

28626 - Works Organisation, Programme and Supervision

Syllabus Information

Academic Year: 2019/20

Subject: 28626 - Works Organisation, Programme and Supervision

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

Degree: 422 - Bachelor's Degree in Building Engineering

ECTS: 6.0

Year: 3

Semester: Second semester

Subject Type: Compulsory

Module: ---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

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 lectures, problem-solving, tutorials, visits, and autonomous work and study.

4.2.Learning tasks

This course is organized as follows:

- **Lectures:** lectures on theoretical arguments or troubleshooting taught primarily in an exhibition by the teacher.
- **Seminars/workshops:** Activities of theoretical discussion and / or practice, conducted in the classroom or in other forums by visiting lecturers.
- **Visits:** Educational visits guided by teachers of the course related to the topics covered throughout the course.
- **Individual tutorials.** They can be held through Moodle or e-mail.
- **Group tutorials:** focused on learning by students developed by the teacher who meets with a group of students to answer questions or develop group examinations resolutions or issues of common interest.

- **Tutored autonomous activities:** These activities are carried out independently by students under the supervision of teachers of the course.
- **Reinforcement activities:** Through the virtual portal teaching (Moodle) or email at the University of Zaragoza, teachers of the course will develop, for specific cases which can not apply conventional tutoring, support activities and help students who needed it, resolving doubts or providing solutions to inherent problems arguments agenda.

4.3.Syllabus

This course will address the following topics:

1. IMPLEMENTATION PLAN WORK. This topic is basically about how to undertake the organization of the work: necessary infrastructure, temporary site installations, rush, permits, resources, etc.
2. INTRODUCTION TO THE PROGRAMMING AND PROJECT PLANNING. The subject introduces students to the need to plan and track projects to ensure compliance with its requirements: cost, time, quality, safety.
3. COMPONENTS OF A PROGRAM. It shows the need to break down a project into different interrelated activities and which are assigned a priority.
4. NETWORKS PERT-CPM. GANTT DIAGRAM. PERT-CPM networks are forms of graphic representation in mesh development of a project related activities broken down into network elements, to elaborate rules, calculation times, durations, critical path, looseness, etc. PERT networks consider time as a random variable, while the CPM networks consider time as a datum. Gantt chart is the representation of a project in a bar graph representing activities, describing sequences of all the activities that make up the project.
5. PROBABILITY DISTRIBUTION AND METHOD MCE. The uncertainty in the timing of implementation of activities leads us to consider the concept of probability of compliance with a schedule. Therefore, the duration is a random variable once obtained becomes a datum. But there is a relationship between duration and resources applied (cost). The MCE method tries to find an optimal solution cost-lasting.
6. METHOD ROY. This topic is another form of graphical representation of programming with some variations from the PERT-CPM representation is addressed. These activities are represented by arrows whose beginning and end is marked by an event. Now, activities are represented by rectangles that are linked by arrows indicating the relationships between activities. Relations activities are to start finally.
7. METHOD OF PRECEDENCE. Network programming procedure by which calculation process follows the critical path method, with systems like ROY PERT and programming logic. Network design is similar to ROY system, showing the activities themselves with a beginning and an end, and their predecessors and successors with the difference that allows you to schedule activities in parallel moving closer to the reality of implementation.
8. CONTROL OF WORKS. It will give a general overview of the highlights for effective control methods works, and if so how to approach the application of corrections/modifications in case of deviations detected on the initial planning.

4.4.Course planning and calendar

The course consists of 6 ECTS credits, which represents 150 hours of student work on the course during the semester. 40% of this work (60 hours) Will take place in the classroom, and the rest will be autonomous.

Schedule sessions and presentation of works

week activities

1	TOPIC 0	PRESENTATION. PROPOSALS. PRACTICE 0: KNOWLEDGE ON THE SUBJECT
	TOPIC 1	PRACTICE 0: Continuation / IMPLEMENTATION PLAN WORK
2	ITEM 1	IMPLEMENTATION PLAN WORK

	TOPIC 1	PRACTICE 1: IMPLEMENTATION OF A WORK
3	TOPIC 1	EXHIBITION IN PRACTICE CLASS 1
	TOPIC 2	INTRODUCTION TO PROGRAMMING AND PROJECT PLANNING
4	TOPIC 2	PRACTICE 2. ACTIVITIES / RELATIONS / PLANNING / TIMES -DURACIONES
	ITEM 3	COMPONENTS OF A CLASSROOM PROGRAMMING the method will be used FLIPPED
5	UNIT 4	NETWORKING PERT / GANTT theory and exercises
	TOPIC 4	CPM (Critical Path Method) theory and exercises
6	TOPIC 4	PRACTICE 3 networks PERT and CPM
	TOPIC 4	PRACTICE 3 networks PERT and CPM class presentation
7	SEMINAR	SEMINAR Ganttter (ANA Dr. ESTEBAN.) / PRACTICE 4: GANTT realization
	TOPIC 4	PRACTICE 4: GANTT presentation in class
8		ALL TOPICS rehearsals
		ASSESSMENT TEST theoretical and practical (Continuous assessment)
9	UNIT 5	PROBABILITY DISTRIBUTION METHOD
	UNIT 5	MCE
10	UNIT 5	DISTRIBUTION probab. AND METHOD MCE
	UNIT 5	PRACTICAL 6: METHOD MCE / ODDS
11	ITEM 6	METHOD ROY Practices
	ITEM 6	WORK METHOD ROY PERT
12	ITEM 6	PRACTICE 7: ROY
	SEMINAR	BIM (Building Information Modeling)
13	ITEM 7	METHOD OF PRECEDENCE / Resolution Practice 6

	ITEM 7	PRACTICE 7: PRECEDENCE
14	ITEM 6	PRACTICE 7: PRECEDENCE. EXPOSURE AND DEFENCE
	ITEM 8	CONTROL WORKS
15	UNIT 8	PRACTICE 8: CONTROL OF WORKS
	TEST	theoretical and practical (Continuous assessment)

Further information concerning the timetable, classroom, office hours, assessment dates 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=28626&year=2019