



3 credits

30.0 h

Q1

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| Teacher(s) | Debiez Cathy coordinator ; |
| Language : | English |
| Place of the course | Louvain-la-Neuve |
| Main themes | <p>Human Toxicology (30h): Historical Overview, concepts and basic concepts in toxicology, assessment methods - Metabolism of xenobiotics : absorption by inhalation, ingestion or dermal; distribution; biotransformation (phase I and II reactions) and excretion - Toxicity of major pollutants or contaminants dangerous to humans: lead, cadmium, mercury, pesticides, dioxins, PCBs, air pollutants, carcinogens - Risk assessment.</p> <p>Environmental Toxicology (15h +7.5 h): Transport of pollutants - Monitoring of pollutants (biomarkers and bioindicators) - Emerging Pollutants - Contamination of foodstuffs - Endocrine Disruptors - Effects of pollutants on populations and communities - Risk assessment in ecotoxicology</p> <p>Depending on their program, students may attend only the "Human Toxicology" (BRTE2201A)</p> |
| Aims | <i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i> |
| Evaluation methods | Oral or written exam |
| Teaching methods | Lectures with audio-visual aids (slides and videos) - concrete examples - specific involvement of external experts |
| Content | <p>Human Toxicology (30h) - After an introduction on the history of poisons and the concepts and basic principles of toxicology, the course describes the pathways and mechanisms involved in the absorption, distribution, biotransformation and excretion of xenobiotics. It then discusses the main toxic substances to which humans may be exposed in their living or professional activities: irritating and suffocating gas, heavy metals (lead, cadmium, mercury), pesticides, dioxins, hydrocarbons, asbestos, etc. Finally, it also addresses the methodology for risk assessment of chemicals.</p> <p>Environmental Toxicology (15h +7.5 h) - Each chapter of the course focuses on a specific topic related to environmental pollutants. The course covers the transport of pollutants in the biosphere and the accumulation profiles within organisms. Impacts of pollutants on individuals are also studied, from the biochemical level to the population. The concepts of bioindicator and biomarker are detailed. Topical issues such as the contamination of food, the effects of endocrine disruptors, especially during early exposure (gestation and lactation) and issues raised by emerging pollutants are discussed in detail.</p> <p>The practical section includes seminars given by experts, exercises on risk assessment in ecotoxicology and laboratory tour.</p> |
| Inline resources | Moodle |
| Bibliography | Fichiers power point disponibles sur Moodle |
| Other infos | This course can be given in English. |
| Faculty or entity in charge | AGRO |

| Programmes containing this learning unit (UE) | | | | |
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| Program title | Acronym | Credits | Prerequisite | Aims |
| Master [120] in Environmental Science and Management | ENVI2M | 3 | |  |
| Master [60] in Environmental Science and Management | ENVI2M1 | 3 | |  |