Level: bachelor

Course title: Accidents in the environment

Status: elective

ECTS: 7

Requirements: None

Learning objectives

Introduce students to the possibility of accident occurrence, types of accidents and environmental monitoring after accidents.

Learning outcomes

Identifying potential sites of accidents in industrial installations, types and causes of industrial accidents. Gaining knowledge about the consequences of an accident on the properties of substances, compounds that are uncontrollably discharged into the water, air and ground.

Syllabus

Theoretical instruction

Industrial accidents and natural disasters. Managing risk of major industrial accidents, accident prevention, risk assessment for the environment and human health, controlling risks and activities, planning emergency measures. Methods for hazard identification. The effects of the explosion and fire; liquid vapour explosions in a state of boiling; explosion of pressure vessels, release and expansion of gases, vapours, liquids, aerosols and dust hazardous materials. Local and international regulations. Domino effect. Behaviour of pollutants released during accidents into the environment. Sensitivity of various environmental media to released pollutants. Chemical substances that can be released during accidents. Gathering information about accidents. Types and sampling of environmental media after accidents. Ecosystems potentially threatened by accidents.

Practical instruction

Practical instruction follows the theoretical instruction.

Weekly teaching load				Other:
Lectures: 2 (30)	Exercises: AV 2(30)	Other forms of teaching: 1 (15)	Student research:	