

Program Testimonials

"Both the students and faculty appear to be tireless, demonstrating the passion that is paramount to the success of the safety, health and environmental profession."

Jack Dobson, past president, American Society of Safety Engineers, Sr. Account Consultant, Liberty Mutual

"As a 'new player' in the industrial community in Alabama and the Southeast, we have appreciated and benefited significantly from the interaction with you and your students. I think this is demonstrated by the fact that both of our current staff ergonomists received their training in your programs."

Dennis Mickelsen, senior manager, General Affairs and Safety, Hyundai Motor Manufacturing Alabama, LLC



"The Deep South Education and Research Center (ERC) involves a synergistic relationship between Auburn and the University of Alabama at Birmingham at the forefront of modern research being done in the fields of concern. The resultant interaction among program, students, and faculty is an essential element of a world class education in this important region, and for the broader national context. Joint programs are the hallmark of the continuing evolution of graduate science and engineering competency in the country – the Deep South ERC is truly a national asset and must be not only maintained, but expanded."

John Olson, Ph.D. '03, manager, International Space Station Operations and Crew Exploration Vehicle, Office of Safety and Mission Assurance, NASA HQ

"I can say firsthand that the program was geared to helping students solve practical, real-world problems more so than any other educational program with which I am familiar. The research training was right on the money."

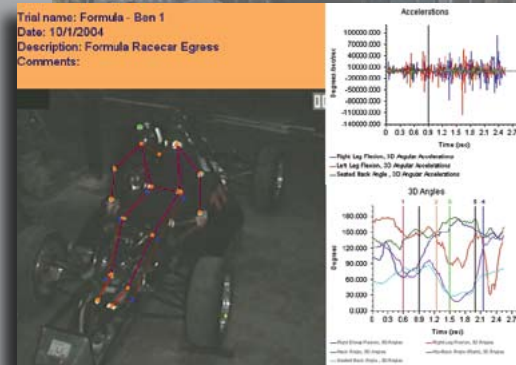
Joel Haight, Ph.D. '99, P.E., associate professor, Penn State University

"The mission and long-term effectiveness of the occupational injury community is dependent on the availability of high quality investigators with interdisciplinary training. It is abundantly clear your program addresses this need in a unique way, supplying the discipline with doctoral-level graduates who have acquired finely honed engineering skills."

Russ Fine, Ph.D., M.S.P.H., professor of medicine, director, UAB Injury Control Research Center

"I have continually relied on the ISE department at Auburn as a resource. I firmly believe in this program. It gave me a fundamentally sound education which in turn has provided me with a successful career."

Ashley West, M.S. '01, manager, Ergonomics, Delta Airlines



Contact Us

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The Deep South Center for Occupational Health and Safety
A NIOSH Education and Research Center
University of Alabama at Birmingham and Auburn University
www.uab.edu/dsc



AUBURN UNIVERSITY

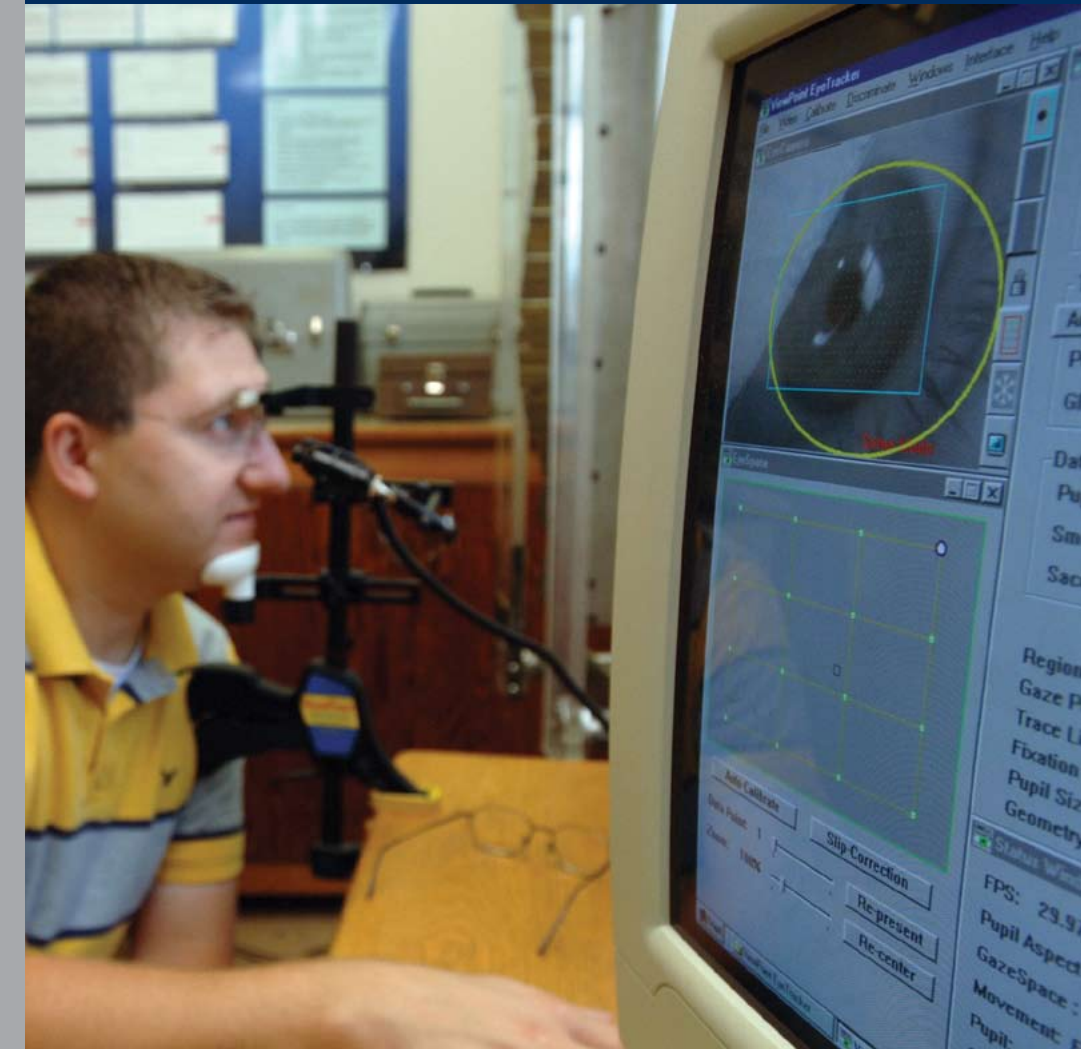
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INDUSTRIAL AND SYSTEMS ENGINEERING

Occupational Safety and Ergonomics Injury Prevention



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Occupational Safety and Ergonomics Injury Prevention



The Department of Industrial and Systems Engineering in the Samuel Ginn College of Engineering provides occupational safety and ergonomics (OS&E) and injury prevention (IP) educational opportunities at the graduate level through degree programs, research, continuing education, and outreach.

- Full tuition and fellowships for U.S. students (or permanent residents)
- Outreach courses offered by DVD and Internet (streaming video)
- Interdisciplinary interaction through field trips, shared courses, and seminars

The mission of the OS&E/IP program is to provide the occupational safety and health profession with interdisciplinary trained graduate level professionals, with

strong backgrounds in engineering or physical sciences, who are capable of conducting research in occupational safety, and identifying, analyzing and controlling occupational safety hazards through engineering methodologies and design.

Master of Industrial and Systems Engineering (30 credit hours)

Non-thesis professional degree program in occupational safety and ergonomics. Dual M.I.S.E. and M.B.A. program available in conjunction with the College of Business (54 credit hours).

Master of Science (30 credit hours)

Traditional research thesis-based degree with a focus on OS&E/IP. The student, along with an advisor, develops an individualized plan of study that will prepare the student to conduct thesis research.

Doctor of Philosophy (60 credit hours)

The Ph.D. student, along with an advisor, develops an individualized plan of study for obtaining the academic background to conduct dissertation research in OS&E/IP. It is recommended, but not necessary, that a student obtain a master's degree before enrolling in the doctoral program.

Auburn OS&E/IP at a Glance

- Offering formal undergraduate instruction in OS&E since the 1950s
- Graduate OS&E program started in the 1960s
- IP program initiated in 2001
- OS&E/IP program provides comprehensive coverage of topics recommended in the National Institute for Occupational Safety and Health (NIOSH) Guidelines for Academic Programs in Occupational Safety
- As of 2006, one of 16 education and research centers sponsored by NIOSH
- Recent graduates have been employed by Delta Airlines, Honda, General Motors, Hyundai, USPS, Home Depot, UPS, Penn State, Mississippi State, Northrop Grumman, John Deere, and NASA
- More than \$500,000 in annual research expenditures (2005-2006)

Program Directors



Rob Thomas
Ph.D., P.E., C.P.E.

OS&E program director



Jerry Davis
Ph.D., C.P.E., C.S.P.

IP program director

Recent Publications

Results of recent work completed by OS&E/IP students and faculty have been published in journals such as

Human Factors

Ergonomics

Journal of Safety Research

Applied Ergonomics

IIE Transactions

International Journal of Industrial Ergonomics

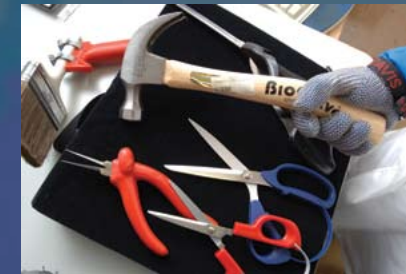
American Industrial Hygiene Association Journal

Applied Ergonomics

Journal of Safety, Health, and Environmental Research

Research Areas

- Warning signs, text, and information displays
- Whole body vibration associated with heavy trucks
- Postural stability and balance on elevated and/or sloped surfaces
- Patient handling in restricted areas
- Human performance in evacuation modeling
- Safety training techniques for the Hispanic workforce
- Behavioral-based safety
- Integration of engineering and the Public Health Model



OS&E/IP Library and Laboratories

- The library offers research and study space for graduate students and makes hundreds of hard copy publications available for research, including journals, textbooks, professional magazines, regulations and standards, data sets, and research reports
- The Human Factors Lab provides state-of-the-art equipment such as an eye tracking system for hands-on learning and experiments. The "Elemental Driving Simulator" can be used to determine whether an individual possesses sufficient capability to drive safely. A "Photomodeler" system can be used to construct 3-D computer models from digital photographs of real-world objects
- The Biomechanics Lab uses a "Peak Motus" system to perform biomechanical analysis that relates specific body movements to physical stresses in humans. The "Lumbar Motion Monitor" measures and records the position, velocity and acceleration of the back. The "Balance Master" system assesses functional limitations in balance control. Other lab equipment is used in the areas of foot ground reaction force, and nerve and muscle activity (electromyography) data acquisition and analysis
- Cooperative arrangements with Auburn's Department of Health and Human Performance provide access to physiology, biomechanics, motor behavior, thermal imaging, environmental and cognitive research laboratories