

Occupational toxicology

C4

17



Myriam Borgatta



Sven Hoffmann

Aim	<p>This module is fundamentals of toxicology and is divided in two parts: chronic toxicity of chemicals used at work (part I) and acute toxicity (part II: Hazardous materials training, HAZMAT). Fundamental toxicology describes the disposition of a compound within the human body. This module focus on how contaminants enter the human body (absorption), behave inside the body (distribution), transform (metabolism), and are eliminated. Common toxicological considerations such as calculation of internal dose and interpretation of human variability are also discussed. Upon completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Explain the concepts of absorption, distribution, metabolism and elimination (ADME), and the parameters influencing ADME • Retrieve and link absorption to metabolite formation and internal dose • Understand organ toxicity such as neurotoxicity, hematotoxicity, hepatotoxicity, pulmonary toxicity and reprotoxicity • Give examples common chemicals used at the workplace and their organ toxicities • Manage HAZMAT-events (AHLs) • Treatment of acute intoxications in first aid settings (AHLs)
Contents	<ul style="list-style-type: none"> • Basic principles of toxicology • Source of exposure and effects of the main toxic agents in the workplace in Switzerland • Carcinogenic, mutagenic and reprotoxic chemicals • Principles of regulatory toxicology • Toxicological data bases for work and health specialist • Official hazmat life support course (AHLs), including international certification • Poisoning treatment paradigm, including specific Antidotes (AHLs)
Methods	Lectures; Group work; Practical exercise
ECTS credits	2 ECTS credits= approx. 60 hours of workload including 47 hours of on-campus lectures and 13 hours of pre-assignment and exam
Target audience	<ul style="list-style-type: none"> • Students in the DAS Work+Health program • Occupational physicians and occupational hygienists • Other occupational health specialists interested in toxicology and hazmat life support
Module manager	<ul style="list-style-type: none"> • Dr. Myriam Borgatta; University of Lausanne, Unisanté, Dép. Santé au Travail et Environnement • Sven Hoffmann ; University of Zurich, Epidemiology, Biostatistics and Prevention Institute
Administration	Andrea Frederick; andrea.frederick@uzh.ch
Dates and location	Part 1: 30 May–02 June 2022 in Lausanne / Part 2: 09–10 June 2022 in Spiez (AHLs course)
Fee	CHF 4 250.–
Registration deadline	01 April 2022