COURSE DESCRIPTION CARD - SYLLABUS

Course name
Innovations Management [S2IZarz1>ZI]

Course

Field of study
Engineering Management

Year/Semester
2/3

Area of study (specialization)
Managing Enterprise of the Future

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
15

Laboratory classes
0

Other
0

Tutorials
15

Projects/seminars
0

Number of credit points

2,00

Coordinators

prof. dr hab. inż. Maciej Sydor
maciej.sydor@put.poznan.pl

Lecturers

Prerequisites

Knowledge: Can explain the basic issues of organizational science and management theory. Skills: Is able to identify and associate basic problems of organizational science and management theory. Competences: Demonstrates readiness to develop their knowledge and skills. Is open to team work.

Course objective

The aim of the course is to familiarize students with the issues of innovation management and in particular the relationships between the development of the economy and its innovation, concepts of innovation models, creativity in shaping innovation, sources of financing innovation and the shaping and development of innovative enterprises.

Course-related learning outcomes

Knowledge:
The student describes the legal aspects of innovation management, including the impact of business law on the innovation process in organizations [P7S_WG_01].
The student lists contextual sciences and their relevance to the innovation process, including research methods used in innovation management [P7S_WG_04].

The student characterizes the role of modern technologies and devices in shaping innovation, including their application in different types of industrial innovation [P7S_WG_10].
The student lists the ethical standards for bringing innovations to the market [P7S_WK_01].
The student defines the principles of intellectual property and copyright protection in the context of innovation management [P7S_WK_02].

Skills:
The student evaluates and analyzes different types of innovations, including product, process, organizational and marketing innovations [P7S_UW_03].
The student designs innovation processes in organizations, using appropriate decision-making methods [P7S_UW_04].
The student analyzes the stages of innovation implementation and evaluates their effectiveness using research methods [P7S_UW_05].
The student analyzes existing technological solutions in organizations and proposes innovative improvements [P7S_UW_09].

Social competences:
The student develops the interdisciplinary skills necessary to effectively manage innovation in complex organizational environments [P7S_KK_01].
The student identifies key factors influencing innovation success and manages them to achieve organizational goals [P7S_KK_02].
The student initiates and manages innovation projects, combining theoretical knowledge with practical aspects of innovation implementation [P7S_KO_02, P7S_KO_03].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows: Formative assessment:
a) in the scope of exercises: based on the assessment of current progress of task implementation in the simulation process of creating and implementing innovations
b) in the scope of lectures: based on answers to questions about the material discussed in previous lectures,
Summative assessment:
a) in the scope of exercises based on: (1) public presentation of the results of simulation of creating and implementing innovations,
(2) discussion after the presentation; (3) the form and quality of prepared materials,
b) in the scope of lectures: exam in the form of a choice test, with answers among which at least one is correct; each question is scored on a scale of 0 to 1; the exam is passed after obtaining at least 50% of points. You can take the exam after passing the exercises.

Programme content

The concept and types of innovation in industry. Organizational and marketing innovations. Product and process innovations. Open and closed innovations. Stages of implementing innovation. An example of using innovation in practice.

Course topics

The course covers methods of creating and managing innovations, combining theory with the practical aspects of modern business operations. The lecture series begins by defining the role of innovation in the economy and its classification. Particular emphasis is placed on creative processes and technologies, including the TRIZ method as a tool for generating innovative solutions.

A significant part of the program focuses on legal and ethical issues, with special regard to intellectual property protection and industrial property law. Students are introduced to the full innovation life cycle – from the initial idea, through implementation stages, to commercialization. In this context, specialized methods for assessing risk and efficiency, such as QFD, FMEA, and PHA, are discussed.

The course also covers economic aspects, including an analysis of project funding sources and strategies

for the management and development of innovative organizations in the market.

Teaching methods

Lectures - monographic and conversational
Exercises - observation, demonstration and project method

Bibliography

Basic:
Knosala R. [red.] (2014). Zarządzanie innowacjami, Polskie Wydawnictwo Ekonomiczne.
Kałkowska J., Pawłowski E., Włodarkiewicz-Klimek H. (2013). Zarządzanie organizacjami w gospodarce opartej na wiedzy, Wydawnictwo Politechniki Poznańskiej, Poznań.
Karlik M (2013). Zarządzanie innowacjami w przedsiębiorstwie: poszukiwanie i realizacja nowatorskich projektów, Wydawnictwo Poltext.

Additional:
Tidd J., Bessant J. (2011). Zarządzanie innowacjami: integracja zmian technologicznych, rynkowych i organizacyjnych, Oficyna Wolters Kluwer Business.
Żebrowski M., Waćkowski K. (2011). Strategiczne zarządzanie innowacjami: strategie małych i średnich przedsiębiorstw IT, Difin.
Durlik I., Santarek K. (2016). Inżynieria Zarządzania III. naukowe, techniczne i inwestycyjne przygotowanie produkcji wyrobów wysokiej techniki. C.H. Beck.

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	1,00