



## Medical Geology Short Course

June 27-28, 2010

### Day 1: Sunday, June 27, 2010

- 8:00-8:30 REGISTRATION (Venue: The Concourse, Arts & Science Building, NUI Galway. Follow "[SEGH 2010 Registration & Presentations](#)" on NUI Galway map)
- 8:30-9:00 WELCOMING REMARKS
- 9:00-9:30 Objectives and Short Description of the Course  
*Jose A. Centeno, PhD, AFIP*  
*Robert B. Finkelman, PhD, Univ of Texas at Dallas*
- 9:30-10:15 Medical Geology: An emerging discipline in environmental and human health.  
*Olle Selinus, PhD, SGU*
- 10:15-10:45 Coffee Break
- A. Environmental Toxicology, Environmental Health, and Environmental Geochemistry.**
- 10:45-11:30 Trace Elements, Metals and Metalloids in Environmental Health and Human Diseases  
*José A. Centeno, PhD, AFIP*
- 11:30-12:15 Natural and Anthropogenic Sources, Transport and Fate of Toxic Metal Ions in the Environment  
*Robert B. Finkelman, PhD, Univ of Texas at Dallas*
- 12:15-12:30 DISCUSSION
- 12:30-14:00 LUNCH
- B. Medical Geology: Sources of Exposure and Health Effects of Trace Elements, Toxic Metal Ions, Metalloids**
- 14:00-14:45 The health impacts of trace elements released by residential coal combustion – A case study of arseniasis and fluorosis  
*Robert B. Finkelman, PhD, Univ of Texas at Dallas*
- 14:45-15:30 Arsenic Poisoning: Natural History, Toxicology and Health Effects  
*Jose A. Centeno, PhD, AFIP*
- 15:30-16:00 Coffee Break
- 16:00-16:45 Medical Geology and Health Effects of Lead and Mercury Exposure  
*Jose A. Centeno, PhD, AFIP*
- 16:45-17:30 Summary and Discussion



**Day 2: Monday, June 28, 2010**

**C. Analytical Toxicology: Trace Element Speciation, Microscopy, Detection, and Quantification Methods**

- 9:00-9:30 Welcome and Summary
- 9:30-10:15 Analytical methods for the study of trace elements and toxic metal ions in geological and environmental samples  
*Robert B. Finkelman, PhD, Univ of Texas at Dallas*
- 10:15-11:00 Trace Element Speciation in Environmental Medicine and Toxicology and an Overview of Analytical methods for the study of trace elements, metals, and metalloids in biological and tissue samples  
*José A. Centeno, PhD, AFIP*
- 11:00-11:15 Coffee Break

**D. Special Topics and Other Issues in Medical Geology**

- 11:15-12:00 Development and Use of International Geological Databases on Medical Geology  
*Olle Selinus, PhD, SGU*
- 12:00-12:45 Estimating human exposure to potentially harmful elements in soil using in-vitro bioaccessibility measurements  
*Mark Cave, PhD, BGS*
- 12:45-13:45 LUNCH
- 13:45-14:15 Health Effects of Dust and other Medical Geology Issues  
*Robert B. Finkelman, PhD, Univ of Texas at Dallas*
- 14:15-14:45 Environmental Toxicology and Exposure to Natural Dust  
*Jose A. Centeno, PhD, AFIP*
- 14:45-15:30 Integrating Earth Sciences and Public Health - Human Health Impacts of Mining: The Case of Marinduque, The Philippines  
*Jose A. Centeno, PhD, AFIP*
- 15:30-16:00 Coffee Break
- 16:00-16:45 Beneficial Effects from Earth Materials  
*Robert B. Finkelman, PhD, Univ of Texas at Dallas*
- 16:45-17:15 Environmental Health in Ireland: Responses – Enforcement, Education and Policy  
*Maurice Mulcahy, HSE*
- 17:15-17:30 Discussion and Summary
- 17:30-17:45 Course Adjourn and Presentation of Certificates