

Shannon E. Newton, MPH, CIH

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EDUCATION

Master of Public Health (MPH), University of Arizona, 2005

Concentrations: Environmental and Occupational Health, Industrial Hygiene

Research Report: *Noise Control for Air Arc Gouging in Mining Operations*

Advisors: Mark Van Ert, PhD, Cliff Crutchfield, PhD., Mary Kay O'Rourke, PhD, Jeffrey Burgess, MD, MPH

B.S. Environmental Engineering, United States Air Force Academy, Colorado Springs, Colorado, 1995

LICENSES/CERTIFICATION

Certified Industrial Hygienist, Comprehensive Practice

Board of Global Credentialing (BGC) formerly American Board of Industrial Hygiene (ABIH)

Certification Number: CP8000

May 2000 - Present

EMPLOYMENT ACADEMIA

Senior Lecturer

Coordinator, NIOSH Training Project Grant – Industrial Hygiene

University of Arizona; Mel and Enid Zuckerman College of Public Health

December 2022 – Present

- Instructor for MPH Environmental and Occupational Health (EOH) and Industrial Hygiene (IH) courses including EHS 510 *Physical Exposures* (3 units), EHS 502 *Environmental Monitoring* (EOH core course, co-teach, 3 units, lab), EHS 655 *Occupational Controls* (3 units, lab), EHS 422/522 *Intro to Occupational Safety* (3 units), EHS 575 (online section) *Environmental and Occupational Health* and non-routinely EHS 653 *Applied Exposure Assessment* (EOH core course, 3 units, lab).
- Authored successful general education application for MEZCOPH EHS 100: *One Health in Action* course for UA general catalog inclusion in the category of natural scientist perspective with quantitative reasoning attribute.
- Coordinates NIOSH TPG grant including preparing research progress reports, annual reports, and performance tables. Facilitates the appointment of students in graduate level industrial hygiene for grant stipend and tuition support. Manages budget ensuring support to trainees and alignment with Ruth Kirschstein training grant parameters. Provides mentorship to student trainees ensuring student-centered support for their independent student needs.
- Submitted a successful application to the Board of Certified Safety Professionals (BCSP) for the MEZCOPH MPH Occupational and Environmental Health – Industrial Hygiene track as a Qualified Academic Program (QAP). Provided documentation for domain alignment of the curriculum with the Associate Safety Professional examination blueprint. This designation allows graduates of the MPH EOH-IH track to apply for and obtain the professional designation of Graduate Safety Professional (GSP) upon completion of the MPH, adding value to our program. Maintains this affiliation with program renewals.
- Created a pilot program escape room for outreach and recruitment of high school students to the field of occupational safety and health. Tested the escape room concept with two summer high school student groups at the UA campus: Southwest Environmental Health Sciences Center (SWEHSC) Steps 2 STEM and Environmental Science and Risk Assessment Center (ESRAC) Young Global Leader's programs.
- Coauthored Provosts Investment Fund (PIF) proposals requesting funding consideration to expand the pilot escape room concept to a virtual platform that could be accessed by high school students in the southwest.

Adjunct Lecturer

University of Arizona; Mel and Enid Zuckerman College of Public Health

Fall Semester 2021 – Spring Semester 2022

- Fall Semester 2021 – Instructor for EHS 484/584 *Fundamentals of Industrial and Environmental Health* (3 Units).
- Spring Semester 2022 – Instructor for EHS 655 *Control of Occupational Exposures* (3 Units, with lab)

Program Manager for Mining Research

University of Arizona; Mel and Enid Zuckerman College of Public Health

January 2011 – May 2012

- Responsible for industrial hygiene and occupational health research design, sample collection and management, data analysis, and technical writing related to the Institute for Mineral Resources and Mel and Enid Zuckerman College of Public Health collaborative mining research projects under the Science Foundation of Arizona funding source.
- Revised occupational health and industrial hygiene design elements for a Biodiesel Exhaust Health Effects study. Collected preliminary data in support of the successful resubmission of an RO1 application to NIOSH. The RO1 (\$1.95M) was awarded to the Mel and Enid Zuckerman College of Public Health.
- Created Mining Safety and Health web page - actively integrated University of Arizona Institute for Mineral Resource collaborative partner information in support of the NIOSH Western Mining Health and Safety Training Grant.
- Drafted Mining Hazardous Noise and Firefighter Overhaul concept papers for submission under NIOSH Broad Agency Announcements.

EMPLOYMENT INDUSTRY**General Manager, Certified Industrial Hygienist
Health Effects Group, Inc.**

Tucson, Arizona

April 2002 – January 2011

- Served as General Manager for the Health Effects Group, Inc., directing all aspects of industrial hygiene and environmental monitoring.
- Evaluated and designed industrial hygiene sampling strategies for microbial indoor air quality investigations at over 700 schools, commercial buildings, and residential dwellings.
- Designed respiratory protection programs for local industrial facilities to include program management plans and personal fit testing of workers.
- Designed and implemented preventive indoor air quality surveillance program for Arizona schools.
- Provided chemical hazard monitoring for large medical center in Tucson, Arizona – defined exposures to formaldehyde and sevoflurane recommended and evaluated control ventilation.
- Provided consulting services to school insurers regarding fiberglass contamination monitoring, remedial cleaning recommendations, met with concerned parents, provided media interview.
- Provided monitoring for asbestos for 250+ school districts supported by the Arizona School Risk Retention Trust (ASRRT). Ensured NESHAP compliance for renovation and demolition projects.

Certified Industrial Hygienist
Environomics Southwest, LLC

Phoenix, Arizona

August 2000 – April 2002

- Designed, directed, and implemented the industrial hygiene sampling strategy for indoor air quality microbial investigations in over 1,000 commercial buildings, hospitals, schools, and residential dwellings.
- Designed operating procedures for an industrial manufacturer describing appropriate work practices, required protective equipment, and toxicological information for disturbances of mercury-contaminated soil.
- Developed a microbial remediation pamphlet for contractors, which describes acceptable techniques for the removal and treatment of fungi-contaminated building materials in indoor environments.

Director, Bioenvironmental Engineering
Bioenvironmental Engineer, United States Air Force

Peterson Air Force Base, Colorado

August 1998 – August 2000

- Directed industrial hygiene, radiation safety, and environmental sampling and analysis services for three Air Force installations and over 30 geographically separated units in Air Force Space Command. Supervised an office of 18.
- Drafted disaster response plans for Air Force installations detailing emergency response actions to natural disasters, aircraft mishaps, chemical spills, and terrorist attacks by chemical, biological or radiological contaminants.
- Directed industrial hygiene, environmental sampling and analysis, and radiation safety support in the absence of three additional engineers—these efforts resulted in zero compliance findings and an 80% increase in productivity.
- Designed and implemented an environmental air quality study at Eskan Village, Kingdom of Saudi Arabia to quantify the risk to United States Air Force personnel deployed at air bases in Southwest Asia—results of the study were reported to the Under Secretary of Defense for Gulf War Illness.

Director, Occupational Health and Industrial Hygiene
Bioenvironmental Engineer, United States Air Force

Holloman Air Force Base, New Mexico

June 1995 – August 1998

- Managed all aspects of industrial hygiene services at USAF installation serving a worker population of 4,600 including 119 industrial workplaces. Supervised occupational health activities in an office of six technicians.
- Supervised the compliance of nine regulatory programs including ventilation control systems, evaluation of chemical and physical hazards, respiratory protection, ergonomics, protective equipment selection, and hazard communication.
- Provided visionary leadership during reorganization of occupational health program and industrial hygiene sampling strategy; transformed failing program into outstanding regulatory condition in less than 14 months.

HONORS AND AWARDS

Delta Omega Honorary Public Health Society, 2005

U.S. Air Force Academy Command Bioenvironmental Engineer of the Year, 1999

Air Combat Command Bioenvironmental Engineer of the Year, 1996

SERVICE

Guest Lecturer, University of Arizona, College of Medicine, 2023

FCM 201 *Family and Community Medicine* – participated in a panel providing Public Health discipline perspectives to medical students.

Guest Lecturer, University of Arizona, Mel and Enid Zuckerman College of Public Health, 2015-Present

2024, EHS 575 *Environmental and Occupational Health* – provided guest lecture on Industrial Hygiene role in Public Health and US Worker’s Compensation practices.

2023, EHS 575 *Environmental and Occupational Health* – provided guest lecture on Industrial Hygienists role in Public Health and US Worker’s Compensation practices.

2019, Guest Lecturers EHS 510 *Physical Exposures* – Lecturer Topics: Introduction to Physical Exposures, Non-Ionizing Exposures, Thermal Stress and EHS 484/584 *Fundamentals of Industrial Hygiene and Environmental Health* – Lecture Topics: Dermal Exposures, Hazardous Noise, and Toxicology/Multi-Media Exposures

2018, Guest Lecturers EHS 484/584 *Fundamentals of Industrial Hygiene and Environmental Health* – Lecture Topics: Dermal Exposures, Hazardous Noise, and Toxicology/Multi-Media Exposures

2017, Guest Lecturers CPH 484/584 *Fundamentals of Industrial Hygiene and Environmental Health* – Lecture Topics: Dermal Exposures, Hazardous Noise, and Toxicology

2016, Guest Lecturers CPH 484/584 *Fundamentals of Industrial Hygiene and Environmental Health* – Lecture Topics: Dermal Exposures, Hazardous Noise, and Toxicology

2015, Guest Lectures CPH 457/557 *Food We Eat, Drugs We Take, How We Work and Play* – The US Regulatory Agencies – Lecture Topic: Food and Drug Administration, Zika Exercise/Paper

COMMUNITY ENGAGEMENT

2024, Arizona STEM Adventure, “Decibel Detectives”, Pima Community College Northwest, Tucson, Arizona.

2024, Global Health Institute, Young Global Leaders Program, “Climate Change and Workers – Thermal Stress”, University of Arizona, Tucson, Arizona.

2024, Southwest Environmental Health Science Center (SWEHSC), Steps 2 STEM Youth Program, “Industrial Hygienists – Heroes of the Workplace, A STEM Career brought to you by the University of Arizona Mel and Enid Zuckerman College of Public Health”, University of Arizona, Tucson, Arizona.

2024, Baboquivari STEM Career Fair, “Public Health Careers in Prevention: Industrial Hygiene”, Baboquivari Middle/High School, Topowa, Arizona.

2023, Southwest Environmental Health Science Center (SWEHSC), Steps 2 STEM Youth Program, “Industrial Hygienists – Heroes of the Workplace, A STEM Career brought to you by the University of Arizona Mel and Enid Zuckerman College of Public Health” University of Arizona, Tucson, Arizona.

2023, Global Health Institute, Young Global Leaders Program, “Industrial Hygienists – Heroes of the Workplace, A STEM Career brought to you by the University of Arizona Mel and Enid Zuckerman College of Public Health”, University of Arizona, Tucson, Arizona.