

## COURSE OUTLINE

### 1. GENERAL

<b>SCHOOL</b>	APPLIED SCIENCES		
<b>DEPARTMENT</b>	Department of Environmental Engineering		
<b>LEVEL OF STUDY</b>	Undergraduate		
<b>COURSE UNIT CODE</b>	<b>GE5720</b>	<b>SEMESTER OF STUDY</b>	seventh
<b>COURSE TITLE</b>	Modeling Methods for Environmental Engineers		
<b>COURSEWORK BREAKDOWN</b>		<b>TEACHING WEEKLY HOURS</b>	<b>ECTS Credits</b>
Theoretical background		3	3
<b>Laboratory exercises</b>		2	2
<b>COURSE UNIT TYPE</b>	SC: Specialization Courses		
<b>PREREQUISITES :</b>			
<b>LANGUAGE OF INSTRUCTION/EXAMS:</b>	Greek		
<b>COURSE DELIVERED TO ERASMUS STUDENTS</b>			
<b>MODULE WEB PAGE (URL)</b>	<a href="http://geope.teikoz.gr/undergraduate/ug_studies.htm">http://geope.teikoz.gr/undergraduate/ug_studies.htm</a>		

### 2. LEARNING OUTCOMES

#### Learning Outcomes

On successful completion of this module the learner will be able to:

1. Explain the principles of pollutants' dispersion modeling
2. Apply mathematical equations to solve pollution problems
3. Calculate the dispersion of air pollutants coming from point, line, area, and volume sources
4. Use and apply the dispersion models in the frame of environmental impact assessment, decision support system and generally environmental management.

#### General Skills

Upon successful completion of the programme students will:



<b>ASSESSMENT METHODS</b>		

## 5. RESOURCES

### *- Recommended Book Resources:*

- ❖ M.R. Beychok, «Fundamentals of stack gas dispersion», 3<sup>rd</sup> ed., 1994
- ❖ Stefan Trapp, Michael Matthies, “Chemodynamics and Environmental Modeling, An Introduction. Springer 1997.
- ❖ Isam Magid, A. Mohammed, D. Rowe, «Modeling methods for environmental engineers», LEWIS PUBLISHERS, 1997
- ❖ D.Bruce Turner, “Workbook of Atmospheric Dispersion estimates, An introduction to Dispersion Modeling”, Lewis Publishers 1994.
- ❖ D. Rowe, “Modeling Methods for Environmental Engineers”, Lewis Publishers 1997.
- ❖ Handbook on ATMOSPHERIC DIFFUSION, Steven R. Hanna, G.A. Briggs, R. P. Hosker, 1982

### *- Recommended Article/Paper Resources:*