

Titulació	Tipus	Curs	Semestre
2501233 Gestió aeronàutica	OB	2	1

Professor de contacte

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Utilització d'idiomes a l'assignatura

Llengua vehicular majoritària: anglès (eng)

Grup íntegre en anglès: Sí

Grup íntegre en català: No

Grup íntegre en espanyol: No

Prerequisites

It is advisable to have successfully completed the previous course on Airport Management (101757 - Operacions Aeroportuàries I).

Objectius

Upon the course completion, students will be able to:

1. Discuss the importance of legislative acts affecting Airport Management.
2. Identify, compare and evaluate the various airport types, categories, operational systems, areas, functions, and agents roles.
3. Explain the evolution of various organizational designs and managerial functions at airports.
4. Identify the major areas of managerial attributes, responsibility and expertise.
5. Identify the major streams of airport revenue and expenses, budget types, leases, rates, and pricing strategies.
6. Understand the airport tactical and operational planning activities.
7. Describe the scope and significance of airport maintenance to include major categories, costs, design considerations, environmental concerns, and techniques for dealing with repairs.
8. Recognize and explain the economic importance and related impacts of airports on the community and transportation infrastructure.
9. Explain airport capacity potential and apply statistical measures to traffic demand forecasts.
10. Explain the airport master planning process to include its major elements, tasks, forecasting techniques, and development responsibilities.

Competències

- Actitud personal.
- Comunicació.
- Disposar dels fonaments de matemàtiques, economia, tecnologies de la informació i psicologia de les organitzacions i del treball, necessaris per comprendre, desenvolupar i avaluar els processos de gestió dels diferents sistemes presents al sector aeronàutic.
- Hàbits de pensament.
- Hàbits de treball personal.
- Identificar, desenvolupar o adquirir, i mantenir els recursos necessaris per donar resposta a les necessitats tàctiques i operatives inherents a les activitats del transport aeri.

Resultats d'aprenentatge

1. Avaluar de forma crítica el treball realitzat.
2. Comunicar eficientment de forma oral i/o escrita coneixements, resultats i habilitats, tant en entorns professionals com davant de públics no experts.
3. Descriure l'entorn aeronàutic en l'àmbit de les operacions aeroportuàries.
4. Descriure les operacions en l'àrea de control de terminal (TMA).
5. Desenvolupar estratègies d'aprenentatge autònom.
6. Desenvolupar la capacitat d'anàlisi, síntesi i prospectiva.
7. Desenvolupar la curiositat i la creativitat.
8. Desenvolupar un pensament i un raonament crític.
9. Fer un ús eficient de les TIC en la comunicació i la transmissió d'idees i resultats.
10. Gestionar el temps i els recursos disponibles. Treballar de manera organitzada.
11. Identificar els recursos logístics necessaris en un aeroport per a la gestió de les operacions costat terra per atendre l'escala de les aeronaus.
12. Identificar els recursos tecnològics necessaris per a la gestió costat aire de les operacions en àrea de control de terminal.
13. Identificar les operacions de manteniment de la infraestructura, així com la repercussió que tenen en la qualitat del servei.
14. Mantenir una actitud proactiva i dinàmica respecte al desenvolupament de la pròpia carrera professional, el creixement personal i la formació continuada. Tenir esperit de superació.
15. Treballar de manera autònoma.
16. Utilitzar l'anglès com l'idioma de comunicació i de relació professional de referència.

Continguts

Airport Operations II provides students with a deeper understanding of the management, administration, financing and operating of small, medium, large and hub airports. The course is designed for those students who are interested in airport management as a career field or others who can benefit from an in-depth exposure to airport management.

An understanding of the operation and management of airports plays an important role in rounding out the aviation elective course offerings to students in any of the aviation degree programs. Whether such students are interested in airport management as a career field or another segment of aviation such as the airlines, general aviation or government, how the airport interfaces with these segments is an integral part of his/her overall education. Therefore, its contribution is largely synergistic, but it also provides an opportunity to acquire an in-depth analysis of the phases of airport management; specifically, master planning or the physical facility planning, economics of master planning or the physical facility planning, economics of airport operation and organizational structure. The duties and responsibilities of the airport management team will be analyzed.

CONTENTS

PART I: AIRPORT OPERATIONS MANAGEMENT

- Introduction to Airport Operations
- Airport Operations Specific Features
 - Ground Handling Management
 - Gate Assignment and Check-In Counter Assignment
 - Landing and Arrival Methods
 - Take off and Departure Methods
 - Security and Screening Management
 - Peaks and Airline Rescheduling

PART II: GROUND HANDLING PLANNING AND SCHEDULING

- Ground Handling Overview: Passenger Services, Ramp Services, Load Control, Communications and Flight Operations, Cargo and Mail Warehouse Services, Support Services, Security, Aircraft Maintenance
- IATA Standard Service Level Agreement

- Tactical Planning
 - Objectives
 - Workload Planning
 - Staff Rostering
- Operational Planning
 - Objectives
 - Ground Handling Operations Scheduling
 - Flight Delays Management
- Safety and Security Management
 - Safety Challenges in Passenger Handling, Baggage Handling, Cargo/Mail Handling and Aircraft Handling Procedures
 - Risk Management
 - Safety Improvement Initiatives
 - Legislators and Executive Institutions
 - Safe Ground Handling Methodology
- Environment Friendly Ground Handling

PART III: AIRPORT CAPACITY MANAGEMENT

- Airport Landside Capacity
- Airport Airside Capacity
- Methods for Measuring Airport Landside Capacity
- Airport Demand
- Methods for Analyzing and Forecasting the Airport Passenger Demand
- An Application of the Econometric Methods
- Matching the Airport Capacity to Demand in the Short-Term
- The Airport Master Plan

PART IV: AIRPORT COLLABORATIVE DECISION MAKING

- Objectives
- Milestones Approach
- System Wide Information Management (SWIM)
- Real Cases

PART V: THE FUTURE AIRPORTS

- The Airport as Multimodal Transport Node
- Design and Operations of the Future Airports
- Green Airports
- Airports as a part of Smart Cities

Metodologia

The main contents of this course will be introduced in regular lectures. The course also includes (1) problem sessions that are focused on the application of specific methods to realistic problem solving, and (2) seminars where students will be encouraged to deeply analyze particular topics of the course.

Activitats formatives

Títol	Hores	ECTS	Resultats d'aprenentatge
Tipus: Dirigides			
Problem sessions	15	0,6	1, 2, 3, 6, 8, 9, 10, 11, 12, 14, 15, 16

Regular lectures	25	1	3, 4, 8, 11, 12, 13, 16
Seminars	10	0,4	2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 16
Tipus: Autònomes			
Assignments	100	4	1, 3, 4, 5, 6, 8, 10, 11, 12, 13, 15, 16

Avaluació

The evaluation of this course is to be done based on two examinations (mid-term and final), three practical sessions and three seminars. The final grade will be calculated using the following formula:

$$\text{Final_grade} = 0.15 * (\text{Average}(\text{Practical sessions})) + 0.10 * (\text{Average}(\text{Seminars})) + 0.25 * \text{Mid-term_exam} + 0.5 * \text{Final_exam}$$

In case of failure, students will have a chance to repeatedly pass the practical sessions, the mid-term exam and final exam.

Activitats d'avaluació

Títol	Pes	Hores	ECTS	Resultats d'aprenentatge
Class and Seminars Participation (discussions, assignments, attendance, attention in class, questions raised, etc.)	10%	0	0	2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 16
Final examination	50%	0	0	3, 4, 11, 12, 13, 15
Mid-term examination	25%	0	0	3, 4, 11, 12, 13, 15
Problem sessions (3 sessions)	15%	0	0	1, 2, 3, 6, 7, 8, 9, 10, 11, 12, 14, 16

Bibliografia

1. Neufville, R. and Odoni, A. Airport Systems. Planning, Design, and Management. 2nd Edition. 2013
2. Vasigh, B., Fleming, K. Introduction to Air Transport Economics: From Theory to Applications. 2nd Edition. 2013
3. Francisco Salazar De La Cruz. INDUSTRIA AEROPORTUARIA. Editorial Círculo Rojo, 2013.