Study program: Communal Engineering	

Course: Project Management

Professor: PhD Milorad Zlatanović

Status of course: elective

ECTS credits: 7

Pre-requisites: none

Aims of the course:
- introduction of students with the principles and methods of project management in construction;
- management of business and manufacturing activities in construction;
- enabling students to work independently and as team members on the management of construction projects, in particular, the construction of civil engineering, hydraulic engineering, building construction and prefabricated buildings.

Learning outcomes:
The student is able to:
- use knowledge in project management practically, independently and in a team;
- manage projects in civil engineering, hydraulic engineering, building construction and prefabricated buildings.

Syllabus:

Theoretical part

Basic terms. Investment projects. Participants in project realization and modeling. Project management using a computer. Implementation of MS Project and Primavera on project management in construction. Defining the problem, Structure analysis. Time analysis. Analysis of expenses. Optimization of the dynamic plan. Determining optimal execution time with minimal costs. Defining the necessary resources for construction works. Market research and financial operations on the project. Exploration of possible terms and methods of payment. Contracting for the construction of a facillity. Types of contracts. Preparation of a project (planning and technical) documentation and preparation of realization. Works on the construction site. Checking of the construction project realization. Managing technical documentation during project implementation. Collected work. Basics for payment. Measurement of completed quantities. Quality control of performed works.

Practical part

Specifying examples from the field of project management in construction. Examples of application of project management in construction, with special emphasis on their significance from the production optimization aspect. Examples of project management in construction using modern software packages MS Project and Primavera. Work on a project task.

Literature:
1. Ivković, B., *Upravljanje projektima u građevinarstvu*, Građevinska knjiga, Belgrade, 2005.
2. Savić S., *Kalkulacije u građevinarstvu*, Građevinska knjiga, 2006.
3. Vojinović L., *Upravljanje kvalitetom u građevinarstvu*, VGGŠ, Belgrade, 2009.
4. Spajić R., Đinđić M., *Upravljanje izgradnjom gradske konunalne infrastrukture*, VTŠ, Niš, 1998.

Number of active classes			Other forms of teaching:
Lectures: 3	Practical classes: 4	Laboratory classes: 0	

Teaching methods:
Theoretical part with direct solution of practical problems in the field of roads. Autorial exercises with an active approach to solving practical problems from technical practice. Application of acquired knowledge in solving of 3 tasks.

Grading system (maximum 100 points), **grading scale** from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.

Pre-commitments	**points**	**Final exam**	**points**
activity during lectures	10	written exam	-
practice training	20	oral exam	30
colloquium(s)	20 + 20		
Sum	**70**	**Sum**	**30**