



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Ecologistics [S1Log2>EKOL]

### Course

Field of study

Logistics

Year/Semester

3/5

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

elective

### Number of hours

Lecture

15

Laboratory classes

0

Other (e.g. online)

0

Tutorials

15

Projects/seminars

0

### Number of credit points

2,00

### Coordinators

dr inż. Magdalena Graczyk-Kucharska

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### Lecturers

### Prerequisites

The student has basic knowledge of environmental protection, logistics and organization and management sciences. Can Interpret and describe: phenomena that affect the company, its logistic processes and environmental protection. Can assess the manner of achieving goals while maintaining good relationships with partners and co-workers. Is aware of his/her knowledge of logistics, environmental protection and organization and management sciences and understands and analyses related basic social phenomena.

### Course objective

The aim of the course is to familiarize students with the nature, objectives and methods of completing ecologically-oriented logistic processes and systems of pro-ecological management of production processes.

### Course-related learning outcomes

Knowledge:

1. Student knows the basic relationships in logistics and its specific issues, i.e. ecology and pro-ecological supply chain management [P6S\_WG\_05]
2. Student is able to recognize and define the relationship between the technical and economic sphere

characteristic of logistics and supply chain management in the context of waste management

[P6S\_WK\_01]

3. Student knows the basic relationships in the field of logistics, ecology and supply chain management

[P6S\_WG\_08]

4. Student is able to characterize best practices in logistics and pro-ecological process management in the supply chain [P6S\_WK\_06]

5. Student can indicate the basic relationships in force in logistics and ecology, including sustainable development and the logistics waste management system [P6S\_WK\_04]

6. Student knows the basic relationships and contemporary trends in the field of logistics, environmental science and its specific issues in the context of supply chain management [P6S\_WK\_05]

Skills:

1. Student is able to search based on the literature of the subject and other sources and in an orderly manner present information on the problem falling within the scope of ecology and pro-ecological supply chain management [P6S\_UW\_01]

2. Student is able to prepare the work materials necessary to work in an industrial environment and knows the safety principles associated with this work, including safety problems in logistics [P6S\_UW\_05]

3. Student is able to make a critical analysis of a problem that falls within the scope of ecology and pro-ecological supply chain management [P6S\_UW\_06]

4. Student is able to design, using appropriate methods and techniques, an object, system or process that meets the requirements within the framework of ecology and pro-ecological supply chain management [P6S\_UW\_07]

5. Student is able to present, using properly selected means, a problem that falls within the scope of ecology and its specific issues, as well as pro-ecological supply chain management [P6S\_UK\_01]

Social competences:

1. Student is aware of the recognition of the importance of knowledge in the field of ecology and pro-ecological supply chain management in solving cognitive and practical problems [P6S\_KK\_02]

2. Student is aware of initiating activities related to the formulation and transfer of information and cooperation in society in the field of ecology [P6S\_KO\_02]

3. Student is aware of the responsible fulfillment, correct identification and resolution of dilemmas related to the profession of logistics in the field of ecology [P6S\_KR\_01]

4. Student is aware of cooperation and work in a group on solving problems within the scope of ecology and pro-ecological supply chain management [P6S\_KR\_02]

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Formative assessment: in the lecture, knowledge is verified in a partial form at the 3rd, 5th, 9th and 11th hour of the lecture in the form of four tests consisting of 3-6 test questions each (open and closed), variously scored, which together account for 40% of the value of the final lecture grade. Passing threshold of the formative assessment colloquium: 60%. Summative assessment: on the basis of the substantive quality of the pass in the last class conducted in written form (final colloquium), conducted in the form of a test consisting of 15-20 test questions each (open and closed), variously scored, which constitutes 60% of the value of the final assessment of the lecture. The threshold for passing the summative assessment colloquium: 60%.

Excercises: Formative evaluation: each time during the meeting on the basis of the discussion of the proposed solutions to the indicated problems in the field of ecology and at the 3rd, 8th, 10th hour of classes in the form of a partial evaluation of the tasks relized so far, which in total constitutes 30% of the final evaluation of the excercises. Summative evaluation: on the basis of a final evaluation consisting of a substantive evaluation of the partial tasks (50% of the final evaluation of the excercises) and a final public presentation during the last class and discussion of the results of the project (20% of the final evaluation of the excercises).

## Programme content

The program covers the issue of environmentalism, sustainability and the circular economy in the context of changes and challenges in the socio-economic environment.

## Course topics

Lecture: Conceptual assumptions of ecology. Sustainability. Circular economy. Logistics oriented internally and externally on the waste management system. Processes of recirculation of waste materials in the economy. Ecological balances in logistic systems. Logistics of municipal waste disposal and new technologies in waste management. Designing recycling-oriented products. Pro-ecological management systems. Logistic waste management system.

Tutorial: The impact of the company's location and activity on the environment. Designing an ecological product and ecological construction. The process of delivery, production and distribution in terms of waste and environmental impact. Categories and groups of waste in the enterprise. Internal waste logistics. Logistic system of waste management in the enterprise, including subsystems: collection, transport, recovery of waste and information flows. Documentation in the field of waste management in the enterprise. New technologies in the field of waste management.

## Teaching methods

Lecture: multimedia presentation illustrated with examples given on the board - informative, problem-based lecture, work with a book, discussion.

Tutorial: multimedia presentation illustrated with examples given on the board, case study method, business stories - exercises and practical tasks.

## Bibliography

Basic:

1. Korzeniowski A., Skrzypek M., Ekologistyka zużytych opakowań, Instytut Logistyki i Magazynowania, Poznań, 1999.
2. Korzeń Z., Ekologistyka, Instytut Logistyki i Magazynowania, Poznań, 2001.
3. Jabłoński J., Zarządzanie środowiskowe jako warunek ekologizacji przedsiębiorstwa. próba modelu teoretycznego, WPP, Poznań, 2001.
4. Jabłoński J. (red.), Technologie zero emisji, WPP, Poznań, 2011.
5. Jakowski S., Projekt nowelizacji zasad projektowania opakowań transportowych, Centralny Ośrodek Badawczo-Rozwojowy Opakowań, Warszawa, 2003.
6. Kowalski Z., Kulczycka J., Góralczyk M., Ekologiczna ocena cyklu życia procesów wytwórczych, Wydawnictwo Naukowe PWN, Warszawa, 2007.
7. Graczyk-Kucharska M., Human resources responsibilities in logistic system of waste management for sustainable growth and circular economy. European Research Studies Journal, Vol. XXIV, SI 5, pp. 221-233, 2021.
8. Graczyk-Kucharska M., Hojka K., Conceptual model of human resource management for the efficient management of a circular economy. European Research Studies Journal, Vol. XXIV, SI 5, pp. 234 - 247, 2021.

Additional:

1. Górski M., Prawo ochrony środowiska, Wolters Kluwer Polska, Warszawa, 2009.
2. Kwaśnicka K., Odpowiedzialność administracyjna w prawie ochrony środowiska, Wolters Kluwer Polska, Warszawa, 2011.
3. Radecki W., Ustawa o odpadach. Komentarz, Wolters Kluwer Polska, Warszawa, 2009.
4. Dobrzańska B., Dobrzański G., Kielczewski D., Ochrona środowiska przyrodniczego, Wydawnictwo Naukowe PWN, Warszawa 2008.
5. Graczyk-Kucharska M., Sustainability in the Development of Green Organizations Based on the Example of Manufacturing Companies. Sustainability, 15(20), 14705, 2023.

## Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	1,00