STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Theory of Decision Making**		Code **1010102111010110231**
Field of study **Civil Engineering second-cykle studies**	Profile of study (general academic, practical) **(brak)**	Year /Semester **1 / 1**
Elective path/specialty **Costruction Engineering and Management**	Subject offered in: **Polish**	Course (compulsory, elective) **obligatory**
Cycle of study: **Second-cycle studies**	Form of study (full-time,part-time) **full-time**	
No. of hours Lecture: **2** Classes: **2** Laboratory: **-** Project/seminars: **1**		No. of credits **5**
Status of the course in the study program (Basic, major, other) **(brak)**	(university-wide, from another field) **(brak)**	
Education areas and fields of science and art **technical sciences**		ECTS distribution (number and %) **5 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge concerning the engineering of construction processes and construction economics Elementary knowledge In probability calculus
2	**Skills**	Student is able to obtain information from literature on the subject Student is possessing a skill of the self-education Student is possessing a skill of the inference
3	**Social competencies**	Student is acting according to principles of ethics

Assumptions and objectives of the course:

Handing over to the knowledge in the decision theory and applying elements for chosen in issues of the investment process. Purchasing basic skills in analysis of phenomena, of influencing factors, construction of formal and descriptive models and untying these models.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. He knows the specificity of decision-making problems in the engineering of construction processes - [K_W 10; K_W 11]
2. He knows elements of the theory of organization and management the construction production with reference to the specificity - [K_W 11]
3. He knows bases of the decision theory and conditioning them in applying in the construction - [K_W 10]
4. He knows methods and tools assisting the decision making - [K_W 08]

Skills:

1. He is able to describe and to characterize decision-making problems appearing in the construction and factors conditioning them - [K_U 17]
2. He is able to build formal and descriptive models for chosen phenomena and decision-making problems - [K_U 05]
3. He is able to apply methods get to know and tools for solving simple decision-making problems - [K_U 05]
4. He is able to identify risk factors in the building production and to estimate his income at the ultimate result - [K_U 12; K_U 17]

Social competencies:

1. He is responsible for the reliability of get results of his works and their interpretation - [K_K 02]
2. He understands meaning of problems of the organization and managing in engineering activity, is able to formulate opinions about technological processes in the construction - [K_K 07]
3. He is conscious of the need of raising qualifications and the update of the acquired knowledge - [K_K 06]

Assessment methods of study outcomes

- written exam

Scale of the evaluation in %:

excellent (A) 90% and up

good (B) 85%-89%

average (C) 75%-84%

passing (D) 65%-74%

near failed (E) 55%-64%

failed (F) 0%-54%

- Project classes: evaluation of 3 prepared projects

Course description

Specificity of the construction production. Issues of the decision making theory according to principles of the rationality and according to ways of deciding. Principle of economical production, organized action cycle. Classes of the decision theory, factors optimizing decisions. The structure of decision-making tasks and the structure of characteristics of the decision-maker. Management as process of decision making: managements functions, decisive situations, management techniques. The place and the role of the decision-maker in the management system. Decision making in conditions of risk and the uncertainty. Methods of the identification of the risk. Using the operational research in the process of the decision making. Temporarily- cost methods in the process of the decision making.

Information in the process of the decision making: information gap, communications process, preventive measures reducing or disqualifying noises, value of information, transformation. Databases, knowledge bases. Mathematical methods, elements of the artificial intelligence, computer technologies in assisting the decision making.

Psychological aspects of the decision making. Needs, attitudes, values, frustration and defense mechanisms. Verbal communication and non-verbal. Styles of resolving conflicts, bases of the negotiations.

Basic bibliography:

1. Jaworski K. Metodologia projektowania realizacji budowy PWN Warszawa 1999

2. Kapliński O. (Ed.) Metody i modele badań w inżynierii przedsięwzięć budowlanych PAN, KILiW, IPPT, Seria Studia z Zakresu Inżynierii Nr 57. Warszawa 2007

3. Kapliński. O. Modelling of construction processes: A managerial approach KILiW PAN, Inst. Podstawowych Problemów Techniki, seria: Studia z Zakresu Inżynierii Nr 43 Warszawa 1997

4. Kukuła K., 2000. Decyzje menedżerskie w teorii i praktyce zarządzania, Wydawnictwa Naukowe Wydziału Zarządzania Uniwersytetu Warszawskiego

Additional bibliography:

1. Sadowski W. Teoria podejmowania decyzji. Wstęp do badań operacyjnych. PWN, Warszawa 1973

2. Szapiro T. Co decyduje o decyzji. PWN, Warszawa 1993

Result of average student's workload

Activity	Time (working hours)
1. Participation in lectures	30
2. Participation in classes	30
3. Participation in project classes	15
4. Preparation for exam	10
5. Preparation of projects	15

Student's workload

Source of workload	hours	ECTS
Total workload	100	5
Contact hours	75	4
Practical activities	25	1