

COURSE OUTLINE

1. GENERAL

SCHOOL	FACULTY OF ENGINEERING		
DEPARTMENT	ENVIRONMENTAL ENGINEERING		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	E6ΥΠ	SEMESTER	5 th
COURSE TITLE	OCCUPATIONAL SAFETY AND HEALTH		
TEACHING ACTIVITIES <i>If the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to the whole course, then please indicate the teaching hours per week and the corresponding ECTS Credits.</i>		TEACHING HOURS PER WEEK	ECTS CREDITS
		3	5
Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.			
COURSE TYPE <i>Background, General Knowledge, Scientific Area, Skill Development</i>	SCIENTIFIC AREA		
PREREQUISITES:	Calculus, Chemistry, Atmospheric Physics, Applied Statistics, Fluid Mechanics, Physical processes.		
TEACHING & EXAMINATION LANGUAGE:	Greek		
COURSE OFFERED TO ERASMUS STUDENTS:	NO		
COURSE URL:	https://eclass.duth.gr/courses/TMC102/		

2. LEARNING OUTCOMES

Learning Outcomes

Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.

1. Knowledge based

- To be informed of the relevant legislation and in any new regulation concerning the OSH
- Health hazards at work and Exposure assessment
- Chemicals, REACH and CLP
- Occupational Health Standards
- Evaluating the working environment (Surveys, Sampling, Risk assessment)
- Controlling health Hazards
- Selection and Use of Personal Protective Equipment

2. Skills / Competences acquired

- Students will be able to recognize, evaluate and recommend controls for a variety of potentially hazardous occupational exposures.
- Students will be informed in the basic legislation, regulations and guidelines in OSH.
- Students will be able to conduct a complete survey in a working environment and identify the potential hazards and stresses for the health of the workers.
- Students will be able to propose preventive or mitigation strategies to sustain or improve the health of the workers.

General Skills

Name the desirable general skills upon successful completion of the module

Search, analysis and synthesis of data and information,
ICT Use

Project design and management
Equity and Inclusion

Adaptation to new situations

Decision making

Autonomous work

Teamwork

Working in an international environment

Working in an interdisciplinary environment

Production of new research ideas

Respect for the natural environment

Sustainability

Demonstration of social, professional and moral responsibility and sensitivity to gender issues

Critical thinking

Promoting free, creative and inductive reasoning

Search, analysis and synthesis of data and information, Adaptation to new situations, Working in an international environment

Working in an interdisciplinary environment, Project design and management

3. COURSE CONTENT

Occupational Safety and Health provides a general introduction to the field of occupational safety and health of any kind of working environment. The course includes introducing concepts, terminology, and methodology in the practice of OSH and identifies resource materials. Three basic modules are presented:

- EU and national legislation and the role of the professionals in this frame.
- Hazards at work (exposure to harmful physical, chemical and biological agents), such as chemicals, noise, thermal stress. Ergonomics and psychological stress are also discussed. Special focus is given on the new EU regulations for chemicals, i.e. REACH and CLP.
General principles of evaluating the work environment, sampling methodology, evaluating exposure to health hazards and control, principles of ventilation, personal protective equipment and safety signs.
- Management of safety and health at work. Risk assessment, prevention and mitigation strategies).

The class would benefit those needing a basic understanding of OSH, those wishing to become professionals in OSH and /or to pursue a Master's degree in OSH.

4. LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD <i>Face to face, Distance learning, etc.</i>	Face to face	
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) <i>Use of ICT in Teaching, in Laboratory Education, in Communication with students</i>	Use of ICT during teaching and communication with students	
TEACHING ORGANIZATION <i>The ways and methods of teaching are described in detail. Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc. The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.</i>	Activity	Workload/semester
	Lectures	40
	Visits to workplaces	30
	Reading and studying	80
	Class total	150
STUDENT EVALUATION <i>Description of the evaluation process Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written</i>	The course is evaluated by written examination (60%) and project presentation (40%).	

Assignment, Essay / Report, Oral Exam, Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others

Please indicate all relevant information about the course assessment and how students are informed

5. SUGGESTED BIBLIOGRAPHY

1. E-book «Occupational Safety and Health» G. Loupa, available in the e-class.
2. "Ergonomics, systems for OSHA management", 3rd Edition, TZIOLAS Press, 2021
3. «Health and Safety at work, 10th edition (Kogan Page)» by Jeremy Stranks, edited by K. Adam and D. Nathanail, ROSSILI Press, 2017.
4. Papers
5. Publications of the Hellenic Institute of Health and Safety at work and of the European Agency for Safety and Health at Work (EU-OSHA).

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	Glykeria Loupa
Contact details:	gloupa@env.duth.gr
Supervisors:	YES
Evaluation methods:	Written examination with distance learning methods
Implementation Instructions:	The examination in the course will take place on the day defined by the Program of the Department. The topics will be posted in the e-class. In the Word file of the topics that each student will "download", he will write his answers. Each of them will post this file in the "Assignments" section of the e-class. This approach is exactly the same as the way students' homework is done. The test will be performed via Teams. The link will be sent to students via e-class exclusively to the institutional accounts of those who have registered for the course and have accepted the terms of the distance examination. Students must log in to the examination room through their institutional account. Otherwise, they will not be able to participate. They will also take part in the examination with a camera which they will have open during the examination. Before the start of the exam, students will show their academic ID to the camera, so that they can be identified. Any question will be asked through a microphone. They should also make sure that the issues are processed on a desktop or laptop and not on a tablet or mobile.