



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Ecologistics

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### Course

Field of study

Logistics

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/5

Profile of study

general academic

Course offered in

compulsory

Requirements

compulsory

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### Number of hours

Lecture

15

Tutorials

Laboratory classes

15

Projects/seminars

Other (e.g. online)

### Number of credit points

3

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### Lecturers

Responsible for the course/lecturer:

dr inż. Magdalena Graczyk-Kucharska

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Wydział Inżynierii Zarządzania

ul. Jacka Rychlewskiego 2, 60-965 Poznań

Responsible for the course/lecturer:

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### Prerequisites



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. Knows the basic relationships in logistics and its specific issues, i.e. ecology and pro-ecological supply chain management. P6S\_WG\_08
2. 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\_04
3. Knows the basic relationships in the field of logistics, ecology and supply chain management. P6S\_WG\_08
4. Is able to characterize best practices in logistics and pro-ecological process management in the supply chain. P6S\_WK\_06
5. He can indicate the basic relationships in force in logistics and ecology, including sustainable development and the logistics waste management system. P6S\_WK\_04
6. 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. 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. 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. 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. 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. 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. 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. 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. 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. 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:

Forming assesment

a) the project- discussion on solutions that wants to propose in the project b) a lecture on the basis of answers to questions concerning the material discussed in the previous lecture.

summary assesment

- labs a) based on substantive assessment of the project (70% final grade) and final presentation including discussion on solutions presented in the project (30% final grade), b) on the basis of the written test.

### Programme content

The course covers the following topics:

- 1) The Framework eco-logistics.
- 2) Logistics orientation on waste management system.
- 3) The processes of recycling waste materials in the economy.
- 4) Ecological balances in logistic systems.
- 5) Logistics of communal waste disposal.
- 6) Design of recycling-oriented products.



- 7) Environment-friendly management systems.
- 8) Environmental aspects of transport policy of the European Union.

### Teaching methods

- 1) Konventional lecture, work with books, talk, problem lecture.
- 2) Case study, simulation method.
- 3) Exercises, laboratories, project.

### 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. J. Jabłoński (red.), Technologie zero emisji, Wyd. PP, 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, PWN, Warszawa 2007.
7. D. Burchart-Korol, M. Graczyk, K. Witkowski, Life Cycle Perspective for Improving Sustainable Supply Chain Management. Applied Mechanics and Materials .- 2015, Vol. 708, s. 8--12, ISSN: 1662-7482.
8. M. Graczyk. Bilans ekologiczny jako źródło informacji środowiskowej w przedsiębiorstwie. Ekonomia i Środowisko .- 2007, nr 1, s. 53--68, ISSN: 0867-8898.
9. M. . Graczyk, M. Rybaczewska-Błażejowska. Continual improvement as a pillar of environmental management. Management .- 2010, Vol. 14, no 1, s. 297--305, ISSN: 1429-9321.

#### 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. Ochrona środowiska przyrodniczego. Dobrzańska B., Dobrzański G., Kiełczewski D., Wydawnictwo Naukowe PWN, 2008.



4. M. Graczyk, L. Kaźmierczak-Piwko, Społeczna odpowiedzialność biznesu w kontekście realizacji strategii zasobooszczędnej i niskoemisyjnej gospodarki w UE. *Humanizacja Pracy* .- 2015, nr 4(282), s. 169--182, ISSN: 1643-7446.

#### Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for laboratory classes, preparation for tests) <sup>1</sup>	45	2,0

<sup>1</sup> delete or add other activities as appropriate