Polish course name	**LOGISTYCZNE SYSTEMY INFORMATYCZNE W PRZEDSIĘBIORSTWACH PRODUKCYJNYCH**
English course name	**LOGISTIC IT SYSTEMS IN MANUFACTURING COMPANIES**
Course code	**WIP-MDL-D1-LISIM-07**
Field of study	**MATERIALS DESIGN AND LOGISTICS**
Level of qualification	**First degree**
Form of study	**Full-time**
Semester	**7**
Number of ECTS points	**2**
Ways of assessment	**Test**

Number of hours per semester

Lecture	Seminar	Classes	Laboratory	Project
15		30		

TEACHERS:

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Dr inż. Tomasz Turek,
Dr inż. Leszek Ziora,
Dr inż. Andrzej Chluski,
Dr inż. Ilona Pawełoszek.

COURSE OBJECTIVES:

- **C1** Providing students with knowledge in the field of logistic IT systems supporting production enterprises.
- **C2** Obtaining by the students the practical skills in the field of use of modern IT systems supporting logistics in manufacturing companies.

PRELIMINARY REQUIREMENTS FOR KNOWLEDGE, SKILLS AND OTHER COMPETENCES:

1. Basic knowledge of the basics of computer science and the basics of information technology.

2. Ability to use literature sources and internet resources.
3. Basic knowledge of logistics and logistics processes.
4. Ability to work independently and in a group.

COURSE CONTENT

LECTURE

- **L1** Structural and process approach to a production enterprise.
- **L2, L3** Logistics information systems.
- **L4 - L6** ERP class IT systems.
- **L7, L8** Evolution of ERP systems.
- **L9 - L11** Effects and barriers to implementing ERP systems**.**
- **L12** WMS systems.
- **L13** SCM systems.
- **L14, L15** Organization of logistic IT systems implementation works.

CLASSES

- **C1, C2** Introductory classes, organizational issues, rules for performing laboratory exercises, rules of the computer lab. Presentation of the ERP system. Presentation of other IT systems supporting logistics (e.g. WMS, SCM, TMS, GIS).
- **C3, C4** General presentation of ERP class systems supporting logistic processes, available at the Management Department (SAP, Macrologic MERIT).
- **C5, C6** Installation and configuration of an ERP class system, setting access rights, identifiers and passwords.
- **C7, C8** General characteristics of the selected ERP system (SAP or Macrologic MERIT).
- **C9, C10** Rules for creating contractor dictionaries as well as dictionaries of materials and services. Completing data in dictionaries.
- **C11, C12** Rules for creating offers and orders in the ERP system. Creation of sample offers and orders.
- **C13, C14** Basics of warehouse management in the ERP system.
- **C15, C16** Rules for creating delivery orders. Create a supply order.
- **C17, C18** Supply in ERP systems. Acceptance of goods at the warehouse. Purchasing documents. Storage documents.

- **C19** Order processing rules. Issuing a sales document and a warehouse document.
- **C20** Basics of production logistics. Principles of creating technology for products. Creation of technology in the ERP system.
- **C21, C22** Rules for creating production guides (orders). Creation of an order in the ERP system.
- **C23, C24** Raw material order, raw material release for an order. Generating warehouse documents in the ERP system.
- **C25** Rules for creating production reports. Generating a report in the ERP system.
- **C26, C27** Presentation of the capabilities of WMS class systems and other selected applications supporting logistics processes. Basic system operation, registration of activities included in logistics processes. Checking the correctness of the entered data.
- **C28, C29** Presentation of the capabilities of SCM class systems supporting logistic processes. Basic system operation, registration of activities included in logistics processes. Checking the correctness of the entered data.
- **C30** Summary of laboratory classes. Verification of works. Issuing final grades.

BASIC REFERENCES

1. Dziembek D.: Integrated ERP-Class Management Information Systems – Evolution, Current State and Development Directions, Problemy Zarządzania, Volume 19, No. 3(93), 2021 r.
2. Dziembek D., Turek T.: The ERP Process System as a Direction of The Evolution of Integrated Management Information Systems, Business Informatics 3(49), 2018 r.
3. Majewski J.: Informatyka dla logistyki, Wydawnictwo Instytut Logistyki i Magazynowania Poznań, 2008 r.
4. Chaberek M., Jezierski A.: Informatyczne narzędzia procesów logistycznych, Wydawnictwo CEDEWU, 2010 r.
5. Szymonik A.: Technologie informatyczne w logistyce, Placet 2010 r.
6. Nowicki A., Chomiak-Orsa I. (red.): Analiza i modelowanie systemów informacyjnych, Wyd. UE we Wrocławiu, Wrocław 2011 r.

SUPPLEMENTARY REFERENCE MATERIALS

1. Długosz J.: Nowoczesne technologie w logistyce, PWE Warszawa, 2009 r.
2. Murphy P.: Nowoczesna logistyka, Helion, Gliwice 2011 r.

LEARNING OUTCOMES

› **EU1** Student has a basic theoretical knowledge of the role and importance of logistic information systems in manufacturing companies.
› **EU2** Student is able to use logistic IT systems in the field of recording and monitoring the course of logistic processes and related economic operations taking place in production companies.

TEACHING TOOLS

› Multimedia presentations.
› Laboratory equipment and guides.
› Computer stations with software (Merit, SAP, LSI in cloud).

WAYS OF ASSESSMENT (F – FORMATIVE, P – SUMMATIVE)

› **F1**. Assessment of the implementation of tasks included in the curriculum.
› **F2.** Assessment of the mastery of the teaching material being the subject of laboratory tasks - final test.
› **P1.** Assessment of the mastery of the teaching material within the lectures - final test.

STUDENT WORKLOAD

Form of activity	Number of hours	ECTS
Contact hours with the teacher		
Lectures	15	0,6
Seminar		
Classes	30	1,2
Laboratory		
Project		
Test		
Exam		
Total contact hours	45	1,8

Student's own work		
Getting acquainted with the indicated literature	2	0,08
Preparation for seminar		
Preparation for classes	2	0,08
Preparation for lab		
Project preparation		
Consultation	1	0,04
Preparation for the exam		
Total student's own work	5	0,2
Total number of hours/ ECTS points for the course	**50**	**2,0**

ADDITIONAL INFORMATION

Timetable of classes	https://wip.pcz.pl/dla-studentow/plan-zajec/studia-stacjonarne
Information about the consultation (time + place)	https://wip.pcz.pl/dla-studentow/konsultacje-dla-studentow

MATRIX OF LEARNING OUTCOMES REALISATION

Learning outcome	**Reference of given outcome to outcomes defined for whole program**	**Course objectives**	**Course content**	**Ways of assessment**
EU 1	K_W02, K_W07, K_W06, K_U04, K_U05, K_U07, K_K02,	C1	L1 - L15	P1
EU 2	K_W02, K_W07, K_W06, K_U04, K_U05, K_U07, K_K02,	C2	C1 - C30	F1, F2

FORM OF ASSESSMENT - DETAILS

EU1 Student has a basic theoretical knowledge of the role and importance of logistic information systems in manufacturing companies.

- 2,0 Student does not know the basic rules regarding the role and importance of logistic IT systems in a production company.
- 3,0 Student partially knows the basic rules regarding the role and importance of logistic information systems in a production company.
- 3,5 Student almost knows the basic rules regarding the role and importance of logistic IT systems in a production company.
- 4,0 Student knows the rules regarding the role and importance of logistic IT systems in a production company.
- 4,5 Student knows almost very well the rules regarding the role and importance of logistic IT systems in a production company.
- 5,0 Student knows very well the basic rules regarding the role and importance of logistic IT systems in a production company.

EU2 Student is able to use logistic IT systems in the field of recording and monitoring the course of logistic processes and related economic operations taking place in production companies.

- 2,0 Student is not able to use logistic IT systems in the field of recording and monitoring the course of logistics processes and related economic operations taking place in production companies.
- 3,0 Student is able to partially use logistic IT systems in the field of recording and monitoring the course of logistic processes and related economic operations taking place in production companies.
- 3,5 Student can almost use logistic IT systems in the field of recording and monitoring the course of logistics processes and related economic operations taking place in production companies.
- 4,0 Student is able to use logistic IT systems well in the field of recording and monitoring the course of logistic processes and related economic operations taking place in production companies.
- 4,5 Student is able to use logistic IT systems very well in the field of recording and monitoring the course of logistics processes and related economic operations taking place in production companies.

› 5,0 Student very well uses logistic IT systems in the field of recording and monitoring the course of logistics processes and related economic operations taking place in production companies.