# 1. BASIC INFORMATION

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|---|---|
| **Course** | Air Transport |
| **Degree program** | Degree in Aerospace Engineering of aircrafts |
| **School** | Arquitecture, Engineering and Design |
| **Year** | Third |
| **ECTS** | 6 ECTS |
| **Credit type** | Degree Requirements |
| **Language(s)** | English |
| **Delivery mode** | Face to Face |
| **Semester** | Second |
| **Academic year** | 2023/2024 |
| **Coordinating professor** | Miguel A. Cosano |
| **Professor** | Miguel A. Cosano / Fernando Gómez |

# 2. PRESENTATION

This course belongs to the "Aerospace systems and infrastructures" module:
- Aerospace Technology 6 ECTS (first year)
- Navigation Systems I 6 ECTS (first year)
- Navigation Systems II 6 ECTS (second year)
- Air Transport 6 ECTS (third year)

The course includes an introduction to air transport from its different agents:
- Air carrier: Organization and management, airline business, and marketing of airlines.
- Aircraft: Performances of aircrafts, aircraft manufacturer companies.
- Airport and air navigation: Aircraft traffic forecast, passenger flow analysis, design factors for airport dimensioning, air navigations systems.
- Regulation of air transportation: Introduction to international air transportation law, Chicago conference, other international agreements, Spanish air transportation law, and aircraft law.

# 3. COMPETENCIES AND LEARNING OUTCOMES

**Core competencies:**

- CB4: To allow students to communicate information, ideas, problems and solutions both to a specialized and non-specialized audience

**Cross-curricular competencies:**

- CT7: Ability to analyze and assess the social and environmental impact of the technical solutions.

- CT19: Working in interdisciplinary teams, providing the most efficient on the basis of cooperation, assuming their role within the team, establishing good relationships and exchanging information (Teamwork).

**Specific competencies:**
- CE9: To understand the air navigation system as a whole and the complexity of the air traffic
- CE13: To understand the uniqueness of infrastructure, building and operation of airports.
- CE14: To understand the air transport system and its coordination with other modes of transport
- 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.

**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 following table shows the relationship between the competencies developed during the course and the learning outcomes pursued:

| Competencies | Learning outcomes |
|---|---|
| CB4, CT7, CT19, CE9, CE13 | LO20 |
| CT7, CE9, CE13, CE14, CE19 | LO21 |

# 4. CONTENT

- o Institutional framework of civil aviation
- o Evaluation and operation of transport aircraft
- o Operation of Air transport

# 5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:
- Survey of objectives and interests
- Lecture-based class
- Research by groups or problem solving by groups
- Individual reports
- Field experiences, conferences, visits to companies and institutions,

# 6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

**Campus-based mode:**

| Learning activity | Number of hours |
|---|---|
| Lecture-based class | 48 h |
| Integration of team work | 40 h |
| Conferences | 12 h |
| Self Study | 40 h |
| Mentoring, monitoring and assessment | 10 h |
| **TOTAL** | **150 h** |

# 7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

**Campus-based mode:**

| Assessment system | Weight |
|---|---|
| TESTS | 30 % |
| COURSE INTEGRATING PROJECT | 30 % |
| ARTICLES, VISITS, CONFERENCES AND REPORTS | 30 % |
| TRANSVERSAL, DISCIPLINARY SKILLS | 10 % |

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

## 7.1. First exam period

1. Exams, tests and other test knowledge (individual): 30 %, divided in two tests (15 % midterm and 15% final test). A minimum mark of 5 over 10 is required (weighted mean of both test)

2. Course integrating project (groups): **30%**. A minimum mark of 5 over 10 is required.

3. Elaboration of articles, visits, conferences, and reports (individual): **30 %**

4. Transversal-disciplinary skills (individual): **10%**

A minimum mark of 5 over 10 is required for evaluation procedures 3 and 4 together.

A class attendance of 50% is required.

## 7.2. Second exam period

During the extraordinary period the set of reports, articles, and the project report must be delivered before the test.
1. Exams, tests and other test knowledge: 30%. A minimum mark of 5 over 10 is required. Exceptional minimum mark can be adopted depending on test type.
2. Course integrating project: 30%. A minimum mark of 5 over 10 is required.
3. Elaboration of articles, reports of visits, conferences, and reports: 30%
4. Transversal-disciplinary skills: 10%
A minimum mark of 5 over 10 is required for evaluation procedures 3 and 4 together.

# 8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

| Assessable activities | Deadline |
|---|---|
| Report on IATA Conference | One week after the conference |
| Workshop on Lean Management | One week after the conference |
| Report on Euroconcontrol Conference | One week after the conference |
| Visit to Airbus Getafe | One week after the conference |
| Report on SMS Conference | One week after the conference |
| Report on CRM Conference | One week after the conference |
| Airline Tickets Activity | May |

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

# 9. BIBLIOGRAFÍA

The recommended Bibliography is:

- Fundamentals of International Aviation. Suzanne Kearns. 2018
- Rigas Doganis. "Flying off Course: Airline Economics and Marketing, Fourth Edition
- Airline Operations and Management by Gerald N Cook Bruce G Billig
- Airline Operations and Scheduling Second Edition by Massoud Bazargan z-lib.
- Buying the Big Jets, Fleet Planning for Airlines, 2nd Edition (2007). Paul Clark

# 10.  DIVERSITY MANAGEMENT UNIT

From the Educational Guidance and Diversity Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

 From this unit we offer to our students:

1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.

2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.

3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.

4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students in need of educational support can write to us at:
orientacioneducativa@universidadeuropea.es

# 11.  ONLINE SURVEYS

Your opinion matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the "surveys" section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.

# WORK PLAN FOR THE COURSE

## 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.

## SCHEDULE ACTIVITIES

This table shows the delivery deadline for each assessable activity in the course, as well as the delivery dates:

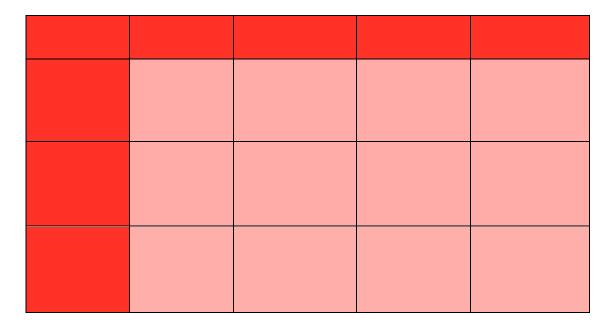| Week | Contents | Learning activities /Assessables | Weight of evaluable activity |
|------|----------|----------------------------------|------------------------------|
|      |          |                                  |                              |
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|      |          |                                  |                              |
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|      |          |                                  |                              |
|      |          |                                  |                              |

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

# DESCRIPTION FOR ASSESSMENT ACTIVITIES

Activity 1.

Activity 2.

Activity 3.

Activity 4.

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# RUBRICS FOR ASSESSMENT ACTIVITIES

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# PLAGIARISM REGULATION

In accordance with the current student disciplinary regulations at Universidad Europea:

- Plagiarism, in full or in part, of intellectual works of any kind, is considered a very serious offense.
- Very serious offenses relating to plagiarism and the use of fraudulent means to pass assessment tests shall result in exclusion from the exams for the relevant period, as well as the inclusion of the offense and its details in the student's academic record. For more information you can find all information regarding disciplinary regulations at the following link: