



# The Midwest Center for Occupational Health and Safety

## MIDWEST CENTER FOR OCCUPATIONAL HEALTH AND SAFETY (MCOHS) EDUCATION AND RESEARCH CENTER (ERC)

### ***GRADUATE EDUCATION OPPORTUNITIES***

The mission of the Midwest Center for Occupational Health and Safety (MCOHS) Education and Research Center (ERC), as a center of excellence, is to provide: 1) cutting-edge interdisciplinary academic and research training to prepare exceptional leaders who make significant contributions to occupational health and safety, and (2) continuing education (CE) to prepare professionals to address current and emerging threats to the nation's workforce. This ERC, one of 18 nationwide, was designed in response to a mandate of the National Institute for Occupational Safety and Health (NIOSH) -- to provide an adequate supply of qualified personnel to carry out the purposes of the Occupational Health and Safety Act and reduce the national burden of work-related injury and illness. The MCOHS (<http://www.mcohs.umn.edu>) recognized regionally, nationally and internationally for its impact, has a service area that includes Minnesota, Wisconsin, and North and South Dakota. The MCOHS provides graduate degree programs, continuing education and outreach activities, and serves as a regional resource for industry, labor, federal, state, and local government agencies, agriculture, and other interested parties.

The primary facilities for training are the University of Minnesota, School of Public Health (SPH), Division of Environmental Health Sciences, Regions Hospital and HealthPartners Medical Group, and the Department of Occupational and Environmental Medicine, which is affiliated with the University of Minnesota's School of Medicine. Several major centers and other resources provide unique opportunities for students, faculty, staff, and regional partners. These include the: University of Minnesota Center for Public Health Preparedness; Regional Injury Prevention Research Center; Center for Violence Prevention and Control; Intelligent Transportation Systems (ITS) Institute, a National University Transportation Center; Midwest Center for Life-Long-Learning in Public Health; and Centers for Public Health Education and Outreach. Laboratories include the: Industrial Hygiene Laboratories; Toxicology Laboratory; Veterinary Science Laboratory; and Human Factors Interdisciplinary Research in Simulation and Transportation Laboratory. The SPH is fully accredited by the Council on Education for Public Health. Clinical rotations and internship opportunities occur at additional sites, including local industry, health clinics, and government agencies.

The Midwest Center for Occupational Health and Safety provides excellence in graduate and continuing professional education in occupational safety and health and incorporates novel distance learning technologies to serve the needs of a diverse workforce. An innovative administrative structure supports enhanced efforts in interdisciplinary research, education, and outreach, and strengthens diversity recruitment for the next generation of professionals. Ongoing evaluation and enrichment of strategic planning efforts further strengthens this center with focused involvement of key stakeholders to ensure the Center is positioned to continue to produce the leaders who make important contributions to the safety and health of the nation's workforce.

**Graduates are prepared to assume positions in various institutions including academic institutions, corporate and industrial settings, health agencies, and health care facilities. Tuition and stipends are available to eligible applicants.** Information on the MCOHS academic training programs and continuing education is provided in the following:

## ACADEMIC TRAINING PROGRAMS

The mission of the Midwest Center for Occupational Health and Safety (MCOHS) Education and Research Center (ERC) is to ensure a Center of Excellence that provides 1) cutting-edge interdisciplinary academic and research training to prepare exceptional leaders who make significant contributions to the field of occupational health and safety and (2) continuing education to prepare occupational health and safety professionals to address current and emerging threats to the nation's workforce. This ERC, one of 18 nationwide, was designed in response to a mandate of the National Institute for Occupational Safety and Health (NIOSH) -- to provide an adequate supply of qualified personnel to carry out the purposes of the Occupational Health and Safety Act and reduce the national burden of work-related injury and illness. The MCOHS (<http://www.mcohs.umn.edu>) recognized regionally, nationally and internationally for its impact, has a service area that includes Minnesota, Wisconsin, and North and South Dakota. The MCOHS provides graduate degree programs, continuing education and outreach activities, and serves as a regional resource for industry, labor, federal, state, and local government agencies, agriculture, and numerous other partners.

The primary facilities for training are the University of Minnesota, School of Public Health (SPH), Division of Environmental Health Sciences, Regions Hospital and HealthPartners Medical Group, and the Department of Occupational and Environmental Medicine, which is affiliated with the University of Minnesota's School of Medicine. Several major centers and other resources provide unique opportunities for students, faculty, staff, and regional partners. These include the: University of Minnesota Simulations, Exercises, and Effective Education (U-SEE) Center; CDC-funded Center for Preparedness Education and Training; Regional Injury Prevention Research Center; Center for Violence Prevention and Control; Intelligent Transportation Systems (ITS) Institute, a National University Transportation Center; Midwest Center for Life-Long-Learning in Public Health; and Centers for Public Health Education and Outreach. Laboratories include the: Industrial Hygiene Laboratories; Toxicology Laboratory; Veterinary Science Laboratory; and Human Factors Interdisciplinary Research in Simulation and Transportation Laboratory. The SPH is fully accredited by the Council on Education for Public Health. Clinical rotations and internship opportunities occur at additional sites, including local industry, health clinics, and government agencies.

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## ACADEMIC TRAINING PROGRAMS

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### **Industrial Hygiene**

Degrees offered: MS, MPH, PhD

This program prepares students to enter the field of industrial hygiene and to contribute to the reduction of occupational ill health through anticipation, recognition, evaluation, and control of workplace hazards. Academic work is combined with field experience and special projects. Core courses in basic industrial hygiene, properties, measurement, and control of airborne contaminants, exposure assessment, hazardous materials, environmental health, toxicology, epidemiology, biostatistics, radiation, and noise protection are balanced by a wide range of elective offerings. Such coursework is led by highly qualified and experienced primary and adjunct faculty. This program is accredited by the Accreditation Board of Engineering and Technology. Positions acquired by graduates include: Industrial Hygienist (3M, Occupational Safety and Health Administration); Health and Safety Specialist (Allina Hospitals and Clinics, Minnesota Department of Health); and Community Energy Program Manager (Green Institute).

**Program Director:** Gurumurthy Ramachandran, PhD, CIH, Professor

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### **Occupational and Environmental Medicine**

Degrees offered: MPH, board eligibility in Occupational Medicine

The first year of this post-graduate medical training program includes academic experience leading to the MPH degree as well as opportunities for participation in clinically-oriented conferences, grand rounds, and didactic conferences through the Department of Occupational and Environmental Medicine, Regions Hospital. The second year is comprised of clinical rotations in occupational medicine in hospital/clinical settings and industrial locations. Elective periods may be spent on special projects in a variety of state and federal occupational and environmental health agencies. Experience in occupational medicine research is also included. Residents completing the program will be board-eligible in Occupational Medicine. Positions acquired by graduates include: Epidemic Intelligence Service Officer (National Institute for Occupational Safety and Health); Research Director (Regions Hospital); Medical Officer (Agency of Toxic Substances and Disease Registry); and Staff Physician in Occupational Health (Veterans' Administration Medical Center).

**Program Director:** Jeffrey H. Mandel, MD, MPH, Associate Professor

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### **Occupational and Environmental Health Nursing**

Degrees offered: MPH, MS, PhD

The field of Occupational and Environmental Health Nursing (OEHN) addresses the health and safety of people at work, their families, and the general community. The academic program prepares OEHNs to develop, manage, and evaluate health services, programs, and policies designed to promote population health and prevent work-related injuries and disease. This program provides a rich learning environment for students which includes classes, seminars and a variety of field and research experiences that are tightly woven into the curriculum. The academic program has a strong emphasis on mentoring students and promoting interaction with alumni and program board members. These interactions help create a sense of community among students which facilitates success in the program. Three degree options exist for study: The PhD program is for students interested in a career of research and teaching; the Master of Public Health (MPH) degree emphasizes program management; and the Master of Science (MS) degree in Environmental Health is designed for students with an interest in applied research. The core curriculum includes course work in public health and occupational health sciences, research methods and statistics, management and financial management, public health nursing, and occupational and environmental health nursing. Students obtain field experience in occupational and public health settings with experienced mentors. Positions acquired by graduates include: Assistant Professor (University of Minnesota); Occupational Health Nurse (3M, Ridgeview Medical Center); Nurse Practitioner (United Health Care); Assistant Clinical Manager (United Hospital Intensive Care Unit); Regional Safety Manager (Pillsbury Company); and School and Environmental Health Nurse (Minneapolis Public Schools).

**Program Director:** Patricia M. McGovern, PhD, MPH, RN, Professor

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### **Occupational Injury Prevention Research Training Program**

Degree offered: PhD

The Occupational Injury Prevention Research Training Program (OIPRTP) is designed to train occupational injury prevention researchers and educators, at the doctoral level, who can successfully address a variety of occupational injury problems. This program addresses the serious deficiencies identified by the Institute of Medicine and encompasses the components of occupational injury and epidemiology and occupational safety engineering and science through the academic and research training components.

The OIPRTP builds on extensive high quality training and research experiences that have achieved national and international recognition and prepares graduates for a variety of positions in academic and other research settings, including corporations, state or federal agencies, and health care settings. Positions acquired by graduates, in national and international locations, include: Safety Investigator in Chronic Disease and Environmental Epidemiology; Assistant Professor, Department of Medicine and Coordinator, Polytrauma and Blast-Related Injuries QUERI, Veterans' Administration Medical Center; Research Project Director; Head - Epidemiology (Dow Corning Corporation); Research/Safety Engineering Manager, Technology Laboratory (Nike); State Program Administrative Principal, Injury/Illness Data Analyst; Post-Doctoral Fellow, Environmental and Occupational Health Sciences; Associate Professor, College of Public Health, Occupational Safety and Health; Consultant, Injury/Occupational Injury Prevention; Epidemiologist III – Lead Epidemiologist, State Health Department;

**Program Director:** Susan Goodwin Gerberich, PhD, Mayo Professor and

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## **Occupational Health Services Research and Policy**

Degrees offered: PhD

The Division of Environmental Health Sciences (EnHS) and the Division of Health Policy Management (HPM) in the School of Public Health have established a unique, collaborative doctoral-level education program in occupational health services research and policy. Through interdisciplinary coursework, seminars, and research training students acquire the capacity to design and conduct original research addressing issues of access, cost and quality of health care services and health outcomes for workers and their families, which will help meet the demand for more rigorous evaluation of occupational health and safety policies and programs. The program builds on existing doctoral programs offered by both divisions. Students may enter through either division. All students take a rigorous program in research design, statistics, sampling, survey methodology, econometrics, health economics, occupational and environmental epidemiology and toxicology, exposure assessment and policy. Graduates of the program will be the future experts and leaders in the emerging field of occupational health services research working in academia, governmental agencies, industries and health plans.

**Program Director:** *Patricia M. McGovern, PhD, RN, Professor*

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## **Occupational and Environmental Epidemiology**

Degrees offered: MPH, PhD

This training program draws on the strengths of two divisions in the School of Public Health: Environmental Health Sciences (EnHS) and Epidemiology and Community Health (EpiCH). Doctoral students are admitted from either division and MPH students will be admitted from EnHS. This program offers rigorous training in epidemiologic methods applied to occupational and environmental problems and incorporates state-of-the-art methods in a multidisciplinary training environment. The program draws on the resources from faculty in both divisions with expertise in epidemiologic methods, exposure assessment, and epidemiology of cancer, cardiovascular diseases, reproductive health, infectious diseases, and respiratory health. In addition to training doctoral students, this program will support MPH students interested in integrating occupational epidemiology in environmental health sciences with specific emphasis on infectious diseases and food systems.

**Program - Director:** *Bruce H. Alexander, PhD, Professor*

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### **Program – Co-Directors:**

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## **CONTINUING EDUCATION PROGRAM**

### **Continuing Education in Occupational Health and Safety**

This program provides comprehensive professional continuing education in occupational and environmental medicine, industrial hygiene, safety/injury prevention, occupational and environmental health nursing, and management of hazardous substances in occupational environments. Courses range from short updates to five-day certificate-based trainings. The program is affiliated with the National Institute for Occupational Safety and Health, the Occupational Safety and Health Administration, the National Institute of Environmental Health Sciences, and the US Environmental Protection Agency, and draws on expertise from professionals in academia, government, labor, and business.

**Program Director:** *Julie Alcorn-Webb, MA, BA*

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