

## **Pollution and ecosystem protection (II-nd Year of study, III-rd Semester)**

**Credit value (ECTS) 2**

### **Course category**

Domain (Optional)

### **Course holder:**

**Lecturer PhD. Camelia Elena LUCHIAN**

### **Discipline objectives (course and practical works)**

The course aims to explain the particularly complex and acute problems of the environmental pollution crisis of recent decades, due to the accelerated development of human society. The issue of the environment has acquired a planetary dimension, the notions regarding the environmental aspects have penetrated in all fields of life and human society, in the economic, social, political, legislative fields, in education, culture.

The practical works aim to familiarize students with methods and techniques for protection and elimination of pollutants from various environmental components: air, water, soil.

### **Contents (syllabus)**

<b>Course (chapters/subchapters)</b>
<b>1. Introduction to the field of environmental protection. The need for study and environmental protection actions.</b>
<b>2. The main environmental risks.</b>
<b>3. Pollution and atmosphere protection</b>
<b>4. Pollution and waters and aquatic systems protection.</b>
<b>5. Pollution and soil protection.</b>
<b>6. Biodiversity conservation.</b>
<b>7. Monitoring and quality control of the environment in anthropized systems.</b>

<b>Practicum</b>
<b>1. Methods of sampling from different environmental components.</b>
<b>2. Procedures for removing gaseous and vapor pollutants from the atmosphere.</b>
<b>3. Procedures for removing particulate pollutants from the air.</b>
<b>4. Specific procedures for municipal wastewater treatment by pollutant retention and settling methods.</b>
<b>5. Biological treatment of municipal wastewater.</b>
<b>6. Water purification techniques from the food industry</b>
<b>7. Final knowledge verification colloquium</b>

### **References**

1. **Camelia Luchian**, Tehnici și echipamente de investigare a factorilor de mediu, Ed. Stef, Iași, 2018
2. Ileana Fulvia Sandoiu, Monitoringul mediului, Editura Matrixrom, Colectia: Protectia mediului, 2013

3. Berca, M., Ecologie generală și protecția mediului, Ed. Ceres, București, 2000.
4. Macoveanu M., Teodosiu C., Duca Gh.- “Epurarea avansată a apelor uzate conținând compuși organici nebiodegradabili”, Ed. Gh. Asachi, Iași, 1997
5. Rojanschi, V., Bran F., Diaconu G. – “Protecția și ingineria mediului”, România, Ed. Economică, 1997

### **Evaluation**

<b>Evaluation form</b>	<b>Evaluation Methods</b>	<b>Percentage of the final grade</b>
Course	Exam	60%
	Course attendance	10%
Practicum	Practicum activity	10%
	Final laboratory test	20%

### **Contact**

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