



Code	MAT/09
Matter	Risk Management
Main language of instruction	Italian
Head instructor	Valerio Marchisio
Introduction	The Risk Management course aims to provide a general overview of the techniques and the main approaches of risk management. One module is dedicated to the Italian Decree Law no. 81 on safety and health in the workplace. Numerous examples and case studies are provided to understand how to create risk detection, assessment and management models in different contexts.
Objectives	The course has the following training objectives: <ul style="list-style-type: none"> • Understand the Risk Management ideas and concepts. • Acquire the common techniques of risk assessment in each context analyzed. • Acquire the principles of risk management. • Acquire the general contents of Decree Law no. 81; • Understand, through targeted examples, how to build a risk management framework.
Competencies	<p><i>Knowledge and understanding</i> At the end of the course, the students must demonstrate to understand the risks associated with real situations, and the ability to select risk assessment and management techniques. Furthermore, the students must demonstrate to know the principles of risk management in accordance with the international standards presented.</p> <p><i>Ability to apply knowledge and understanding</i> The course and the knowledge learned are the basis of many applications in different fields, since risk is inherent in all human activities. In addition, the tools learned during the course can be of support in similar contexts, such as project management, and useful in working and professional life.</p> <p><i>Communication skills</i> The student will be able to understand and describe exposure to specific risks in real contexts. In this sense, the students will learn the procedures, techniques and terminologies to implement a risk management framework.</p> <p><i>Learning ability</i> At the end of the course, the students will have the opportunity to use what studied and fully learn the application of the models studied.</p>
Syllabus	<p>Introduction (Module 1) – (2 hours of study load - week 1). Introduction to risk management, historical cases.</p> <p>The risk management system (Module 2) – (40 hours of study load - weeks 1-3). Definition of the risk management, from identification to mitigation. Models and tools for each phase of the system, with an in-depth look at communication and consultation.</p> <p>Approaches (Module 3) – (37 hours of study load - weeks 3-5). Definition and analysis of the main techniques for detecting, assessing and managing risks, considering the most common international standards.</p> <p>Italian Decree Law no. 81 (Module 4) – (18 hours of study load - weeks 5-7). Analysis of the general principles of the legislative decree on the health and safety of workers, with an understanding of the aspects consistent with the risk management framework learned.</p> <p>Further concepts (Module 5) – (17 hours of study load - week 8). Further concepts useful in building a risk management framework. Further principles, governance analysis, enterprise risk management, indicators.</p> <p>Risks (Module 6) – (22 hours of study load - weeks 9-10). Analysis of some common risks and their characteristics.</p>

	Exercises and examples (Module 7) – (24 hours of study load - weeks 10-11). Examples and case studies.
Evaluation system and criteria	The exam consists of a written test aimed at ascertaining the ability to understand, analyze and rework the concepts acquired or of an oral exam. The written test may include both open-ended and closed-ended exercises on the main topics of the course. The activities do not contribute to the exam grade, but are a useful tool for verifying the own preparation.
Prerequisites	-
Materials to consult	Lectures notes of the course Fundamentals of Risk Management for Process Industry Engineers, 2023, Maureen Hassall, Paul Lant