Polish course name	**ORGANIZACJA I ZARZĄDZANIE PROCESAMI PRODUKCYJNYMI**
English course name	**ORGANIZATION AND MANAGEMENT OF PRODUCTION PROCESSES**
Course code	**WIP-MDL-D1-OAMOP-05**
Field of study	**Materials design and logistics**
Level of qualification	**First degree**
Form of study	**Full-time**
Semester	**5**
Number of ECTS points	**3**
Ways of assessment	**Exam**

Number of hours per semester

Lecture	Seminar	Classes	Laboratory	Project
15		15		

TEACHERS:

Dr inż. Cezary Kolmasiak,

Dr inż. Teresa Bajor,

Dr inż. Marzena Ogórek.

COURSE OBJECTIVES:

- **C1** Provide students with basic knowledge in the field of organization and management of production processes.
- **C2** Acquainting students with the process approach in management.
- **C3** Acquisition of practical skills by students in the application of the principles and tools of process management.

PRELIMINARY REQUIREMENTS FOR KNOWLEDGE, SKILLS AND OTHER COMPETENCES:

1. Basic knowledge of mathematics and economics.
2. Knowledge of the basics of management and process management.
3. Ability to work independently and in a group.
4. Ability to use literature sources and internet resources.

COURSE CONTENT

LECTURE

- **L1** Characteristics of the production process.
- **L2, L3** Types and elements of the production process.
- **L4** The technological cycle and the production cycle, characteristics and structure of the cycle.
- **L5** Schedules of the production process.
- **L6** Planning and control of production flow.
- **L7** Lengths of the production cycle. Work in progress.
- **L8** Continuous flow. Managing production capacity. Methods of operation synchronization in the production process.
- **L9** APS systems.
- **L10, L11** Flexible production systems.
- **L12, L13** Production planning and management systems (MES, ERP).
- **L14, L15** Means of production in various branches of the economy.

CLASSES

- **C1** Acquainting students with the rules of completing the course and the course of carrying out project exercises.
- **C2** Production system. Characteristics, specific features and classification of typical systems, processes and production techniques.
- **C3** Determining the time of implementation of technological operations.
- **C4** Methods of increasing the productivity of processes.
- **C5** Risk in planning production orders.
- **C6** Design of production systems. Construction of schedules for the course of production processes.
- **C7** 5S Practices.
- **C8** Lean Manufacturing.
- **C9, C10** Total Quality Management, Six Sigma.
- **C11** Kaizen - continuous improvement,"5 × why?".
- **C12** Balancing the assembly line.
- **C13** Total equipment efficiency.
- **C14, C15** Means of production used in various branches of the economy.

BASIC REFERENCES

1. M. Brzeziński: Organizacja podstawowych procesów produkcyjnych, PL, Lublin 1997 r.
2. K. Pasternak: Zarys zarządzania produkcją, PWE, Warszawa 2005 r.
3. S. Borkowski, R. Ulewicz: Zarządzanie produkcją. Systemy produkcyjne, Oficyna wydawnicza HUMANITAS, Sosnowiec 2008 r.
4. I. Durlik: Inżynieria Zarządzania Cz.II - strategie wytwarzania, Placet, Warszawa 2005 r.
5. I Durlik: Strategia i projektowanie systemów produkcyjnych, Placet, Gdańsk 1996 r.
6. R. Knosala: Inżynieria produkcji kompendium wiedzy, PWE, Warszawa, 2017 r.
7. P. Gajewski: Koncepcja struktury organizacji procesowej, Dom Organizatora, Toruń 2003 r.
8. T. Kaczmarczyk: Ryzyko i zarządzanie ryzykiem. Difin, Warszawa 2005 r.
9. I. Durlik: Inżynieria zarządzania: strategia i projektowanie systemów produkcyjnych, cz. 1, Placet, Warszawa, 2007 r.
10. E. Kulińska, A. Busławski: Zarządzanie procesami produkcji, Warszawa, Difin, 2019 r.
11. W. M. Grudziewski: Metody projektowania systemów zarządzania, Difin, Warszawa, 2004 r.
12. E. Janczyk-Strzała: Controlling w przedsiębiorstwach produkcyjnych, CeDeWu, Warszawa, 2008 r.

SUPPLEMENTARY REFERENCE MATERIALS

1. T. Kaczmarczyk: Zarządzanie ryzykiem. Ujęcie interdyscyplinarne, Difin, Warszawa, 2010 r.
2. K. Kukuła: Badania operacyjne w przykładach i zadaniach. PWN, Warszawa 2004 r.

LEARNING OUTCOMES

› **EU1** The student has theoretical knowledge in the field of production process management.

› **EU2** The student knows the trends and directions of development of production process management.

TEACHING TOOLS

› Lecture and classes with audio-visual aids.
› Design classes carried out in the form of partial works with the use of computers.
› E-learning platform of the Czestochowa University of Technology, or other distance learning tools.

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

› **F1**. Assessment of activity during classes.
› **F2**. Assessment of the prepared presentation.
› **P1**. Exam.

STUDENT WORKLOAD

Form of activity	Number of hours	ECTS
Contact hours with the teacher		
Lectures	15	0,6
Seminar		
Classes	15	0,6
Laboratory		
Project		
Test		
Exam	2	0,08
Total contact hours	32	1,28
Student's own work		
Getting acquainted with the indicated literature	10	0,4
Preparation for seminar		
Preparation for classes	25	1,0
Preparation for lab		
Project preparation		
Consultation	2	0,08
Preparation for the exam	6	0,24
Total student’s own work	43	1,72

Total number of hours/ ECTS points for the course	**75**	**3,0**

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_W03, K_W05, K_U04, K_K01,	C1, C2, C3	L1 - L15 C1 - C15	F1, F2, P1
EU 2	K_W02, K_W03, K_W05, K_U04, K_K01,	C1, C2, C3	L1 - L15 C1 - C15	F1, F2, P1

FORM OF ASSESSMENT - DETAILS

EU1 The student has theoretical knowledge in the field of production process management.

- 2,0 The student has not mastered the basic knowledge of production process management.
- 3,0 The student has acquired a sufficient knowledge of the management of production processes.
- 3,5 The student acquired the knowledge of production process management to a more than sufficient degree.
- 4,0 The student has acquired a good knowledge of the management of production processes.

- 4,5 acquired knowledge in the field of production process management to an over good degree.
- 5,0 The student has acquired a very good knowledge of the management of production processes.

EU2 The student knows the trends and directions of development of production process management.

- 2,0 The student does not know the trends and directions of development of production process management.
- 3,0 The student is able to present the basic trends and directions of development of production process management.
- 3,5 The student fully meets the requirements for the grade 3,0 and exceeds them, but does not fully meet the requirements for the grade 4,0.
- 4,0 The student is able to present selected trends and directions of development of production process management.
- 4,5 The student fully meets the requirements for the grade 4,0 and exceeds them, but does not fully meet the requirements for the grade 5,0.
- 5,0 The student knows the trends and directions of development of production process management with a very good grade.