SPECIALIZATION: SUSTAINABLE MANAGEMENT OF POLLUTION

LEVEL: MASTER 2
PERIOD: SEMESTER 1
LANGUAGE: EN
ECTS: 30
TEACHER/COORDINATOR: JULIEN CASTELIN

1- Objectives and skills developed

The learning approach of the program is essentially multidisciplinary, dealing with the management of contaminated sites from the technical, scientific, economic and sociological angles. The specific objectives of this semester are to provide students with knowledge on:

› Pollution treatment techniques (treatment of water, effluents);

› The different remediation techniques (physico-chemical treatment, bioremediation, phytoremediation ...)

› Social management of contaminated sites and selected management methods (social acceptance, socially positive use of the restored site, integration of the surrounding populations in the rehabilitation process...);

› Economic evaluation of management methods (cost evaluation, choice of alternative uses for contaminated areas)

› Possible rehabilitation methods (spatial planning, landscape management)

2- Content and organization

The academic Semester (September to end of January) is composed of:

› A two-week study tour with our partner university 'University of Chemistry and Technology' in Prague (September);

› Multiple courses, case studies, group work, site visits,

› Participation to professional and/or scientific conferences, in France or abroad, in which students will be able to meet the actors involved in management of polluted sites and soils, whether from the scientific or professional world and thus develop their network;

› Self-directed time slots for the Semester project or the various projects included in different teaching units.

The courses are mainly provided by specialists, professors or professional experts working in the different areas of interest of the program.

The second semester of the program corresponds to the end-of-study internship (30 ECTS), which student can carry out in a company, consulting firm, research laboratory, in research and development, etc. in France or abroad.

3-Evaluation

Continuous assessment (individual & group) and individual written exams at the end of the semester
For the Semester project: Oral defense, final written report and evaluation done by the "client"

4- Teaching units

The SMaP specialization includes 5 program units:

1 / Program Unit “Applied techniques of pollution remediation”, with 3 teaching units:

› Physical and chemical treatment techniques

› Biological treatment technique

› Phytoremediation

2 / Program Unit “Sustainable management of polluted areas”, with 4 teaching units:

› Alternative use of polluted sites

› Ecological restoration

› Landscape management

› Sustainable management of polluted areas

3 / Program Unit “Computer and Statistic tools”, consisting of 1 teaching unit:

› Statistical tools

4 / Program Unit “Languages, intercultural and scientific communication”, with 2 teaching units:

› French as a Foreign language or English (for French speaking students)

› Intercultural Communication and Personal Development

5 / Program unit “Project Management”, including 2 teaching units:

› Professional (Semester) project;

› Responsibility: promotion / communication / sustainable projects