STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Innovation management**		Code **1011102211011168999**
Field of study **Engineering Management - Full-time studies -**	Profile of study (general academic, practical) **(brak)**	Year /Semester **1 / 1**
Elective path/specialty **Quality Systems and Ergonomics**	Subject offered in: **Polish**	Course (compulsory, elective) **elective**
Cycle of study: **Second-cycle studies**	Form of study (full-time,part-time) **full-time**	
No. of hours Lecture: **15** Classes: **15** Laboratory: **-** Project/seminars: **-**		No. of credits **2**
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** **Technical sciences**		ECTS distribution (number and %) **2 100%** **2 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Is able to explain the basic issues of the science of organization and management theory
2	**Skills**	He can identify and associate basic problems of organizational science and management theory
3	**Social competencies**	He demonstrates readiness to develop his knowledge and skills. He is open to work in a team

Assumptions and objectives of the course:

the aim of the subject is to familiarize students with the problems of innovation management and in particular with the dependencies between economic development and its innovation, concepts of innovation models, creativity in shaping innovations, sources of innovation financing and shaping and development of innovative enterprises

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

Knowledge:

1. Has in-depth knowledge of changes in the organization structure resulting from the impact, creation and implementation of innovation - [[K2A_W03]]
2. Has in-depth knowledge of dependencies occurring in organizational units and between them resulting from the impact, creation and implementation of innovation - [[K2A_W05]]
3. Knows methods and tools for modeling decision-making processes that support innovation management - [K2A_W09]
4. Has in-depth knowledge of structural structuring mechanisms and business management models in the context of innovation - [K2A_W14]
5. Has in-depth knowledge of the processes of change and management of these changes in the context of innovation management - [K2A_W15]
6. Knows and understands the basic concepts and principles in the field of industrial property and copyright protection and the need to manage intellectual property resources with a special focus on innovation management, including the creation of spin-off, spin-out and academic entrepreneurship - [K2A_W17]
7. knows the general principles of creating and developing forms of individual entrepreneurship with particular emphasis on innovation management, including the creation of spin-off, spin-out and academic entrepreneurship - [K2A_W18]

Skills:

1. Is able to correctly interpret and explain social, cultural, political, legal and economic phenomena in the context of innovation management - [[K2A_U01]]

2. Can use theoretical knowledge to describe and analyze the causes and course of processes and phenomena, and can formulate their own opinions and critically select data and methods of analysis in relation to innovation management - [[K2A_U02]]

3. Is able to properly analyze the causes, course of social processes and phenomena in the context of innovation management, as well as formulate their own opinions on this subject and make simple research hypotheses and verify them - [[K2A_U03]]

4. Has the ability to use the acquired knowledge in various fields and forms, extended by a critical analysis of the effectiveness and usefulness of the applied knowledge in the field of innovation management - [K2A_U06]

5. Has the ability to understand and analyze social phenomena, extended by the ability to deepen the theoretical assessment of these phenomena in selected areas, using the research method in the field of innovation management - [K2A_U08]

Social competencies:

1. He is aware of responsibility for his own work and readiness to comply with the principles of teamwork and taking responsibility for the tasks he performs jointly, especially in the area of creating and implementing innovations - [[S2A_K02]]

2. Can perceive causal relationships in the implementation of set goals and rank the importance of alternative or competitive tasks in the area of innovation management - [[S2A_K03]]

Assessment methods of study outcomes

Forming evaluation:

a) in the scope of exercises: on the basis of an assessment of the current progress of task implementation in the simulation process of creating and implementing innovations

b) in the field of lectures: based on answers to questions about the material discussed in previous lectures,

Summary rating:

a) in the field of exercises based on: (1) public presentation of simulation results of creating and implementing innovations,

(2) discussion after the presentation; (3) the form and quality of the materials prepared,

b) in the field of lectures: exam in the form of a test of choice, with responses of which at least one is correct; each question is scored on a scale from 0 to 1; the exam is passed after obtaining at least 55% of points. You can take the exam after completing the exercises.

Course description

1. Innovation in a knowledge-based economy

1.1. The concept and classification of innovations

1.2. Measurement and evaluation of innovation

1.3. Innovation and trends in the development of innovation in the Polish economy

2. Innovation models

2.1. Model of national innovation systems

2.2. Triple helix model

2.3. Open innovation model

3. Creativity

3.1. Creativity and innovation

3.2. Methods of supporting creativity

4. Support for creativity and innovation

4.1. EU projects

4.2. Framework programs

4.3. Business environment institutions (business incubators, science and technology parks, technology transfer centers)

5. Sources of innovation financing

5.1. Internal sources of innovation financing

5.2. External sources of financing for innovation

6. An innovative company

6.1. Concept, forms, ways of organizing

6.2. Spin-off, spin-out companies

6.3. Academic entrepreneurship and good practices

Teaching methods:

Lectures - monographic and conversational

Exercises - a method of observation, demonstration and project

Basic bibliography:

1. Knosala R. [red.] (2014). Zarządzanie innowacjami, Polskie Wydawnictwo Ekonomiczne.

2. Kałkowska J., Pawłowski E., Włodarkiewicz-Klimek H. (2013). Zarządzanie organizacjami w gospodarce opartej na wiedzy, Wydawnictwo Politechniki Poznańskiej, Poznań.

3. Karlik M (2013). Zarządzanie innowacjami w przedsiębiorstwie: poszukiwanie i realizacja nowatorskich projektów, Wydawnictwo Poltext.

Additional bibliography:

1. Tidd J., Bessant J. (2011). Zarządzanie innowacjami: integracja zmian technologicznych, rynkowych i organizacyjnych, Oficyna Wolters Kluwer Business.

2. Żebrowski M., Waćkowski K. (2011). Strategiczne zarządzanie innowacjami: strategie małych i średnich przedsiębiorstw IT, Difin.

3. Durlik I., Santarek K. (2016). Inżynieria Zarządzania III. naukowe, techniczne i inwestycyjne przygotowanie produkcji wyrobów wysokiej techniki. C.H. Beck.

Result of average student's workload

Activity	Time (working hours)
1. Didactic classes	30
2. Preparation for test	8
3. Preparing for the classes	10
4. test	2

Student's workload

Source of workload	hours	ECTS
Total workload	50	2
Contact hours	32	1
Practical activities	15	0