Universidad Europea
LAUREATE INTERNATIONAL UNIVERSITIES

Course Syllabus

Aerospace Production and Projects

Year: 2018/2019
Code: 9966001302
Coordinating professor: Ignacio José Marquez López
Degree program: Degree in Aerospace Engineering of aircrafts
School: Arquitectura, Ingeniería y Diseño
Languages: English

The mission of Universidad Europea de Madrid is to offer its students a holistic education, helping them become leaders and professionals capable of responding effectively to the needs of today's global world, adding value within their career fields, and contributing to social advancement through their entrepreneurial spirit and ethical integrity. We also strive to create and transfer knowledge through applied research, thus making our own contribution to progress and putting ourselves at the forefront of intellectual, scientific, and technological development.

Contents

1. Basic information on the course/module

ECTS	6
Credit type	Degree requirements
Language	English
Delivery mode	Face to face
Trimester/Semester	Second semester

2. Presentation of the course/module

This course belongs to the "Materials and production I" module:

- Materials science 6 ECTS (first year)
- Materials elasticity and resistance 6 ECTS (second year)
- Aerospace production and projects 6 ECTS (third year)

The course of Aerospace Production and Projects covers following topics: manufacturing processes for aeronautical and aerospace industry and focused on conventional and nonconventional processes of productions.

3. Competencies and learning outcomes

Core competencies:

- CB3: That students have the ability to gather and interpret relevant data (usually within their field of study) to make judgments that include reflection on relevant social, scientific or ethical.
- CB4: To allow students to communicate information, ideas, problems and solutions both to a specialized and non-specialized audience.
- CB5: That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy

Cross-curricular competencies:

- CT2: Planning, definition, direction and project management of design, stress analysis and production in the field of aeronautical engineering aimed, according to the knowledge acquired as provided in paragraph 5 of the Decree CIN/308/2009, vehicles aerospace.)
- CT14 (N3): Problem Solving with initiative, decision making, creativity, and critical thinking, professionally, and the preparation and defense of arguments (Troubleshooting).
- CT16 (N3): To communicate and convey information, ideas and skills in the student's field of specialization, either in writing or orally, both to skilled and unskilled audiences (communication skills).

Specific competencies:

- CE12: To understand the manufacturing processes.
- CE19: Applied knowledge of: the science and technology of materials, mechanics and thermodynamics, fluid mechanics, aerodynamics and flight mechanics, navigation and air traffic, aerospace technology, theory of structures, air transport, economy and production projects; impact on environment.

Notes: UNIQUE LEVEL: Competence developed at one level. Level 1 (N1): awareness about the importance of competences and basic application of it to several situations. Level 2(N2): interiorization and skillful handling of competences. Level 3 (N3): Full interiorization and handling of competences at any needed situation.

Learning outcomes:

- LO20: To conduct studies by integrating the technologies and engineering procedures which are developed in the competencies of this modules
- LO21: From a series of requirements, and prior information, to conceptualize an engineering problem, proposes an approach to solve it, and obtain the better solution. All this related to the competencies of this module.

The table below shows the relation between the competencies developed during the course and the envisaged learning outcomes:

Competencies	Learning outcomes
CB3,CT2, CT16(N3),CE12	LO20
CB4,CB5,CT2,CT14(N3), CT16(N3),CE12,CE19	LO21

The following table shows how the different types of activities are distributed and how many hours are assigned to each type:

Type of educational activity	Number of hours
Lecture-based class	20 h
Integration of team work	60 h
Self-study	50 h
Mentoring, academic monitoring and assessment	20 h
TOTAL	**150 h**

To develop the competencies and achieve the learning outcomes, you will have to complete the activities indicated in the table below:

Learning outcomes	Learning activity	Type of activity	Content
LO20. To perform studies where technologies, and engineering procedures related to competences of this module are involved.	Activity 1	Self-study	All the units
	Activity 2	Integration of team work	
LO21. From previous requirements and information, conceptualize an engineering problem, raise an approach to solve it, and find the better solution, all related to the competences of this module.	Activity 3	Lecture-based class Self-study Mentoring, academic monitoring and assessment	

When you access the course on the *Virtual Campus,* you'll find a description of the activities you have to complete, as well as the deadline and assessment procedure for each one.

4. Monitoring and assessment

The following table shows the assessable activities, their respective assessment criteria, and the weight each activity carries towards the final course grade.

Assessable activity	Assessment criteria	Weight (%)
Activity 1	• Appropriate hypothesis has been considered. • The results are analyzed and conclusions extracted. • Studies of state of the art are included	25-40%
Activity 2	• Appropriate hypothesis has been considered. • The results are analyzed and conclusions are outlined. • Studies of state of the art are included • Students cooperate to accomplish previous criteria.	25-45%
Activity 3	• Appropriate hypothesis has been considered. • The complete set of equations to solve the problem has been expound • Correct results are obtained according to the hypothesis considered. • The results are analyzed and conclusions are outlined.	30-35%

When you access the course on the *Campus Virtual*, you'll find a description of the activities you have to complete, as well as the deadline and assessment procedure for each one.

4.1. First exam period

To pass the course in the first exam period you should

- Obtain a minimum mark of 5 over 10 in every evaluation method:
- A class attendance of 50% is required.

4.2. Second exam period

To pass the course in the second exam period you should

- Obtain a minimum mark of 5 over 10 in every evaluation method.

5. Bibliography

Recommended bibliography will be updated.

6. How to communicate with your professor

Whenever you have a question about the content or activities, don't forget to post it to your course forum so that your classmates can read it.

You might not be the only one with the same question!

If you have a question that you only want to ask your professor, you can send him/her a private message from the *Campus Virtual*. And if you need to discuss something in more detail, you can arrange an advisory session with your professor.

It's a good idea to check the course forum on a regular basis and read the messages posted by your classmates and professors, as this can be another way to learn.

7. Study recommendations

When you study at university, you need to plan and be consistent from the first week. It's very useful to exchange experiences and opinions with professors and other students, as this will help you develop core competencies such as flexibility, negotiating skills, teamwork, and, of course, critical thinking.

To help you, we recommend using a general method of study based on the following points:

- Study systematically and at a steady pace.
- Attend class and regularly check the course forum on the *Campus Virtual* so that you keep up to date with what's happening.
- Participate actively in the course by sharing your opinions, doubts and experiences relating to the topics covered and/or suggesting new topics of interest for discussion.
- Read the messages posted by your classmates and/or professors.

Active participation in physical and virtual classroom activities is of special interest and academic value. You can participate in many different ways: asking questions, giving your opinion, doing all the activities your professor suggests, taking part in collaborative activities, helping your classmates, etc. This way of working requires effort, but it will help you get better results as you develop your competencies.