



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Reverse Logistics

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### Course

Field of study

Environmental Protection Technologies

Area of study (specialization)

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Level of study

First-cycle studies

Form of study

full-time

Year/Semester

II/3

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

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### Number of hours

Lecture

30

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

0

### Number of credit points

3

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### Lecturers

Responsible for the course/lecturer:

dr hab. inż. Magdalena Krawczyk-Coda

Responsible for the course/lecturer:

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### Prerequisites

Student starting this lecture should have a basic knowledge of environmental protection. Student should also have the skills to obtain the necessary information from the indicated sources and databases.

### Course objective

To provide students with knowledge of reverse logistics. To familiarize with the concept of waste recovery, the problems of handling them and the technologies for their disposal allowed in Poland.

### Course-related learning outcomes

Knowledge

1. Student knows the principles of environmental protection related to waste recovery. [K\_W05]
2. Student has the knowledge to describe the basic development trends related to waste management. [K\_W11]
3. Student has basic knowledge about the life cycle of products, as well as recognizes and characterizes waste recovery and neutralization technologies. [K\_W13]



### Skills

1. Student can obtain, analyze and interpret information from literature and other sources (eg. legal acts), justify and formulate conclusions about recovery of municipal and industrial waste. [K\_U01]
2. Student is able to work both individually and in the team. [K\_U02]
3. Student is able to self-educate in the field of reverse logistics. [K\_U06]
4. Student can use correctly the terminology related to reverse logistics. [K\_U08]

### Social competences

Student understands the need for self-studying and improvement of her/his professional competences.  
- [K\_K01]

2. Student is aware of the importance of the problems related to reverse logistics. - [K\_K02]

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The knowledge acquired during the lecture will be verified by one 90-minute test carried out during the 15th lecture. Test consists of 10 open questions, equally scored. Student will need to achieve a score of 50% or better to pass. Theoretical issues on the basis of which questions are prepared will be sent to students by e-mail using the university e-mail system.

### Programme content

Reverse logistics concept, its subject, goals and tasks; Closed-loop supply chain; Planning and organization of material flows in reverse logistics; Remanufacturing - secondary production; Legal aspects of waste recovery; Analysis of selected solutions in the area of reverse logistics (automotive industry, waste electronic equipment, waste batteries).

### Teaching methods

Multimedia presentation

### Bibliography

#### Basic

1. Logistyka zwrotna, Paulina Golińska, Wydawnictwo Politechniki Poznańskiej, Poznań 2013
2. Logistyka zwrotna, Jacek Szofłysek, Instytut Logistyki i Magazynowania, Poznań 2009 r.

#### Additional

1. Logistyka zwrotna : teoria i praktyka, Jacek Szofłysek, Sebastian Twaróg, Polskie Wydawnictwo Ekonomiczne, Warszawa 2017.
2. Logistyka zwrotna produktów niepełnowartościowych w zarządzaniu przedsiębiorstwami produkcyjnymi, Marta Starostka-Patyk, Polskie Wydawnictwo Ekonomiczne, Warszawa 2016.



### Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	40	1,5
Student's own work (literature studies, preparation for test) <sup>1</sup>	35	1,5

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