COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Environment		
ACADEMIC UNIT	Department of Environment		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	**209KEY**	**SEMESTER**	**6**
COURSE TITLE	Air Pollution		

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	3	
Total credits		**6**

COURSE TYPE	Special background
PREREQUISITE COURSES:	-
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes (Tutorials)
COURSE WEBSITE (URL)	http://www.env.aegean.gr/studies/undergraduate-degree/curriculum/air-pollution/

(2) LEARNING OUTCOMES

Learning outcomes

Main learning outcomes of this fluid mechanics class are:

- Understanding of basic principles of air pollution
- Develop the ability to calculate the concentrations of various pollutants, using Gauss models.
- Understanding the basic operation principles of air pollution control technology.

General Competences

Adapting to new situations
Decision-making
Working independently
Working in an interdisciplinary environment
Project planning and management

(3) SYLLABUS

Introduction- The Earth's Atmosphere
Effects of Air Pollution – Major Sources
Structure of the Stratosphere – Depletion of Stratospheric Ozone the role of CFCs
PM in the atmosphere, Size distributions, chemical and optical properties of atmospheric aerosols
Meteorology and Air pollution interactions
Inversion, winds, fronts, stability
Atmospheric dispersion in the atmosphere – Gauss equations
Exercises on atmospheric dispersion
Wet and dry deposition
Atmospheric chemicals (Sources-reactions-transport-sinks)
Control of gaseous pollutants in the atmosphere
Control of atmospheric particulate matter

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face-to-face
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	
TEACHING METHODS	

Activity	***Semester workload***
Lectures	39
Study and analysis of bibliography	115
Course total	***154***

STUDENT PERFORMANCE EVALUATION	Language of evaluation: Greek Methods of evaluation: Short-answer questions 25% Open-ended questions 25% Problem solving 50%

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:
Γεντεκάκης Ιωάννης (2010) Ατμοσγαιρική Ρύπανση – επιπτώσεις, έλεγχος, εναλλακτικές τεχνολογίες. Εκδόσεις Κλειδάριθμος, Αθήνα.
Λαζαρίδης Μ. , 2005 «Ατμοσφαιρική Ρύπανση με Στοιχεία Μετεωρολογίας», Εκδόσεις Τζιόλα, Αθήνα
Seinfeld, J. H. and Pandis, S. N., 1998, "Atmospheric chemistry and physics - from air pollution to climate change", Wiley, New York. ISBN: 0471178160
Finlayson-Pitts, B. J. & Pitts, J. N., 1999, "Chemistry of the Upper and Lower Atmosphere : Theory, Experiments and Applications", Academic Press, New York, ISBN: 012257060X- Συναφή επιστημονικά περιοδικά:

- Related academic journals: