

## RISK ANALYSIS AND SECURITY. LEGISLATION AND DOCUMENTATION.

### 1.1. Identification

University:	Universidad Politécnica de Valencia											
School:	Escuela Técnica Superior de Ingeniería del Diseño											
Course:	Risk Analysis And Security. Legislation And Documentation.											
ECTS:	3											
Semester:	<i>Winter</i>				X	<i>Summer</i>						
Category	<i>Fundamental course</i>						<i>Specialisation course</i>					X
Module	<i>MFI</i>		<i>MFII</i>		<i>MFIII</i>		<i>MSI</i>	X	<i>MSII</i>		<i>MSIII</i>	
Teachers:	M. Teresa Mira Llosá											
Language:	<i>English</i>	X	<i>Italian</i>		<i>Swedish</i>		<i>Spanish</i>					

### 1.2. Learning-outcomes

- To provide a framework for analyzing multidisciplinary research management industrial risk
- knowledge about the fundamentals of Integral management of occupational accidents : Documental treatment and accidents investigation.

### 1.3. Competencies

#### ▪ General

- to have critical understanding of technical and scientific tools
- to work and manage teams
- communication skills (both written and oral)
- to work in an european context ( Directives, International Chemical Safety cards, OHSAS18001, 18002...)

#### ▪ Specific

- to determine risks evaluations in case of fire.
- to understand integrated management systems: Environmental and Occupational health and safety .
- to perform “ occupational risk management handbook”
- to analyse and solve complex problems arising in use of carcinogenic substances in work
- to determine the risk parameters that allow the solution to preventive management

### 1.4. Contents

1. Acts of the Institutions of the European Communities as a source of Community Law European Directive on Emissions Trading

2. European Communities regulations on occupational hazards and pollution, hold in the library of the CENFYD.
3. Legislation relating to the control of chemicals and GMOs (genetically modified organisms): Directive 67/548/EEC, Directive 90/219/EEC and DCouncil Directive 90/679/EEC.
4. International Chemical Safety Cards (ICSCs): International Programme on Chemical Safety
5. Integrated management systems: environmental and occupational health and safety .ISO 14004 - Environmental Management Systems - General Guidelines on Principles Systems and Supporting Techniques; ISO 19011 - Guidelines for quality and/or environmental management sytems auditing.
6. The technical requirements of BS 8800 and OHSAS 18001. OHSAS 18001 Appreciation and Interpretation. OHSAS 18002 Guidelines for the implementation of OHSAS 18001
7. Chemical Management Risk Assessment Criteria: Risk Management Tools .
8. Chemical Risk assesment at the occupational safety and health: Toxic Substance Action
9. Carcinogenic chemicals: Substances and preparations covered by Directive 90/394/CEE
10. Risks evaluations in case of fire. High-consequence risks: explosion, fire flash, jet fires and fireballs. Portable fire extinguishers: utilization
11. Management of the Personal Protective Equipment in health care services. Clasification and types of personal protection according to technical spanish standards: Respiratory , eye and hearing protection, protective clothing, safety workwear.
12. Working in confined spaces
13. Classification, emballage et étiquetage des préparations dangereuses: Directives du Conseil (88/379/CEE et suivantes)
14. Vulnerability models for population in major accidents: Probit method.
15. Probabilistic Risk Assessment Procedures Guide: The integral administration of the accidents of work : documental treatment and accidents investigation
  
16. Emergency plans against fire: On-site emergency plan in Chemical Industries and chemical industries workers.

### **1.5. Teaching Methodology**

- Lecture sessions
- Practical sessions: “cooperative work” for solving problems
- laboratory sessions

### **1.6. Evaluation**

- written exams
- oral evaluation of the problems solved by “cooperative work”
- oral evaluation of laboratory work

## 1.7. Bibliography

- Zwetsloot, g., & bos, j.: "Design for Sustainable Development. Environmental Management and Safety and Health". European Foundation for the Improvement of Living and Working Conditions, Norwich, 1998.
- D96/94/CE**. DOCE L 338 de 28.12.96, 86-88.
- D98/24/CE**. DOCE L 131 de 5.5.98, 11-23.
- D1999/38/CE** DOCE L 138 de 1.6.99, 66-69.
- D91/382/CEE** DOCE L 206 de 29.7.91, 16-18.
- Commission of the European Communities:Occupational exposure limits. EUR13776. Luxembourg, 1999. ISBN 99-926-3507-4.
- Guidelines on the expression of uncertainty in quantitative testing. EA. European co-operation Accreditation EA-04/16 rev00 (December 2003).
- National Institute for Occupational Safety and Health Manual of Analytical Methods. Aromatic, amines. NIOSH n°- 2042. N.I.O.S.H, 4th edition, Cincinnati, Oh, U.S.A. (1999)
- Danish Technological Institute, Photo safari - a learning platform for organisational intercambio (benchmarking). 2003
- Weinstein, N.D.; Rothman, A.J. y Sutton, s.r. "Stage theories of health behavior: Conceptual and methodological issues. Health Psychology, 17(3), 290-299. (2000).
- NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH. "Manual of Analytical Methods". NIOSH, Cincinnati, Ohio (USA), 4 th Edition, Vol. 1-4, 1999.
- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. Inorganic and Organic Methods.OSHA, Analytical Laboratory, Salt Lake City, Utah (USA), 2nd Edition, Part I, Vol. 1-4 (1990-93), Part II, Vol 1-2, (1991).