

# Short term Course Information

<b>School</b>	<u>Health</u>
<b>Department</b>	Health, safety, and environment management (HSE)
<b>Name of Program</b>	Carcinogenic and non-carcinogenic risk assessment of exposure to organic pollutants and heavy metals
<b>Description (500 characters)</b>	A human health risk assessment is the process to estimate the nature and probability of adverse health effects in humans who may be exposed to chemicals in contaminated environmental media, now or in the future. Health risk assessment of chemicals is the scientific method to assess the risk to humans of exposure to different types of chemical substances, such as pharmaceuticals, environmental pollutants, chemicals in cosmetics, clothing or other everyday products and pesticide residues, food additives and other substances in food.
<b>Keyword (3 Words)</b>	Hazard, Risk assessment, risk management
<b>Complete Description</b>	<p>The course starts off with introducing the concepts in risk assessment, e.g. aims of risk assessment, role of risk assessment in risk analysis (risk assessment, risk management, risk communication), different steps in risk assessment (hazard identification, hazard characterisation, exposure assessment, risk characterisation). It moves on to the different types of data from in vivo/animal, epidemiological and in vitro studies as well as exposure data that are used in risk assessment. Thereafter it is discussed how the relevance and reliability of the data is assessed, and how different kind of evidence is integrated (for example from animal and epidemiological studies). The principles on how to derive health-based guidance values such as Acceptable Daily Intake (ADI) and to derive Margins of Safety values based on the data are exercised. The course then moves on to provide examples of the role of risk assessment in regulatory decision making. Case studies of different types of risk assessments exemplify how research connects to risk assessment activities. The participants will also discuss how their own research can contribute to risk assessments.</p> <p><b>Course Contents</b></p> <ol style="list-style-type: none"> <li><b>Learn about Risk Assessment</b> <ul style="list-style-type: none"> <li>What is Risk?</li> <li>History of Risk Assessment at EPA</li> <li>Getting Help with Risk Assessment Issues</li> <li>Risk Management</li> <li>Risk Messaging</li> </ul> </li> <li><b>Human Health Risk Assessments</b> <ul style="list-style-type: none"> <li>Describe the basic concepts and principles of health risk assessment of pollutants and heavy metals</li> <li>Explain how different types of data from in vivo/animal, epidemiological and in vitro studies as well as exposure data are used in risk assessment.</li> <li>Conducting a Human Health Risk Assessment via EPA (Carcinogenic and non-carcinogenic risk)</li> <li>Human Health Risk Assessment Guidance</li> <li>Reflect on the role of health risk assessment in regulatory decision making</li> <li>Human Health Risk Assessment Tools and Databases</li> </ul> </li> </ol>
<b>Program coordinator</b>	Phone :009150060122 Fax : Mobile :009150060122 Email :tavakkolisani@mums.ac.ir Address : Department of Health, safety and environment management (HSE), Faculty of Health, Mashhad University of Medical Sciences, Mashhad, Iran Contact Person Name : Dr Belin Tavakoli Sani
<b>Length of Training</b>	9 sessions
<b>Language Requirement</b>	Farsi, English
<b>Admission Requirement</b>	The course is designed for Master and PhDs students, academic staff, national and international environmental researcher and their counterpart advisers and assistants who are involved in the implementation of monitoring program. Students will be asked to read peer-reviewed journal articles, watch videos, and review primary source documents to prepare for each class session. Each day of class will provide students with an opportunity to discuss the key issues identified for that day and in the assigned readings. Morning sessions will be lecture and small group presentations. Some mornings we will discuss one or two of the key readings for that day. Some class sessions will be a combination of lecture and discussion; others may be structured for small and large group discussions, case study reviews, and/or student present.
<b>Tuition Fee *</b>	500 US Dollar