

Innovative Postgraduate Education in the Field of Environment Protection: Methods and Tools



FOOD SAFETY RISK ASSESSMENT

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Modernized Course Objectives and Tasks

Course goal: *Familiarize* with the fundamentals of *food safety* and defense, modern standards and principles of food safety and **risk assessment**



The diagram illustrates the pathways of environmental pollutants into the human body and their associated health effects. A central human figure shows the internal organs and circulatory system. Three main pollution sources are shown in circular insets:

- Air Pollution:** Shows industrial smokestacks. A pink arrow points from this source to a pink box listing pollutants: VOCs, Microplastic, CO₂, CO, NO_x, O₃, PM_{2.5-10}, SO_x, and Pb. Arrows from this box point to various health effects: Headache/Fatigue (top), Respiratory Disease (lungs), Cardiac Illness (heart), Gastroenteritis (stomach), Liver Disease (liver), Cancer Threat/T.B. (lower torso), and Skin Allergy (lower leg).
- Water Pollution:** Shows a polluted body of water with green algae. A blue arrow points from this source to the Headache/Fatigue area. Another blue arrow points from the Headache/Fatigue area to the Respiratory Disease area.
- Soil Pollution:** Shows a dump truck dumping waste into the soil. A brown arrow points from this source to the Gastroenteritis area. Another brown arrow points from the Gastroenteritis area to the Liver Disease area.

Health effects listed in the center of the human figure include: Headache/Fatigue, Respiratory Disease, Cardiac Illness, Gastroenteritis, Liver Disease, Cancer Threat/T.B., and Skin Allergy.

- [illegible]

Course Comparative Analysis

the most relevant and similar course was “Food safety risk assessment” at Wageningen University & Research (WUR)

Criterion/Details	EU Example: WUR	Course Modernized in RA
Classic or applied:	Applied (Research and education combined)	Both (Academic)
Program/discipline profile:	Food safety risk assessment is one of the thesis track-related subjects and it is compulsory	Food safety risk assessment is one of the compulsory courses
Course type:	Master	Only for master level
Relations to other courses in the program: Outcome courses:	Food safety risk management	Thesis



Course Outcomes



TO know the peculiarities of food contamination at different stages of the food supply chain, as well as the potential hazards and risks associated with food consumption.



BE able to apply food safety standards, distinguish adulterated and potentially hazardous food products



TO master qualitative and quantitative methods for assessing the acute and chronic risks of food safety

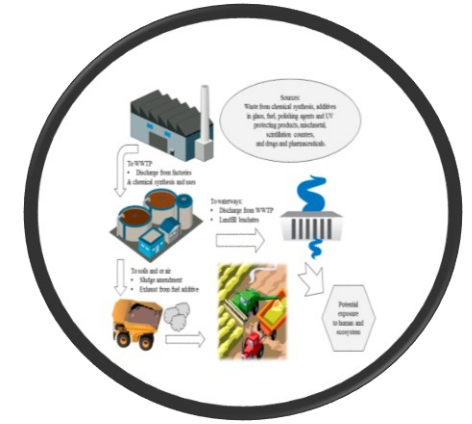
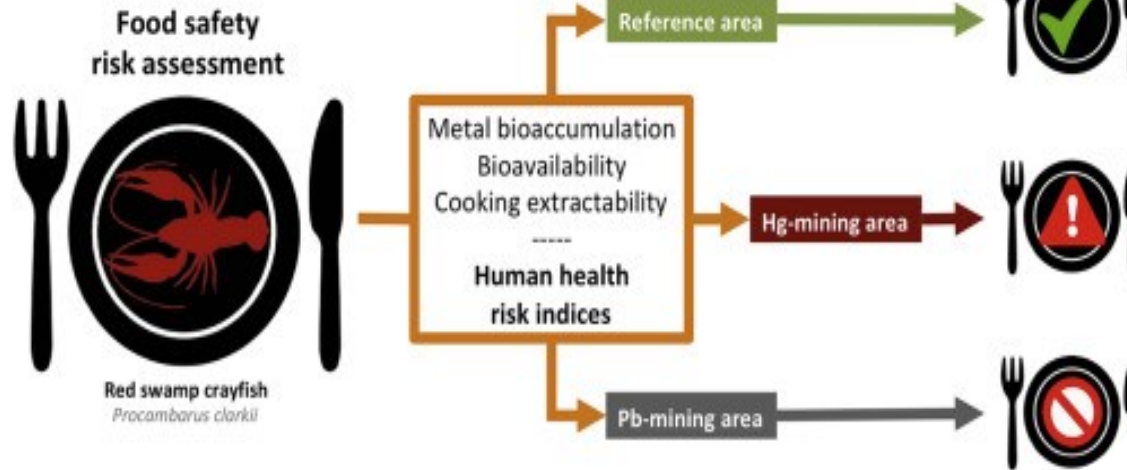
Interdisciplinary Connections With Other Courses



Soil quality monitoring



Environmental Toxicology



Environmental geochemistry



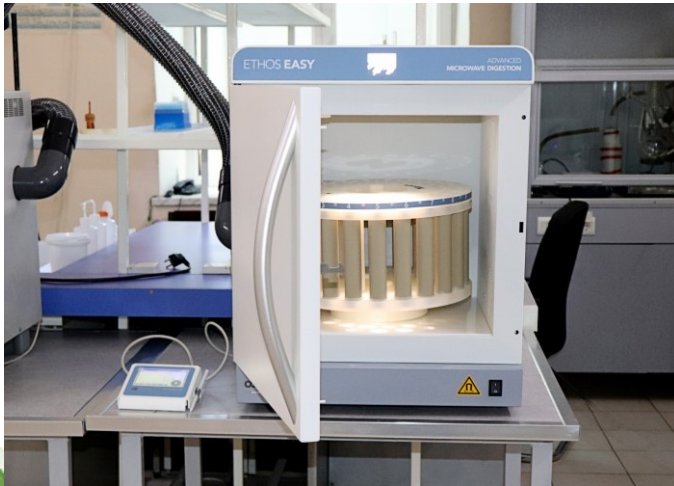
Environmental monitoring and measuring devices



Environmental radiation protection

ERLEP Laboratory Involvement in the Course Curricula

- ✓ Research-based curriculum based on ERLEP capacity
- ✓ Case studies with involvement of HPLC and other devices
- ✓ Thesis conducted with the usage of ERLEP infrastructure



THANK YOU !

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