



THE UNIVERSITY OF ARIZONA

Mel & Enid Zuckerman
College of Public Health

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

EHS 655 Control of Occupational Exposures

Catalog Description: Design and evaluation of systems controlling occupational exposures. Emphasis is on industrial ventilation but also includes administrative and personal protective controls. Specific industrial operations and exposure models will be addressed. (3 units)

Course Topics:

- Control Hierarchy
- Principles of Fluid Dynamics
- General Exhaust Ventilation and Thermal Control
- Emission Permitting
- Operation & Maintenance
- Cost Estimation
- PPE Standards and Selection
- Respiratory Protection

Course Objectives: During this course, students will:

- Develop skills to design and implement systems to control exposures in the occupational environment.
- Explore range of exposure control options, understand the effectiveness of each option and the desired hierarchy of selecting control measures.

Learning Outcomes (Competencies Obtained): Upon completion of this course students will be able to:

1. Classify the hierarchy of control options and define the requirements for each option
2. Use simple models to estimate exposures in occupational settings to determine ventilation and control needs.
3. Display a fundamental, working knowledge of fluid dynamics
4. Demonstrate an understanding of design considerations and methods for industrial ventilation systems
5. Quantitatively evaluate the performance of industrial ventilation systems
6. Select appropriate respirators and personal protective equipment
7. Describe qualitative and quantitative aspects of generation of agents, factors, and stressors
8. Recommend and evaluate engineering, administrative, and personal protective equipment controls and/or other interventions to reduce or eliminate hazards