COURSE DESCRIPTION CARD - SYLLABUS

Course name
Human Capital Management in Industry 4.0 [N2IZarz1-ZPP>ZKLwP]

Course

Field of study
Engineering Management

Year/Semester
1/2

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
part-time

Requirements
compulsory

Number of hours

Lecture
10

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
10

Number of credit points

3,00

Coordinators

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Lecturers

Prerequisites

Knowledge: Can explain the basic issues of organizational science and management theory. Skills: Is able to identify and associate the basic problems of organization 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 acquire knowledge, skills and competences in the field of: understanding the essence, principles and correctness of human capital management in industry 4.0.

Course-related learning outcomes

Knowledge:
The student describes how legal norms affect human capital management in the context of Industry 4.0, including legal aspects of employment, data privacy and innovation [P7S_WG_01].
The student explains how an interdisciplinary approach to management science is applied to human capital management, with an emphasis on specific research methods for optimizing teamwork [P7S_WG_04].
The student characterizes the impact of organizational culture and ethics on the formation of human

capital policies in Industry 4.0 enterprises [P7S_WG_09].

Skills:
The student analyzes the impact of social and cultural changes on human capital management and creates adaptation strategies for Industry 4.0 employees [P7S_UW_01].
The student models human capital management processes using advanced research methods to forecast and respond to the needs of Industry 4.0 employees [P7S_UW_02].
The student performs an in-depth analysis of the competencies and skills of employees required in Industry 4.0, using research methods to assess and develop human capital [P7S_UW_05].

Social competences:
The student identifies and explains the role of various scientific disciplines (such as psychology, management, law) in creating human capital management strategies and demonstrates the ability to effectively integrate these disciplines through the design and implementation of team projects that focus on employee innovation and adaptation in the context of Industry 4.0 [P7S_KK_01].
The student identifies and manages cause-and-effect relationships in the work environment, prioritizing activities for employee development and engagement [P7S_KK_02].
The student contributes to the design and implementation of initiatives to develop human capital, especially in the context of the challenges of Industry 4.0 [P7S_KO_01].
The student demonstrates an awareness of the need for a professional approach to managing diversity and professional ethics in the context of the international and multicultural environment of Industry 4.0 [P7S_KR_01].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assessment:
a) within the scope of the project: based on the assessment of the current progress of task implementation in the audit process of the state of the organization in the knowledge economy.
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 the project based on: (1) public presentation of the audit results and assessment of the organization's level of adaptation to the conditions of the knowledge-based economy; (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 55% of points. You can take the exam after passing the project.

Programme content

Industry challenges 4.0 towards the shaping of human capital in enterprises.
The concept and meaning of human capital in the context of shaping industry 4.0.
Processes of human capital management in industrial enterprises 4.0 (acquisition, motivation, development and evaluation of employees).
Competences and skills of industry employees 4.0.
Opportunities and barriers in adapting employees to the reality of industry 4.0.

Course topics

Challenges of industry 4.0 towards shaping the human capital of enterprises, The concept and importance of human capital in the context of shaping industry 4.0, Human capital management processes in industry 4.0 enterprises (acquiring, motivating, developing and assessing employees), Competencies and skills of industry 4.0 employees, Opportunities and barriers in the adaptation of employees to the reality of industry 4.0

Teaching methods

Lectures - monographic and conversational.
Project - observation, demonstration and project method.

Bibliography

Basic:
1. Włodarkiewicz-Klimek H., Kapitał ludzki w kształtowaniu zwinności organizacji opartych na wiedzy, Wydawnictwo Politechnik Poznańskiej, Poznań 2018
2. Atiku S.O., Human Capital Formation for the Fourth Industrial Revolution, Namibia University of Science and Technology, IGI Global 2020
3. Olejniczak T., Japońskie fabryki Hybrydowe w Polsce i Europie środkowo-Wschodniej, Wydawnictwo POLTEXT 2019 W: Human aspects of advanced manufacturing. Proceedings of the 14th International Conference on
Applied Human Factors and Ergonomics and the Affiliated Conferences, San Francisco, USA, 20-24, July, 2023. Red. Waldemar Karwowski, Stefan Trzcieliński: AHFE International, 2023 - s. 100-110.

Additional:
1. Schwab K., Czwarta Rewolucja Przemysłowa, Studio Emka 2018
Sobieraj J. Rewolucja przemysłowa 4,0, Wydawnictwo Naukowe Instytutu Technologii i Eksploatacji - PIB w Radomiu 2019

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
Classes requiring direct contact with the teacher	25	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	50	2,00