COURSE OUTLINE

1. GENERAL

SCHOOL	School of Engineering		
DEPARTMENT	Department of Civil Engineering/ Master Program 'Hydrometeorological Disasters Program		
LEVEL OF STUDIES	7		
COURSE CODE	**ΕΣΔΤΥΚΤΥΠ**	**SEMESTER**	**1st**
COURSE TITLE	Introduction to water and aquatic environment management		

TEACHING ACTIVITIES *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.*	**TEACHING HOURS PER WEEK**	**ECTS CREDITS**
Lectures	3	6
Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.		

COURSE TYPE *Background, General Knowledge, Scientific Area, Skill Development*	Scientific Area
PREREQUISITES:	NO
TEACHING & EXAMINATION LANGUAGE:	Greek/ English
COURSE OFFERED TO ERASMUS STUDENTS:	NO
COURSE URL:	https://eclass.duth.gr/courses/1021376/

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.

Once the course is completed, participants will be able to:

- ·To understand relationships between natural, biological and ecological mechanisms in the management of aquatic ecosystems.
- ·Use integrated control and mathematical modeling techniques for the control and monitoring of aquatic ecosystems.
- ·Understand how aquatic ecosystems respond to natural and man-made impacts.
- ·Gain experience in ecological management and key elements of decision-making authorities.
- ·Be able to formulate objectives and targets in the management of water resources

General Skills

Name the desirable general skills upon successful completion of the module

Search, analysis and synthesis of data and information,
ICT Use
Adaptation to new situations
Decision making
Autonomous work
Teamwork
Working in an international environment
Project design and management
Equity and Inclusion
Respect for the natural environment
Sustainability
Demonstration of social, professional and moral responsibility and sensitivity to gender issues
Critical thinking

Working in an interdisciplinary environment *Promoting free, creative and inductive reasoning* *Production of new research ideas*
• Search, analysis and synthesis of data and information • Production of new research ideas • Project design and management • Respect for the natural environment • Promoting free, creative and inductive reasoning

3. COURSE CONTENT

1. General aspects of aquatic ecosystems: global distribution, exploitation, food chains, addressing natural and man-made impacts.
2. Water and sediment quality indicators
3. Framework Directive and water policy
4. Water quality assessment and prediction of ecosystem properties using mathematical modeling techniques.
5. Water quality monitoring and bioconditions.
6. Principles of ecological management and decision-making
7. Physical and biological methods for assessing the quality of freshwater and coastal waters
8. Waste treatment
9. Integrated control of water resources.
10. Presentation of water body monitoring programs

4. LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD *Face to face, Distance learning, etc.*	Distance learning
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) *Use of ICT in Teaching, in Laboratory Education, in Communication with students*	Use of ICT in Teaching, and Communication with students • Digital slides • videos • MsTeams/ e-class, webmail
TEACHING ORGANIZATION *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.*	

Activity	*Workload/semester*
Lectures	39
Final project	60
Bibliographic research & analysis	78
Final examination	3
TOTAL	**180**

STUDENT EVALUATION *Description of the evaluation process* *Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam, Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others*	Written Assignment, 100%

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

5. SUGGESTED BIBLIOGRAPHY

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	Akratos C., Kagkalou I., Sylaios G., Latinopoulos D.
Contact details:	cakratos@civil.duth.gr, ikagkalo@civil.duth.gr, gsylaios@env.duth.gr, dlatinop@civil.duth.gr
Supervisors: (1)	YES
Evaluation methods: (2)	Written Assignment (100%)
Implementation Instructions: (3)	Written assignment should be submitted via eclass on a specified date.