

28716 - Topography

Información del Plan Docente

Academic Year	2016/17
Academic center	175 - Escuela Universitaria Politécnica de La Almunia
Degree	423 - Bachelor's Degree in Civil Engineering
ECTS	6.0
Course	2
Period	Second semester
Subject Type	Compulsory
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

The learning process designed for this subject is based on the following:

Strong interaction between the teacher/student. This interaction is brought into being through a division of work and responsibilities between the students and the teacher. Nevertheless, it must be taken into account that, to a certain degree, students can set

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their learning pace based on their own needs and availability, following the guidelines set by the teacher.

The current subject is conceived as a stand-alone combination of contents, yet organized into three fundamental and complementary forms, which are: the theoretical concepts of each teaching unit, the solving of problems or resolution of questions and laboratory work, at the same time supported by other activities

The organization of teaching will be carried out using the following steps:

— **Theory Classes** : Theoretical activities carried out mainly through exposition by the teacher, where the theoretical supports of the subject are displayed, highlighting the fundamental, structuring them in topics and or sections, interrelating them.

— **Practical Classes** : The teacher resolves practical problems or cases for demonstrative purposes. This type of teaching complements the theory shown in the lectures with practical aspects.

— **Laboratory Workshop** : The lecture group is divided up into various groups, according to the number of registered students, but never with more than 20 students, in order to make up smaller sized groups.

— **Individual Tutorials** : Those carried out giving individual, personalized attention with a teacher from the department. Said tutorials may be in person or online.

5.2.Learning activities

The programme offered to the student to help them achieve their target results is made up of the following activities...

Programmed learning activities

Involves the active participation of the student, in a way that the results achieved in the learning process are developed, not taking away from those already set out, the activities are the following:

— **Face-to-face generic activities** :

● **Theory Classes** : The theoretical concepts of the subject are explained and

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illustrative examples are developed as support to the theory when necessary.

• **Practical Classes** : Problems and practical cases are carried out, complementary to the theoretical concepts studied.

• **Laboratory Workshop** : This work is tutored by a teacher, in groups of no more than 20 students.

– **Generic non-class activities** :

• 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.

The subject has 6 ECTS credits, which represents 150 hours of student work in the subject during the trimester, in other words, 10 hours per week for 15 weeks of class.

A summary of a weekly timetable guide can be seen in the following table. These figures are obtained from the subject file in the Accreditation Report of the degree, taking into account the level of experimentation considered for the said subject is moderate.

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Activity	Weekly school hours
Lectures	3
Laboratory Workshop	1
Other Activities	6

Nevertheless the previous table can be shown into greater detail, taking into account the following overall distribution:

— 40 hours of lectures, with 50% theoretical demonstration and 50% solving type problems.

— 10 hours of laboratory workshop, in 1 or 2 hour sessions.

— 6 hours of written assessment tests, one hour per test.

— 4 hours of PPT presentations.

— 90 hours of personal study, divided up over the 15 weeks of the 2 nd semester.

There is a tutorial calendar timetable set by the teacher that can be requested by the students who want a tutorial.

5.3.Program

The program that the student is offered to help you achieve the expected results includes the following activities
Content

Topic 1: The graphic expression and Topography

Practice 1: Topographic maps, interpretation.

Item 2: Notions of geodesy: Coordinates.

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Practice 2: Geodesic Network, guidance and coordinate transfer.
Practice 3: Cartographic Resources. IDEs
Practice 4: Identification of surveying equipment
Theoretical evaluation test. (Items 1 and 2)
Practice 5: Initiation parking and guidance
Item 3: Instruments and measuring elements in the surveys and stakeout.
Practices 6, 7 and 8: Handling equipment (uprising)
Item 4: Methods topographic surveys
Practice 9: Digital Terrain Models I
Item 4: Topographical Methods: Itineraries
Practice 10: Digital Terrain Models II
Item 4: Topographical Methods: altimetry
Practice 11: Digital Terrain Models III
Item 5: GNSS surveying equipment applications.
Practice 12: altimetry
Item 6: Setting out in Civil Engineering
Practice 13: Stakeout
Evaluation testing practices.

5.4.Planning and scheduling

Planning & timetable

Class hall sessions & work presentations
timetable

The dates of the final exams will be those
that are officially published at
<http://www.eupla.es/secretaria/academica/examenes.html>.

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The planning orientation shown below

— Week 1, 2, 3 and 4: Topic 1.

— Week 5 and 6: Topic 2.

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— Week 7, 8 and 9 : Topic 3.

— Week 10: Topic 4.

— Week 11: Topic 5.

— Week 11 and 12: Topic 6.

— Week 13: Topic 7.

— Week 14 and 15: Topic 8.

5.5.Bibliography and recommended resources

Bibliography

- Domínguez García-Tejero, Francisco. Topografía general y aplicada / Francisco Domínguez García-Tejero . - 8a. ed. corr. y aum. Madrid : Dossat, 1984
- Problemas resueltos de topografía / Mercedes Delgado Pascual... [et al.] Salamanca : Ediciones Universidad de Salamanca, 2000
- Muñoz San Emeterio, Carlos. Problemas básicos de topografía : planteados y resueltos / Carlos Muñoz San Emeterio. - 1ª edición Madrid : Bellisco, 2005
- Santamaría Peña, Jacinto.. Manual de prácticas de Topografía y Cartografía / Jacinto Santamaría Peña, Teófilo Sanz Mendez . - 1ª edic. Logroño : Universidad de La Rioja, Servicio de Publicaciones,2005.
- González Cabezas, Antonio Miguel. Lecciones de topografía y replanteos / Antonio Miguel González Cabezas . - 4ª ed. San Vicente (Alicante) : Club Universitario, D. L. 2008
- Crespell i Serra, Josep. Replanteo de obras de edificación/Josep Crespell i Serra. - 1ª edición Madrid : Tornapunta, 2012

Resources

Material	Format
Topic theory notes	Paper/repository
Topic problems	
Topic theory notes	Digital/Moodle

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Topic presentations

E-Mail

Topic problems

Related links

Educational software

Web page