



Optional Subject : **D.O.5 - QUALITY MANAGEMENT**

Year of study: **IV – Civil Engineering**

Discipline Code: **CE412**

Discipline Structure: **term II-14 weeks, 2 course hours + 1 lab. hour weekly**

Broad view

Most of us choose to do good things in life. Construction engineers also. But not every intended good job ends as it started. So a good thing shall be well done. This is all about quality. Quality is a philosophical concept closely linked to other fundamental concepts, such as "good", "beautiful" and "true". The concept of "quality" is a notion that people have operated since ancient times. The Babylonian king Hammurabi (about 1772 B.C.) stated that *"If a builder builds a house, and that house collapses and kills the owner, the builder will be put to death"*. Fortunately nowadays laws are not so hard. But still they punish lack of quality.

Quality is a concept that is used in all areas of economic and social life, including in Construction engineering. But there are so many that are involved in "construction process". Therefore not long after graduation, your technical background and experience combined with management knowledge, will be valued in a diverse range of sectors, including construction quality management.

This course is meant to be an initiation of construction engineers in the science and art of quality management.

Course objectives

The goal of the course is to give you answers to questions like: what is quality in construction sector?, how to ensure it?, how to control it?, what happens if construction works have poor quality?, what is management?, what is quality management?, etc. It also will guide you over the project life-cycle and let you know how to cope with quality matters over the building lifetime stages bearing in mind that lack of quality means losing money, reputation or even worse.



Course content

Each of us is managed or manages. This is the reason for lectures to begin with a general presentation of management principles, techniques and functions to be applied in construction quality management. Lifecycle stages of a building project shall be further presented in connection with statutory regulations about construction quality.

Also, project managers and directors of construction companies shall be invited to disseminate their experience from the „real life” point of view, where students may find the application of the scholar theoretical body of knowledge.

Laboratory works shall be focused on solving of practical issues specific to construction quality assurance and control such as: assembling a building design documentation, prepare a building quality plan and work procedures, simulation of a handing over procedure, building condition survey over the operation stage.

Reasons for choosing this course

Students will discover that Construction Engineering is not only performing some calculation but more than that it involves equipment, work methods, money and people. By itself, no drawing will ever become a real building. A real building is the result of work of various professionals that have to be managed to reach the desired requirements.



Optional Subject : **D.O.5 - PROJECT MANAGEMENT**

Year of study: **IV – Civil Engineering**

Discipline Code: **CE412**

Discipline Structure: **term II-14 weeks, 2 course hours + 1 lab. hour weekly**



Broad view

Management is as old as civilization, but its formal study is recent. Over the last few decades even the Engineering and Construction sector has been adopted management as a tool for increasing productivity. Construction engineers understood that organizations exist because most of the time no one individual can successfully cope with various demands for knowledge, experience, skills and ability to accomplish the organization's goals. Therefore, not long after graduation, your technical background and experience combined with business and management knowledge, will be valued in a diverse range of sectors, including management of construction projects. This course is meant to be an initiation of construction engineers in the science and art of project management.

Course objectives

The goal of the course is to give you a deep inside view on the functions of management and how to apply them to manage a construction project from pre-implementation to completion. It also will guide you over the project life-cycle and let you know how to initiate a project, how to plan, develop a design documentation, manage time and money, organize, motivate and lead people, bearing in mind the profitability, technical efficiency and expose to constraints.

Course content

Good engineering management is an art, in that a good manager achieves its objectives by stimulating the creating effort of a group of people, but it is an art backed by scientific principles. Lectures shall present the basic principles, techniques and instruments related to construction and project management. In the same time, an incursion in the behavioural sciences will develop how to delegate authority, motivate people, communicate and be a leader of your subordinates.

Also, project managers and directors of construction companies shall be invited to disseminate their experience from the „real life” point of view, where students may find the application of the scholar theoretical body of knowledge.

Laboratory works shall be focused on solving of practical issues specific to project management such as: assembling a building design documentation, review a project scheme on the basis of life-cycle costing approach, application of decision making process, develop a contract for the execution of construction works, handing over procedure.

Reasons for choosing this course

Students will discover that Construction Engineering is not only performing some calculation but more than that it involves equipment, work methods, money and people. By itself, no drawing will ever become a real building. A real building is the result of work of various professionals that have to be managed to reach the desired goal.