

Course guide 205058 - 205058 - Demolitions and Soil Preparation

Last modified: 02/04/2024

| Unit in charge: | Terrassa School of Industria | al, Aerospace and Audiovisual Engineering |
|---------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Teaching unit: | 758 - EPC - Department of | Project and Construction Engineering. |
| Degree: | MASTER'S DEGREE IN INDU MASTER'S DEGREE IN AERO MASTER'S DEGREE IN SPAC | JSTRIAL ENGINEERING (Syllabus 2013). (Optional subject). DNAUTICAL ENGINEERING (Syllabus 2014). (Optional subject). CE AND AERONAUTICAL ENGINEERING (Syllabus 2016). (Optional subject). |
| Academic year: 2024 | ECTS Credits: 3.0 | Languages: English |

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Coordinating lecturer: David Vives

Others:

TEACHING METHODOLOGY

The course is divided into parts:

Theory classes

Practical classes

Self-study to carry out 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 will guide students in applying theoretical concepts to solve problems, always using critical reasoning. We propose that students solve exercises inside 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.

LEARNING OBJECTIVES OF THE SUBJECT

Introduce the main demolition techniques and procedures of concrete, brickwork and steel structures, as well as planning and security basics.

On the other hand, introducing soil preparation methods to place new foundations where former buildings stood, or to reinforce existing foundations.

STUDY LOAD

| Туре | Hours | Percentage |
|-------------------|-------|------------|
| Self study | 48,0 | 64.00 |
| Hours large group | 27,0 | 36.00 |

Total learning time: 75 h



CONTENTS

Module 1: DEMOLITIONS

Description:

- Introduction to the main demolition techniques of brickwork, steel and concrete structures.
- Demolition planning.
- Risk Analysis.
- Considerations on demolition material recycling and disposal.

Full-or-part-time: 45h

Theory classes: 15h Self study : 30h

Module 2: SOIL PREPARATION

Description:

- Introduction to soil behavior. Main parameters.
- Soil?s resistance to shear stress.
- Reinforcement of foundations.

Full-or-part-time: 30h

Theory classes: 12h Self study : 18h

GRADING SYSTEM

40 % Essay on a specific demolition subject.40 % Essay on a specific Soil Preparation subject.20% Activities and problems to be proposed in class (during the course)

RESOURCES

Other resources: CTE DB SE-C Cimientos CTE DB SE-AE Acciones en la Edificación NTE - Demoliciones Principles of Geotechnical Engineering, Braja M. Das Hormigón Armado 15 Ed, Jimenez, Montoya