



Course Syllabus

Graduation Project

Year: 2018/2019

Code: 9966001408

Coordinating professor: Daniel González Juárez (PhD)

Degree program: Degree in Aerospace Engineering of Aircraft

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.

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1. Basic information on the course/module

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|---------------------------|---------------------|
| ECTS | 18 |
| Credit type | Degree requirements |
| Language | English |
| Delivery mode | Face to face |
| Trimester/Semester | Second semester |

2. Presentation of the course/module

Graduation project consists on a final academic work that students have to develop along an equivalent time of 425 hours during second semester of the fourth year. Topic of the work will be related to aerospace engineering and will be chosen with the help of the tutoring professor. Graduation project has to include an abstract, an introduction, the methodologies used, calculation, analysis, design, conclusions, and future work.

3. Competencies and learning outcomes

Core competencies:

- CB1: That students have demonstrated knowledge and understanding in a field of study that part of the basis of general secondary education, and is usually found at a level that, while supported by advanced textbooks, includes some aspects that will knowledge of the forefront of their field of study
- CB2: That students can apply their knowledge to their work or vocation in a professional manner and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study.
- 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.
- CT5 Capacity to conduct activities of projecting, technical management, expertise, writing reports, inspections, opinions, and technical suggestions on tasks related to the technical aeronautical engineering, in assignments of the responsibilities and technical positions genuinely aerospace.
- CT7: Ability to analyze and assess the social and environmental impact of the technical solutions.
- CT8: Knowledge, understanding, and ability to use regulation needed for technical aeronautics engineers in specific field of aircraft.
- CT9: Knowledge, and ability to use business management technics and labour law, taking into account principles of equality between men and women, solidarity, and peace culture.

- CT20: Take decisions, in advance, on what is need to be done, who should do it, and how it should be done.
- CT21: Self-acknowledgement for achieving high levels of performance in one’s work, with a positive influence in substantially improving the results (Self Confidence).

Specific competencies:

- CE36: Ability to individually develop a project related to specific technologies of aerospace engineering, associated to specifig technology of aircraft, in such manner the work is carried out professionally, synthesising and integrating the adquired competences in previous modules.

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:

- LO36: To develop a typical project in aerospace engineering field, specifically in aircraft.

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

| Competencies | Learning outcomes |
|--|-------------------|
| CB1, CB2, CB3, CB4, CB5, CT2, CT5, CT7, CT8, CT9, CT20, CT21, CE36 | LO36 |

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 |
|---|-----------------|
| Self-study | 425 h |
| Mentoring, academic monitoring and assessment | 25 h |
| TOTAL | 450 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 |
|---|-------------------|---|--------------------------------------|
| LO36. To develop a typical project in aerospace engineering field, specifically in aircraft | Activity 1 | Mentoring, academic monitoring and assessment Self-study | Specific for each graduation project |

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 | <ul style="list-style-type: none"> - The project is well structured, and references used are relevant and correctly assigned. - The project can be a reference within its field. - Student demonstrate high capacity to summarize and organize information. - All information needed in the project is analyzed. - Final results are obtained by needed calculation or/and appropriated theoretical fundamentals. - Final product is useful or add value. - Capacity to communicate technically in oral form, in a clear, enthusiastic, and original way, and catching the audience, by using appropriate methods. | 100% |

| | | |
|--|--|--|
| | - Student answers clearly, with arguments to convince, the questions proposed by the tribunal. | |
|--|--|--|

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

Graduation project is surpassed with a mark of 5 over 10.

4.2. Second exam period

Graduation project is surpassed with a mark of 5 over 10.

5. Bibliography

Specific bibliography according the topci of the project.

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.

PLAN INSTITUCIONAL DE EVALUACIÓN DE APRENDIZAJES POR COVID-19

FICHA DE ADAPTACIÓN DE LAS ACTIVIDADES FORMATIVAS Y DE EVALUACIÓN

| |
|--|
| Asignatura/Módulo: Trabajo Fin de Grado |
| Titulación/Programa: Grado en Ingeniería Aeroespacial en Aeronave |
| Curso (1º-6º): 4º |
| Grupo (s): -- |
| Profesor/a: Daniel González Juárez |
| Docente coordinador: Daniel González Juárez |

| Actividad formativa descrita en la Guía de aprendizaje | Actividad formativa adaptada a formato a distancia |
|---|---|
| Desarrollar un proyecto en el campo de la ingeniería aeroespacial, específicamente en aeronaves | Desarrollar un proyecto en el campo de la ingeniería aeroespacial, específicamente en aeronaves |
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| Actividad de evaluación presencial planificada según Guía | | NUEVA actividad de evaluación que se propone (a distancia) | |
|--|---|---|---|
| Descripción de la actividad de evaluación presencial original | Defensa pública del TFG | Descripción de la nueva actividad de evaluación | Defensa pública del TFG usando la plataforma online de la Universidad Europea |
| Contenido desarrollado (temas) | Específico de cada TFG | | |
| Resultados de aprendizaje desarrollados (consultar Guía de aprendizaje de la asignatura/módulo) | Desarrollar un proyecto en el campo de la ingeniería aeroespacial, específicamente en aeronaves | | |
| Duración aproximada | 20min | Duración aproximada y fecha | 20 min (semana del 22/06) |
| Peso en la evaluación | 100% | Peso en la evaluación | 100% |
| Observaciones | Las defensas públicas de los TFGs se realizarán de forma online a través de la plataforma de la Universidad Europea | | |