Summary
The quality of our environment - occupational and general - is an important determinant of our health. This course reviews the physical, chemical and biological pollutants present in our environment and the risks associated with them.

Content

**Chemical pollutants**
- Properties, inhalation, skin passage, distribution in the body
- Exposure assessment, measurement strategies and methods, control or reduction strategies

**Physical agents**
- Noise, vibration, thermal environment, non-ionizing radiation
- Exposure assessment, measurement methods, control or reduction strategies

**Physical and chemical pollutants**
- Properties of dusts and fibers, inhalation, aerodynamic behavior
- Measurement and sampling methods, control or reduction strategies

**Biological risks**
- Biological agents, properties, risk situation
- Measurement and sampling methods

**Climate and health**
- Health effects related to global warming, vectors of infectious transmissions, heat stress

**Environmental interventions**
- Risk assessment and monitoring of contamination/pollution situations

Keywords
Risk assessment, work environment, environmental health, occupational hygiene, exposure sciences, physical, chemical, biological pollutants

Learning Prerequisites

**Required courses**
None

**Recommended courses**
Environmental chemistry, Analysis of pollutants in the environment, Analysis and management of industrial risks, Ecotoxicology

**Important concepts to start the course**
Physical and chemical properties of pollutants
Learning Outcomes
By the end of the course, the student must be able to:
• Identify the risks associated with pollutants in the environment
• Characterize the different types of pollutants and their properties
• Use simple risk assessment tools and methods
• Select appropriately appropriate skills or methods to manage a particular risk
• Identify occupational and environmental health issues within public health

Transversal skills
• Make an oral presentation.
• Demonstrate the capacity for critical thinking

Teaching methods
Ex cathedra lectures and group exercises and presentations

Expected student activities
Participate in the course and exercise session
Prepare and present a case study of a practical problem

Assessment methods
Presentation of a case study during the semestre (1/3)
Oral exam (2/3)

Supervision
Office hours  Yes
Assistants  No
Forum  Yes

Resources
Bibliography

Ressources en bibliothèque
• Di Nardi. The Occupational Environment: its evaluation, control and management (1997)

Références suggérées par la bibliothèque
• Gérin. Environnement et santé publique: fondements et principes. 2005

Notes/Handbook
The Occupational Environment / DiNardi
Handout notes (available on Moodle in pdf)

Moodle Link
• https://go.epfl.ch/ENV-468