

28610 - Installations: the Basics

Syllabus Information

Academic Year: 2019/20

Subject: 28610 - Installations: the Basics

Faculty / School: 175 - Escuela Universitaria Politécnica de La Almunia

Degree: 422 - Bachelor's Degree in Building Engineering

ECTS: 6.0

Year: 2

Semester: First semester

Subject Type: Basic Education

Module: ---

1.General information

1.1.Aims of the course

Enabling students to acquire basic and practical knowledge about the calculation of the different fluid transport, electromechanical, electrical, thermodynamic and acoustic installations that are integrated in the building.

1.2.Context and importance of this course in the degree

This course is previous to the subjects of Installations I and Installations II, where the necessary skills are set up so that the student can plan and design the installations of a residential building.

It is supplemented with knowledge from the other subjects of the degree in Technical Architecture, with the aim that the student gets a global view of the elements that make up a building and how they are dealt with.

1.3.Recommendations to take this course

This course does not possess any normative prerequisite, although, for its adequate progress, knowledge and strategies coming from the subjects of Mathematics for Building I and Mathematics for Building II of the first year are an asset.

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

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 theory sessions, practice sessions, and autonomous work and study.

4.2.Learning tasks

This course is organized as follows:

- **Theory sessions.**
- **Practice sessions / laboratory**
- **Autonomous work and study**

- Study and understanding of the theory taught in the lectures.
 - Understanding and assimilation of the problems and practical cases solved in the practical classes.
 - Preparation of seminars, solutions to proposed problems, etc.
 - Preparation of laboratory workshops, preparation of summaries and reports.
 - Preparation of the written tests for continuous assessment and final exams.
- **Exams.** Three different tests.

4.3.Syllabus

This course will address the following topics:

- **Topic 1:** Principles of Thermodynamics. Thermal expansions and heat transfer (conduction, convection and radiation).
Hygrometry.
- **Topic 2:** Fluid dynamics.
- **Topic 3:** The electric field and direct current circuits. The magnetic field and alternating current circuits. Principles of the electromagnetic induction.

4.4.Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates (<https://eupla.unizar.es/asuntos-academicos/examenes>) and other details regarding this course will be provided on the first day of class or please refer to the Faculty of EUPLA website and Moodle.

4.5.Bibliography and recommended resources

http://biblos.unizar.es/br/br_citas.php?codigo=28610&year=2019