

**Grant #: 5-T03-OH008431-13**  
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**Title: The Appalachian Training Program in Occupational Health and Safety**  
**2016 – 2017 Annual Report**  
**Occupational Safety and Health Engineering (OSHE)**

## Summary

The Occupational Safety and Health Engineering (OSHE) program is designed to educate engineering students at the master's and doctorate level in the area of occupational safety and ergonomics. The program independently augments and capitalizes upon our existing Industrial Hygiene and Safety Management program and is a core component within the Industrial and Management Systems Engineering (IMSE) program at West Virginia University (WVU). The OSHE curriculum provides a strong didactic foundation and analytical skills. Our trainees become proficient in engineering and scientific methods and are able to identify occupational hazards, understand failure modes and effects, engineer out such hazards, implement administrative controls as stop-gap measures, and to use experimental, simulation and engineering models to develop, test and evaluate design interventions.

## Relevance

The need for technically competent OSH professionals is higher in the Appalachian region, including West Virginia, compared to rest of the nation. This is due to the high concentration of several hazardous industries within the region including mining, oil and gas extraction, logging, chemical manufacturing, timbering, construction, transportation, and agriculture. To meet this need, it is critical to continue and strengthen OSH training opportunities and develop a new generation of OSH leaders and professionals. The OSHE program is committed to serve this local and regional need.

## Key Personnel

Key personnel or core faculty for the OSHE program is comprised of five full-time IMSE faculty members. The core faculty members are directly responsible for teaching the required OSHE courses and mentoring OSHE students to degree completion as chairs or members of their thesis and dissertation committees.

Name	Role	Contact information
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### Website

<http://imse.statler.wvu.edu/graduate>

### **High Impact Stories**

- Trainee awards: One of the NIOSH funded PhD trainees won the best paper award at the XXIX<sup>th</sup> Annual Occupational Ergonomics and Safety Conference held at Seattle, Washington from June 1 to 2, 2017. This trainee is conducting research on work-related shoulder musculoskeletal disorders with a focus on rotator cuff muscle fatigue.
- Publications: Several occupational safety and health engineering projects were successfully completed during the last year. The projects outcomes were presented at the international conferences and are published in the peer-reviewed journals and conference proceedings. NIOSH funded trainees presented 3 research papers at two different international conferences and authored 4 articles that are published (or accepted for publication) in the peer-reviewed journals and conference proceedings.