



SUBJECT DATASHEET

Semester:	2009/10/2
Subject:	Atmospheric Science
Code:	VEMKFTB212L
Responsible department:	Department of Earth and Environmental Sciences
Responsible department code:	MKFT
Responsible lecturer:	Dr. Ágnes Molnár

Educational objectives:

Understanding the basic principles of physical and chemical processes in the atmosphere.

Detailed content of the subject:

1. Gaseous composition of the atmosphere. 2. The physical and chemical properties of atmospheric aerosol particles. 3. Relationship between the composition and the climate; the structure of the atmosphere. 4. Fundamentals of atmospheric dynamics; the nature of the atmospheric motions; forces in the atmosphere. 5. Vertical motions; turbulent diffusion. 6. General circulation, weather systems. 7. Sources of air pollutants. 8. Physical and chemical transformation of air pollutants; dry deposition. 9. Wet deposition; the chemical composition of the precipitation. 10. Introduction to modeling of the air pollution; Euler models. 11. Regional scale air pollution; Lagrange models. 12. Local air pollution; Gauss model. 13. The effects of local and regional scale air pollution. 14. The effect of global scale air pollution. 15. Methods in air pollution regulation.

Requirements:

Attendance on the course is optional (recommended). Minimal condition of the admittance for oral examination is the pass mark of the written test. Missing from the written test is accepted if medical or other certificate is presented. The written test can be made up once. During the course one written test should be fulfilled, which can be made up or corrected once. The attendance on this test is obligatory. Pass mark is given in case of 60% efficiency.

Required and suggested references:

Mészáros, E. (1993): Légekörtan. Veszprémi Egyetemi Kiadó, Veszprém. Mészáros, E. (2001): A környezettudomány alapjai. Akadémiai Kiadó, Budapest Bozó, L., Mészáros, E. és Molnár, Á. (2006): Levegőkörnyezet. Modellezés és megfigyelés. Akadémiai Kiadó Budapest