Process Structures and Pipe-Racks

Academic Year: (2022 / 2023) **Review date: 23/05/2022 12:22:40**

Department assigned to the subject:

Coordinating teacher: VADILLO MARTIN, GUADALUPE

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 2

OBJECTIVES

Students who successfully pass the course achieve the following learning outcomes:
1. Ability to project, calculate and design products, processes, facilities and plants in the field of Industrial Construction.
2. Knowledge and skills to project, calculate and build conventional and advanced structural solutions.
3. Knowledge and understanding of aspects related to the design, calculation and analysis of pipe-racks.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Process structures
- Definition and typology of the different process structures.
- Fundamental design considerations of process structures.
- Applicable loads: permanent, wind, earthquake or supported equipment load combinations
2. Definition and typology of pipe racks.
- Fundamental design considerations in pipe trays
- Applicable loads: permanent, wind, earthquake, supported equipment load combinations.
3. Practical cases.

LEARNING ACTIVITIES AND METHODOLOGY

The training activities developed in the course are:
-Theoretical and practical lessons
-Individual and group work
-Development of practical cases
-Individualized and group tutoring
Using as a methodology
-Exposition by the teacher of the fundamental concepts of the subject
-Discussion, under the teacher supervision, of topics related to the content of the course
-Resolution of practical cases, problems, etc.
-Preparation of work and reports individually and in groups

ASSESSMENT SYSTEM

% end-of-term-examination/test:	0
% of continuous assessment (assigments, laboratory, practicals…):	100

The continuos assessment mark will be 100 % of value in the final mark

BASIC BIBLIOGRAPHY

- null Base Plate and Anchor Rod Design , AISC-STEEL DESIGN GUIDE 1.

- null Guidelines for Seismic Evaluation and Design of Petrochemical Facilities, ASCE.

- null Minimum Design Loads for Buildings and other Structures, ASCE-7/16 .

- null Specification for Steel Structural Buildings, AISC-360/16 .

- null Wind Loads for Petrochemical and Other Industrial Facilities., ASCE.