



Course guide

310771 - 310771 - Quantity Surveying

Last modified: 06/06/2024

Unit in charge: Barcelona School of Building Construction
Teaching unit: 732 - OE - Department of Management.

Degree: BACHELOR'S DEGREE IN ARCHITECTURAL TECHNOLOGY AND BUILDING CONSTRUCTION (Syllabus 2019).
(Optional subject).

Academic year: 2024 **ECTS Credits:** 3.0 **Languages:** Spanish

LECTURER

Coordinating lecturer: Baringo Sabater, Pedro

Others:

REQUIREMENTS

Basic knowledge of spreadsheets, budget programs (TCQ, Archimedes, presto), 3D modeling programs (skechup) and BIM programs (Revit, Edificius, ..)

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

FB-06. FB-6 Appropriate knowledge of the business concept, its institutional framework, organisation models, planning, control and strategic decision making in certainty environments, risk and uncertainty; production systems, expenses, planning, financing sources and making of financial plans and budgets.

FB-08. FB-8 Basic knowledge of the legal regulations of the Public Administration and the procedures of public and private procurement.

FE-17. FE-17 Ability to schedule and organise the constructive processes, the construction teams, the technical and human means for its execution and maintenance.

FE-18. FE-18 Knowledge of the law of the construction and the contractual relations which occur in the different phases of the construction process, as well as the specific legislation, rules and regulations of the prevention and coordination in matters of safety and occupational health in construction.

FE-23. FE-23 Ability to draft and calculate basic prices, auxiliary prices, single and split prices of the construction units; analyse and control the costs during the construction process; make budgets.

FE-24. FE-24 Ability for the development of market studies, valuations and appraisals, studies of real-state viability, valuation and expert's report of risks and damages in construction.

Transversal:

04 COE. EFFICIENT ORAL AND WRITTEN COMMUNICATION. Communicating verbally and in writing about learning outcomes, thought-building and decision-making. Taking part in debates about issues related to the own field of specialization.

05 TEQ. TEAMWORK. Being able to work as a team player, either as a member or as a leader. Contributing to projects pragmatically and responsibly, by reaching commitments in accordance to the resources that are available.

06 URI. EFFECTIVE USE OF INFORMATION RESOURCES. Managing the acquisition, structure, analysis and display of information from the own field of specialization. Taking a critical stance with regard to the results obtained.

07 AAT. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.

04 COE N2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 2. Using strategies for preparing and giving oral presentations. Writing texts and documents whose content is coherent, well structured and free of spelling and grammatical errors.

05 TEQ N1. TEAMWORK - Level 1. Working in a team and making positive contributions once the aims and group and individual responsibilities have been defined. Reaching joint decisions on the strategy to be followed.

06 URI N3. 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.

07 AAT N3. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.

TEACHING METHODOLOGY

The subject focuses on the professional activity carried out by a "Quantity Surveyor". Which consists of the economic management of all phases of the development of a building, through the introduction of cost estimates, feasibility studies, tenders, risk analysis, cost optimization and planning.

Learning must be collaborative and interactive between students and teachers.

The students will assume from the beginning the role of "Quantity surveyor" and will be integrated into the team of the project promoter / Writer represented by the teacher and will provide contributions in the different phases of the process. (Feasibility, tender, economic management and cost optimization)

During this process, training sessions will be held to support the preparation of the reports and results of the activity on the process.

During the course, the contributions and results of the different phases of the process developed by the students will be exposed and discussed periodically.

LEARNING OBJECTIVES OF THE SUBJECT

Have the theoretical and practical bases of the economic management of the "Quantity surveyor" in the building process.

Expose and discuss, publicly, the contributions, modifications or discrepancies during the process.

Expand knowledge in the use of BIM tools, to improve communication and productivity of economic management.

STUDY LOAD

Type	Hours	Percentage
Hours large group	30,0	40.00
Self study	45,0	60.00

Total learning time: 75 h

CONTENTS

introduction to Quantity surveying

Description:

1. Introduction
 - 1.01.-Competences of the Quantity surveyor.
 - 1.01.-BIM and Quantity surveying.
- 2.-Corporate management
 - 2.01.- Financial planning.
 - 2.02.- Feasibility analysis.
 - 2.03.- Reports
- 3.- Financial management of the project.
 - 3.01.-Modeling and economic resizing.
 - 3.02.-Initial and project budgets.
 - 3.03.- Project audit and deviation management.
 - 3.04.-Cost analysis and production improvement.
- 4.- Bidding and contracting tactics
 - 4.01.- Bidding process and strategies
 - 4.02.-Comparison, selection of offers and contractual negotiation.
 - 4.03.-Economic monitoring and execution management.
- 5.-Risk management.
 - 5.01.- Identification of risks and preventive measures.
 - 5.02.-Risk management and monitoring.
- 6.-BIM tools (They will be included according to the evolution of the process)
 - 6.01.- BEP introduction (BIM Execution Plan)

Specific objectives:

UNIT 1.-Introduction to the activities of the Quantity surveyor in the study of the value/cost in the design, construction systems, contracting, operation, economic management and maintenance within the construction sector, in the fields of promotion and construction . Presentation of BIM tools.

UNIT 2.- Introduction to the elaboration of analysis reports and financial planning in the initial phases of real estate promotions.

UNIT 3.-Study and realization of economic resizing of the project, introduction of process or modeling options, cost analysis and optimization study of construction processes.

UNIT 4.-Processes to create bids and bidding strategies, study of the different contractual forms, bid selection models and subsequent contractual negotiation with the company. Realization of certifications and management of contradictory.

UNIT 5.- Methodology for risk identification, analysis and assessment, management and application of corrective measures; including feedback for future processes.

UNIT 6.- During the course, BIM tools will be introduced to facilitate the reports, contributions and results of the practical intervention of the project.

Full-or-part-time: 75h

Theory classes: 15h

Practical classes: 15h

Self study : 45h

GRADING SYSTEM

The evaluation system:

Exposure of periodic activities 50%

Delivery and final exposure of the process 50%