

Ergonomics Short Course

December 16-17, 2013

&

Human Factors Short Course

December 18-19, 2013

Shelby Center for
Engineering Technology
Auburn University
Auburn, AL



THE DEEP SOUTH CENTER
for Occupational Health & Safety

The University of Alabama at Birmingham & Auburn University



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Workshops in Ergonomics & Human Factors

We have developed two workshops to take your safety and ergonomic programs to the next level. One workshop will provide you with useful and practical tools to prevent work-related injuries using ergonomic principals. A second workshop will give you the background and knowledge to apply human factors engineering concepts for safer processes.

Who should attend: Safety and Health Professionals, Engineers, Managers and Supervisors, Risk and Loss Control Personnel, Health Care Professionals, Occupational Health Practitioners, Industrial Hygienists, Manufacturing/Design Engineers, Union Representatives, Ergonomics Team Leaders, Corporate Medical Staff, Human Resource Professionals - **anyone with a role in workplace health and safety.**

Ergonomics Short Course, December 16-17, 2013

The workshop will include presentations and exercises, so that upon completion of this workshop, you should be able to:

- Recognize and understand the causes of work-related musculoskeletal disorders (MSDs)
- Understand worker capabilities and limitations and how to design jobs accordingly
- Apply contemporary ergonomic job analysis techniques to identify MSD risk through hands-on demonstrations
- Use ergonomics principles to improve the design of workstations (from the office to the plant floor)
- Understand the ergonomist's role in returning injured workers to the job more safely and quickly
- Apply principles of successful ergonomics programs to reduce worker compensations costs and increase productivity and profitability

Topics include: Costs of MSDs, MSDs Risk Factors and Anatomy, Anthropometric Exercises, Work Physiology Tools and Methods, Causes and Controls of Low Back Pain, Manual Materials Handling, Design of Push and Pulling Tasks, Effective Job Design Strategies to Control MSDs.

Human Factor Short Course, December 18-19, 2013

This workshop has been designed so that upon completion of this course, participants should:

- Gain an understanding of how humans receive and process information and how this can sometimes result in system errors.
- Have an understanding of basic human information processing capabilities and limitations.
- Understand basic control/display relationships, user expectations, and compatibility between control operation and desired system output.
- Understand the implications of human factors for workplace design.
- Understand the impact of various environments on human perceptions and performance.
- Be able to apply human factors concepts in the evaluation of existing systems and in the design of new systems.

Topics include: Information Input and Processing, Display of Information (Text, Graphics, Symbols and Codes), Usability and System Evaluation, Controls and Data Entry, Human Factors in System Design, Noise and Motion.

Course Faculty / Planning Committee

Based on the expressed needs of practitioners in our region, we have brought together an experienced, dynamic faculty to give you an **opportunity to learn from the best**. These courses will be taught by the distinguished, award-winning faculty from Auburn University's Samuel Ginn College of Engineering.

Sean Gallagher, PhD, CPE - Dr. Gallagher is an Associate Professor in the Industrial and Systems Engineering Department at Auburn University. Prior to joining Auburn, Dr. Gallagher spent 27 years performing ergonomics research at the Bureau of Mines and then as a Senior Research Scientist at The National Institute for Occupational Safety and Health (NIOSH). Dr. Gallagher was recently awarded the 2013 International Ergonomics Association/Liberty Mutual Medal in Occupational Safety and Ergonomics.

Rich Sesek, PhD, CSP, CPE - Dr. Sesek is an Assistant Professor in the Industrial and Systems Engineering Department at Auburn University. Prior to joining Auburn, Dr. Sesek spent ten years as a faculty member at the University of Utah. Rich focuses his research on human factors and the design of methods to more accurately predict low back injuries. Dr. Sesek was recently recognized by the American Society of Safety Engineers (ASSE) as their 2013 Outstanding Educator, and also awarded the Board of Certified Safety Professionals (BCSP) Award of Excellence for 2013.

Robert E. Thomas, PhD, PE, CPE - Dr. Thomas is an Emeritus Professor in the Industrial and Systems Engineering Department at Auburn University, and a registered professional engineer in the state of Texas. He joined the Auburn faculty in 1988. Prior to coming to Auburn he worked as an industrial engineer, in military equipment design and procurement, and in ergonomic and industrial engineering consulting. He earned his undergraduate Industrial Engineering degree from Georgia Tech, and his masters and PhD from Texas A&M University. Dr. Thomas was recently honored for his career contributions to the field of ergonomics by his recognition as a Fellow in the American Industrial Hygiene Association (AIHA).

Ruoliang (Rio) Tang, PhD - Dr. Tang recently graduated from the Auburn University Department of Industrial and Systems Engineering, where he focused his studies and research on ergonomics issues associated with the lower back. His cutting edge doctoral research utilizes MRI to model low back stresses. Dr. Tang earned a Graduate Certificate in Occupational Safety and Ergonomics from Auburn University, and is currently pursuing professional certification in safety and ergonomics. Both his BS and MS were earned (Industrial Engineering/Management) from Beijing Institute of Technology, in China.

Jerry Davis, PhD, CSP, CPE - Dr. Davis is an Associate Professor in the Industrial and Systems Engineering Department at Auburn University. A professional member of ASSE, his teaching responsibilities include safety engineering, ergonomics, and work measurement courses, in both the undergraduate and graduate curricula. He is board certified in safety and ergonomics and pursues an active research agenda associated with these topics. Jerry is a retired United States Naval Officer, having served over twenty years in the nuclear submarine fleet.

Elizabeth H. Maples, PhD - Dr. Maples is the Deputy Director of the Deep South Center for Occupational Health and Safety and an Assistant Professor in the University of Alabama at Birmingham, School of Public Health. A professional member of ASSE, her teaching responsibilities include interdisciplinary field studies and worksite evaluations.

Course Location

The workshops will be held at the Shelby Center for Engineering Technology, 345 W. Magnolia Avenue, Auburn University, AL. The labs and classrooms at the Shelby Center are state-of-the-art. You will learn from the best faculty in the best setting! Parking will be available on campus for \$5.00 per day. Internet access will be available.

A listing of nearby hotels will be provide in your confirmation letter.

Registration Information

Tuition fees for the workshops are \$450/course or you may attend both workshops for \$775. Registration fees must be received in advance. **Members of AL ASSE receive discounted registration fees of \$425/course or both workshops for \$750.**

Ergonomics Short Course ~ \$450 Human Factors Short Course ~ \$450

Attend both programs for only ~ \$775

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Cancellation Policy: If the workshop is cancelled, the Deep South Center for OH&S cannot be held responsible for travel expenses. Refund requests must be made in writing 2 weeks prior to course. A 20% processing fee will be deducted.

Mail to: Deep South Center for OH & S
University of Alabama at Birmingham
1720 2nd Avenue South, RPHB 520A
Birmingham, AL 35294-0022



REGISTER BY PHONE: 205-934-7178, **FAX:** 205-975-7179 or **EMAIL:** dsc@uab.edu

www.uab.edu/dsc

The Sponsor

The Deep South Center for OH&S is one of 18 **Education and Research Centers** sponsored by the **National Institute for Occupational Safety & Health**. The Deep South Center for OH&S works with industry, business, non-profits and academia to promote healthy and safe working conditions throughout the southeast. Academic and research programs are offered through the University of Alabama at Birmingham and Auburn University.

Our Co-Sponsor, the **AL Chapter of the ASSE** recently celebrated **75 years** of being an active chapter of the ASSE. Join this dynamic group of safety and health professionals and problem solvers! You will see your knowledge and opportunities soar. Contact our vice-president, Randy Easterling, CSP, CIH for membership information: reasterling@ccs.ua.edu.