Level: bachelor

Course title: Fundamentals of waste management

**Status**: obligatory

**ECTS**: 7

Requirements: none

## Learning objectives

Introducing students to waste characterization and categorization. Introduction to the basic principles of waste management and understanding the need for the application of a waste management hierarchy (prevention of waste, recovery of waste material or energy consumption), and disposal in sanitary landfills with all control measures.

## **Learning outcomes**

Systematic knowledge about the character of waste, utilization of waste as a source of secondary raw materials, the importance of recycling, waste separation and disposal at the landfill.

## **Syllabus**

Theoretical instruction

The term solid waste. Origin and types of waste. Characterization and classification of waste. Municipal waste as a global problem. Separation and utilization of different recyclable materials from municipal waste or getting fuel from waste. Recycling and its importance. Systematized basic knowledge about the processes of incineration, pyrolysis, gasification, anaerobic digestion and composting of waste. Waste disposal and process control in closed landfills. Other wastes those are harmful to the environment due to possessing one or more hazardous characteristic.

## Practical instruction

Practical instruction follows the theoretical one.

Weekly teaching load				Other:
Lectures:	Exercises:	Other forms of	Student research:	
3	1	teaching: 2		