COURSE DESCRIPTION CARD - SYLLABUS

Course name
Basics of quality management [S1Bud1>PZJa]

Course

Field of study
Civil Engineering

Year/Semester
2/4

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
full-time

Requirements
elective

Number of hours

Lecture
15

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
15

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

The student has basic knowledge of the basics of construction and the subject of quality management; The student is able to obtain information from the indicated sources and analyze engineering activities undertaken; The student is aware of the need to constantly update and supplement construction knowledge and take responsibility in professional work; The student is aware of the issues of management in construction

Course objective

Learning and expanding knowledge of the basic principles of construction in the aspect of quality, management in construction in the aspect of implementation of a construction project in terms of quality. Sensitizing the student to practical aspects of quality management in construction.

Course-related learning outcomes

Knowledge:
1. Are able to prepare an introductory economic analysis of proposed solutions and undertaken engineering activities; can prepare a cost calculation and a work schedule, contract and business plan of a building project; are able to manage building processes, define duties and tasks in investment and

building control.
2. Ae able to prepare an introductory economic analysis of proposed solutions and undertaken engineering activities; can prepare a cost calculation and a work schedule, contract and business plan of a building project; are able to manage building processes, define duties and tasks in investment and building control.
3. Can estimate hazards of building projects and building operation, implement suitable safety rules and prepare work standards as well as quality management procedures. .

Skills:
1. Have detailed knowledge on business activity in construction industry and the ways of developing different forms of individual entrepreneurship; understand the principles of enterprise financial economy.
2. Have detailed knowledge in the field of operation algorithms of selected software supporting the analysis and design of building facilities, which are also useful to plan and manage construction projects, including Building Information Modelling (BIM).
3. Know in detail the rules of developing the procedures of construction project quality management; have knowledge of the effectiveness, costs and timing of construction projects under risk and uncertainty conditions..

Social competences:
1. Can realise that it is necessary to improve professional and personal competence; are ready to critically evaluate the knowledge and received content..
2. Understand the need to transfer to the society the knowledge about building engineering, transfer the knowledge in a clear and easily comprehensible manner.
3. Are ready to think and act in a business-like way.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

As a form of measuring / assessing student work, a final test is carried out (during the last class)
Grade scale determined% from:
90 very good (A)
85 good plus (B)
75 good (C)
65 sufficient plus (D)
55 satisfactory (E)
below 54 insufficient (F)

Programme content

Characteristics of open / closed production systems (examples)
Benefits of introducing quality management
The genesis of quality issues (in general) breakthrough events), the genesis of quality management in the domestic construction industry
Selected definitions of quality (including the fundamental definition of quality), the role of the performance / operation system in quality management, in-house quality calculations (example)
Conditions for quality classes (examples), consequences of non-compliance in relation to the investor and the contractor, social consequences of non-compliance
Practical aspects of quality management in construction

Course topics

Lecture 1 - Introduction,
Lecture 2 - Characteristics of open / closed production systems (examples)
Lecture 3 - Benefits of introducing quality management
Lecture 4 - The genesis of quality issues (in general) breakthrough events), the genesis of quality management in the domestic construction industry
Lecture 5 - Selected definitions of quality (including the fundamental definition of quality), the role of the performance / operation system in quality management, in-house quality calculations (example)
Lecture 6 - Conditions for quality classes (examples), consequences of non-compliance in relation to the

investor and the contractor, social consequences of non-compliance
Lecture 7 - Practical aspects of quality management in construction
Lecture 8 - Credit
Project 1 - Introduction
Project 2 - Project Overview (1)
Project 3 - Project Overview (2)
Project 4 - Project Overview (3)
Project 5 - Project Overview (4)
Project 6 - Consultation (1)
Project 7 - Consultation (2)
Ptrojekt 8 - Credit

Teaching methods

Pyramid discussion; Panel discussion; The classic problem method; Teaching games; Exchange of ideas; Informative lecture; Problem lecture; Conversational lecture; Program text; Work with a book; Talk; Lecture reading; Demonstration method; Production exercise method; Method of experiments; Observation and measurement method; Project method; Leading text method; Workshop method; Show.

Bibliography

Basic:
11. Myszewski J. PO PROSTU JAKOŚĆ. PODRĘCZNIK DO ZARZĄDZANIA JAKOŚCIĄ,2009,
2. Hamrol A. Zarządzanie jakością z przykładami, Wydawnictwo Naukowe PWN, Warszawa 2005, 2008

Additional:
1. . Eckers G. Rewolucja Six Sigma ? jak General Electric i inne przedsiębiorstwa zmieniały proces w zyski, Akademia Białego Kruka, MT Biznes, Warszawa 2010.
2. Nowotarski, Piotr, and Jerzy Paslawski. "Barriers in running construction SME–case study on introduction of agile methodology to electrical subcontractor." Procedia Engineering 122 (2015): 47-56.

Breakdown of average student's workload

	Hours	ECTS
Total workload	60	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00