

28722 - Procedures and Organisation

Syllabus Information

Academic year: 2023/24

Subject: 28722 - Procedures and Organisation

Faculty / School: 175 - Escuela Universitaria Politécnica de La Almunia

Degree: 423 - Bachelor's Degree in Civil Engineering

ECTS: 6.0

Year: 3

Semester: First semester

Subject type: Compulsory

Module:

1. General information

The subject will provide students with knowledge of the most common construction processes in civil works and the machinery used in them.

The subject identifies and studies the procedures for earth moving, the use of concrete and those of bituminous mixtures. It also defines the use of machinery and auxiliary means common to many engineering processes such as formwork, shoring, shoring, cranes, compressors and various tools.

All this theoretical knowledge is applied in practice by solving problems related to performance, duty cycle and cost calculations yields, work cycles and costs.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), in such a way that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement.

Goal 4: Quality Education.

Goal 9: Industry, innovation and infrastructure.

2. Learning results

1. To know the construction procedures for earth moving.
2. Use of earthmoving machinery and its working cycles.
3. The processes and machinery used in the production of aggregates.
4. The construction processes in which concrete and bituminous mixtures are used.
5. The use of auxiliary machinery and the proper use of shoring, shoring, formwork, falsework and cranes.
6. Describe the types and characteristics of machinery for the different construction procedures.
7. To choose the most appropriate construction procedures for real situations in civil engineering and building works.
8. Calculate yields, productivity and costs of technical and human resources.

3. Syllabus

DIDACTIC UNIT I: EARTH MOVING PROCEDURES

TOPIC 1. EARTH MOVING AND EARTH MOVING MACHINERY

TOPIC 2. VOLUMES OF LAND

TOPIC 3. TRACTION AND ROLLING CONDITIONS

TOPIC 4. PRODUCTION AND COST OF MACHINERY

TOPIC 5. DIGGING AND PUSHING:

TOPIC 6. EXCAVATION AND LOADING: LOADING SHOVEL

TOPIC 7. LOADING AND HAULING: MOTORCYCLES

TOPIC 8. EXCAVATION EQUIPMENT: EXCAVATORS

TOPIC 9. HARBORING: TRUCKS AND DUMPERS

TOPIC 10. SPREADING AND LEVELING: MOTOR GRADERS

TOPIC 11. COMPACTING

DIDACTIC UNIT II: GENERAL CONSTRUCTION PROCEDURES

TOPIC 12. AUXILIARY RESOURCES

TOPIC 13. AGGREGATES PRODUCTION

TOPIC 14. FLEXIBLE PAVEMENTS: MACHINERY AND SITE INSTALLATION

TOPIC 15. CONCRETE: MACHINERY AND SITE INSTALLATION

TOPIC 16. SHORING, FORMWORK, REINFORCING, SHORING AND FALSEWORK

TOPIC 17. CRANES AND LIFTING SYSTEMS

TOPIC 18 CASE STUDIES OF CONSTRUCTION PROCEDURES

4. Academic activities

There will be the following activities:

-Face-to-face activities:

1. Theoretical classes: The theoretical concepts of the subject will be explained and practical examples will be developed.
2. Tutorial practices, problem classes: Students will develop examples and carry out practical problems or cases related to the theoretical concepts studied.

- **Tutored autonomous activities:** These activities will be tutored by the faculty of the subject. The students will have the opportunity to carry out these activities at the center, under the supervision of the teachers.
- **Reinforcement activities:** Through a virtual teaching portal (Moodle), various activities will be conducted to reinforce the basic contents of the subject (). These activities will be personalized and controlled through.

In order to carry out the time distribution, we use as a measure the teaching week, in which the student must dedicate 10 hours to the study of the subject.

5. Assessment system

Two forms of assessment will be followed, a continuous one with two tests taken throughout the term and a final global assessment, this last one with two tests.

Attendance to face-to-face activities must be at least 80%, students who do not meet this requirement will be excluded from the continuous assessment.

If the two continuous evaluation exams are passed, it is not necessary to take the final comprehensive exam.

In the case of not reaching this condition, the student will have to take the final test, even if he/she has passed by continuous assessment any of the tests (regardless of the grade obtained)

The indicative weights of the **continuous assessment** are:

Concept	Percentage		Condition
First Test	60%	Minimum grade of ≥ 4.0	
Second Test	30%	Minimum grade of ≥ 4.0	
Coursework	10%	Minimum grade of ≥ 4.0	

Mean score, between tests, ≥ 5.0

The indicative weights for the **overall assessment** are:

Concept	Percentage	Condition
Single exam	90%	Minimum grade of ≥ 4.0
Coursework	10%	Minimum grade of ≥ 4.0

Mean score, between tests, ≥ 5.0

No parts or grades will be kept from one academic year to the next.

