

Title of Course: Environmental Protection for Engineers/Basics of Environmental Engineering

Codes of Course: on MSc: MSM019ANMI (IT), MSB020ANEP (Civil)

on BSc: PMKKONB041HA (IT)

Semester: Autumn

Number of credit: 3

Lecture number a week: 2

Requirement: term mark

Language of course: English

Advance subjects (requirements): –

Subject supervisor: dr. Tibor Pécz PhD

Tutor: dr. Tibor Pécz PhD

Short description:

- History of EP. Concepts and fields of environmental protection. The regulation of environmental protection in Hungary. Important definitions of EP. The elements of environment, its characteristics and pollution data. The process of pollution. Global problems. Possibilities for Humankind. Renewable energy.

General Requirements:

- Visiting lectures. Writing a test, an essay and making a presentation.

Purpose:

- To give a basic knowledge of environmental processes and environmental protection to engineering students.

Education method:

- Oral interpretation using Microsoft Power Point presentation and consultation. Working presentation of students on environmental fields.

Course materials:

- Moser, M. (1997): Circulations in Nature and Society. Környezetvédelmi és Területfejlesztési Minisztérium. (Ministry of Environmental Protection and Land Management) Budapest.
- Rausz, A. (ed.) (2005): Environmental Statistical Yearbook of Hungary 2004. Hungarian Central Statistical Office. Budapest.
- Miller, G. T.(1982): Living in the Environment. Wadsworth Publishing Company. Belmont. California.
- Marquita K. Hill (1997): Understanding Environmental Pollution. Cambridge University Press.
- Houghton J. (2009): Global Warming – The Complete Briefing. Cambridge University Press.
- Hanrahan G. (2012): Key Concepts In Environmental Chemistry. Elsevier Inc.

Requirements during semester:

- Visiting lectures, max. number of missing 3. Writing a test, an essay and making and interpreting a presentation in ppt/pptx file on an optional environmental problem.

Requirements during examination season:

- Students can make up for the semester works.

Supplement:

- Students can make up for the test, the essay and the presentation on the first week of examination season.

Controllation:

- 1 test is from lectures materials.
- 1 essay is from optional environmental fields.
- 1 presentation is from the essay.
- **Type of exams and additional information:**
- The test is a written exam min. 5 max. 10 points.

Marks:

- 10 points=5 (excellent)
- 9-8 p=4 (good)
- 7-6 p=3 (satisfactory)
- 5 p=2 (pass)
- 4-0 p=1 (unsatisfying)
- The essay is an electronic script min. 10 max. 15 pages of A4 in Times New Roman 12 of letter size. The essay min. 26 max. 50 points.
- The presentation is an oral exam in ppt/pptx file. The presentation min. 26 max. 50 points.
- Mark is going to be the essay and the presentation together:
- 100–88 points=5
- 87–77 p=4
- 76–66 p=3
- 65–53 p=2
- 52–0 p=1

Contains of term mark:

- Test mark+essay and presentation mark.

Schedule of Course:

Tuitional Week:

- 1. Introduction.
- 2. The history of environmental protection. Juristical regulation and institution of environmental protection in Hungary.
- 3. Basic concepts. Process of pollution.
- 4. Atmosphere and its processes.
- 5. Water protection.
- 6. Land and soil protection.
- 7. Waste treatment and management. Noise and vibration.
- 8. Global problems. **Written test.**
- 9. ***Autumn Break.***
- 10. **Deadline of essay.** New fields in the Environmental Protection. Renewable energy sources.
- 11. Oral presentation of students I.
- 12. Oral presentation of students II.
- 13. Oral presentation of students III.
- 14. Oral presentation of students IV.
- 15. First supplement of the test and the presentation.