

**Ohio University Training Project Grant in Occupational Safety  
T03OH009841  
Annual Report for Period from July 1, 2016 through June 30, 2017  
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Co-P.I.: Gary Weckman, PhD**

## **SECTION I**

### TPG Summary:

This Training Project Grant in Occupational Safety at Ohio University addresses the shortage of well-trained practitioners in a traditionally underserved area of Southeastern Ohio and the Ohio River Valley. The program is run within the Department of Industrial and Systems Engineering (ISE) in the Russ College of Engineering and Technology. Students are enrolled in the MS program in ISE. Key elements of the program include: six core courses, two mandatory internships, two mandatory seminars in writing and research, and participation in plant tours and professional activities. The six core classes are: Human Factors Engineering, Industrial Ergonomics, Occupational Hygiene Laboratory, Occupational Safety and Health Administration, Systems Safety, and Six Sigma. Students then take elective courses in the Russ College or other colleges at Ohio University to complete their degree requirements. A specific academic focus for this project is older workers and advanced data analysis methods. Faculty for the program are well-qualified in this area as well as in the component areas of occupational safety research and field practice.

Through NIOSH support we have recruited and graduated students who may not have entered the safety profession. Our graduates have undergraduate degrees in engineering disciplines (industrial, mechanical, plastics, and electrical) as well as math, psychology and applied management. We believe that this diversity contributes to the strength of the program and the profession.

### Relevance:

Demographic changes will necessitate the need for Occupational Safety (OS) Specialists during the next 10 years. Southeastern Ohio is especially underserved in its ability to produce well-trained OS Specialists who can address the relevant needs of local industry. This project will produce well-trained practitioners who will be able to address the OS needs of Ohio and the priorities of NIOSH.

### Key Personnel:

Diana Schwerha, PhD, PI: schwerha@ohio.edu  
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### TPG Website:

<http://www.ohio.edu/engineering/ise/labs/ergonomics/niosh-tpg-project.cfm>

## SECTION II

### High Impact Stories:

The Ohio University Training Project Grant in Occupational Safety started in 2012 and is currently in its sixth year. Our training program is a two-year program culminating in the students receiving a MS in Industrial and Systems Engineering (with a focused curriculum on Occupational Safety). We believe that our program differentiates itself from others in its curriculum (focused on safety and housed in Industrial and Systems Engineering), and its on-campus and off-campus internships. The PIs meet regularly with an advisory board to ensure the quality of the program.

All students participate in two internships: 1) one with the Ohio University Safety Department during their first year, and 2) in industry between year one and year two. This combination of experiences provides the trainees with exposure to various fields within occupational safety and allows them to work with a diverse group of people. In the past, their work on campus helped the safety department cost-justify interventions and provided valuable assistance in data collection. Trainees have had industry internships at various sites, including the Ohio Bureau of Workers Compensation (BWC), Fairfield Medical Center, Honda Manufacturing, Suncoke, Caterpillar, Amsted Rail, Grange Insurance and Quidel Corporation. Graduates of the program are currently employed in the occupational safety field both in government and private industry.

During the school year students are involved in a variety of extra-curricular activities, such as construction tours, professional society meetings, plant tours and conferences. During the 2016-17 school year students attended the University of Cincinnati Pilot Research Symposium, Safety Day at Ohio State University, the BWC Safety Congress, and Safety 2017. They attended plant tours off campus and attended construction safety tours on campus. Students are officers and members of the Ohio University Student Chapter of the ASSE, and they hold events and sponsor guest lecturers. In the past several years students presented their research at the Ohio University Research and Creativity Expo and this year the students plan to host an ASSE meeting at the Lancaster campus.

Students are currently focusing their research on a variety of topics, such as ergonomic risks in the solar installation industry, safety and accessibility concerns in a children's museum and ways to engage millennials in the safety culture within an age-diverse workforce. Past projects have included: development of a mobile application for fall safety in hunting, the use of value stream mapping to improve the procurement of ergonomic office equipment, determination of appropriate heights for TP dispensers in accessible bathrooms, sit-stand workstations and the use of neural networks for injury analysis. These projects are within the expertise of the faculty members, and they are relevant to contemporary challenges in the safety field.