POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)
pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Risk management

Course

Field of study
Management and production engineering

Year/Semester
1/2

Area of study (specialization)

Profile of study
general academic

Level of study
Second-cycle studies

Course offered in
polish

Form of study
full-time

Requirements
elective

Number of hours

Lecture
15

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
15

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

PhD Hubert JOPEK
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ph. +4861 665-2307
Faculty of Mechanical Engineering
Jana Pawła II 24, 60-965 Poznań

Responsible for the course/lecturer:

Prerequisites

Knowledge of mathematics, and in particular statistics at the academic level. Knowledge in the field of economics, knowledge in the field of planning and management of technological processes.

Course objective

Acquiring the knowledge in the field of risk management in the organization, in particular: in the implementation of IT projects, information management, cybersecurity

Course-related learning outcomes

Knowledge

1. The student has broadens theoretical knowledge related to the planning processes including strategic and production planing (construction, technological and organizational planning).

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2. The student has extensive knowledge of mathematical statistics, mainly in the area of forecasting in the company and process simulation

3. The Student know the basic methods and techniques used to solve complex engineering tasks related to modeling and process improvement (including business processes)

Skills

1. The student is able to develop forecasts using the methods of regression analysis and the methods of moving average, moving weighted average and exponential smoothing. Student is also able to develop a model illustrating changes in process parameters, taking into account the risk drift.

2. The student can develop a model of the process and tasks (operations) carried out in processes and apply modeling to simulate the analyzed objects.

3. Te student is able to assess the reliability of technical objects.

Social competences

The student is aware of the effects of engineering activities both in the technical and non-technical areas. The student is also aware of the consequences of decisions made and responsibility for the decisions made.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Completion of the lecture based on the points obtained during the test and during the activity in the classroom. Passing requires more than 50% of points:> 50% - 3.0,> 60% - 3+,> 70% - 4,> 80% - 4+,> 90% of points - 5.0

project: Assessment based on the risk management concept prepared for selected problem. The form and quality of the prepared materials are assessed

Programme content

Lecture: The concept of risk management in the enterprise in the field of: reliability of devices and processes as well as occupational health and safety. The use of risk management techniques in IT projects, ensuring data security, controlling the security of IT systems, managing financial risk. Acquainting with the existing legal acts concerning risk management (including ISO 31000) and with the standard concerning information security (ISO 27005). Getting to know the methods of identifying, estimating, controlling, reporting as well as minimizing and avoiding risk. Crisis management.

Project: Development of a risk management concept in a selected design problem (technological, financial, etc.)

Teaching methods

Lecture: lecture / problem lecture / lecture with multimedia presentation The content presented at the lecture is provided in the form of a multimedia presentation in combination with a classic blackboard lecture enriched with demonstrations related to the presented issues.

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Project: project method, problem solving, solving practical problems, searching for sources, team work, discussion.

Classes conducted in a stationary form or as webinar.

Bibliography

Basic

Risk management — Risk assessment techniques

Jajuga K. "Zarządzanie ryzykiem", PWN, Warszawa, 2018

Tarczyński W, Mojsiewicz M. Zarządzanie ryzykiem. Podstawowe zagadnienia , PWE, Warszawa 2001

Wróblewski D. "Zarządzanie ryzykiem" - przegląda wybranych metodyk, CNBOP-PIB, Józefów 2015

Additional

Holliwell J., The Financial Risk Manual: A Systematic Guide to Identifying and Managing Financial Risk, Pearson Education Limited, 1997.

Hubbard D.W., The Failure of Risk Management, John Wiley and Sons Ltd New Jersey, 2009.

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1]	20	1,0

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[1] delete or add other activities as appropriate