COURSE DESCRIPTION CARD - SYLLABUS

Course name
City logistics [S2Log2E-SL>LogM]

Course

Field of study
Logistics

Year/Semester
1/2

Area of study (specialization)
Logistics Systems

Profile of study
general academic

Level of study
second-cycle

Course offered in
english

Form of study
full-time

Requirements
elective

Number of hours

Lecture
15

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
30

Number of credit points

4,00

Coordinators

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Lecturers

Prerequisites

Knowledge of logistics processes and their course. Knowledge about the impact of economic processes on the environment and society.

Course objective

Providing students with knowledge of urban logistics and best practices in the field of urban logistics. Equipping students with skills in modeling logistics systems taking into account the city limits. Equipping students with skills in improving logistics systems operating in the city.

Course-related learning outcomes

Knowledge:
1. Student knows the relationships between elements of the city system and their relationship with logistics [P7S_WG_01]
2. Student knows issues in the field of production engineering and their relationship with logistics processes implemented in the city system [P7S_WG_02]
3. Student knows the issues of process mapping, process orientation in urban logistics and simulation of logistics processes implemented in the city and for the needs of the city [P7S_WG_03]

4. Student knows the extended interpretations of transport, storage and material flow processes in the context of city logistics [P7S_WG_05]
5. Student knows the detailed methods, tools and techniques characteristic of urban logistics [P7S_WK_01]

Skills:
1.Student is able to gather based on the literature and other sources (in Polish and English) and provide information on urban logistics issues in an orderly manner [P7S_UW_01]
2. Student is able to communicate using properly selected means in the field of urban logistics with stakeholders involved in its processes [P7S_UW_02]
3.Student is able to make a critical analysis of technical solutions used in the city logistics system (in particular in relation to devices, facilities and processes) [P7S_UW_04]
4. Student is able to assess the usefulness and possibility of using new achievements (techniques and technologies) in the field of urban logistics [P7S_UW_06]
5. Student is able to design, using properly selected means, the urban logistics subsystem or a solution to improve the implementation of urban logistics processes [P7S_UK_01]
6. Student is able to formulate and solve problem tasks in the field of urban logistics through interdisciplinary integration of knowledge from the fields and disciplines used to design logistics systems [P7S_UO_01]
7. Student is able to identify changes in requirements, standards, regulations, technical progress and reality of the labor market in the field of urban logistics, and on their basis to determine the need to supplement own knowledge and other [P7S_UU_01]

Social competences:
1. Student recognizes the cause-and-effect relationships in achieving the objectives and grades the significance of alternative or competitive tasks, taking into account the requirements and constraints of individual stakeholders [P7S_KK_01]
2. Student is aware of the responsibility for own work and readiness to comply with the rules of teamwork and taking responsibility for jointly implemented tasks and projects [P7S_KR_01]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Knowledge obtained during lectures is verified by a colloquium conducted in the last class. The colloquium includes 5 open questions, evenly scored. The passing threshold is 50% of points.
Project: Skills obtained during project classes are verified during consultations regarding subsequent stages of the project (20% of the grade) and on the basis of the delivered project documentation prepared in accordance with the guidelines (50% of the grade) as well as the presentation and defense of the project (30% of the grade). The passing threshold is 50% of points.

Programme content

Lecture: City - definition, city characteristics, types of cities. Urban logistics - definition. The flow of goods / materials in the city. The flow of people in the city. Waste flow in the city. Strategies for sustainable urban development. Modern technologies in urban logistics
Project: Development of a solution for a selected problem in the field of urban logistics. The project should apply qualitative and quantitative methods to analyse the flow of goods and/or people in the urban area, and to propose an improved solution for the identified problems. Environmental and economic aspects shall be considered when assessing the feasibility of the proposed solution in city logistics

Teaching methods

Lecture: Informative (conventional) lecture (providing information in a structured way) and Problem lecture for strategies of sustainable urban development and modern technologies in urban logistics.
Project: project method.

Bibliography

Basic:
1. Taniguchi E., Thompson R.G.,City Logistics 1: New Opportunities and Challenges, Wiley, 2018.

2. Taniguchi E., Thompson R.G., City Logistics 2: Modeling and Planning Initiatives, Wiley, 2018.
3. Oleśków-Szłapka J., Pawłyszyn I., Facchini F., Stachowiak A., Tanajura Ellefsen A.P., Sustainable city mobility - comparison of actual state in selected European countries [w:] Golińska-Dawson P., Kune-Muh T., Kosacka-Olejnik M., Smart and sustainable supply chain and logistics - trends, challenges, methods and best practices. Volume 1, Springer, Cham, 2020, s. 133-151.

Additional:
1. Browne M., Behrends S., Holguin-Veras J., Genevieve G., Woxenius J., Urban Logistics, Kogan Page, 2018.
2. Stachowiak A., Oleśków-Szłapka J., Pawlak N., Cyplik P., Szpakowska M., Contemporary solutions for city logistics - a case study on transport in Poznan [w:] Stajniak M., Szuster M., Kopeć M., Toboła A., Challanges and modern solution in transportation, Instytut Naukowo-Wydawniczy "Spatium", Radom, 2019, s. 37-47.
3. Ragin-Skorecka K., Stachowiak A., Wojciechowski H., Fertsch M., Congestion in historical city centres - discussion on phenomena and analysis with network thinking methodology and grey sets, Informatyka Ekonomiczna, nr 3(53), 2019, s. 86-96.

Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,00
Classes requiring direct contact with the teacher	45	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	55	2,00