



COURSE CARD

1. Basic information

Course name in English:	Recent Research Trends in Investment Project Management	
Course name in Polish:	Najnowsze kierunki badań w Zarządzaniu Przedsięwzięciami Inwestycyjnymi	
Number of hours:	30	
Type of course:	Elective course	
Form of course:	lecture	
Code of course:	W02ILT-SD0138W / ILQ100438W	
Course leader:	Dr hab. inż. Jarosław Konior	
Faculty of the course leader:	W2 Faculty of Civil Engineering	
Email address of the course leader:	jaroslaw.konior@pwr.edu.pl	
Scientific discipline(s) assigned to the course (doctoral students representing the marked disciplines can participate in the course):	Architecture and urban planning	<input checked="" type="checkbox"/>
	Automation, electronic, and electrical engineering	<input type="checkbox"/>
	Information and communication technology	<input type="checkbox"/>
	Biomedical engineering	<input type="checkbox"/>
	Chemical engineering	<input type="checkbox"/>
	Civil engineering and transport	<input checked="" type="checkbox"/>
	Mechanical engineering	<input type="checkbox"/>
	Environmental engineering, mining, and energy	<input type="checkbox"/>
	Mathematics	<input type="checkbox"/>
	Chemical sciences	<input type="checkbox"/>
	Physical sciences	<input type="checkbox"/>
	Management and quality studies	<input checked="" type="checkbox"/>

2. Objectives

Getting familiar with Recent Research Trends in Investment Project Management – theoretical basics, applied trends, practical approach, case studies analysis

3. Content

Detailed information about the course content, including topics and form of classes.

No.	Topic	Number of hours	Form of classes
1	Induction and Introduction. What investment, project and management are?	2	lecture
2	Free market economics	2	lecture
3	Organisational structures of companies and projects	2	lecture
4	Human resources management – approach challenge and get success	2	lecture
5	Marketing of own business and private propriety	2	lecture



6	Investment process – worldwide and Polish	2	lecture
7	Project life cycle - EPCM and Kerzner's Triangle	2	lecture
8	Project management procedures for Engineering, Procurement and Construction Management	2	lecture
9	Planning and scheduling of tasks and processes	2	lecture
10	Procurement, proposals and tenders – public and nonpublic	2	lecture
11	Negotiations and bidding – technics and tricks	2	lecture
12	Form of contracts and contracting strategies	2	lecture
13	Approach to modern design – 3D-BIM, SFD, TFD, LEAN	2	lecture
14	Risk management of investment projects	2	lecture
15	Summing up. How to become a smart Project Manager?	2	lecture

4. Prerequisites

List of prerequisites relating to knowledge, skills and other competences for course participants.

Soft skills – team work, international relations, human resource management

Hard competences – economics, marketing, engineering, procurement, project & construction management

5. Learning outcomes

List of learning outcomes at level 8 of the Polish Qualifications Framework assigned to the course (mark the learning outcomes in the last column).

Symbol	Learning outcome	
	<i>KNOWLEDGE. Doctoral student knows and understands:</i>	
SzD_W3	the main trends in the development of the scientific or artistic disciplines covered in the curricula;	<input checked="" type="checkbox"/>
SzD_W4	research methodology;	<input checked="" type="checkbox"/>
SzD_W5	the rules for the dissemination of scientific results, including in open access mode;	<input type="checkbox"/>
SzD_W6	the fundamental dilemmas of modern civilization;	<input checked="" type="checkbox"/>
SzD_W7	the legal and ethical conditions of scientific activity;	<input checked="" type="checkbox"/>
SzD_W8	the economic and other relevant conditions of scientific activity;	<input checked="" type="checkbox"/>
SzD_W9	basic principles of knowledge transfer to the economic and social spheres and commercialisation of results of scientific activity and know-how related to these results.	<input checked="" type="checkbox"/>
	<i>SKILLS. Doctoral student is able to:</i>	
SzD_U2	use knowledge from different fields of science or art to creatively identify, formulate and innovatively solve complex problems or perform research tasks, in particular: - define the purpose and subject of scientific research, formulate a research hypothesis, - develop research methods, techniques and tools, and use them creatively,	<input checked="" type="checkbox"/>



	- draw conclusions on the basis of scientific research; critically analyse and evaluate the results of scientific research, expertise and other creative work and their contribution to knowledge development; transfer the results of scientific activities to the economic and social spheres;	
SzD_U3	communicate on specialised topics to the extent that they enable an active participation in the international scientific community;	<input type="checkbox"/>
SzD_U4	disseminate research results, including in popular forms;	<input checked="" type="checkbox"/>
SzD_U5	initiate debates and participate in a scientific discourse;	<input checked="" type="checkbox"/>
SzD_U6	be able to speak a foreign language at B2 level of the Common European Framework of Reference for Languages to a level that enables them to participate in the international scientific and professional environment;	<input checked="" type="checkbox"/>
SzD_U7	plan and implement an individual or collective research or creative activity, including in an international environment;	<input checked="" type="checkbox"/>
SzD_U8	independently plan and act for one's own development and inspire and organize the development of others;	<input checked="" type="checkbox"/>
SzD_U9	plan classes or groups of classes and implement them using modern methods and tools.	<input type="checkbox"/>
<i>SOCIAL COMPETENCES. Doctoral student is ready to:</i>		
SzD_K3	fulfilling the social obligations of researchers and creators, initiate public interest activities, thinking and acting in an entrepreneurial way;	<input checked="" type="checkbox"/>
SzD_K4	maintaining and developing the ethos of research and creative environments, including: - carrying out scientific activities in an independent manner, - respecting the principle of public ownership of research results, taking into account the principles of intellectual property protection.	<input checked="" type="checkbox"/>

6. Evaluation

Short description of the method(s) used to evaluate the learning outcomes assigned to the course, e.g., exam, test, report, presentation, etc.

Final exam, case study appraisal at each lecture

7. Teaching methods

Short description of the teaching methods used during the course, e.g., multimedia presentation, discussion, literature studies, developing written documents, own work, etc.

simulations, models, analyses with mixed techniques – audio vision + case studies

8. Literature

List of primary and secondary literature used to prepare the course and including additional knowledge for participants, e.g., books, textbooks, research papers, standards, web pages, etc.

Books:

- [1] "A Guide to the Project Management Body of Knowledge". Fourth Edition. Polish Edition. Project Management Institute. Warszawa, 2009.
- [2] Clough R.H., Sears G. A., „Construction Project Management”. John Wiley, 1991.
- [3] Code of Practice. "Project Management for Construction and Development". Blackwell Publishing, 2002.



- [4] „FIDIC Conditions of Contract for Works of Civil Engineering Construction”. Federation Internationale des Ingenieurs-Conseils, Fourth Edition 1987, Reprinted 1988 with editorial amendments. First Edition 1999, Reprinted 2004 as English – Polish Edition. Cosmopoli. Warszawa, 2016.
- [5] Harris F., McCaffer R. „Modern Construction Management”. Blackwell Publishing, 1989.
- [6] Hawawini G., Viallet C., “Finanse menedżerskie”. PWE. Warszawa, 2007
- [7] Kerzner H. „Project Management”. Van Nostrand Rein Comp. New York, 1984.
- [8] Woodward J. F. „Construction Project Management – Getting it right first time”. T. Telford. Washington, 1997.
- [9] P. Project Management Institute, A guide to the project management body of knowledge (PMBOK guide) 6th Edition, Project Management Institute (PMI), 2017.
- [10] IPMA, IPMA Individual Competence Baseline, 2015.
- Research papers:
- [1] J. Konior, Fuzziness over randomness in unforeseen works of construction projects, Civil Engineering and Architecture. 7 (2019) 42–48. <https://doi.org/10.13189/cea.2019.070202>.
- [2] J. Konior, M. Szóstak, Methodology of planning the course of the cumulative cost curve in construction projects, Sustainability (Switzerland). 12 (2020). <https://doi.org/10.3390/SU12062347>.
- [3] J. Konior, Enterprise’s risk assessment of complex construction projects, Archives of Civil Engineering. 61 (2015) 63–74. <https://doi.org/10.1515/ace-2015-0025>
- [4] J. Konior, Monitoring of Construction Projects Feasibility by Bank Investment Supervision Approach, Civil Engineering and Architecture. 7 (2019) 31–35. <https://doi.org/10.13189/cea.2019.070105>
- [5] J. Konior, Monitoring of Construction Projects Feasibility by Bank Investment Supervision Approach, Civil Engineering and Architecture. 7 (2019) 31–35. <https://doi.org/10.13189/cea.2019.070105>.
- [6] J. Konior, M. Szóstak, The S-curve as a tool for planning and controlling of construction process- case study, Applied Sciences (Switzerland). 10 (2020). <https://doi.org/10.3390/app.10062071>

9. Other remarks

Additional remarks, comments, (e.g., language of the course)

Technical and economics English at advanced / proficiency level would be a benefit