SSM
Scuola Superiore Meridionale

Course title:

Quantitative Risk assessment in industrial processes

Duration [number of hours]**: 12**

PhD Program [MERC/MPS/SPACE]**: MERC**

Name and Contact details of unit organizer(s):

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Course Description [max 150 words]**:**

Risk assessment is defined as the comprehensive and systematic process of identifying, evaluating, and analyzing both internal and external hazards and their potential consequences, with the objective of developing effective risk prevention and mitigation strategies, determining the acceptability of the industrial process, and ensuring compliance with applicable safety standards, regulations, land use planning frameworks, and civil protection requirements.
The course provides a comprehensive introduction to the complex, multidisciplinary methodologies currently employed in advanced industrial countries for systematic risk assessment.
The numerical methods for calculation of probability and consequences will be described.

Syllabus [itemized list of course topics]**:**

- Quantitative risk assessment
- Reliability Analysis
- Consequence Assessment
- Natural-Technological Risk (Na-Tech)
- Acceptability of risks

Assessment [form of assessment, e.g., final written/oral exam, solutions of problems during the course, final project to be handed-in, etc.]**:**

Project

Suggested reading and online resources:

CPR 18E The Purple Book (available online, free)