Technological and environmental risks management

INGÉNIEUR MANAGEMENT DES RISQUES INDUSTRIELS ET ENVIRONNEMENTAUX

ENGINEER INDUSTRIAL RISK AND ENVIRONMENT MANAGEMENT

Lecturers: Pietro SALIZZONI, Richard PERKINS

| Lecturers : 0.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : MI

Objectives

Keywords :

Programme

Learning outcomes

Independent study

Objectifs : This activity is not concerned with framed autonomy activities outside personal work.

Méhodes : This activity is not concerned with framed autonomy activities outside personal work.

Core texts

Assessment

IMR 3.1 :25%
IMR 3.2 : 20%
IMR 3.3 : 25%

LES IMPACTS SUR L'HOMME, L'ENVIRONNEMENT ET LA SANTÉ

IMPACTS ENVIRONMENT AND HUMAN HEALTH

Lecturers: Pietro SALIZZONI, Richard PERKINS

| Lecturers : 18 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 14 | Project : 0.0 | Language : FR

Objectives

Present the phenomena that are responsible for the major natural and technological hazards. Provide an introduction to the different modelling approaches that are used to assess and quantify environmental impact.

Keywords :

Programme

Pollution: types and impacts (CM 6h)
1. Air pollution
2. Soil and water pollution
3. Acoustic waves and radiation

Human health and environmental risk assessment: epidemiology (CM 8h)
1. Environmental exposures and the risk of cancer
2. Known risks and perceived risks
3. Risk factors for cancer

Learning outcomes

- Identify the risk exposure of a population or an industrial process.
- Master the modelling tools that are used to assess the environmental or human impact of different types of risk

Independent study

Objectifs : This activity is not concerned with framed autonomy activities outside personal work.

Méhodes : This activity is not concerned with framed autonomy activities outside personal work.

Core texts

Assessment

Savoir faire : 50%
Méthodologie : 50%

EVALUATION ET QUANTIFICATION DES RISQUES

EVALUATION AND QUANTIFICATION OF RISKS

Lecturers: Pietro SALIZZONI, Richard PERKINS

| Lecturers : 22 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 8 | Project : 0.0 | Language : MI

Objectives

Construct models to quantify the risks and uncertainties related to different hazards. Develop tools to quantify the economic consequences of events arising from human actions or natural processes.

Keywords :

Programme

Technological risks (8h CM + 8h BE) F. Rosset ODZ Consultants
The objective of this course will be to provide a historical overview of various industrial accidents and the impact they have had on the development of industrial safety regulations and legislation. Different hazardous phenomena will be presented, together with the ways in which they are modelled.

Risk Economics (14h CM) L. Abdelmalki Lyon 2
1. Well-being & Efficiency
   • Economic & market efficiency

Learning outcomes

- Be able to identify the main types of industrial hazard
- Master different modelling techniques
- Understand how to formulate a problem in economic terms, and be able to express it using the appropriate terms and vocabulary.
- Know how to integrate the non-market values of the environment into a cost-benefit analysis

Independent study

Objectifs : This activity is not concerned with framed autonomy activities outside personal work.

Méhodes : This activity is not concerned with framed autonomy activities outside personal work.

Core texts

Assessment

Savoir: 50%
Savoir-faire: 25%
Méthodologie: 25%

GESTION, PRÉVENTION ET MITIGATION DES RISQUES

MANAGEMENT, PREVENTION AND MITIGATION OF RISKS

Lecturers: Pietro SALIZZONI, Richard PERKINS

| Lecturers : 27 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 3 | Project : 0.0 | Language : FR

Objectives

Define the legislative framework for the prevention and management of environmental risk
Analyse the psychological processes that underlie decision making.

Keywords :

Programme

Law and standards (15h CM) I. Michallet Lyon 3
1. Sources of environmental legislation (in France)
2. The sources of environmental legislation (outside France)
3. The principles of environmental legislation and the different actors
4. Classified Installations for the protection of the environment (ICPE)
5. Water rights
6. Air quality legislation
7. Waste-disposal legislation
8. Environmental assessment

Learning outcomes

- Understand the hierarchy of standards and their interaction
- Be familiar with the general prinicpies of environmental law, and their implemntation in specific legislation
- Relate environmental legislation to its implementation in specific industrial examples

Independent study

Objectifs : This activity is not concerned with framed autonomy activities outside personal work.

Méhodes : This activity is not concerned with framed autonomy activities outside personal work.

Core texts

Assessment

Savoir: 50%
Savoir-faire: 25%
Méthodologie: 25%

PROJET IMR

IMR PROJECT

Lecturers: **Pietro SALIZZONI, Richard PERKINS**

| Lecturers : 0.0 | TC : 0.0 | PW : 0.0 | Autonomy : 0.0 | Study : 0.0 | Project : 30 | Language : FR

Objectives

Address the management of a research project aimed at determining the impacts of environmental pollution on human health. Understand the techniques of communication and public communication concerning the results of epidemiological studies.

Keywords :

Programme

This independent work will concern problems related to technological risks, and will be supervised F. Rosset (ODZ Consultants), an engineer working in the field of industrial risk management . It will require a multidisciplinary approach, and should include legal, economic and technical aspects of the problem.

Examples of subjects proposed in previous years:
1. Analysis of an accident and its impact on regulatory and industrial practices: the Buncefield accident
2. Risk associated with ammonium nitrate

Learning outcomes

Independent study

Objectifs : This activity is not concerned with framed autonomy activities outside personal work.

Méhodes : This activity is not concerned with framed autonomy activities outside personal work.

Core texts

Assessment

Savoir-faire : 50%
Méthodologie : 50%