

205058 - Demolitions and Soil Preparation

Coordinating unit:	205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering		
Teaching unit:	758 - EPC - Department of Project and Construction Engineering		
Academic year:	2018		
Degree:	MASTER'S DEGREE IN SPACE AND AERONAUTICAL ENGINEERING (Syllabus 2016). (Teaching unit Optional) MASTER'S DEGREE IN INDUSTRIAL ENGINEERING (Syllabus 2013). (Teaching unit Optional) MASTER'S DEGREE IN AERONAUTICAL ENGINEERING (Syllabus 2014). (Teaching unit Optional)		
ECTS credits:	3	Teaching languages:	English

Teaching staff

Coordinator: David Vives

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

Total learning time: 75h	Hours large group:	27h	36.00%
	Hours medium group:	0h	0.00%
	Hours small group:	0h	0.00%
	Guided activities:	0h	0.00%
	Self study:	48h	64.00%

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Content

<p>Module 1: DEMOLITIONS</p>	<p>Learning time: 45h Theory classes: 15h Self study : 30h</p>
<p>Description:</p> <ul style="list-style-type: none"> - Introduction to the main demolition techniques of brickwork, steel and concrete structures. - Demolition planning. - Risk Analysis. - Considerations on demolition material recycling and disposal. 	
<p>Module 2: SOIL PREPARATION</p>	<p>Learning time: 30h Theory classes: 12h Self study : 18h</p>
<p>Description:</p> <ul style="list-style-type: none"> - Introduction to soil behavior. Main parameters. - Soil's resistance to shear stress. - Reinforcement of foundations. 	

Qualification 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)

Bibliography

Others 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