

SOME END-OF-STUDIES INTERNSHIPS

Micropollutants in the marine environment : assessment of studies and data available on pesticides	IFREMER Nantes
Unique document of professional risk assessment	Laboratoires GILBERT
Evaluation of the sediment toxicity : Implementation of a test	SGS Multilab
updating of safety and environmental aspect	Safran Aircelle
Assessment of capacity to repair damaged DNA from the zebra mussel	UMR INERIS SEBIO
ISO 14001 - ISO 50001 - OHSAS 18001 Management system	SEDIBEX
Preparation of the 2014 environmental audits	Chevron Oronite
Redesign of the QSE portal - Development of the IMS (Integrated management system)	EdF UP Le Havre
Creation of a INB decree gateway document	AREVA NC
Environmental conformity study	SIDEL blowing and Services
Census of data available on the intertidal space	Agence des Aires Marines Protégées
Environmental performance	Brasseries Kronenbourg

PROFESSIONALS

The master R&E benefits from many professionals' involvement.



FIELDS OF ACTIVITY

- Operational ecotoxicology
- Consulting engineering in environmental regulations and in the prevention of technological accidents
- Expertise and certification jobs in relation to safety standards at work
- Chemical risk, environmental quality and corporate social responsibility assessment
- Management, coordination, training, regulatory surveillance and scientific monitoring in the environment departments



REGISTRATION

Open online in April 2017 on :
<https://ecandidature.univ-lehavre.fr>



Education Office:
 02 32 74 43 55
m.ge@univ-lehavre.fr

UFR des Sciences et Techniques, 25 Rue
 Philippe Lebon 76058 Le Havre cedex
<https://www.univ-lehavre.fr>

Directed by Louison Pichard student in Professional License SSC

MASTER DEGREE IN RISKS AND ENVIRONMENT

University of Le Havre
 UFR Sciences & Techniques



OBJECTIVES OF THE PROGRAM

The master's degree in R&E is a **vocational course** providing **expertise in the prevention** and management of chronic and emerging risks for health at work and the environment.

Students will acquire the necessary knowledge about toxicants and contaminants then will be trained to master **the tools of chemical risk assessment**, the set of **regulations** as regards liability law, the environment code, the enforcement of water laws, the European REACH regulation and environmental quality indicators.

They will be skilled to design, coordinate and carry out actions of **prevention, reduction and certification** in term of **environmental impact**. This program heavily relies on the regulatory development governing operation and waste disposal authorizations, certifications regarding safety, quality, environment and corporate social responsibility

A MULTIDISCIPLINARY PROGRAM

The master R&E relies on prerequisite bachelor knowledge to develop balanced and operational skills.



20 %
Biodiversity,
environmental impacts



20 %
English, statistics,
entrepreneurship



20 %
Chemistry of contaminants
and analytical techniques



20 %
Toxicology,
Ecotoxicology



20 %
Environmental code,
QHSE

THE PROGRAM

MASTER 1

RISK PREVENTION EXPERT AND MANAGER QSE (70 H)

- Occupational exposure - Workplace analysis
- Common system OHSAS 18001- MASE
- A single professional risks document
- ISO 26000 : Corporate social responsibility

ECOLOGY : ENVIRONMENTAL MANAGEMENT (90 H)

- Conservation Biology
- Biodiversity, invasion and erosion
- Indicators for biocenotic assessment
- Conservation, marine protected areas, natura 2000

CONTAMINANTS AND TOXICITY (110 H)

- Ecosphere chemistry
- Pollutants : sources, distribution, persistence
- Mechanisms of exposure : absorption, distribution, metabolism, excretion
- Mechanisms of toxic action

TOOLS FOR THE SUSTAINABLE DEVELOPMENT ENGINEER (115 H)

- Training for the quality control engineer ISO 9001
- Information literacy and professional strategy
- introduction to GIS
- English
- Statistics

FIELD WORK AND ANALYSIS (45 H)

- Field study ZA Seine
- Sampling methods
- Company visits

ENVIRONMENTAL CODE AND LEGISLATION (80 H)

- Environmental law and economics
- Environmental code
- ISO 14001 - Environmental management certification
- Energy management and Carbon footprint

MASTER 2

NORMATIVE AND REGULATORY ASPECTS IN RISK MANAGEMENT (75 H)

- Introduction to ERA - Major Risks - SEVESO
- Environmental code - CEPI - REACH - CLP
- Water Law - WFD - MSFD
- National and international agencies
- Radiological risks

ANTHROPIZED ENVIRONMENT MANAGEMENT (100 H)

- Spatial planning and sustainable development
- Natural risks
- Hydrology, water table, ground water, water management and treatment
- Management of contaminated sites
- Microbiological risk and bioremediation

BIOASSESSMENT AND CHEMICALS ANALYSIS (110 H)

- Biotests and biomarkers
- Physico-chemical analysis of environmental contaminants

TOOLS FOR THE SUSTAINABLE DEVELOPMENT ENGINEER (90 H)

- English
- Bioinformatics
- Entrepreneurship, accounting and management
- Company visits

ADMISSION PREREQUISITES

The master R&E is available to students who have obtained a degree in life sciences, chemistry or environmental sciences. For Students possessing a vocational bachelor in areas related to the environment, biotechnology, toxicology or chemistry and wishing to pursue higher education in a Master, their admission shall be subject to approval by the education commission.