

SafeEngine Module



Environmental Risk Assessment SYLLABUS

INSTRUCTORS:

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COURSE DESCRIPTION

The course is designed for Bachelor and master's degree students with a background in engineering. The course provides information on the basic concepts of human and ecological risk assessment.

Our society is confronted with new and sometimes ill-understood Risks. The overall purpose of this course is to provide students with skills and insights for them to relate in a qualified manner to existing and future debates of risk. The course will cover up the most important subjects such as: exposure assessment, modelling and monitoring approaches, conceptual site models, risk characterization, acceptable risk, and risk modelling.

On the other side, the course will be accompanied by varied practical lessons, that will strengthen the information from course modules.

COURSE OBJECTIVE

By the end of this course, participants should be able to:

- ◆ Understand and apply basic risk terminology, identify hazards and risks
- ◆ Explain the difference between risk management and safety management
- ◆ Evaluation of chemical exposure as consequence of the environmental pollution generated by water, soil, or air contamination.

For each stackable e-learning course, videos showing practical works correlated with the course module will be created. Consequently, for each student will be developed abilities in determining what risk control measures they will be needed at their future works, and to identify the most appropriate sustainable solutions in this concern.

Analysis of practical works will be exemplified during the videos linked to the course topic. In this way, students will have the opportunity to face different environmental issues that could arise in different specific circumstances.

COURSE ORGANIZATION

The course will be organized in at least 5 virtual lessons and 1 virtual practical work exemplification, with compulsory attendance. Virtual lessons and virtual practical work exemplification can be attended by students enrolled to this course. For the dates of exams see the SafeEngine website (www.safeengine.eu). The training sessions will be held in two terms: 1st November 2021-31st January 2022 (first training session) and 1st March 2022-31st May 2022 (second training session)

The course is organized in the following chapters:

- Basic concept of environmental risk assessment
- Environmental Factors affecting Humans' Health
- Risk Management
- Risk-Based Approach for Contaminated Land Management
- Risk-based Approach to Air Quality Management
- Risk-based Approach for Safe Drinking Water
- Environmental Health Risks and Solid Waste Management

PRE-REQUISITES

Fundamentals in Environmental Engineering

Basic knowledge in physics and chemistry of the atmosphere

MATERIAL

Teaching materials are available on the Federica and EnvyJobs e-learning platform (e-courses, e-books, and video with practical works).

EVALUATION

Starting from November 2021 those who have attended the course can take the exam. At the end of each course, a self-evaluating test will be assigned. The test will consist of 10/20 questions per lessons, its' structure consists of: *true/false* or *multiple choice* questions.

The final evaluation of the students will be done at the end of the training sessions

Time frame period for the sessions:

(first training session)- 1st November 2021-31st January 2022

(second training session) 1st March 2022-31st May 2022

Students can sign up for exams only after successfully attending all web-lessons and web-practical works (compulsory attendance, verified through online check).

The exam aims at evaluating the Student's learning progress (competency and achievement of desired learning objectives). Exams will be computer-based and will consist of a multiple choice questionnaire which has to be successfully completed. The final evaluation test will include a set of 50 questions.

The students will be evaluated through the online examination system.

Exam results are reported as pass and score or fail. Exams are considered successful if the correct answers provided by the student are at least 50% of the total number of questions (50 questions).

Examination will be graded according to a scale ranging from 0 to 100, with 50 as a pass mark.

The final grade of the SafeEngine module (2/4), based on the average of the single courses results, will be converted into the local grading scale of UPB partner.

To students that failed the exams, a diagnostic report indicating subject areas of relative strength and weakness will be provided. The diagnostic report can assist them to study for a successful re-examination.

Student registration for participating in the exams will be done over the web.

The exam registration is done via the web. For more information please visit the *SafeEngine website*, pre-registration section.

RESOURCES

Resources available on the Federica / EnvYJobs platforms.