

## 820061 - PEM - Project Engineering & Management

Coordinating unit:	295 - EEBE - Barcelona East School of Engineering
Teaching unit:	717 - EGE - Department of Engineering Presentation
Academic year:	2018
Degree:	BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN ENERGY ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN ENERGY ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN BIOMEDICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN MATERIALS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
ECTS credits:	6
Teaching languages:	English

### Teaching staff

Coordinator: FRANCISCO ALPISTE PENALBA

### Degree competences to which the subject contributes

Specific:

1. Understand the organisational structure and functions of project management offices.

Transversal:

2. EFFECTIVE USE OF INFORMATION RESOURCES - Level 3. Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.

### Teaching methodology

The subject uses about 40% expositive methodology in classroom activities and projects based learning in 60 %. The individual work is needed about 40% of overall student learning time. the work in groups is needed in 60 %.

### Learning objectives of the subject

The following general learning objectives of this course can be considered:

1. Acquire fundamentals and knowledge about PROJECT ENGINEERING & MANAGEMENT. It refers to the management tasks related to the implementation of projects (Project Management)
2. Reliable use of information resources



## 820061 - PEM - Project Engineering & Management

### Study load

Total learning time: 150h	Hours large group:	45h	30.00%
	Hours medium group:	15h	10.00%
	Hours small group:	0h	0.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

## 820061 - PEM - Project Engineering & Management

### Content

Theme 1: Introduction	Learning time: 4h Theory classes: 2h Self study : 2h
Description: Theme 1: Introduction.The basic fundamentals of project management	
Theme 2: Project Integration Management	Learning time: 4h Theory classes: 2h Self study : 2h
Description: Theme 2: Project Integration Management .To ensure that the various elements of the project are properly coordinated.	
Theme 3: Project Scope Management	Learning time: 4h Theory classes: 2h Self study : 2h
Description: Theme 3: Project Scope Management. To ensure that the project includes all work required and only these.	
Theme 4: Project Time Management	Learning time: 45h Practical classes: 7h 30m Guided activities: 15h Self study : 22h 30m
Description: Theme 4: Project Time Management. To ensure the completion of the project within schedule.	
Theme 5: Project Cost Management	Learning time: 45h Practical classes: 7h 30m Guided activities: 15h Self study : 22h 30m
Description: Theme 5: Project Cost Management. To ensure that the project is completed within budget.	

## 820061 - PEM - Project Engineering & Management

Theme 6: Project Quality Management	Learning time: 8h Theory classes: 4h Self study : 4h
Description: Theme 6: Project Quality Management. To ensure that the project meets the requirements, i.e. the needs for which was undertaken.	
Theme 7: Project Human Resource Management	Learning time: 8h Theory classes: 4h Self study : 4h
Description: Theme 7: Project Human Resource Management. To achieve the most effective use of people involved in the project.	
Theme 8: Project Communication Management	Learning time: 8h Theory classes: 4h Self study : 4h
Description: Theme 8: Project Communication Management. To ensure adequate and timely generation, collection, dissemination, storage and final location of project information.	
Theme 9: Project risk Management	Learning time: 8h Theory classes: 4h Self study : 4h
Description: Theme 9: Project risk Management. To identify, analyze and respond to project risks. Includes maximizing the likelihood and consequences of positive events and minimize the negative events.	

## 820061 - PEM - Project Engineering & Management

Theme 10: Project Procurement Management	Learning time: 16h Theory classes: 8h Self study : 8h
<p>Description: Theme 10: Project Procurement Management. To acquire products (goods or services) from outside the organization conducting the project.</p>	

### Planning of activities

PARTICIPATORY EXPOSITIVE CLASS	Hours: 60h Theory classes: 30h Self study: 30h
<p>Description: Fundamentally expositive by involving the student with short-term activities. The teacher is the protagonist, sets the task to carry out and sets the rhythm of activity.</p> <p>Hours: 4h/week In class: 2h Self-study: 2h</p> <p>Descriptions of the assignments due and their relation to the assessment: An exercise to be performed by each student, similar to the examples solved by the teacher.</p>	

PARTICIPATORY PROBLEM BASED LEARNING CLASS	Hours: 90h Practical classes: 15h Guided activities: 30h Self study: 45h
<p>Description: The method is based on the approach to problems by the teacher which the student has to solve developing a project in a given time or developing a task by planning, designing and carrying out activities.</p> <p>Hours: 6h/week Practical class (half group): 1h Guided activities: 2h Self-study: 3h</p> <p>Descriptions of the assignments due and their relation to the assessment: PROJECT</p>	

## 820061 - PEM - Project Engineering & Management

### Qualification system

Exams of project theory	25%
Exams of problems	25%
Deliverables	20%
Project:	30%

Assessment of student work, individual and / or group, made in person and distance. will be held by the teacher assessment weighting appropriately the different activities. The final mark includes the generic competence assessed on the course: "EFFECTIVE USE OF INFORMATION RESOURCES".

These mark of "EFFECTIVE USE OF INFORMATION RESOURCES" constitutes the 20% of the Project qualification. It is calculated by the teacher and classmates evaluating the contributions made by each student developing the Project.

### Regulations for carrying out activities

Exam of theory without reference material  
Exam of problems with reference material

### Bibliography

#### Basic:

Guide to the project management body of knowledge (PMBOK® Guide). 4th ed. Newtown Square, Pa: Project Management Institute, Inc, cop. 2008. ISBN 9781933890517.

#### Complementary:

Burke, R. Project management : planning and control techniques. 4th ed. West Sussex: John Wiley & Sons, 2003. ISBN 9780470851241.

Burnett, K. The project management paradigm. London: Springer-Verlag, cop. 1998. ISBN 978-3-540-76238-6.

Cleland, D.I. Project management : strategic design and implementation. 5th ed. New York: McGraw-Hill, 2007. ISBN 9780071471602.

Kerzner, H. Project management : case studies. 3rd ed. Hoboken, N.J.: Wiley, cop. 2009. ISBN 9780470278710.

#### Others resources:

Learning material published in the virtual learning environment.