

Academic Year/course: 2021/22

30720 - Conditioning and Services 1

Syllabus Information

Academic Year: 2021/22

Subject: 30720 - Conditioning and Services 1

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 470 - Bachelor's Degree in Architecture Studies

ECTS: 6.0

Year: 3

Semester: Second semester

Subject Type: Compulsory

Module:

1. General information

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, theory sessions, practice sessions, projects, and visits.

The course consists of theoretical and case studies in which knowledge about passive environmental conditioning is introduced, including acoustic conditioning, climate control, and natural lighting.

In parallel, practical activities are devoted to the analysis of a project previously designed by the students and its passive design improvement. The exercise is performed in groups of approximately 4 students during the semester and are supervised during the course, thus allowing a continuous evaluation.

Complementarily field work activities and practical exercises may be proposed.

4.2. Learning tasks

This course is organized as follows:

Activities

1. Lectures, theory, and problem-solving sessions (large group).
2. Practice sessions (intermediate group).
 - Case study discussions.
 - Tutorial sessions.
3. Visits or conferences.
4. Scheduled tutorials.
5. Tests
6. Studying and individual work.

7. Performing tasks and projects individually and/or in small groups.

Total hours of student work: 150 hours (6 ECTS)

Theory credits: 75 hours (3 ECTS)

Practice credits: 75 hours (3 ECTS)

4.3. Syllabus

This course will address the following topics:

- Introduction: Definition of natural conditioning of buildings; Natural conditioning along the history of architecture; Implementation in place and comfort; Intrinsic characteristics of the project and comfort.
- Passive climate conditioning: Strategies for natural climate conditioning; Natural ventilation; Sun exposure; Climatic comfort.
- Natural lighting conditioning: Daylighting strategies and their integration into the project; Dimensioning natural lighting.
- Introduction to acoustic conditioning.

4.4. Course planning and calendar

Lectures, theory and problem-solving sessions of 2 hours per week according to the School schedule.

Practice sessions of 2 hours per week according to the School schedule.

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the College of Higher Engineering and Architecture (EINA) website (<https://eina.unizar.es/>) and Moodle.