



**TECHNICAL UNIVERSITY OF CRETE
SCHOOL OF ENVIRONMENTAL ENGINEERING**

Code: Course:

Mandatory: Elective: Specialization:

Semester F S Teaching Units ECTS

Teaching Hours per week: T E L

Instructors:

Textbooks (Eudoxus):

Other recommended books:

Notes:

Labs: # of lab exercises: Individual Reports Team Reports

Lab final written exam % of Final Lab Grade

Final Grade: Final Exam %

Project %

Labs %

Other (Problem Sets) %

Course Syllabus:

Elements of probability and statistics. Probability Distributions: continuous and discrete. Risk and uncertainty in engineering projects. Estimation of risk factors in applied cases. Cost benefit analysis. Decision trees. Introduction to statistical decision theory, Bayes theory, Bayes Risk, prior and posterior distributions. Application of the Loss functions in environmental decision making. Sensitivity analysis and uncertainty with respect to data availability. Risk Analysis & Geostatistics. Risk analysis in hydrological projects. Introduction to Game theory in water resources management (Irrigania software).