

# ENGINEERING FOR SAFETY OF CRITICAL INDUSTRIAL AND CIVIL

(Lecce - Università degli Studi)

## Teaching SAFETY ENGINEERING

GenCod A007226

**Owner professor** Giovanni ELMO

**Teaching in italian** SAFETY ENGINEERING

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**SSD code** ING-IND/17

**Reference course** ENGINEERING FOR SAFETY OF CRITICAL INDUSTRIAL AND

**Course type** Laurea Magistrale

**Credits** 9.0

**Teaching hours** Front activity hours: 81.0

**For enrolled in** 2025/2026

**Taught in** 2025/2026

**Course year** 1

**Language** ENGLISH

**Curriculum** INDUSTRIAL AND CIVIL INFRASTRUCTURES

**Location** Lecce

**Semester** Second Semester

**Exam type** Oral

**Assessment** Final grade

**Course timetable**

<https://easyroom.unisalento.it/Orario>

### BRIEF COURSE DESCRIPTION

The course provides the tools and methodologies to acquire the basic skills of a safety engineer who must be able to carry out risk assessment in civil infrastructures and industrial plants

### REQUIREMENTS

No prerequisites required

### COURSE AIMS

Provide the student with the knowledge to be able to:

- know and apply the engineering principles for risk assessment by referring to mandatory legislation.
- know the prevention and protection measures relating to the most well-known specific risks and with particular reference to fire risk assessment
- understand the technical-organizational problems and methodologies for the design and management of systems at risk of major accidents

### TEACHING METHODOLOGY

Lectures, exercises and seminars

### ASSESSMENT TYPE

The exam consists of an in-depth study of a topic of the program

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## FULL SYLLABUS

- Introduction to safety engineering: concepts, objectives, methods and fundamental legislation.
- Risk assessment methodologies and techniques. Introduction to the assessment of specific risks: chemical risk, physical risk, mechanical risk.
- Fire risk assessment: materials, technologies, ATEX environments, procedures according to the new Fire Prevention Code.
- The legislation for the design and management of systems at risk of major accidents (Direttive Seveso).
- Notes on Risk management systems ISO 31000 and HSE management systems ISO 45001 and OHSAS 18001

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## REFERENCE TEXT BOOKS

Slides provided by the teacher