

## SUBJECT CHART

Name: Search, Design and Planning of Development of New Solutions (1170-XX000-NSP-2MI1)

Name in Polish: Poszukiwanie, projektowanie i planowanie rozwoju nowych rozwiązań

Name in English: Search, Design and Planning of Development of New Solutions

### Data about the subject:

The unit offering the subject: Faculty of Management

Subject for the unit: Faculty of Management

Dydactic cycle: Academic year 2022/2023 – summer semester

Subject cycle coordination: Danuta Rojek, PhD

### The default protocol type for the item:

Total score

Language:

angielski

WWW Website:

Moodle course [moodle.usos.pw.edu.pl](https://moodle.usos.pw.edu.pl)

Shortage description:

n/a

Description:

n/a

Literature:

Obligatory:

1. Knosala, R. i inni, 2014. *Poszukiwanie innowacyjnych rozwiązań*. Warszawa: PWE.
2. Kosieradzka, A. i inni, 2013. *Metody i techniki pobudzania kreatywności w organizacji i zarządzaniu*. Kraków-Warszawa: edu-Libri.
3. Łobejko, S., Plinta, D. i Sosnowska, A., 2019. *Strategie i modelowanie rozwoju produktów innowacyjnych*. Warszawa: PWE.
4. Łunarski, J., 2016. *Innowacje technologiczne w przedsiębiorstwach. Projektowanie, wdrażanie i użytkowanie*. Warszawa: Instytut Mechanizacji Budownictwa i Górnictwa Skalnego.
5. Szatkowski, K., 2016. *Zarządzanie innowacjami i transferem technologii*. Warszawa: Wydawnictwo Naukowe PWN.
6. Tidd, J. and Bessant, J., 2010. *Managing innovation: integrating technological, market and organizational change*. Chichester: John Wiley & Sons
7. Trocki, M. i Wyrozębski, P. (red.), 2015. *Planowanie przebiegu projektów*. Warszawa: Oficyna Wydawnicza SGH [publikacja dostępna w Internecie].
8. Yayici, E., 2016. *Design thinking methodology book*. Stambul: ArtBizTech.

Extended:

1. Brown, T. and Kätz, B., 2009. *Change by design: how design thinking transforms organizations and inspires innovation*. New York: Harper Business.
2. Kaczmarek, B. i Gierulski, W., 2014. *Komercjalizacja nowych produktów*. Kielce : Wydawnictwo Politechniki Świętokrzyskiej.
3. Knosala, R. i inni, 2014. *Zarządzanie innowacjami*. Warszawa: PWE.
4. Śledzińska, K. i Włoch, R., 2021. *Gospodarka cyfrowa. Jak nowe technologie zmieniają świat*. Warszawa: Wydawnictwa Uniwersytetu Warszawskiego. <https://doi.org/10.31338/uw.9788323541943>
5. Żuber R., 2008. *Zarządzanie rozwojem przedsiębiorstwa. Teoria i praktyka*. Warszawa: Difin.

### Learning outcomes:

Knowledge:

- The graduate knows and understands selected issues of the global digital economy and the conditions for managing organizations resulting from them, regarding the introduction of new solutions in products and business processes.
- The graduate has in-depth, structured, and theoretically based knowledge covering key issues in the field of methods of searching, designing and planning the development of new solutions.
- The graduate knows and understands to an in-depth degree the concepts and principles of intellectual property protection and copyright in the process of searching for new solutions.

Skills:

- ❖ Graduates can use their knowledge to formulate and solve complex and unusual problems encountered in the process of searching, designing, and planning new solutions in a company in the conditions of globalization of the market.
- ❖ The graduate has skills in the field of searching, designing, and planning the development of new solutions in the enterprise.
- ❖ The graduate is able to professionally communicate using various channels and communication techniques with specialists in the field of searching, designing and planning the development of new solutions and to popularize knowledge in this field among non-specialists; can write useful texts at work; is able to independently prepare and deliver an oral presentation, presenting his/her point of view and properly arguing; is able to lead and summarize a discussion, motivating participants to be active and responding to expressed opinions; can inspire and organize the learning process of others
- ❖ The graduate can use their knowledge to use a foreign language at the B2+ level of the Common European Framework of Reference for Languages and terminology in the field of Business English regarding the introduction of new solutions in products and business processes.

Competences:

- The graduate is ready to critically assess his knowledge in searching, designing, and planning the development of new solutions and to recognize its importance in overcoming cognitive and practical problems.
- The graduate is ready to constantly deepen his language skills in the field of introducing new solutions in products and business processes, and independently using the sources available to him for this purpose and critically assessing them in terms of their usefulness for his professional work.
- A graduate is ready to think and act in a responsible, rational, and entrepreneurial way, is able to search, design and plan the development of new solutions, taking into account changes in the environment.

**Assessment methods and criteria:**

The final score is based on:

- 50% lectures score – test to pass (at the end of the lectures),
- 50% classes score – the project to prepare.

**Apprenticeships:**

no apprenticeships

**Details of subject and groups**

Lectures (15 hours)

**WWW Website:**

Moodle course [moodle.usos.pw.edu.pl](https://moodle.usos.pw.edu.pl)

**Literature:**

*As defined above*

**Learning outcomes:**

*As defined above*

**Evaluation criteria**

test to pass (at the end of the lectures)

60% needed to pass the test

**Subject scope:**

- Innovation and its importance for the company in the era of digital transformation of the economy. Signals for change. Techniques that stimulate the creativity of employees
- Selected methods and techniques of generating new solutions - creative problem solving (the Socrates method, the "brainstorming" method, the Gordon method, the "six thinking hats" method, the Delphi method, design thinking, etc.)
- Methods and techniques for designing new solutions (value innovation; value management system; balanced scorecard)
- Methods and techniques of designing new solutions (five-phase method of improving systems and processes; developing the function of "house of quality")
- Designing new solutions based on the concept of Open Innovation and crowdsourcing
- Evaluation and selection of optimal variants of new solutions (criteria, evaluation methods and selection of solutions)
- Methods and techniques of planning the development of new solutions. Project management of the implementation of a new solution.

**Didactic methods:**

*Lectures based on PowerPoint presentations with the subject content.*

*Discussion with students*

Classes (30 hours)

Moodle course [moodle.usos.pw.edu.pl](https://moodle.usos.pw.edu.pl)

**Literature:**

*As defined above*

**Learning outcomes:**

*As defined above*

**Evaluation criteria**

Project to prepare. Topic of the project: Search, Design and Planning of Development of New Solutions of selected problem (from career, private or other life area):

1. Presentations of each project phase during classes,
2. Project preparation in groups (or individual)
3. Project submission

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**Didactic methods:**

Life presentations of groups

Discussion

Self-study during project preparation (based on methods and tools presented on lectures)

**Equivalent items in cycles:**

n/a

**Groups belonging of subjects in cycles:**

n/a

**Points in the cycles:**

<b>Management Engineering (Inżynieria Zarządzania), second-stage full-time studies (117G-NSP-IZ)</b>			
Point type	Quantity	Start cycle	End cycle
ECTS (ECTS)	4	2022Z	

<b>Management (Zarządzanie), second-stage full-time studies (117G-NSP-ZA)</b>			
Point type	Quantity	Start cycle	End cycle
ECTS (ECTS)	4	2022Z	