

28611 - Topography and Layout

Syllabus Information

Academic Year: 2019/20

Subject: 28611 - Topography and Layout

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: Compulsory

Module: ---

1.General information

1.1.Aims of the course

The subject and its expected results respond to the following approaches and objectives:

Show the basic concepts of the Topography theory and the Stakeouts.

Use different equipment used for the measurement of topographic variables and use of specific computer systems.

Resolve the different types of topographic itineraries, both planimetric and altimetric, including atypical situations.

Show the general principles of the Stakeouts.

1.2.Context and importance of this course in the degree

The Subject of Topography and Replanting, is part of the Degree in Technical Architecture, taught by EU

This subject implies a more than discrete impact in the acquisition of the skills of the degree, in addition to

The need for the subject within the curriculum of the present degree is more than justified and it is unders

1.3.Recommendations to take this course

The development of the Subject of Topography and Replanting requires putting into play knowledge and

- Technical drawing: Graphic resources, expression techniques, views and plans are commonly used in T

- Mathematics: The realization of all the calculations that are carried out in Topography makes use of calc

In relation to the above, in the first course of the degree the subjects of: "Mathematics applied to the buil

This subject does not possess any normative prerequisite nor does it require specific complementary know

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, workshops and tutorials.

A strong interaction between the teacher and student is promoted. 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 their learning pace based on their own needs and availability, following the guidelines set by the teacher.

4.2. Learning tasks

This 6 ECTS (150 hours) course is organized as follows:

- **Theory sessions.** In the theory part, the theoretical concepts of the course are explained and illustrative examples are developed as support to the theory when necessary.
- **Practice sessions.** Complementary to the theoretical concepts studied, the teacher resolves practical problems or cases for demonstrative purposes. Students will be divided into several groups of no more than 20 students / as, being tutored by the teacher.
- **Workshop.** This work is tutored by a teacher, in groups of no more than 20 students. 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.
- **Tutorials:** Individual tutorials which may be face-to-face or online.
- **Exams** (6 hours)
- **Autonomous work and study** (90 hours)
 - 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.

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 this course is moderate.

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 2nd semester.

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

4.3. Syllabus

Topic 1: The graphic expression and Topography
Practice 1: Sketching

Topic 1: The graphic expression and Topography
Practice 2: Guidance from the National Geodetic Network

Practice 3: cartographic resources IDEs

Topic 2: Notions of geodesy: Coordinates.

Practice 4: Identification of surveying equipment

Topic 2: Notions of geodesy: Coordinates.

Practice 5: Managing teams: Parking

Examination Topics 1 and 2

Practice 6: Managing teams: Establishing local reference system

Topic 3: Instruments and measuring elements in the surveys and stakeout.

Practice 7: Handling equipment: Lift ET

Topic 3: Instruments and measuring elements in the surveys and stakeout. problems

Practice 8: Importing data for digital terrain modeling.

Topic 4: Methods in topographic surveys and stakeout.

Practice 9: Generation of surfaces with survey data.

Topic 4: Methods in topographic surveys and stakeout. Examples and problems

Practice 10: Generation and export stakeout files from modified digital model.

Topic 5: topographical applications in building works with GNSS systems.

Practice 11: Leveling.

Topic 5: topographical applications in building works. GNSS systems.

Practice 12: stakeout ET

Topic 6: Stakeout

Practice 13: stakeout Level

Topic 6: Stake: problems

Practice 14: Survey and stakeout with GNSS

Practical tests evaluation.

Notwithstanding the above table it may be more detailed, taking into account the global distribution following:

- 26 hours of lectures, with 40% of theoretical presentation and 60% resolution of such problems.
- 30 hours of practice sessions 2 hours.
- 4 hours of written tests, two-hour test.
- 6 Hours seminars and group tutorials.
- 32 hours of exercises and tutored projects, spread over the 15-week semester.
- 50 hours of personal study, spread over the 15-week semester.

4.4.Course planning and calendar

Schedule of topics:

? Week 1, 2, 3 and 4: Topic 1.

? Week 5 and 6: Topic 2.

? 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.

Material

Topic theory notes

Topic problems

Topic theory notes

Topic presentations

Format

Paper/repository

Digital/Moodle

Topic problems

E-Mail

Related links

Educational software

Web page

Further information concerning the timetable, classroom, office hours, assessment dates (<http://www.eupla.es/secretaria/academica/examenes.html>) 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=28611&year=2019