



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Risk management [N2MiBM2>ZR]

Course

Field of study

Mechanical Engineering

Year/Semester

1/2

Area of study (specialization)

–

Profile of study

general academic

Level of study

second-cycle

Course offered in

Polish

Form of study

part-time

Requirements

compulsory

Number of hours

Lecture

8

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

8

Number of credit points

2,00

Coordinators

Lecturers

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

Knowledge of risk management in the organization and in particular in the execution of projects and the preparation and supervision of processes.

Course-related learning outcomes

none

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.

Grades: very good - if the ratio of sums of achieved and total points is bigger than 90,1%; good plus - if the ratio of sums of achieved and total points is between 80,1-90%; good - if the ratio of sums of achieved and total points is between 70,1-80%; satisfactory plus - if the ratio of sums of achieved and total points is between 60,1-70%; satisfactory - if the ratio of sums of achieved and total points is between 50,1-60%; if the sum is smaller than 50% - unsatisfactory.

Programme content

none

Course topics

The class is devoted to presenting methods for analyzing, assessing and dealing with risk. Students are introduced to various concepts of risk: in a broad sense (as the probability of deviation from the expected result) as well as in a narrower sense (as the probability of an undesirable event).

The following risk management issues are presented in the course.

1. basic scheme of risk management based on ISO 31000 standard
2. presentation of methods of analysis, estimation and risk assessment. Quantitative and qualitative methods. General methods (e.g. FMEA, HAZOP) and dedicated to specific applications (e.g. HACCP, VaR).
3. discussion of selected risk management standards applicable in selected fields, including machine safety issues, production processes
In maintenance of machinery and equipment.
4. development of procedures, scenario methods, contingency plans, crisis management
5. basic information on financial risk: time value of money volatility, exchange rates, hedging and financial instruments to minimize risk
6. issues related to cyber security
7. risk in project management.

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.

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		
Classes requiring direct contact with the teacher		
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)		