Universidad Europea

Course Syllabus

Air Transport 2020/2021

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Course Syllabus: Air Transport

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

Course	Air Transport
Degree program	Degree in Aerospace Engineering of aircrafts
School	Arquitecture, Engineering and Design
Year	Second
ECTS	6 ECTS
Credit type	Degree Requirements
Language(s)	English
Delivery mode	Face to Face and Online
Semester	Second
Academic year	2020/2021
Coordinating 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 (second 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.

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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.

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 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

1.Introduction to Air Transport
2.Air Law
3.Airlines
4.Performance
5.Airports

5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Survey of objectives and interests
- Lecture-based class•Laboratory practices
- Research by groups or problem solving by groups
- 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	50 h
Integration of team work	40 h
Conferences	12 h
Self Study	38 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:

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
Report on Lean Management Conference	One week after the conference
Report on Performance Conference	One week after the conference
Report on Airbus Future Projects	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 28th

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. BIBLIOGRAPHY

- Fundamentals of International Aviation. Suzanne Kearns. 2018
- Rigas Doganis. “Flying off Course: Airline Economics and Marketing, Fourth Edition
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10.DIVERSITY MANAGEMENT UNIT

Students with specific learning support needs:

Curricular adaptations and adjustments for students with specific learning support needs, in order to guarantee equal opportunities, will be overseen by the Diversity Management Unit (UAD: Unidad de Atención a la Diversidad).

It is compulsory for this Unit to issue a curricular adaptation/adjustment report, and therefore students with specific learning support needs should contact the Unit at unidad.diversidad@universidadeuropea.es at the beginning of each semester.

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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.

DESCRIPTION FOR ASSESSMENT ACTIVITIES

To be explained during class

RUBRICS FOR ASSESSMENT ACTIVITIES

Assessable activity	Assessment criteria	Weight (%)
Activity 1	• Appropriate hypothesis has been considered. • Correct results are obtained, which are coherent with the hypothesis considered. • The results are analyzed and conclusions extracted. • Studies of state of the art are included	20%
Activity 2	• Student attends the conference or visit • Student attitude is proactive • A report is done, where technical conclusions are included	5%
Activity 3	• Explanation is clear and concise • Presentation contents are correct • Presentation time is adjusting to required duration • Student can answer the questions of audience • Presents all information clearly and concisely and in an organized manner • Does much more than merely restate the question and offer a brief response • Students collaborate to accomplish previous criteria	20%
Activity 4	For exam • The answer contains one or two basic facts that are correct, but may also have incorrect statements as well. No connections or comparisons provided • The answer contains most (75%) of the points that needed to be included. The writing is clear, if uninspired. Correct attempts to integrate the points. • The answer not only contains the main points but goes beyond them to provide a critique of their veracity. The writing is clear and measured. For test • The answer is correct • The answer mark is clear	35%
Activity 5	• The format of the report is correct • All contents are included in the report • Technical conclusions are included, by using theoretical	20%