

FACULTY OF CIVIL ENGINEERING

SUBJECT CARD

Name in English: Construction project management
Name in Polish: Zarządzanie przedsiębiorstwami budowlanymi
Main field of study (if applicable): Civil Engineering
Specialization (if applicable): Civil Engineering
Level and form of studies: ~~1st~~ 2nd level*, full-time / ~~part-time~~*
Kind of subject: obligatory / ~~optional~~ / ~~university-wide~~*
Subject code: CEB008563
Group of courses: YES / NO*

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	15	15			
Number of hours of total student workload (CNPS)	30	60			
Form of crediting	Examination / crediting with grade *	Examination / crediting with grade *	Examination=/crediting with grade *	Examination / crediting with grade *	Examination=/crediting with grade *
For group of courses mark (X) final course					
Number of ECTS points	1	2			
including number of ECTS points for practical (P) classes		1,5			
including number of ECTS points for direct teacher-student contact (BK) classes	0,6	0,6			

*niepotrzebne skreślić

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. The student has the knowledge on construction technology and organization
2. The student is capable to elaborate the time schedule, bill of quantity and cost plan of construction projects.
3. The student knows the basic roles of structural design of construction objects

SUBJECT OBJECTIVES

- C1. to transfer the knowledge on construction project management
- C2. to train competencies for identification and resolving of considerable problems concerning execution of construction processes
- C3. to prepare the alumni for self-dependent managerial positions focused on construction works and supervision of teams in construction industry
- C4. to get the ability for self-study and continuous learning of new problems solving.

SUBJECT EDUCATIONAL EFFECTS	
Relating to knowledge:	
PEK_W01	the student knows procedures of construction projects management, has the knowledge on organization and management of complex construction projects, has the knowledge on evaluation of project economy, supervision of projects, and computer-aided planning of projects.
PEK_W02	the student has knowledge on performing the business in construction industry, does understand basic roles of company finance and knows cost control procedures as long as project time management
PEK_W03	the student knows basic role of construction law regulations and corresponding administration procedures, including environmental regulations, power energy regulations, waste management law, geological law and knows the basic roles of facility management.
Relating to skills:	
PEK_U01	can plan and prepare the investment process for execution phase, including tendering, managing of construction project and fundamentals facility management
PEK_U02	can use the advanced tools for internet and other sources searching the building information, can use the IT tools for interpersonal communication and can get and use the software needed for effective organization and management of construction projects.
PEK_U03	can elaborate the time schedule of works, as long as the bill of quantity; also, can evaluate the economy of construction project.
PEK_U04	can evaluate the risk allocated to execution of a construction project
Relating to social competences:	
PEK_K01	the student is aware of need of permanent increasing of professional and personal competencies by means of formal and not formal training exercises on new construction technology problems.
PEK_K02	the student can think and act in entrepreneurial way.

PROGRAMME CONTENT		
Form of classes - lecture		Number of hours
Le1	Management models of a construction process. Regulations and administrative procedures related to the construction process. Obligations and rights of the participants.	1
Le2	The investment process: local plan, arrangements, documents, administrative decisions. Feasibility study for construction projects. Principles and scope of a study.	2
Le3	Tender procedures. Types of tenders. Private and public orders. Management of a tender procedure. Insurances in the investment process in construction. Commodity exchanges.	2
Le4	Tenders and contracts in the construction industry. FIDIC	2
Le5	The use of scheduling and network planning in management of engineering investment.	2
Le6	Evaluation of engineering projects effectiveness (NPV, IRR). Cost control of projects.	2
Le7	Construction project progress analysis using Earned Value Method	2
Le8	Crediting test.	2
Total hours		15

Form of classes - classes		Number of hours
Cl 1	Planning the organization of a construction project structure. Planning of the structure of a construction contracting company.	1
Cl 2	Selected administration procedures obligatory in the construction project management	2
Cl 3	Selected parts of the feasibility study of a construction investment project	2
Cl 4	Engineering clauses in contracts for works in construction.	2
Cl 5	Planning of works with application of critical paths and the cost plan ("S" curve).	2
Cl 6	Calculation of Net Present Value and Internal Rate of Return for construction investment projects.	2
Cl 7	Calculation of forecasted final date and final cost of construction projects with use of Earned Value Method.	2
Cl 8	Crediting test.	2
	Total hours	15

Form of classes - class		Number of hours
Cl1		
...		
	Total hours	

Form of classes - laboratory		Number of hours
Lab1		
...		
	Total hours	

Form of classes - project		Number of hours
Proj1		
...		
	Total hours	

Form of classes - seminar		Number of hours
Sem1		
...		
	Total hours	

TEACHING TOOLS USED	
N1.	Regular lecture with multi-media presentation. Presentation of construction case studies. Presentation of annual report data of real construction companies.
N2.	Demonstration of some recognizable software packages for project management.
N3.	Contact hours for students.

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT		
Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
	PEK_W01	final semester quiz
	PEK_W02	

	PEK_W03
	PEK_U01
	PEK_U02
	PEK_U03
	PEK_U04
	PEK_W01
	PEK_W01

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] A Guide to the Project Management Body of Knowledge, Fourth Edition. Project Management Institute, 2009.
- [2] Clough R.H., Sears G. A., Construction Project Management. JohnWiley 1991
- [3] Code of Practice: Project Management for construction and development. Blackwell Publ. 2002
- [4] Ferry D. J., Brandon P. S., Ferry J. D., Cost Planning of Buildings. Blackwell Science, 1999.
- [5] Fewings P., Construction Project Management – an integrated approach. Taylor&Francis, 2005.
- [6] Harris F., McCaffer, Modern Construction Management. Blackwell Sci. Publ. 1989
- [7] Lambeck R., Eschemuller J., Urban Construction Project Management. McGraw-Hill, 2008.
- [8] Lester A., Project Management – Planning and Control (5th Edition). Elsevier, 2007.

SECONDARY LITERATURE:

- [1] Fisk E. R., Construction project administration. Pearson 2006.
- [2] Gould F. E., Managing the construction process. Pearson 2005
- [3] Kerzner H., Project Management. Van Nostrand Rein. Comp., 1984
- [4] Johnson R. E., The Economics of Building, JohnWiley, 1990
- [5] Woodward J. F., Construction Project Management – Getting it right first time. Thomas Telford 1997.

SUBJECT SUPERVISOR (NAME AND SURNAME, DIVISION, E-MAIL ADDRESS)

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MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR SUBJECT
Construction project management
AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY *Civil Engineering*
AND SPECIALIZATION **Civil Engineering**

Subject educational effect	Correlation between subject educational effect and educational effects defined for main field of study and specialization (if applicable)**	Subject objectives ***	Programme content ***	Teaching tool number ***
Knowledge				
PEK_W01	K2_W11, K2_W12, K2_W15, K2S_CEB_W21	C1, C2, C3, C4	Lec1, Lec2, Lec3	N1, N2, N3
PEK_W02	K2_W11, K2_W12, K2S_CEB_W21	C1, C2, C3, C4	Lec5 do Lec7	N1, N3
PEK_W03	K2_W11, K2_W12, K2_W13, K2_W14, K2S_CEB_W21	C1, C2, C3, C4	Lec2, Lec4	N1, N3
Skills				
PEK_U01	K2_U01, K2_U14, K2S_CEB_U23	C1, C2, C3, C4	Lec1 do Lec4 Cl2, Cl5	
PEK_U02	K2_U01, K2S_CEB_U23	C1, C2, C3, C4	Lec5 do Lec7 Cl1 do Cl7	
PEK_U03	K2_U08, K2_U13	C1, C2, C3, C4	Lec5, Cl5	N1, N2, N3
PEK_U04	K2_U14	C1, C2, C3, C4	Lec3 Cl1 do Cl7	
Social competence				
PEK_K01	K2_K01, K2_K02	C2	Lec1 do Lec3 Cl1 do Cl7	N1
PEK_K02	K2_K05	C3	Lec1 do Lec7 Cl1 do Cl7	N1, N2, N3

** - enter symbols for main-field-of-study/specialization educational effects

*** - from table above