

## Airport Operations I

Code: 101757  
ECTS Credits: 6

**2025/2026**

Degree	Type	Year
Aeronautical Management	OB	1

### Contact

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### Teaching groups languages

You can view this information at the [end](#) of this document.

### Prerequisites

This course does not have any pre-requisit.

### Objectives and Contextualisation

1. Provide a global overview of the organization and dimensionality of the airport management.
2. Provide an overview of the current liberalization of air traffic services with emphasis on the multiple business opportunities in the free competition of the provision of air traffic control service.
3. Provide a global and systemic overview of the airport role in commercial aviation.
4. Provide an overview of air cargo transportation, including the cargo transportation in passenger airplanes and specialized cargo airplanes.
5. Review the most important transporters and logistics agents, including their operations.

### Competences

- Communication.
- Identify, develop and maintain the necessary resources to meet the tactical and operative needs inherent to air transport activities.
- Personal attitude.
- Personal work habits.
- Supervise the management of resources in an airport.
- Thinking skills.
- Use knowledge of the fundamental principles of mathematics, economics, information technologies and psychology of organisations and work to understand, develop and evaluate the management processes of the different systems in the aeronautical sector.

### Learning Outcomes

1. Communicate knowledge and findings efficiently, both orally and in writing, both in professional situations and with a non-expert audience.
2. Coordinate the multiple organisations acting simultaneously or concurrently in the turnaround process.

3. Critically assess the work done.
4. Describe the aeronautical environment in the field of airport operations.
5. Develop critical thought and reasoning.
6. Develop curiosity and creativity.
7. Develop independent learning strategies.
8. Develop the ability to analyse, synthesise and plan ahead.
9. Draw up and interpret passenger services procedures.
10. Identify airport types and topologies.
11. Identify operations that must be coordinated in aircraft turnaround time.
12. Identify the logistical resources necessary in an airport for the management of landside operations for aircraft turnaround.
13. Identify the technological resources necessary for the airside management of operations in the terminal area.
14. Maintain a proactive and dynamic attitude towards career progression, personal growth and continuous professional development. Have the will to succeed.
15. Make efficient use of ICT in communicating ideas and results.
16. Manage time and available resources. Work in an organised manner.
17. Plan the activities of the turnaround cycle.
18. Work independently.

## Content

1. The Role of Airports in Air Transport
  - 1.1. Classification of Airports: Types and Activities
  - 1.2. Airport Business Models and Management
  - 1.3. Characteristics of Airport Service Production
  - 1.4. Airport Economics and Finance
  - 1.5. The Airport Industry in Spain
  - 1.6. Airport Capacity
2. National, International, and Industry Organizations. Liberalization of Air Transport: USA, Europe, and Spain
3. The Airport as Infrastructure
  - 3.1. Basic Concepts
  - 3.2. Airside and Landside
  - 3.3. Airport and Aircraft Services
4. Ground Operations. Handling
  - 4.1. Basic Concepts
  - 4.2. Passenger and Baggage Handling
  - 4.3. Ramp Handling
  - 4.4. Cargo Handling (Aircargo)
  - 4.5. General Aviation Handling
5. Airspace
  - 5.1. Principles and Techniques of International Air Navigation
  - 5.2. Airspaces
  - 5.3. Air Traffic Services
  - 5.4. Air Traffic Control: Methods and Applications
  - 5.5. Air Traffic Flow Management: CFMU and FMP. Slot Allocation
  - 5.6. Flight Plan. Flight Phases. Navigation Charts
  - 5.7. Environment
  - 5.8. Basic CNS Concept
6. Operational Safety

## Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Lectures	30	1.2	1, 9, 2, 4, 8, 5, 15, 12, 13, 11, 10, 17
Problem solving sessions	15	0.6	3, 1, 9, 2, 4, 8, 6, 5, 15, 16, 12, 13, 11, 10, 14, 17
Scheduled visits	5	0.2	4, 8, 6, 14
Seminars	5	0.2	3, 1, 9, 2, 4, 8, 5, 15, 12, 13, 11, 10, 17
Type: Autonomous			
Autonomous work	95	3.8	9, 2, 4, 7, 8, 5, 16, 12, 13, 11, 10, 17, 18

The working methodology will consist, for the most part, of lectures where the necessary concepts and the corresponding skills will be explained.

## COMMUNICATION CHANNELS

The professor will communicate with students using the following channels:

- University emails of students
- Course delegate, secretary or department support.

Students can communicate with the professor using the following channel:

- Email (will be provided the first week) or virtual campus as detailed

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

## Assessment

### Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
A1 Airport operations	45%	0	0	3, 1, 7, 8, 6, 5, 15, 16, 14, 18
A2 Air navigation and operational safety	40%	0	0	3, 1, 7, 8, 6, 5, 15, 16, 14, 18
A3 Air cargo logistics	15%	0	0	9, 2, 4, 12, 13, 11, 10, 17

This course does not include the single assessment system

## CONTINUOUS EVALUATION

In order to comply with the principles of continuous evaluation, the procedures set out in this document will be followed. It should be understood that these principles are:

- They apply only in the field of this subject
- They comply with the general and specific principles established by the UAB

## EVALUABLE ACTIVITIES

The scope of the competencies foreseen in the subject and the method of evaluation of the degree in which the student obtains it are based on the accomplishment of the activities programmed within the course. Every activity has a type. The types of possible activities are the following:

### Activities I

1.1 Final exam

1.2 Recovery Exam

### Activities II

2 Delivery of reports, or individual or group work

3 Solving problems, practices, or individual or group cases

4 Oral presentation of an individual or group work

5 Intervention Row 0

### Activities III

6 Attendance and active participation in classes, seminars, conferences, Row 0 ...

### Activities I, II or III

7 Others authorized by the Management of the School of Engineering

Activities, II and III, are Non-recoverable. Non-recoverable activities are, in accordance with the above list, the 2, 3, 4, 5, 6 and type 7 activities that expressly establish this.

Without prejudice to other disciplinary measures deemed appropriate, irregularities committed by the student that may lead to a variation in the grade of an assessment act will be graded with a zero. Therefore, copying, plagiarism, cheating, copying, and so on. in any of the assessment activities, it will involve suspending it with a zero. Assessment activities qualified in this way and by this procedure will not be recoverable, and therefore the subject will be suspended directly without the opportunity to recover it in the same academic year.

Proposed activities that are not submitted within the indicated period will be scored zero

## NON-EVALUATED STUDENTS (NA)

Students who have not submitted the individual or group work proposed during the course will be designated in this category. The rating of Non-Evaluable (NA) will only be obtained if no evaluable item is submitted.

Students who have not personally taken the final or recovery exam will be designated in this category.

## HONOR REGISTRATION (MH)

MH will be awarded to students with an overall grade of 9.0 or higher. No examination will be conducted for the award of the MH. The maximum number of MH will be 5% or fraction of the number of students enrolled in the subject.

## EVALUATION OF REPEATING STUDENTS

Repeating students will not have a differentiated treatment and will have to carry out all the activities and tests proposed to pass the subject.

### OVERALL EVALUATION OF THE SUBJECT:

The final grade, CF, is obtained by the expression:

$$CF = 0.4 * (\text{Weighted arithmetic mean of projects and partials, not all deliverables weigh the same}) + 0.5 * (\text{grade of the official final exam or recovery}) + 0.1 * (\text{Attendance and active participation in seminars})$$

It is a requirement to pass the subject to have a minimum grade of 3 out of 10 in the official final or resit exam.

The number of assignments and partial exams will be scheduled in view of the development of the course. To take the recovery exam, you will be in accordance with the regulations of the degree.

Attendance at the seminars is mandatory.

Artificial Intelligence is forbidden in this subject.

Reminder: 1 ECTS = 25 hours of student work.

## Bibliography

1. INGENIERÍA AEROPORTUARIA; García Cruzado, Marcos; ETS Ingenieros Aeronáuticos, 1997.
2. OPERACIONES AEROPORTUARIAS; Isidoro Carmona, Aníbal; Fundación AENA, 1997.
3. DESCUBRIR LOS AEROPUERTOS; Tejada Anguiano, Iván; AENA, Colección Descubrir, 1999.
4. EL TRANSPORTE AÉREO; Utrilla Navarro, Luís; AENA, Colección Descubrir, 2003.
5. INTRODUCCIÓN A LA GESTIÓN ECONÓMICA DE AEROPUERTOS; Salazar de la Cruz, Francisco; Fundación AENA, 2003.
6. INDUSTRIA AEROPORTUARIA; Salazar de la Cruz, Francisco; Editorial Círculo Rojo, 2013.
7. CUADERNO GUIA DE OPERACIONES DE ESCALA; Salazar de la Cruz, Francisco; Apuntes, 2004.
8. AIRPORT HANDLING MANUAL; IATA, 2004.
9. LAS COMPAÑÍAS AÉREAS; Benito, Arturo; AENA, Colección Descubrir, 2004.
10. SERVICIOS AEROPORTUARIOS; Isidoro Carmona, Aníbal; Fundación AENA, 2004.
11. EL HANDLING AEROPORTUARIO; Domingo Calvo, Mariano; AENA, Colección Descubrir, 2005.
12. ANEXO 11 : Servicios de tránsito aéreo. OACI. Última edición disponible.
13. ANEXO 14 : Diseño y operación de aeródromos. OACI. Última edición disponible.
14. Reglamento de Circulación aérea. Ministerio de Fomento. Última edición.
15. AIP - España. Edición electrónica en línea.
16. LA NAVEGACIÓN AÉREA Y EL AEROPUERTO. Saenz Neto, Francisco et al. Fundación Aena.
17. LOGÍSTICA DEL TRANSPORTE AÉREO. Ferrandis Cabré, Joan B.; Apuntes del profesor.

## Software

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## Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this [link](#). To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	10	Catalan	second semester	afternoon
(PAUL) Classroom practices	12	Catalan	second semester	afternoon
(SEM) Seminars	21	Catalan	second semester	afternoon
(SEM) Seminars	22	Catalan	second semester	afternoon
(SEM) Seminars	23	Catalan	second semester	afternoon
(SEM) Seminars	24	Catalan	second semester	afternoon
(TE) Theory	1	Catalan	second semester	afternoon