SYLLABUS

Name: Name in Polish: Name in English:

Course offered by department: Course for department: Study level and form: Term: Coordinator of course edition:

Industry 4.0 in Logistics Przemysł 4.0 w logistyce Industry 4.0 in Logistics

Information on course:

Faculty of Organisation and Management Silesian University of Technology Master's degree, Full-time winter semester (3), 2024/2025 Prof. PŚ dr hab. Monika Odlanicka-Poczobutt

Default type of course examination report:	
zal	
Lan	guage:
Eng	lish
C οι	urse homepage:
http	os://platforma.polsl.pl/roz /course/view.php?id=401#
ECT	S
2	
Sho	ort description:
The	aim of the course is to highlight the changes that have occurred through digital transformation, which has affected the entire supply chain. The
nev	v model of logistics activities involves the use of solutions focused on innovation and the effective use of ICT.
Des	scription:
Lec	ture 1 Introduction to Industry 4.0 - basic definitions
Lec	ture 2 (R)Evolution of logistics
Lec	ture 3 Contemporary directions of logistics development - e-logistics, Smart Logistics, IoT, IoS
Lec	ture 4 Application of RFID in logistics
Lec	ture 6 Virtual supply chains and networks
Lec	ture 7 Selected IT solutions
Bib	liography:
1.	Blaik P., 2010. Logistyka. Koncepcia zintegrowanego zarządzania, Wyd. PWE, Warszawa, 2010.
2.	Bowersox D.J., Closs D.J., Bixby Cooper M. (2010), Supply chain logistics management, Boston.
3.	Brettel, M., Friederichsen, N., Keller, M., & Rosenberg, M. (2014). How Virtualization. Decentralization and Network Building Change the
	Manufacturing Landscape: An Industry A.O. Perspective World Academy of Science Engineering and Technology International Journal of
	Information and Communication Engineering Vol 8, No.1
1	Rujsk A. (2017). Revelucia przemycłowa 4.0 i jej wpływ na legistyka XVI wieku. Gzeconicma Legistyka pr.6/2017. c. 1229
4. c	Bujak A., (2017). Rewolucju przemiysłowu-4.07 jej wpryw nu logistykę XXI wieku, Czasopismo Logistyka ili 0/2017, S. 1556.
э.	Bukowski L. (2019a). Logistics decision-making based on the maturity assessment of imperfect knowledge, Engineering Management in Production
~	and Services, vol 11, issue 4.
6. -	Deloitte. (2014). Industry 4.0. Challenges and solutions for the digital transformation and use of exponential technologies.
7.	Industry 4.0. Opportunities and challenges of the industrial internet. https://www.pwc.pl/pl/pdf/industry-4-0.pdf
8.	Marjan S., Lerher T. Gajšek B., Maturity levels for logistics 4.0 based on nrw's industry 4.0 maturity model, 18 international scientific conference
	Busness Logistics In Modern Management, October 11-12,2018-Osijek, Croatia.
9.	Odlanicka-Poczobutt M. (2014). System automatycznej identyfikacji RFID w bibliotece akademickiej. Cz. 1 w: Biblioteka akademicka. Infrastruktura
	- uczelnia - otoczenie,. Pod red. M. Odlanickiej-Poczobutt i K. Zioło, Wydaw. Politechniki Śląskiej, Gliwice 2014, s. 291-305.
10.	Odlanicka-Poczobutt M. Barcik R. (2021). Logistyka 4.0. Logistyka 4.0 – wybrane zastosowania, Wydawnictwo Towarzystwa Naukowego Organizacji
	i Kierownictwa – Stowarzyszenie Wyższej Użyteczności "Dom Organizatora", Toruń 2021. https://repolis.bg.polsl.pl/Content/70898/Barcik-
	<u>Ryszard_Odlanicka-Poczobutt-Monika_Logistyka-4.0_2020.pdf</u>
11.	Schwab K. (2018). Czwarta rewolucja przemysłowa. Wydawnictwo Studio Emka, 2018.
Lea	rning outcomes:
E1 /	At an in-depth level - selected facts, objects and phenomena, as well as methods, theories and conditions explaining the complex relationships
bet	ween them and constituting advanced general knowledge in the field of mechanical engineering in connection with other fields. K2A_W01
E2 I	Main trends of development in the discipline of mechanical engineering in connection with other disciplines. K2A_W02
E3 I	Perform tasks as well as formulate and solve problems using new knowledge, including the knowledge from other fields; use analytical, simulation
and	experimental methods, see their systemic and non-technical aspects, and make a preliminary economic assessment of proposed solutions and
unc	iertaken engineering activities. KZA_UU2_KZA_UU3
64 I	integrate and use advanced knowledge related to the new of study of management and production engineering when formulating and solving tipeering tasks. K2A, LIOS
E5 I	Recognition of the importance of knowledge in solving cognitive and practical problems: consulting experts in the event of difficulties in solving the

E5 Recognition of the importance of knowledge in solving cognitive and practical problems; consulting experts in the event of difficulties in solving the problem on his/her own. K2A_K02

Assessment methods and assessment criteria:

Credit conditions:

- ✓ Lecture writing a test on the subject based on lecture materials 50%;
- Project preparation of a presentation of Industry 4.0 in Logistics on the example of selected company 50% (an example may come from the internet, but it must be labeled with own commentary).