UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Environmental Control and Safety

2324-3-E2702Q043

Aims

Introduce students to the main topics of occupational safety in general, and the management of chemical agents in particular, in the industrial and professional fields, learning the theories and management and operational methods

Knowledge and understanding
At the end of the course the student was able to learn:
methodologies for risk assessment, environmental impact, risk management measures
the methods of calculating the exposure and the level of risk
the legislation on the matter

Knowledge and application skills
at the end of the course the student is able to:
calculate an exposure
calculate a risk
calculate a hazard classification
evaluate the articles of the legislation to be applied

Autonomy of judgment
Knowing how to identify the most appropriate methods to apply in risk assessment, exposure levels, risk management measures

Communication skills
Knowing how to describe in written form in a clear and concise way and explain orally with proper language the objectives, the procedure and the results of the elaborations carried out.

Ability to learn
Be able to apply the acquired knowledge to contexts different from those presented during the course

Contents

Basic concepts of risk and danger; Italian regulations, international standards, impact and risk assessment, risk management methodologies, risk control measures.

Detailed program

Introduction to the regulatory framework concerning health and safety in the general and environmental fields

Product legislation
REACH, CLP, information transmission methods (SDS), critical reading of the same. Use of the ECHA platform

General principles and concepts: danger, risk, environmental impact, prevention, exposure, protection, CPE PPE

Main legal obligations and roles concerning health, safety in the workplace and environmental protection in Italy: Legislative Decree 81/08, 152/06, 105/2015;

All the main risks related to the working environment: chemical and physical agents, electrical, fire and explosions, confined spaces, other agents…; threshold limit value (TLV) DNEL DMEL, individual and collective protective equipment, hierarchy and methods of use.

Techniques and methodologies: management system, risk analysis (Movarisch algorithms, ECETOC TRA) Safety Data Sheets (SDS and e-SDS) labeling

Detection instruments and sensors, process safety.

Prerequisites

basic courses on processes and systems

Teaching form

Frontal lessons with projection of Powerpoint slides
guided exercises on real cases

Textbook and teaching resource

Powerpoint slides, photographs, diagrams, national and international guidelines

Semester

II semester of the III year

Assessment method

oral exam which consists of a series of questions to verify the knowledge and understanding acquired of the subject represented by the content of the didactic material distributed, as well as the student's ability to elaborate the concepts learned in applying them to real situations.
The assessment of the test takes into account the completeness and accuracy of the answers, the effectiveness of the result of the elaborations and the clarity of the exposition

Office hours

On appointment

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING