



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Enterprise management [S2Bud1E-ZBZ>ZP]

Course

Field of study

Civil Engineering

Year/Semester

1/2

Area of study (specialization)

Sustainable construction and management

Profile of study

general academic

Level of study

second-cycle

Course offered in

English

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture

15

Laboratory classes

15

Other

0

Tutorials

0

Projects/seminars

15

Number of credit points

3,00

Coordinators

dr hab. inż. Jerzy Paślawski prof. PP
jerzy.paslawski@put.poznan.pl

Lecturers

Prerequisites

The student has basic knowledge of civil engineering. The student is able to acquire information from indicated sources and analyse engineering activities. The student is aware of the need for continuous learning and professional responsibility. The student understands basic management issues in the construction sector.

Course objective

To acquire and expand knowledge of managing small and medium-sized construction enterprises, with particular emphasis on innovation. To enable students to analyse practical aspects of construction management in the context of sustainable development.

Course-related learning outcomes

Knowledge:

- Has in-depth knowledge of the environmental impact of construction projects and understands the need to implement principles of sustainable development.
- Has in-depth knowledge of algorithms used in selected software supporting analysis and design of building structures and tools useful for planning and managing construction projects, including BIM

technology.

- Has advanced knowledge of quality management procedures in construction projects and understands issues related to efficiency, costs, and project duration under conditions of risk and uncertainty.

Skills:

- Is able to select appropriate methods and tools (analytical, numerical, simulation-based, experimental) to solve technical problems.
- Is able to formulate and test hypotheses related to research problems using scientific methods and prepare studies supporting research work.
- Is able to assess risks related to construction projects and building operation, implement appropriate safety principles, and develop work standards and quality management procedures.

Social competences:

- Is aware of the need for continuous professional and personal development and is ready to critically evaluate acquired knowledge.
- Understands the need to communicate knowledge about construction in an accessible way.
- Is ready to think and act in an entrepreneurial way.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes are verified through a final examination.

Grading scale:

90-100% - very good (A)

80-89% - good plus (B)

70-79% - good (C)

60-69% - satisfactory plus (D)

50-59% - satisfactory (E)

below 50% - fail (F)

For assessment of laboratory classes and projects, the above grading scale is also used.

Programme content

Lecture 1 - Introduction

Lecture 2 - Engineering entrepreneurship

Lecture 3 - Ideation process

Lecture 4 - Creative techniques

Lecture 5 - New product development

Lecture 6 - Operations management

Lecture 7 - Practical aspects of construction site management

Lecture 8 - Examination

Laboratory 1 - Introduction

Laboratory 2 - Simulation game I

Laboratory 3 - Simulation game II

Laboratory 4 - Simulation game III

Laboratory 5 - Simulation game IV

Laboratory 6 - Simulation game - summary

Laboratory 7 - Simulation game - discussion

Laboratory 8 - Assessment

Project 1 - Introduction

Project 2 - Project discussion I

Project 3 - Project discussion II

Project 4 - Project discussion III

Project 5 - Consultation I

Project 6 - Consultation II

Project 7 - Consultation III

Project 8 - Assessment

Course topics

Fundamental issues of business management in the construction sector. Characteristics of construction enterprises and their role in the construction process. Organisational structures and operational specifics of construction companies. Innovation processes in small and medium-sized construction enterprises. Strategies for implementing innovative solutions. Practical aspects of running a construction business. Use of simulation games and project work to analyse managerial decisions and company performance under changing market conditions.

Teaching methods

- management simulation game
- problem-based lecture
- discussion
- case study analysis
- project-based method
- group work

Bibliography

Basic:

1. March Ch. Operations management for construction, Spon Press, London; New York 2009
2. Davis T. R. How to open and operate a financially successful construction company, Atlantic Publishing, Ocala 2007
3. Kirk R. W. Running a 21st-century small business: The Owner's Guide to Starting and Growing Your Company, Warner Books, NY 2006

Additional:

1. Nowotarski P., Paslawski J. (2015) Barriers in running construction SME case study on introduction of agile methodology to electrical subcontractor, Procedia Engineering 122:47-56
2. Schroeder R.G. Operations Management. Decision making in the operations function, McGraw-Hill Book Company, 2001

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
Classes requiring direct contact with the teacher	45	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00