indicates the timeline with approximately delivery dates for some of the possible evaluable activity items of the subject:

Evaluation Activities Item	Date
1. Presentation session I	Week 3-4
2. Trivia session I	Week 5-6
3. Visit Report I	Week 7-8
4. Midterm	Week 9-10
5. Presentation session II	Week 11-12
6. Trivia session II	Week 13-14
7. Project	Week 17
8. Final Exam	Week 18

This schedule may undergo modifications for logistical reasons of the activities. Any modification will be notified to the student in a timely manner.

## **9. BIBLIOGRAPHY**

- *Ethics, Technology, and Engineering: An Introduction*. Van de Poel, I. Wiley-Blackwell, 2011.
- *Aviation History*. Millbrooke, A.M. Jeppesen, 2006.

## **10. DIVERSITY MANAGEMENT UNIT**

Students with specific educational support needs:

Adaptations or curricular adjustments for students with specific educational support needs, in order to guarantee equal opportunities, will be guided by the Unidad de Atención a la Diversidad (UAD).

The issuance of a report of curricular adaptations/adjustments by said Unit will be essential, so that students with specific educational support needs should contact through: [unidad.diversidad@universidadeuropea.es](mailto:unidad.diversidad@universidadeuropea.es) at the beginning of each semester.

## ANNEX Covid-19 ADAPTATION OF TEACHING AND EVALUATION ACTIVITIES

**Course/Module: HISTORY, PRACTICE AND PROFESSIONAL ETHICS**

**Degree Program: DEGREE IN AEROSPACE ENGINEERING IN AIRCRAFTS**

**Year (1º-6º): 3rd**

**Group (s): M3Z**

**Professor: RUBEN DAPICA TEJADA**

**Coordinating professor: ALICIA PAEZ PAVON  
(Degree Coordinator, Internship coordinator, End of Degree Project, Master's Degree Program)**

Teaching Activity described in the syllabus	Adapted activity in distance learning
Lecture-based class (classroom)	Lecture based class (virtual)
Integrative Team Work (field activity and self-study)	Integrative Team Work (field activity and self-study)
Presentations (classroom)	Presentations (virtual)
Conference/Visit (field activity)	Conference/Visit (distance learning)
Exam (classroom)	Exam (virtual)

Evaluation Activity that was planned in the Syllabus for face to face instruction		NEW virtual evaluation activity (adapted)	
Description of original face to face evaluation activity	Classroom Oral Presentations	Description of new activity	Virtual Oral Presentations
<b>Content to be assessed</b>	<b>Unit 2. Ways to practice the profession</b> <ul style="list-style-type: none"> <li>• 2.1 Job outlook and Career path</li> <li>• 2.2 Aerospace Engineering positions</li> </ul> <b>Unit 3. Engineering Ethics and Deontology</b> <ul style="list-style-type: none"> <li>• 3.1 Responsibility of engineers</li> <li>• 3.2 Organization and structure of companies from an ethical point of view</li> <li>• 3.3 Deontology of Engineering</li> </ul>		
<b>Learning Outcomes to be assessed</b> <i>(Please check Syllabus of the course/module)</i>	<b>LO1: Discerning against an ethical dilemma through reasoned and justified arguments</b> <b>LO2: Issuing judgments of critical appraisal about own and other people's behaviors</b> <b>LO4: Using resources in a sustainable way and prevent negative impacts on the natural and social environment</b>		
<b>Duration</b>	2	<b>Approximate duration</b>	2
<b>Weight in evaluation</b>	20%	<b>Weight in evaluation</b>	20%
<b>Please note:</b>	This oral presentations are based on the 2 case study reports of the Team Work, the first one on Professional Practice and the second one on Professional Ethics.		

Evaluation Activity that was planned in the Syllabus for face to face instruction		NEW virtual evaluation activity (adapted)	
Description of original face to face evaluation activity	Visit/Conference Reports (field activity)	Description of new activity	Visit/Conference Report (virtual activity)
Content to be assessed	<b>Unit 1. History of Aerospace Engineering</b> <ul style="list-style-type: none"> <li>• 1.1 Early Aviation</li> <li>• 1.2 World War I</li> <li>• 1.3 Golden Age</li> <li>• 1.4 World War II</li> <li>• 1.5 Cold War and Space Race</li> <li>• 1.6 Current advances and future projects</li> </ul>		
Learning Outcomes to be assessed <i>(Please check Syllabus of the course/module)</i>	<b>LO3: Understanding the legal, economic and social aspects related to the use of information, and access and use information in an ethical and legal manner</b>		
Duration	2	Approximate duration	2
Weight in evaluation	10%	Weight in evaluation	10%
Please note:	The activity was initially planned as a field experience. The assignment has been substituted by a virtual visit to a airspace museum or a watch of a relevant virtual conference.		

Evaluation Activity that was planned in the Syllabus for face to face instruction		NEW virtual evaluation activity (adapted)	
Description of original face to face evaluation activity	Classroom Exam	Description of new activity	Virtual Exam (proctoring)
Content to be assessed	<p><b>Unit 1. History of Aerospace Engineering</b></p> <ul style="list-style-type: none"> <li>• 1.1 Early Aviation</li> <li>• 1.2 World War I</li> <li>• 1.3 Golden Age</li> <li>• 1.4 World War II</li> <li>• 1.5 Cold War and Space Race</li> <li>• 1.6 Current advances and future projects</li> </ul> <p><b>Unit 2. Ways to practice the profession</b></p> <ul style="list-style-type: none"> <li>• 2.1 Job outlook and Career path</li> <li>• 2.2 Aerospace Engineering positions</li> </ul> <p><b>Unit 3. Engineering Ethics and Deontology</b></p> <ul style="list-style-type: none"> <li>• 3.1 Responsibility of engineers</li> <li>• 3.2 Organization and structure of companies from an ethical point of view</li> <li>• 3.3 Deontology of Engineering</li> </ul>		
Learning Outcomes to be assessed <i>(Please check Syllabus of the course/module)</i>	<p>LO1: Discerning against an ethical dilemma through reasoned and justified arguments</p> <p>LO2: Issuing judgments of critical appraisal about own and other people's behaviors</p> <p>LO3: Understanding the legal, economic and social aspects related to the use of information, and access and use information in an ethical and legal manner</p> <p>LO4: Using resources in a sustainable way and prevent negative impacts on the natural and social environment</p>		
Duration	2	Approximate duration	2
Weight in evaluation	30%	Weight in evaluation	30%
Please note:			