Polish course name	**LOGISTYKA PRODUKCJI**
English course name	**PRODUCTION LOGISTICS**
Course code	**WIP-MDL-D1-PL-02**
Field of study	**Materials design and logistics**
Level of qualification	**First degree**
Form of study	**Full-time**
Semester	**2**
Number of ECTS points	**3**
Ways of assessment	**Test, project**

Number of hours per semester

Lecture	Seminar	Classes	Laboratory	Project
15		6		9

TEACHERS:

Dr Marta Daroń.

COURSE OBJECTIVES:

› **C1** Providing students with knowledge in the field of production logistics system.

› **C2** Obtaining by the students the practical skills in the field of designing and optimizing production logistics system.

PRELIMINARY REQUIREMENTS FOR KNOWLEDGE, SKILLS AND OTHER COMPETENCES:

1. Basic knowledge in the field of logistics.
2. Ability to work independently and in a group.
3. Ability to use literature sources, internet resources and a computer.

COURSE CONTENT

LECTURE

› **L1** General theory of logistics, production logistics subsystem and the logistics system in a production enterprise.

› **L2** Subject, scope and features of production logistics.

- **L3** Work in progress inventory.
- **L4, L5** Design of the logistics network, integrated systems supporting production – OPT, MRP, MRP II.
- **L6, L7** Integrated systems supporting production – ERP, CIM, JiT.
- **L8, L9** Lean Manufacturing as a modern technique in logistics management.
- **L10, L11** Planning of material requirements, principles of controlling the flow of materials and raw materials.
- **L12, L13** Logistics production infrastructure - requirements, means of internal transport, designing of transport routes, storage.
- **L14** Types and forms of production and their impact on the production logistics system.
- **L15** Evaluating of knowledge.

CLASSES

- **C1** Introductory classes, repetition of basic knowledge about logistics systems with particular emphasis on production logistics.
- **C2** Discussion of production and inventory planning issues, exercises and tasks.
- **C3, C4** Scheduling of working time and usage of internal transport equipment in production departments, exercises and tasks.
- **C5** Economical production batch size, exercises and tasks.
- **C6** Test.

PROJECT

- **P1** Introductory classes, tips and discussion of the final project.
- **P2, P3, P4** Designing workstations and material flow in production departments.
- **P5, P6, P7** Designing of transport tasks in production departments.
- **P8, P9** Evaluation of final projects.

BASIC REFERENCES

1. Bendkowski, J., Matusek, M., Logistyka produkcji: praktyczne aspekty. Cz. 1. Planowanie i sterowanie produkcją. Gliwice: Wydaw. Politechniki Śląskiej, 2013 r.
2. Bendkowski, J., Matusek, M., Logistyka produkcji: praktyczne aspekty. Cz. 2. Narzędzia, metody, systemy Gliwice: Wydaw. Politechniki Śląskiej, 2013 r.

3. Bendkowski, J., Matusek, M., Logistyka produkcji: praktyczne aspekty. Cz. 3. Studia przypadków Gliwice: Wydaw. Politechniki Śląskiej, 2013 r.
4. Logistyka produkcji: teoria i praktyka/Red. Fertsch, M., Cyplik, P., Hadaś Ł., Poznań: Instytut Logistyki i Magazynowania, 2010 r.
5. Logistyka produkcji: procesy, systemy, organizacja/red. nauk. Szymonik A., Difin, Warszawa 2012 r.

SUPPLEMENTARY REFERENCE MATERIALS

1. Harris, R., Harris CH., Wilson, E., Logistyka wewnętrzna fabryki wg zasad Lean Manufacturing: przewodnik po systemie zarządzania materiałami dla specjalistów z produkcji, zarządzania produkcją, zakupów, zaopatrzenia oraz technologii, Wydaw. Lean Enterprise Institute Polska, Wrocław, 2013 r.
2. Daroń M., Górska M., Analiza wykorzystania urządzeń transportowych w magazynie wyrobów gotowych, Logistyka 5/2011.
3. Daroń M., Górska M., Wybrane problemy zarządzania zapasami w przedsiębiorstwie produkcyjnym, Logistyka 5/2013.
4. Jonak J., Nieoczym A., Logistyka w obszarze produkcji i magazynowania Wydaw. Politechniki Lubelskiej, Lublin 2014 r.

LEARNING OUTCOMES

› **EU1** Student knows the tasks of the production logistics system and the principles of planning and use of production resources in manufacturing enterprises.
› **EU2** Student has the ability to design and optimize logistics tasks at production departments.

TEACHING TOOLS

› Multimedia presentations.
› CUT e-learning platform (possible use).
› Computer stations with software.

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

› **F1**. The evaluation of classes knowledge – a final test.
› **F2**. The evaluation of project knowledge – a final project.

› **F3**. The assessment during classes – activities and tasks during classes.

› **P1**. The assessment of lectures knowledge – a final test.

STUDENT WORKLOAD

Form of activity	Number of hours	ECTS
Contact hours with the teacher		
Lectures	15	0,6
Seminar		
Classes	6	0,24
Laboratory		
Project	9	0,36
Test		
Exam		
Total contact hours	30	1,2
Student's own work		
Getting acquainted with the indicated literature	10	0,4
Preparation for seminar		
Preparation for classes	6	0,24
Preparation for lab		
Project preparation	15	0,6
Consultation	4	0,16
Preparation for the test	10	0,4
Total student’s own work	45	1,8
Total number of hours/ ECTS points for the course	**75**	**3,0**

ADDITIONAL INFORMATION

Timetable of classes	https://usosweb.pcz.pl
Information about the consultation (time + place)	https://wz.pcz.pl

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_U04, K_K02,	C1	L1 - L15	P1
EU 2	K_W05, K_U04, K_K02,	C2	C1 - C6, P1 - P9	F1, F2, F3

FORM OF ASSESSMENT - DETAILS

EU1 Student knows the tasks of the production logistics system and the principles of planning and use of production resources in manufacturing enterprises.

- 2,0 The student does not know the basic tasks of production logistics system and the principles of planning and use of production resources in production enterprises.
- 3,0 The student partially knows basic tasks of production logistics system and the principles of planning and use of production resources in production enterprises.
- 3,5 The student knows basic tasks of the production logistics system and the principles of planning and use of production resources in production enterprises
- 4,0 The student knows well tasks of production logistics system and the principles of planning and using production resources in production enterprises.
- 4,5 The student knows almost very well tasks of the production logistics system and the principles of planning and using production resources in production enterprises.
- 5,0 The student knows very well tasks of the production logistics system and the principles of planning and using production resources in production enterprises.

EU2 Student has the ability to design and optimize logistics tasks at production departments.

- 2,0 The student is not able to design and optimize logistics tasks at production departments.
- 3,0 The student is partially able to design and optimize logistics tasks at production departments.
- 3,5 The student is almost able to design and optimize logistics tasks in production departments,
- 4,0 The student is able to design and optimize logistics tasks at production departments at well level.
- 4,5 The student is able to design and optimize logistics tasks in production departments at almost very well level.
- 5,0 The student is able to design and optimize logistics tasks in production departments at very well level.