

## Comprehensive Industrial Hygiene Review Course



**Terrance G. Alexander, MS, CIH, PE, BCEE**

*Topic(s):* IH Program Management

Terrance G. Alexander, MS, CIH, PE, BCEE is the Executive Director of Occupational Safety & Environmental Health for the University of Michigan. He is responsible for health, safety and environmental issues facing both the academic and business operations of the University. He directs programs involving hazardous materials, environmental management, biological & laboratory safety, industrial hygiene, radiation safety, ergonomics, food service sanitation, fire safety, and sustainability. Mr. Alexander has over 38 years' experience in these programs, ranging from environmental consulting, to managing a site remediation program at a Department of Energy facility with over 350 historic waste sites. He began his career as an industrial hygienist and environmental engineer with the U.S. Air Force for nine years. He is a licensed professional engineer in Michigan and Illinois, a certified industrial hygienist, and a Board Certified Environmental Engineer with the American Academy of Environmental Engineers. He received his BS in civil engineering from South Dakota State University and MS in environmental science from the University of Idaho.



**Stuart Batterman, PhD**

*Topic(s):* Indoor Air Quality, Air Pollution

Stuart Batterman is Professor of Environmental Health Sciences in the School of Public Health at the University of Michigan, and Center Director of the University of Michigan Center for Occupational Health and Safety Engineering. He is also appointed as Professor of Civil and Environmental Engineering at UM, and as honorary Professor in the Department of Occupational and Environmental Health, Medical School, at the University of KwaZulu-Natal, Durban, South Africa. Dr. Batterman's teaching and research addresses a wide range of topics in environmental and occupational health, including measurement, modeling and health impact assessment of pollutants in indoor and ambient air, water, soil, and biological media. His main focus is on indoor and outdoor air pollution, including evaluation of pollutant sources, exposures, and health effects. His research is applied to contemporary problems, including environmental epidemiology, environmental and health impact assessment, policy analysis, environmental engineering, environmental justice, and life cycle analysis. He participates and has led a number of international projects, include training and research programs in the environmental sciences and engineering in Africa (especially Ghana and South Africa) and Europe (especially Portugal, Russia and Finland). He received his BS in environmental science from Rutgers University, and his Masters and PhD in Civil & Environmental Engineering from the Massachusetts Institute of Technology.



**Anthony D. Burton, MD, MPH, FACOEM**

*Topic(s):* Chemical Health Effects

Dr. Burton trained in occupational medicine at the University of Michigan and is board certified in that field. He is a Fellow of the American College of Occupational and Environmental Medicine. He practiced for years in an outpatient occupational medicine clinic setting and in hospital occupational health. Since November 2007, he has worked for General Motors as a plant medical director.

Dr. Burton has played a leadership role in the Michigan Occupational and Environmental Medicine Association and the American College of Occupational and Environmental Medicine. He is a lecturer at the University Of Michigan School Of Public Health.



### **Jim D'Arcy, PhD**

*Topic(s): Toxicology*

Dr. D'Arcy holds B.S. and M.S. degrees in chemistry from Oakland University and a Ph.D. in Industrial Health from the University of Michigan. He is certified in both toxicology and comprehensive practice by the American Board of Industrial Hygiene. Employed by General Motors for 31 years he is currently a Technical Fellow managing a research program on the control of health risks in the manufacturing environment including the development and introduction of safe biostable metal removal fluids. He is past chair of the AIHA Aerosol Technology Committee, a major contributor to ORC's Management of the Metal Removal Fluid Environment and to several ASTM metal removal fluid and aerosol standards. He has published 47 articles in the scientific literature. He is an AIHA Fellow and is the recipient of the Warren A. Cook and Frank A. Patty awards in industrial hygiene as well as the GM Safety Fellow award.



### **Gregg Grubb, CIH**

*Topic(s): Ventilation I, II, III*

Gregg Grubb has worked for more than 20 years as a Senior Industrial Hygiene Consultant for MIOSHA's Consultation Education and Training (CET) Division. Gregg primarily services the Southwest Michigan region and has worked for the State of Michigan as an Industrial Hygienist since 1987. During his time with the state, he has worked with MIOSHA in various education and training, consultative, and enforcement capacities. He also spent six and a half years running comprehensive environmental and occupational health and safety programs for a state-wide crime laboratory system. In this position, Gregg provided technical industrial hygiene, safety, and environmental assistance, developed training programs, conducted audits, and developed written programs.

Gregg is a Certified Industrial Hygienist and holds a B.S. in Chemical Engineering from Michigan State University. He also serves as a member of the American Conference of Governmental Industrial Hygienists' (ACGIH's) Industrial Ventilation Committee, is a co-coordinator of Michigan's Industrial Ventilation Conference, and an instructor and planning committee member at the North Carolina Industrial Ventilation Conference. Additionally, Gregg serves as an adjunct faculty member at the University of Michigan, Ann Arbor, where he teaches EHS 654, Control of Exposures to Airborne Contaminants.



### **Tim Kearney, CSP**

*Topic(s): Non-ionizing Radiation, PPE*

Mr. Kearney has been a Certified Safety Professional since 1987 and is employed as the Vice President of West Michigan operations for the Argus - Hazco & Enviroair Consultants, Inc. in Byron Center, Michigan. As a service provider, Tim has over thirty one years of experience assisting employers in the use and maintenance of sampling instruments, direct reading fixed & portable aerosol and gas monitors, respiratory protection, chemical protection equipment and fall protection systems. He has conducted numerous field inspections, on-site repairs and re-certifications for both public and private sector employers throughout the country. As a consultant, he has assisted industrial hygienists, safety engineers and EHS managers in the proper selection and evaluation of these devices. As a trainer, Tim has provided thousands of programs for clients in construction, municipal, mining, governmental, healthcare, automotive and various manufacturing environments. Training programs commonly have focused on Personal Protective Equipment and its Selection, Use, and Limitations; Confined Space Entry and Rescue; Use, Care

and Maintenance of APR & SAR Respirators as well as Self-Contained Breathing Apparatus; Hearing Conservation and Noise Measurement; and the Selection and Use of Air Sampling Equipment and Direct Reading Instrumentation have been presented to clients throughout the nation. Tim has an undergraduate degree in Occupational Safety & Health Technology from Ferris State University; a Masters of Business Administration from Central Michigan University and a graduate certificate in Hazardous Materials Management from Wayne State University. He is an active member of the AIHA and is currently a member of the Respiratory Protection Committee since 2007. He has served on both the MIHS and WMIHS Board of Directors and has three times been elected the president for his location section, most recently the WMIHS in 2013-2014.



**Bob Lieckfield, CIH**

*Topic(s):* Analytical Methods

Mr. Robert Lieckfield, Jr., CIH, Vice President, Division Director, HSE Laboratory Services has more than 37 years of experience in HSE consulting and laboratory operations. His experience includes field sampling and laboratory analysis, as well as quality assurance systems. He has more than 10 years of experience in laboratory systems and quality control auditing for compliance to ISO 17025. Mr. Lieckfield is author of "Analytical Methods" and co-author of "Health and Safety Factors in Designing an Industrial Hygiene Laboratory," chapters in *Patty's Industrial Hygiene and Toxicology, Fifth Edition*. He has taught graduate-level courses in industrial hygiene sampling and analytical methods at Wayne State University. He has been an instructor at this comprehensive industrial hygiene review course for the past 28 years.



**John Meeker, MS, ScD, CIH**

*Topic(s):* Heat/Cold Stress, Epidemiology

Dr. John Meeker is a Professor of Environmental Health Sciences and Associate Dean for Research at the University of Michigan School of Public Health. He holds a B.S. in Industrial Technology from Iowa State University, as well as M.S. and Doctor of Science (Sc.D.) degrees in Environmental Science & Engineering and Exposure, Epidemiology & Risk, respectively, from Harvard University, where he also completed a postdoctoral fellowship in Environmental and Reproductive Epidemiology. He is a Certified Industrial Hygienist (CIH). Dr. Meeker's work is wide-ranging, and focuses on defining sources, magnitudes and consequences of human exposure to environmental and occupational contaminants, as well as identifying and evaluating strategies to control harmful exposures. Much of his current research involves human exposure science and reproductive and developmental epidemiology studies of known or suspected endocrine disrupting chemicals, such as phthalates, BPA, pesticides, flame retardants, and others. Dr. Meeker is principal investigator on numerous large-scale research studies, is Associate Editor of *Environmental Health Perspectives*, and has served on numerous peer-review and advisory panels for EPA, NIH, and others in recent years.



**Joe Miklos, PhD**

*Topic(s):* Ionizing Radiation

Joseph A. Miklos, Ph.D. is currently employed by the University of Michigan (UM), Occupational Safety and Environmental Health (OSEH), Radiation Safety Service (RSS). He received his bachelor ('75), masters ('80), and doctoral ('02) degrees from UM. He has been an employee of UM since 1980 when he joined the research faculty at the School of Public Health. He has been with OSEH/RSS since 1998. At OSEH/RSS Joe assists the Radiation Safety Officer (RSO) with Radiological Concerns as needed, assists the RSO with Nuclear Regulatory Commission (NRC) license implementation, supervises the activities of the Health Physics

Technicians, conducts Health Physics Technician training sessions, participates in regulatory inspections from the NRC and Michigan Department of Licensing and Regulatory Affairs, conducts Radiation Safety Training for users of radioactive materials and Xrays, reviews applications for new Authorized Users of radioactive material, reviews and processes amendments and renewal applications of Authorized Users, responds to radiological spills and emergencies, assisted in health physics needs for the Ford Nuclear Reactor Decommissioning Project, conducts and maintains the radon monitoring capability of the University, and maintains the H-3 Exit sign inventory. He also has Adjunct Lecturer appointments in the UM School of Public Health (Environmental Health Sciences) and in the UM College of Engineering (Nuclear Engineering and Radiological Sciences) where he teaches classes in radiological health.



**Rick Neitzel, PhD, CIH**

*Topic(s):* Noise Effects, Measurement and Control

Rick Neitzel is an exposure scientist whose research focuses on the characterization of exposures to noise, heavy metals and other ototoxins, psychosocial stressors, and injury risk factors, as well as a range of adverse health effects associated with these exposures. His work, and the work of his team in the UM Exposure Research lab, takes place in occupational and community settings both domestically and abroad. He is particularly interested in incorporating new methodologies and exposure sensing technologies into research, and also has a strong interest in translating his research findings into occupational and public health practice. He directs the UM Risk Science and Human Health Certificate program, and is also Director of the Pilot Project Research Grant Program of the UM Center for Occupational Health and Safety Engineering.

Prior to his appointment to the faculty of the UM Department of Environmental Health Sciences and to the UM Risk Science Center, he worked as a Research Scientist in the University of Washington Department of Environmental and Occupational Health Sciences from 1998-2011. He has been a Certified Industrial Hygienist since 2003.



**Cindy Ostrowski, CIH**

*Topic(s):* BioHazards

Cindy Ostrowski is a Certified Industrial Hygienist (CIH), who established her own consulting firm, CAO Consulting, LLC after leaving a regional insurance company. She has over twenty years' experience in the field of industrial hygiene. Prior to her career as an industrial hygienist, she was a microbiologist in a clinical laboratory. She holds a Masters of Science degree in occupational and environmental health from Wayne State University. She returned to her alma mater as an assistant professor to teach courses for the graduate OEHS program. During her tenure at Wayne State University, she developed and taught a course dedicated to OEHS for the healthcare industry. Cindy was appointed by former Michigan Governor Engler to the MIOSHA Board of Health and Safety Compliance and Appeals from 1997-2010. She is the current Treasurer and has served as the Secretary (2008-2011) and a Board of Directors (2004-2007) for the American Industrial Hygiene Association (AIHA). She is the current chair for the Industrial Hygiene Division, a board member and member of the scholarship committee for the Michigan Safety Conference.



**Bert Schiller, CIH, ROH**

*Topic(s):* Work Processes, CIH Exam Tips, and Ethical Aspects of IH Practice

Bert Schiller, CIH, has over 35 years of experience. He started his career with Michigan OSHA, worked in the insurance industry for a dozen years, and has been an independent consultant for over 20 years. He is currently an instructor at both Madonna University and the University of Michigan.





**Sheryl S. Ulin, Ph.D., CPE**

*Topic(s): Ergonomics*

Sheryl received a B.S. in Mathematics and Psychology from the University of Michigan in 1985, a M.S. in Industrial and Operations Engineering from Michigan two years later, and a Ph.D. in Industrial and Operations Engineering from Michigan in 1991. In addition, she is a Certified Professional Ergonomist (CPE). Dr. Ulin is a scientist whose research focuses on occupational ergonomics. In addition, she is the Director of Continuing Education. Current and previous projects include providing ergonomic technical assistance and training to small and medium sized companies in the State of Michigan, investigating the relationship between strength and rung size used in playsets by children, comparing various patient transfer techniques, evaluating current and alternate tools/methods for tub and shower cleaning, defining the dose / response relationship between repetition and the incidence of upper extremity musculoskeletal disorders, and tracking the progress of newly formed ergonomics committees. Her involvement in these research projects has led to numerous publications and conference proceedings. She has also provided ergonomics consulting services to many companies across a wide variety of industries. Previously, she served as co-chair of the Ergonomics Standard Advisory Committee for the State of Michigan.



**Edward T. Zellers, PhD**

*Topic(s): Air Sampling Issues, Methods, Instruments and Sampling Statistics, Problem Solving Session I*

Professor Zellers' research and teaching programs are concerned with various aspects of characterizing and controlling human exposures to toxic chemicals, including sampling and analytical methods and instrumentation, assessment strategies, and protective equipment. His primary research interests are in the development of microfabricated sensor arrays and integrated microanalytical systems for the direct determination of organic compounds in air and biological media and for characterizing the interfacial interactions of such compounds with various media. Among the applications being pursued for these new chemical sensing technologies are miniaturized, wireless instrumentation for indoor-air quality assessments, personal exposure monitoring, breath analysis, ambient air pollution mapping, and in-situ assessments of the barrier effectiveness of polymeric chemical protective clothing.

Prof. Zellers maintains an active interdisciplinary research group that involves collaborations among students, faculty, and research scientists from several UM departments, national laboratories, and small R&D firms. He teaches lecture and laboratory courses on chemical hazard evaluation, exposure assessment, and chemical microsensors and microsystems. As director of the Occupational Health Program, Dr. Zellers administers the industrial hygiene component of the NIOSH funded Education and Research Center Training Grant. He is a member of the faculty in the Department of Chemistry and also serves as a Group Leader in the NSF-funded Engineering Research Center for Wireless Integrated MicroSystems (WIMS) headquartered in the Department of Electrical Engineering and Computer Science.