

Economical and Financial Aspects of Construction (250715)

General Information

School	ETSECCPB
Departments	Departament d'Enginyeria Civil i Ambiental (DECA) Departament d'Enginyeria de Projectes i de la Construcció (EPC)
Credits	5.0 ECTS
Programs	MÀSTER UNIVERSITARI EN ENGINYERIA ESTRUCTURAL I DE LA CONSTRUCCIÓ (pla 2015)
Course	2024/25

Main teaching language at each group

- Group 10ES1 Spanish (Q1)

Faculty

Responsible Faculty: Xavier Roca Ramon
Faculty: Xavier Ferré Tafalla, Pedro Judez Muñoz, Xavier Roca Ramon

Objectives of Education

Subject to provide the skills needed to develop cost management and financial analysis of a construction project

- Capability to develop cost management and financial analysis of a construction project, including all stages, from conception to execution. - Capability to consider economic aspects as a criterion for decision making, both in the design phase and in the work construction. - Knowledge of different types of costs on a construction project, the need for economic planning and cost control during its evolution.

The costs of execution of the work construction. Estimated construction costs. Indirect costs. Costs associated with construction waste. Costs associated with site logistics. Time schedule and Economical planning of the construction: management of work teams, control of the economic development of the project, cash-flow analysis of the construction project. Economic Survey of alternative constructive solutions. Cost allocation for workplaces. Decision making in the project stage. Decision making in the execution phase of the work. Sensitivity analysis in construction management. Financial analysis of the project and construction. Determination of the necessary funding. Financial models. Funding sources. Economic viability of the construction project. Methods of economic evaluation of a construction project .

Total hours of student work

		Hours	Percentage
Supervised Learning	Large group	25.5 h	56.67 %
	Medium group	9.75 h	21.67 %
	Laboratory classes	9.75 h	21.67 %
	Guided Activities	0.0 h	0.00 %
Self Study		80.0 h	

Contents

Introduction + Design Phase

Introduction + Design Phase

Budgets

Budgets

Viabilidad + Licitación

Viability

Estimated economic

Economical Estimation

Cost centers

Cost Centres

Economics and Management

Economics and Management

Control works

Control works

Financing Systems

Financing Systems

Evaluation

Activities

Course work tracking

Dedication

6h

Teaching Methodology

The course consists of 3 hours per week of classroom activity, mixing theoretical lectures and solving practical problems with greater interaction with the students.

Support material in the form of a detailed teaching plan is provided using the virtual campus ATENEA: content, program of learning and assessment activities conducted and literature.

Although most of the sessions will be given in the language indicated, sessions supported by other occasional guest experts may be held in other languages.

Grading Rules

() The evaluation calendar and grading rules will be approved before the start of the course.*

The mark of the course is obtained from the ratings of continuous assessment and their corresponding laboratories and/or classroom computers.

Continuous assessment consist in several activities, both individually and in group, of additive and training characteristics, carried out during the year (both in and out of the classroom).

The teachings of the laboratory grade is the average in such activities.

The evaluation tests consist of a part with questions about concepts associated with the learning objectives of the course with regard to knowledge or understanding, and a part with a set of application exercises.

Test Rules

Failure to perform a laboratory or continuous assessment activity in the scheduled period will result in a mark of zero in that activity.

Office Hours

Contact xavier.roca@upc.edu

Bibliography

Basic

- Roca, Xavier. Apuntes propios de la asignatura.