

## Course guide

### 205108 - 205108 - Asset and Facility Management

**Last modified:** 11/04/2025

**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 TECHNOLOGY AND ENGINEERING MANAGEMENT (Syllabus 2016). (Optional subject).

**Academic year:** 2025 **ECTS Credits:** 7.5 **Languages:** English

#### LECTURER

**Coordinating lecturer:** Núria Forcada Matheu

**Others:** Trisan Segui, Francesc

#### TEACHING METHODOLOGY

Lecture: Lecturers present concepts, principles and techniques, with the active participation of students.

Problem Based Learning: Lecturers and students resolve exercises and standard problems through specific techniques related to the theoretical contents and principles of the course.

Project Based learning: Students resolve complex problems through specific techniques related to the theoretical contents and principles of the course.

Self-study: Students diagnose their learning needs, in collaboration with the lecturers, and plan their own learning process.

#### LEARNING OBJECTIVES OF THE SUBJECT

The course Asset and Facility Management introduces students to the concepts, principles and techniques of Facility Management (FM). A detailed review of the 11 competencies of an FM will provide a generic knowledge and capabilities to apply this methodology in any type of facility.

#### STUDY LOAD

Type	Hours	Percentage
Hours medium group	30,0	16.00
Self study	127,5	68.00
Hours large group	30,0	16.00

**Total learning time:** 187.5 h

## CONTENTS

### Module 1: Facility Management: areas and functions

**Description:**

The goal of this module is to determine the strategic role of facility management in supporting the core activities of a building on the operational aspects of the built environment and examine the influence of facilities management practices on corporate strategy, procurement, human resource management and financial decision making. This module will match with the leadership, communications, risk management and human factors competences defined by IFMA (International Facility Management Association).

**Related activities:**

Exam and coursework

**Full-or-part-time:** 37h 30m

Theory classes: 6h

Practical classes: 6h

Self study : 25h 30m

### Module 2: Real State and space management

**Description:**

The aim of this module is to understand how buildings and the space configuration within them support the strategic objectives of the organization.

This module covers best practices and finance analysis reviewing end to end lifecycle of a building.

Real state, Finance and Business, Project Management are core competencies included in this module.

**Related activities:**

Exam and coursework

**Full-or-part-time:** 37h 30m

Theory classes: 6h

Practical classes: 6h

Self study : 25h 30m

### Module 3: Operations and Maintenance

**Description:**

The aim of this module is to understand the fundamentals of Asset Management, as much when the company makes large investments in equipment and machinery as when maintaining and operating them in accordance with the own business objectives and the ones of its stakeholders. Both a business vision and technical aspects will be addressed.

**Related activities:**

Distance and in-class activities

Group project

Final exam

Online self-Assessment

**Full-or-part-time:** 37h 30m

Theory classes: 6h

Practical classes: 6h

Self study : 25h 30m

#### Module 4: Energy and waste management for Facility Managers

**Description:**

The aim of this module is to present the tools and techniques to effectively manage energy in a building. Energy efficiency, energy monitoring and management and environmental certification systems will be presented in this module. Sustainability is the main core competency linked to this module.

**Related activities:**

Exam and coursework

**Full-or-part-time:** 37h 30m

Theory classes: 6h

Practical classes: 6h

Self study : 25h 30m

#### Module 5: Facility Information Management & Technology Management

**Description:**

The goal of this module is to present different technologies to support and integrate Asset and Facility Management within the organizational structure of the company such as Enterprise Asset Management Systems (EAMS), Virtual or Mixed reality (XRS) or Building Information Modelling: O&M phase (BIM).

**Related activities:**

Exam and coursework

**Full-or-part-time:** 37h 30m

Theory classes: 6h

Practical classes: 6h

Self study : 25h 30m

## GRADING SYSTEM

The final grade depends on the following three elements:

- \* 30%, Distance and in-class activities
- \* 40%, Group project (report and dissertation)
- \* 30%, Final exam

## BIBLIOGRAPHY

**Basic:**

- Collado, Víctor; Montoya, Gonzalo; Sanz, Jesús. Manual de gestión valor añadido de facility management. 2ª ed. Madrid: IFMA España, 2019.
- Facility management [on line]. PMM Institute of Learning, 2016 [Consultation: 29/04/2024]. Available on: <https://www.pmmlearning.com/wp-content/uploads/2020/08/Servivios-PMM-Learning-Facility.pdf>.
- Rondeau, Edmond P.; Brown, Robert K.; Lapidés, Paul D. Facility management [on line]. 2ª ed. Hoboken, NJ: John Wiley & Sons, 2006 [Consultation: 28/05/2024]. Available on: <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=699985>. ISBN 9780471700593.

**Complementary:**

- Roper, Kathy; Payant, Richard. The facility management handbook. 4th ed. AMACOM, 2014. ISBN 9780814432150.
- Wiggins, Jane M. Facilities manager's desk reference [on line]. 3rd ed. Hoboken, NJ: Wiley, 2021 [Consultation: 29/05/2024]. Available on: <https://onlinelibrary-wiley-com.recursos.biblioteca.upc.edu/doi/book/10.1002/9781119633624>. ISBN 9781119633594.