COURSE DESCRIPTION CARD - SYLLABUS

Course name
Implementing a circular economy in an enterprise [S2TOZ1>WMGOZwP]

Course

Field of study
Circular System Technologies

Year/Semester
2/3

Area of study (specialization)
Material recycling and chemical recovery

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

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Lecturers

Prerequisites

The student should have basic knowledge of economics and be able to perceive and interpret economic phenomena.

Course objective

The aim of the course is to provide students with knowledge on the implementation of circular economy in the enterprise.

Course-related learning outcomes

Knowledge:
1. Student has advanced, structured and theoretically based knowledge of the principles of the circular economy and the reasons for its implementation. [K_W02]
2. Student has advanced, detailed knowledge covering issues related to sustainable production, principles of conduct and development trends in the circular economy. [K_W03]
3. Student has extended knowledge of the social, ethical, economic and legal aspects of the functioning of an enterprise in a circular economy. [K_W08]
4. Student uses basic legal, economic and ethical acts related to the environmental protection and the

circular economy. [K_W09]

Skills:
1. Student can think creatively, use sources appropriately, perform critical analysis and formulate opinions on professional issues based on the available nformation. [K_U06]
2. Student can cooperate with other people and take a leading role in a team in order to solve engineering problems related to methods and devices used in technologies, including those related to the circular economy. [K_U09]
3. Student can skillfully use professional literature and expert opinions, integrate the obtained information, interpret it and critically evaluate it and formulate competent opinions and reports on its basis. [K_U15]

Social competences:
1.Student can think and act in an entrepreneurial manner, while being aware of his/her social role and the public interest. [K_K04]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The test consists of 20 questions (closed- and open-ended). The test will take place during the last lecture in a stationary or remote form on the Ekursy platform (only if it will be impossible to write a test in a stationary form).
Grade tresholds:
Percentage Range/Grade
<0-50) 2.0 (Unsatisfactory)
<50-60) 3.0 (Satisfactory)
<60-70) 3.5 (Satisfactory plus)
<70-80) 4.0 (Good)
<80-90) 4.5 (Good plus)
<90-100> 5.0 (Very good)

Programme content

Topics related to developing and implementing a business model in an enterprise accordant with the assumptions of a circular economy.

Course topics

1. Circular economy and the actions taken by enterprises and consumers.
2. Strategic documents of the circular economy in the EU, UN and Polish law.
3. Typical obligations of enterprises in the circular economy. Extended producer responsibility.
4. Problems and benefits related to the implementation of the circular economy in an enterprise.
5. Business models that fit into the concept of the circular economy.
6. Characteristics of sustainable projects. Stages of introducing the circular economy in an enterprise.
7. Financing sources of the enterprise transformation.
8. Conditions that a project must meet to obtain funding from FENG.
9. Environmental life cycle assessment (LCA) and why it is worth using this method.
10. How to conduct ecodesign and where to turn if you need professional help.
11. Real benefits of applying the 6R principles and types of indicators that can be used in a project referring to the 6R method.
12. Clean production principles. What is the Environmental Technology Verification System ETV.
13. Identification of external project stakeholders. Stakeholder mapping.
14. What are ecological certificates, why are they worth obtaining and how to do it.
15. How to increase the competitiveness of an application for funding for enterprise transformation by implementing the "Greening" module.

Teaching methods

Multimedia presentation, calculations, case studies, discussion.

Bibliography

Basic:
1. Natalia Iwaszczuk, Krzysztof Posłuszny, Gospodarka o obiegu zamkniętym. Modele, narzędzia, wskaźniki, Wydawnictwa AGH, Kraków 2021
2. Internet portals managed by the Ministry of Funds and Regional Policy (https://www.nowoczesnagospodarka.gov.pl/):
- European Funds Portal,
- European Funds for a Modern Economy.

Additional:
1. EU and UN legal acts and Polish legal regulations concerning the process of implementing circular economy in the enterprise.

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