Occupational and Environmental Health Courses (OEH)

This is a list of all occupational and environmental health courses. For more information, see Occupational and Environmental Health.

OEH:4240 Global Environmental Health 3 s.h.
Environmental health comprised of aspects of human health determined by interactions with physical, chemical, biological, and social factors in global environment; worldview and survey; focus on issues most relevant today; sustainability; air, water, and soil pollution and remediation; occupational health; injury prevention; food safety and security; risk assessment; environmental health policy.

OEH:4260 Global Water and Health 3 s.h.
Overview of global water and health; microbial and toxicant identification, water-related adverse health effects, risk assessment, approaches to reduce water-related disease, distal water-related influences (e.g., global warming), and historic cases. Same as GHS:4260.

OEH:4310 Occupational Ergonomics: Principles 3 s.h.
Fundamentals of ergonomics in context of occupational safety and health practice; topics include work-related musculoskeletal disorders (MSDs), physical risk factors for MSDs, basic occupational biomechanics, office ergonomics and sedentary work, work organization, and task design; emphasis on exposure assessment, with particular attention to methods used commonly in the field; laboratory exercises are used to reinforce key concepts, and students work in teams on an applied project with an area employer.

OEH:4330 Occupational Ergonomics: Applications 3 s.h.
Advanced course in occupational ergonomics, with emphasis on laboratory measurement and field-based assessment of physical risk factors for work-related musculoskeletal disorders; laboratory exercises build skills in use of surface electromyography to assess muscular load; electrogoniometry, inertial sensors, and optical motion capture to assess human motion; accelerometers to assess whole-body and hand-arm vibration; instruction in data collection methods and digital signal processing; students complete a field-based measurement project in collaboration with an area employer. Prerequisites: ISE:3450 or OEH:4310 or BME:5640.

OEH:4510 Injury and Violence Prevention 3 s.h.
Theory, research, and practice of injury control; unintentional and intentional injuries; local, national, international injury issues. Same as CPH:4230, EPID:4510.

OEH:4530 Global Road Safety 3 s.h.
Road safety problem, data sources, research methods used in field, and how intervention and prevention programs are developed and evaluated; lecture, hands-on approaches. Same as CPH:4220, GHS:4530.

OEH:4540 Statistics for Experimenters 3 s.h.
Application of statistical techniques to evaluate data derived from experimental samples designs; use of spreadsheets, statistical software; design and analysis of experiments; regression analysis; model building; practical applications. Same as CEE:4187.

OEH:4920 Solid and Hazardous Wastes 3 s.h.
Sources, characteristics, collection, disposal of solid and hazardous wastes; environmental impacts of hazardous waste management; resource recovery systems. Requirements: for OEH:4920—OEH:4240. Same as CEE:4158.

OEH:5010 Occupational and Environmental Health Seminar 0-1 s.h.
Contemporary topics in occupational health, agricultural and comparative medicine, environmental health.

OEH:5410 Occupational Safety 3 s.h.
Principles and practices of occupational safety; applications in industrial and other occupational settings; interactions with other disciplines.

OEH:5530 Interpreting Occupational and Environmental Health Research 2 s.h.
Tools necessary for making critical assessment of published scientific research reports from a methodological perspective; examples from recently published research studies in occupational and environmental health. Corequisites: EPID:4400.

OEH:5620 Occupational Health 3 s.h.
Principles, practice of occupational medicine, fundamentals of industrial hygiene and safety, occupational health management, ergonomics, occupational health nursing. Offered fall semesters.

OEH:6110 Rural Health and Agricultural Medicine 3 s.h.
Clinical orientation of specific health problems of rural residents, agricultural workers; rural health care delivery, socioeconomic issues in agriculture and their effects on health and safety of the agricultural population; occupational health problems, environmental health hazards in rural areas. Requirements: enrollment in College of Public Health or health sciences.

OEH:6120 Current Topics in Agriculture and Rural Health 0-1 s.h.
Issues that affect the health of agricultural populations, such as agro-terrorism, antibiotic resistance, genetically modified organisms; current scientific literature.

OEH:6310 Occupational Ergonomics: Applications 3 s.h.
Advanced course in occupational ergonomics, with emphasis on laboratory measurement and field-based assessment of physical risk factors for work-related musculoskeletal disorders; laboratory exercises build skills in use of surface electromyography to assess muscular load; electrogoniometry, inertial sensors, and optical motion capture to assess human motion; accelerometers to assess whole-body and hand-arm vibration; instruction in data collection methods and digital signal processing; students complete a field-based measurement project in collaboration with an area employer. Prerequisites: ISE:3450 or OEH:4310 or BME:5640.

OEH:6420 Methods in Exposure Science 3 s.h.
Principles, with emphasis on recognition of chemical health hazards, physical health hazards at work. Corequisites: OEH:5620, if not taken as a prerequisite.

OEH:6431 Assessing Noise Hazards 1 s.h.
Scientific methods to measure noise, assess human noise exposure, and implement technology to control noise exposure.

OEH:6432 Assessing Nonionizing Radiation Hazards 1 s.h.
Scientific methods to measure nonionizing, assess human nonionizing exposure, and implement technology to control nonionizing exposure.

OEH:6433 Assessing Ionizing Radiation Hazards 1 s.h.
Scientific methods to measure ionizing radiation, assess human ionizing radiation exposure, and implement technology to control ionizing radiation exposure.
OEH:6440 Control of Occupational Hazards 3 s.h.
Physical science concepts applied to control of occupational hazards ranging from dusts to mists to vapors; strategies, management issues, personal protective equipment, implementation skills; in-depth instruction on local exhaust ventilation system design.

OEH:6450 Aerosol Technology 3 s.h.
Particle statistics and physics of aerosols, including inertia, diffusion, nucleation, evaporation, condensation, optics, electrical properties; relationship to fields such as agriculture, nanotechnology, environmental and occupational health, atmospheric chemistry, drug delivery.

OEH:6460 Quantitative Exposure Assessment: Study Design and Evaluation 3 s.h.
Principles of designing occupational and environmental exposure assessment studies, analyzing exposure data, and conducting exposure-response evaluations. Prerequisites: OEH:4540.

OEH:6510 Environmental and Occupational Epidemiology 3 s.h.
Overview of methods to interpret and perform environmental and occupational epidemiologic studies with focus on exposure assessment; valuable insights into identifying regional, national, global environmental, and occupational health-related issues. Prerequisites: EPID:4400. Same as EPID:6200.

OEH:6520 Injury Epidemiology 3 s.h.
How epidemiology can be applied to injury prevention and control: epidemiology literature, specific methodological problems involved in the epidemiology of injuries, critical evaluation of research articles. Offered spring semesters of odd years. Prerequisites: EPID:4400. Same as EPID:6510.

OEH:6530 Epidemiology of Occupational Injuries 3-4 s.h.
Epidemiological literature on occupational injuries and their prevention; focus on research methods. Offered spring semesters of even years. Prerequisites: EPID:4400. Same as EPID:6530.

OEH:6540 Environmental and Occupational Medicine 2 s.h.
Skills and knowledge for evaluating and treating patients with work-related illness.

OEH:6710 Human Toxicology and Risk Assessment 3 s.h.
Sources, routes of absorption, effects of environmental toxicants affecting man; pathophysiology of toxicant actions, including those of air and water pollutants, metals, pesticides, solvents, food toxicants, chemicals. Requirements: college chemistry and biology.

OEH:6720 Advanced Toxicology 4 s.h.
Hepatic metabolism and toxification mechanisms, pulmonary and immunotoxicology, nervous system poisons and their mechanisms of action, general and molecular concepts of chemical carcinogenesis. Prerequisites: OEH:6710.


OEH:7010 Problems in Occupational and Environmental Health arr.
Didactic material in occupational and environmental health; may include tutorial, seminar, faculty-directed independent work (e.g., literature search, project, short research project).

OEH:7020 Independent Study in Occupational and Environmental Health arr.
In-depth pursuit of an area in occupational and environmental health requiring substantial creativity and independence.

OEH:7040 Preceptorship in Occupational and Environmental Health 0,3 s.h.
Work experience using knowledge and skills acquired in the classroom; arranged in conjunction with departmental or collegiate activities or with governmental agencies or private industry.

OEH:7050 Occupational and Environmental Health Internship 0,3 s.h.
Comprehensive and integrated application of knowledge acquired in a workplace setting; structured approach to demonstrate skills and knowledge obtained through a workplace experience. Corequisites: OEH:5620 or OEH:4240, if not taken as a prerequisite.

OEH:8610 Occupational Medicine 2,4 s.h.
In-depth study of an area in occupational and environmental medicine, with clinical experience in an outpatient community setting. Requirements: M.D. enrollment.