

## COURSE GUIDE

<u>Subject name</u>	<b>Design of logistics systems and processes</b>
<u>Course of study</u>	<b>Logistics</b>
<u>The form of study</u>	<b>Full-time</b>
<u>Level of qualification</u>	<b>Second</b>
<u>Year</u>	<b>I</b>
<u>Semester</u>	<b>2</b>
<u>The implementing entity</u>	<b>Department of Business Informatics and Ecosystems</b>
<u>The person responsible for preparing</u>	<b>dr Paula Bajdor</b>
<u>Profile</u>	<b>General academic</b>
<u>ECTS points</u>	<b>5</b>

### TYPE OF TEACHING – NUMBER OF HOURS PER SEMESTER

LECTURE	CLASS	LABORATORY	PROJECT	SEMINAR
15	15	-	-	-

### COURSE AIMS

- C1.** Presentation of logistics systems and processes.
- C2.** Achievement of skills concerning design of processes with the usage of BPMN, UML 2.1 notation.

### ENTRY REQUIREMENTS FOR KNOWLEDGE, SKILLS AND OTHER COMPETENCES

- The student possesses basic skills concerning computer operation.
- The student is able to interpret data included in tables and graphs.
- The student can use the Internet services: WWW, e-mail, etc.

### LEARNING OUTCOMES

- EU 1-** The student possesses basic theoretical knowledge concerning the notion, identification and classification of logistics systems and processes.
- EU 2-** The student possesses knowledge and skills concerning design of logistics processes in BPMN and UML notation.
- EU 3-** The student is able to design in practice basic selected logistics processes using appropriate application such as e.g. DIA software.

### COURSE CONTENT

Type of teaching – LECTURES		Number of hours
<b>L1</b>	The notion and classification of logistics systems.	<b>1</b>
<b>L2</b>	Process approach in logistics.	<b>1</b>
<b>L3</b>	Identification and classification of logistic processes and methods used in its design, different approaches to designing a logistics system.	<b>1</b>
<b>L4</b>	Implementation and maintenance of logistic systems.	<b>1</b>
<b>L5</b>	Analysis methods of logistic processes.	<b>1</b>
<b>L6</b>	Improvement of logistic processes. Total quality management and six sigma concept.	<b>1</b>
<b>L7</b>	Logistics decision modeling.	<b>1</b>
<b>L8</b>	Tools for design of logistic processes on the basis of DIA application.	<b>1</b>
<b>L9</b>	Process performance.	<b>1</b>
<b>L10 – L13</b>	Characteristic of basic logistics processes – procurement, storage, production, transportation and communication	<b>4</b>
<b>L14</b>	Models and process standardization	<b>1</b>
<b>L15</b>	The space in systems and logistics processes design	<b>1</b>

<b>Type of teaching – CLASSES</b>		<b>Number of hours</b>
<b>C1</b>	Information system supporting the design of logistics processes	<b>1</b>
<b>C2</b>	Basic design principles	<b>1</b>
<b>C3 – C4</b>	The company's structure and departments design	<b>2</b>
<b>C5</b>	Creating a map of company's processes	<b>1</b>
<b>C6</b>	Identification of Logistics areas and processes	<b>1</b>
<b>C7 – C8</b>	Process diagram creation – flowcharts and BPMN notation	<b>2</b>
<b>C9</b>	Creating a process description sheet	<b>1</b>
<b>C10 – C13</b>	Logistics processes design – supply, storage, transport (distribution), production	<b>4</b>
<b>C14 – C15</b>	Logistics system design	<b>2</b>

### **TEACHING TOOLS**

Coursebooks.

Audiovisual equipment.

Laboratory instructions.

A computer with an access to the Internet and installed DIA application.

E-learning platform.

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

F1 Presentation of assignments.

F2 Students' active participation in classes.

### **STUDENT WORKLOAD**

<b>Form of activity</b>	<b>Average number of hours for realization of the activity</b>
	[h]
Contact hours with the teacher	30
Preparation for classes	20
Preparation for tests	20
Consultations	5
<b>TOTAL NUMBER OF HOURS / ECTS POINTS FOR THE COURSE</b>	<b>75 / 5</b>

## BASIC AND SUPPLEMENTARY RESOURCE MATERIALS

### Basic resources

Kumar A., Business Process Management, New York, Routledge, 2018.

Weske m., Business Process Management: Concepts, Languages, Architectures, Berlin, Springer-Verlag, 2012.

Lenort R., Production Logistics Concepts and Systems: Potential for Use in Metallurgical Processing Companies, 2010.

### Supplementary resources

Jeston J., Business Process Management: Practical Guidelines to Successful Implementations, London: Routledge 2014.

Dumas M., Fundamentals of Business Process Management, Heidelberg: Springer 2013.

Panagacos T., The ultimate Guide to Business Process Management: Everything You Need to Know and How to Apply it to Your Organization, Melbourne, 2012.

Lis T., Bajdor P., Sales Logistics as a Model Used by Companies Fulfilling Individual Customer's Needs, [in:] Challenges in Contemporary Management (ed.) LEMAŃSKA-MAJDZIK Anna, TOMSKI Piotr, Sekcja Wydawnictw Wydziału Zarządzania Politechniki Częstochowskiej, Częstochowa 2013.

Bolesnikov M., Popovic Stijacic M., Radisic M., Takaci A., Borocki J., Bolesnikov D., Bajdor P., Dziendziura J., Development of a Business Model by Introducing Sustainable and Tailor-Made Value Proposition for SME Clients, Sustainability, vol. 11, 2019.

## TEACHERS ( NAME, SURNAME, E-MAIL ADDRESS)

Paula Bajdor: paula.bajdor@pcz.pl

## MATRIX OF LEARNING OUTCOMES REALISATION

Learning outcome	Reference of given outcome to outcomes defined for whole program	Course aims	Course content	Teaching tools	Ways of assessment
EU 1 The student possesses basic theoretical knowledge concerning the notion, identification and classification of logistics systems and processes.	K_W03, K_W04, K_W05, K_U01, K_U03, K_K05	C1-C2	L1 - L15	1,2, 3,4	F1, F2, P1
EU 2 The student possesses knowledge and skills concerning design of logistics BPMN and UML notation processes.	K_W02, K_W03, K_W07, K_U01, K_U03, K_K05	C1-C2	L1-L15, C1-C8	1,2, 3,4	F1, F2, P1
EU 3 -The student is able to design in practice basic selected logistics processes using appropriate. application such as e.g. DIA software.	K_W04, K_W06, K_W07, K_U03, K_U05, K_K05.	C1-C2	C1- C8	1,2, 3,4	F1, F2, P1

## FORM OF ASSESSMENT - DETAILS

	<b>grade 2</b>	<b>grade 3</b>	<b>grade 4</b>	<b>grade 5</b>
EU 1	The student does not know or understand any definitions concerning the problem of logistics systems and processes design.	The student possess basic knowledge concerning the notion, identification, classification of logistics systems and processes.	The student possess good knowledge concerning the notion, identification, classification of logistics systems and processes.	The student possess good knowledge concerning the notion, identification, classification of logistics systems and processes and is able to present selected practical examples of such a processes.
EU 2	The student does not understand any basic BPMN or UML notation.	The student understands some basic BPMN or UML elements.	The student knows most of BPMN or UML notation elements.	The student knows very well BOMN or UML notation.
EU 3	The student cannot design any of presented during classes logistic processes.	The student is able to design one logistic process with the usage of DIA application.	The student is able to design two logistic process with the usage of DIA application.	The student is able to design three logistic process with the usage of DIA application.

**ADDITIONAL USEFUL INFORMATION ABOUT THE COURSE**

Information where presentation of classes, instruction, subjects of seminars can be found, etc. -

They are sent to the e-mail addresses of students

Information on the place where the classes take place -

Such information is placed at www site of The Faculty of Management

Information on the date of classes (day of the week/hour) -

Such an information can be found at www site of the Faculty of Management

Information on consultation hours (hours + place) -

Such information is conveyed to students at the first class.