
COURSE: : Safety in the Chemical Laboratories

ACADEMIC YEAR: 2017-2018

TYPE OF EDUCATIONAL ACTIVITY: Other

TEACHER: Prof. Maria Funicello

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Language: Italian

ECTS: (lessons e
tutorials/practice)
2n. of hours: (lessons e
tutorials/practice)
16Campus: **Potenza**
Dept./School: **Dipartimento di
Scienze**
Program: **Chemistry (L27)**Semester:
(date)
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EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The course aims to indicate the principal risks to which is subject who works in a chemical and biological laboratory, provide students a basic knowledge about safety, indicate the main rules of good behaviour and recognize the signs of prohibition, obligation, fire and emergency. The course aims also to show the main sources of information and the most important regulations on fire safety and handling toxic-harmful substances, and finally to know the PPE to be worn in the laboratory and the behaviour to keep in case of accident or alarm.

PRE-REQUIREMENTS

None

SYLLABUS

Definition of work environment, of quality and security of employment. The most common types of accidents and their causes in some workplaces and in everyday life. FAFR index. Definition of risk and danger. Risk assessment obtained with the CHEOPE model. Fire triangle. Definition of the point and area of flammability and self-ignition of the most common solvents. NFPA Classification of flammable substances. Directive 2003/105 / EC and DLg 238 of 21/09/2005. Classification of types of fires and main rules of conduct in case of fire. Extinguishing media and their appropriate use. Relevant routes of exposure and type of damages. Classification of dangerous substances. Classification of carcinogens. Exposure assessment and most common indexes ACGIH: LD50, MAC, MEL, TLV-STEL, TLV-TWA and TLV-C. Hazard and precautionary statements, information in the safety data sheets and on the labels. PPE, choice of gloves and main rules of good behavior in the chemical and biological laboratory. Signals at the workplace: warning, prohibition, obligation, emergency and fire. Some references on the procedure for the analysis and risk assessment. L.626 and D.M. 81

TEACHING METHODS

Theoretical lessons

EVALUATION METHODS

Validation

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

J. A. Young "Improving Safety in the Chemical Laboratory" Ed. John Wiley & Sons

R. Fornasier "Guida alla Sicurezza nei Laboratori Chimici" Ed. Libreria Cortina, Padova

INTERACTION WITH STUDENTS

Contact by mail and receiving by appointment on every day.

EXAMINATION SESSIONS (FORECAST)¹

5/2/2018; 5/3/2018; 21/5/2018; 2/7/2018; 5/9/2018; 10/10/2018; 11/12/2018

¹Subject to possible changes: check the web site of the Teacher or the Department/School for updates.

SEMINARS BY EXTERNAL EXPERTS YES NO

FURTHER INFORMATION
