Course guide
220324 - 220324 - Airport Infrastructure Management

Last modified: 20/09/2023

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 758 - EPC - Department of Project and Construction Engineering.

Degree: MASTER'S DEGREE IN AERONAUTICAL ENGINEERING (Syllabus 2014). (Optional subject).
MASTER'S DEGREE IN SPACE AND AERONAUTICAL ENGINEERING (Syllabus 2016). (Optional subject).

Academic year: 2023 **ECTS Credits:** 5.0 **Languages:** English

LECTURER

Coordinating lecturer: NURIA FORCADA MATHEU

Primer quadrimestre:
NURIA FORCADA MATHEU - Grup: 1

Others: Primer quadrimestre:
NURIA FORCADA MATHEU - Grup: 1
NURIA MALLAFRE ALCOCER - Grup: 1
RUBEN MARTINEZ SEVILLANO - Grup: 1
FRANCESC TRISAN SEGUI - Grup: 1

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CEEAEROP1. MUEA/MASE: The ability to analyse airport operations, planning and air transport (specific competency for the specialisation in Airports).
CEEAEROP2. MUEA/MASE: The ability to design and calculate airport installations (specific competency for the specialisation in Airports).
CEEAEROP3. MUEA/MASE: The ability to apply analytical and business management techniques to aeronautical companies (specific competency for the specialisation in Airports).

TEACHING METHODOLOGY

The course is divided into parts:
Theory classes
Practical classes
Self-study for doing exercises and activities.
In the theory classes, teachers will introduce the theoretical basis of the concepts, methods and results and illustrate them with examples appropriate to facilitate their understanding.
In the practical classes (in the classroom), teachers guide students in applying theoretical concepts to solve problems, always using critical reasoning. We propose that students solve exercises in and outside the classroom, to promote contact and use the basic tools needed to solve problems.
Students, independently, need to work on the materials provided by teachers and the outcomes of the sessions of exercises/problems, in order to fix and assimilate the concepts.
The teachers provide the syllabus and monitoring of activities (by ATENEA).

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Self study	80,0	64.00
Hours small group	15,0	12.00
Hours large group	30,0	24.00

Total learning time: 125 h

CONTENTS

Module 1: Course introduction. Concepts

Description:
1. Course introduction. Concepts. Vocabulary. Basis of smart buildings.

Related activities:
Exam and Coursework

Full-or-part-time: 40h
Theory classes: 10h
Practical classes: 5h
Self study : 25h

Module 2: Audits, evaluation, planning and management of buiding systems and related services

Description:
2. Protocols for audit and evaluate buiding performance. Planning and management of buiding systems. Management of related buiding services and service suppliers.

Related activities:
Exam and Coursework

Full-or-part-time: 45h
Theory classes: 10h
Practical classes: 5h
Self study : 30h

Module 3: Smart Building Systems

Description:
3. Smart systems description and definition. System Integration. Smart buidings performance.

Related activities:
Exam and Coursework

Full-or-part-time: 40h
Theory classes: 10h
Practical classes: 5h
Self study : 25h

GRADING SYSTEM

The course will be evaluated continuously during the academic year through the coursework. Minimum three evaluation events (mainly case studies) will we proposed during the course. The evaluation weight of these events will be distributed minimum 20% and maximum 40% each, previously agreed with the students, and depending on the amount of work for each case. Initial bad results can be reconducted in successive events.
For those students who meet the requirements and submit to the reevaluation examination, the grade of the reevaluation exam will replace the grades of all the on-site written evaluation acts (tests, midterm and final exams) and the grades obtained during the course for lab practices, works, projects and presentations will be kept.
If the final grade after reevaluation is lower than 5.0, it will replace the initial one only if it is higher. If the final grade after reevaluation is greater or equal to 5.0, the final grade of the subject will be pass 5.0.

BIBLIOGRAPHY

Basic:
- Sinopoli, Jim. Smart buildings systems for architects, owners and builders [on line]. Oxford: Butterworth-Heinemann, 2010 [Consultation: 03/05/2022]. Available on: https://www-sciencedirect-com.recursos.biblioteca.upc.edu/book/9781856176538/smart-building-systems-for-architects-owners-and-builders. ISBN 9781856176538.