

Table 5.2 Course specification

Type and level of studies: Bachelor			
Course name: Accidents in the environment			
Course status: elective			
Number of ECTS credits: 5			
Requirement: -			
Course aim			
Introduce students to the possibility of accident occurrence, types of industrial accidents, natural disaster and environmental monitoring after accidents.			
Course outcome			
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. Understanding the difference between the consequences of technological and natural-technological accidents.			
Course content			
<i>Theory</i>			
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. The effects of releases on water and soil. National and international regulations. Domino effect. Behaviour of pollutants released during accidents into the environment. Gathering information about accidents. Types and sampling of environmental media after accidents. Ecosystems potentially threatened by accidents.			
<i>Practice: Practical classes, OFT, SRW</i>			
Analysis of the causes and consequences of major industrial accidents in the world. Toxicity of accident released substances - Register of Released and Released Chemicals to the Environment, Database (EPER) with properties and location of chemicals released. Practical examples: classification of substances and compounds by risk phrases (R, S); layout of accident prevention plan in industrial installations.			
Literature			
<ol style="list-style-type: none"> 1. Lj. Blagojević, Životna sredina i zdravlje, Univerzitet u Nišu, 2012. 2. Z. Čvorović: Odgovor na hemijski akcident, Zadužbina Andrejević Beograd, 1999. 			
Additional literature:			
<ol style="list-style-type: none"> 1. S. Maletić, M. Dalmacija, B. Dalmacija, M. Bečelić-Tomin, S. Rončević, D. Krčmar, Đ. Kerkez: Izvori i kontrola zagađivanja životne sredine, Prirodno-matematički fakultet, Departman za hemiju, biohemiju i zaštitu životne sredine, Novi Sad, 2017. 2. H.Wood: Disaster and Minewater, Good Practice and Prevention, IWA Publishing, 2012. 3. J. Casal: Evaluation of the Effects and Consequences of Major Accidents in Industrial Plants, Volume 8 (Industrial Safety Series) (Industrial Safety Series), Elsevier Science, 2007. 4. Accident Precursor Analysis and Management: Reducing Technological Risk Through Diligence, The National Academies Press, 2004. 			
Number of classes of active teaching			Other classes
Lectures: 2 (30)	Practice: 2 (30)	OFT:	SRW:
Teaching methods			
Lectures, auditory exercises and seminary papers, consultation.			
Assessment of knowledge (maximum of 100 points)			
Pre-exam obligations	Points	Final exam	points
activity during lecture classes	5	written exam	40
practical teaching	5	oral exam	20
colloquia	20	
seminars	10		