Level: Master

Course title: ECOENGINEERING

Status: elective

ECTS:7

Requirements: none

Learning objectives

To deepen knowledge on the methodology of data collection and data processing concerning environmental pollution, the interpretation of data and process design for wastewater treatment flows from production and diffuse sources of environmental pollution.

Learning outcomes

Upon completion of the course students can independently apply knowledge about solutions and improved processes to protect the environment through appropriate methods and procedures

Syllabus

Theoretical instruction

The study of engineering in environmental protection includes subjects such as methodology for collecting and processing data on environmental pollution, interpretation of data and process design for wastewater treatment flows from production and waste streams of settlements. Material and energy balances of pollutants in a particular system environment. The course includes methodology of calculating the total quantity of pollutants generated in the discharge of industrial processes, ways to minimize waste streams in industrial production. Design basis for reactors used in production processes for waste streams (waste water, waste air, waste sludge and solid waste). The application of chemical-technological and biotechnological processes for the reduction of air, soil and water pollution. Remediation of contaminated sites. The methodology for the design of systems for the protection of air and water, and systems for the disposal and recycling of waste and remediation of contaminated sites. Case studies.

Practical instruction

Practical instruction follows the theoretical instruction.

Weekly teaching load				Other:
Lectures: 3 (45)	Exercises: 2 (30)	Other forms of teaching: 1 (15)	Student research:	