



COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Technology		
ACADEMIC UNIT	Department of Environmental Sciences		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	AY405	SEMESTER	4th
COURSE TITLE	ENVIRONMENTAL ENGINEERING		
INDEPENDENT TEACHING ACTIVITIES	WEEKLY TEACHING HOURS	CREDITS	
Teaching Hours	5	5	
COURSE TYPE	General background		
PREREQUISITE COURSES	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/ENV_U_112/		

(2) LEARNING OUTCOMES

Learning outcomes
<p>Environmental Engineering is one of the most popular, complex and rapidly growing engineering disciplines. The field of environment includes various issues such as public health, aesthetics and the impact of all development activities, pollution control legislation, standards, and regulations and their enforcement. Traditionally, the application of engineering principles to protect and improve the quality of the environment and protect public health was called health engineering or public health engineering. Around 1968, this term changed to environmental engineering.</p> <p>Upon successful completion of the course, students will have acquired the necessary knowledge, skills and competence, and will be able to:</p> <ul style="list-style-type: none"> • Understand the operation of water, waste and solid waste management units. • Assess atmospheric pollution. • Estimate the energy requirements of society and the ways and means to protect the environment from pollution caused by the production and consumption of various goods and comfort conditions.
General Competences
<ul style="list-style-type: none"> • Search for, analysis and synthesis of data and information, with the use of the necessary technology • Decision-making • Working independently • Team work • Project planning and management • Respect for the natural environment • Production of free, creative and inductive thinking

(3) SYLLABUS

<ul style="list-style-type: none"> • Introduction – General concepts. • Water pollution. • Water treatment. • Waste water treatment. • Atmospheric pollution. • Solid waste management. • Ecology. • Renewable energy sources. • Environmental impact assessment.
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(4) TEACHING and LEARNING METHODS – EVALUATION

DELIVERY	Face-to-face												
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	<ul style="list-style-type: none">• Use of PowerPoint slides• View material in video• Websites visits and exploitation of their content• Communication with students via e-mail• Use of asynchronous distance learning (e-class)												
TEACHING METHODS	<table border="1"><thead><tr><th><i>Activity</i></th><th><i>Semester workload</i></th></tr></thead><tbody><tr><td>Lectures</td><td>39</td></tr><tr><td>Laboratory practice</td><td>26</td></tr><tr><td>Study and analysis of bibliography</td><td>40</td></tr><tr><td>Essay writing</td><td>20</td></tr><tr><td>Course total (25 hours workload per credit)</td><td>125</td></tr></tbody></table>	<i>Activity</i>	<i>Semester workload</i>	Lectures	39	Laboratory practice	26	Study and analysis of bibliography	40	Essay writing	20	Course total (25 hours workload per credit)	125
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Course total (25 hours workload per credit)	125												
STUDENT PERFORMANCE EVALUATION	<p>Students' performance is evaluated in the Greek language. The final grade is determined by:</p> <ul style="list-style-type: none">• A written exam (at the end of the semester) that contributes 70% to the final grade, applying one or more of the following evaluation methods: Multiple choice questions, short-answer questions, problem solving.• The preparation and delivery of a written assignment (during the semester) that contributes 30% to the final grade. <p>Final Grade = 70% Exam Grade + 30% Assignment Grade</p>												

(5) ATTACHED BIBLIOGRAPHY

<ul style="list-style-type: none">• Gaur, R.C. (2008) <i>Basic Environmental Engineering</i>. New Age International (P) Ltd., Publishers. ISBN-13: 978-81-224-2701-1.• Pfafflin, J.R., & Ziegler, E.N. (Eds.). (2006). <i>Encyclopaedia of Environmental Science and Engineering, Volumes One and Two (5th ed.)</i>. CRC Press. ISBN-13: 9780849398438• Reynolds, J.P., Jeris, J.S., Theodore L. (Eds.). (2007) <i>Handbook of Chemical and Environmental Engineering Calculations</i>. John Wiley and Sons.
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