

Deep South Center for  
Occupational Health & Safety

Summary Annual Report  
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## **Deep South Center for Occupational Health & Safety Annual Summary Report**

The Deep South Center is a consortium of programs at two of the major universities in Alabama: the University of Alabama at Birmingham (UAB), and Auburn University (AU). An academic program in Agricultural Safety and Health at the University of Alabama will join the Center in the 2008-2009 budget year. The Center's Administrative Core is located at the UAB School of Public Health. The core academic programs of the Center include Industrial Hygiene (IH), directed by Dr. Claudiu Lungu, also at the UAB School of Public Health, Occupational Health Nursing (OHN), directed by Dr. Kathleen Brown, at the UAB School of Nursing, and Occupational Safety and Ergonomics (OSE), directed by Dr. Robert Thomas, at the AU Samuel Ginn College of Engineering. The Center also incorporates two allied safety and health programs: the Hazardous Substance Academic Training (HSAT) program that is associated with the IH program, also directed by Dr. Lungu, and the Occupational Injury Prevention Research Training (OIPRT) program that is associated with the OSE program, directed by Dr. Jerry Davis. The Continuing Education (CE) and Hazardous Substance Training (HST) Programs, directed by Dr. Elizabeth Maples, are located in the UAB School of Public Health. A NORA research training program, directed by Dr. Brown, is being conducted through OHN.

The Administrative Core includes Dr. Riedar K. Oestenstad, the Center Director, Dr. Maples, the Deputy Director, support staff, an Executive Committee, and an external Board of Advisors. It incorporates Outreach, directed by Dr. Maples, Diversity, directed by Dr. Melissa Norman, Pilot Project Research Training (PPRT), directed by Dr. Ed Postlethwaite, and Interdisciplinary Coordination. The Executive Committee includes the Center Director, Deputy Director and all of the Program Directors. The committee meets at least quarterly to review progress in achieving program goals, student progress, plan short-term Center activities, and conduct long-term strategic planning. The Board of Advisors includes representatives from all of the occupational safety and health disciplines, government agencies and labor unions, from all of the states in our region.

The Center submitted an application to fund an Agricultural Safety and Health program at the University of Alabama at Tuscaloosa to incorporate occupational health and safety into a curriculum for professionals who will work with farmers, agribusiness, and in rural communities. The application was approved and the program admitted its first students in the fall semester of 2008.

Interdisciplinary activities continue to be an important activity within the Center, and all of the Center's Program Directors are involved in these activities. The Center's Board of Advisors has an interdisciplinary composition with representatives from all of the occupational safety and health core disciplines and individuals from industry, academia, government agencies and labor. The primary methods of achieving interdisciplinary interaction among students in Center programs include courses common to all academic programs, workplace evaluation field trips, seminars, research projects, and clinical activities. Interdisciplinary experiences are also available through the CE Program. The highlight interdisciplinary courses are the two worksite evaluation courses: ENH 680 - Interdisciplinary Field Studies that is offered every fall semester, and ENH 681 – Interdisciplinary Worksite Evaluations that is offered every spring semester. In these courses students are required to work in interdisciplinary teams to evaluate a real-world safety and health problem and propose methods to reduce or eliminate the hazards.

The Diversity Program has created a database of Historically Black College and Universities (HBCUs) to be used to invite college and university faculty and students to the NIOSH Education & Research Centers Regional Seminar and Research Symposium, inform them about the Pilot Project research funding opportunities, and invite students to the Center's Undergraduate Summer Institute in Occupational and Environmental Safety and Health. Faculty and staff participate in graduate school fairs and present seminars at a number of HBCUs across the region.

A significant Outreach effort was the development and presentation of the Summer Institute in Occupational and Environmental Safety and Health for undergraduate students. Eleven students from eight institutions attended the 2008 Institute. They came from diverse undergraduate backgrounds such as biology, chemistry, industrial hygiene, occupational safety and health technology, health science and pre-med. Over 50% were from minority populations (African-American and Hispanic). The students committed to attending four days of sessions on a variety of topics and all showed an eagerness to learn and to participate in activities. Sessions were led by safety and health practitioners, graduate students and faculty. Speakers were from industry, academia, government agencies and non-profits.

The Continuing Education and Hazardous Substances Programs offered 58 courses in 2007-2008. in AL, TN, LA and FL that were attended by 1098 participants. In April 2008, after two years of planning, the Deep South ERC offered a joint NIOSH ERC Regional Symposium in Pensacola Beach, FL. This was a collaborative effort with the ERCs at the University of North Carolina and University of South Florida. Topics, length of program, location were determined through needs assessment activities of the three NIOSH ERCs. The 2 day program drew practitioners and researchers from across the southeast. The 2009 NIOSH ERCs Regional Symposium will be hosted by the South Florida ERC in March of 2009.

The Pilot Project Program funded four applications in the 2007-2008 budget year. Award recipients were: Nathan Fethke, Ph.D. AEP, Assistant Professor of Occupational Ergonomics, Department of Environmental Health, College of Public Health, East Tennessee State University, Johnson City, TN - Exposure variability among workers performing non-cyclic work; Kevin Robinson, MSPH, Ph.D. Associate Professor, Department of Civil & Environmental Engineering, University of Tennessee, Knoxville, TN - Occupational exposure from clandestine methamphetamine production; Shaun A. Crawford, MPH, DrPH student in Industrial hygiene, (mentor: Claudiu T. Lungu, Ph.D.) Department of Environmental Health Sciences, School of Public Health, UAB - Characterizing and modeling Styrene emissions from thermoset composite materials; and Gwendolyn N. Hudson, MPH; Ph.D. student in Environmental Management and Policy, (mentor, Steven Becker, Ph.D.) Department of Environmental Health Sciences, School of Public Health, UAB - Population monitoring in radiological emergencies: Views of public health professionals.

During the 2007-2008 project year the OHN program had 6 enrolled PhD students and 6 master's students. A new initiative during this project period was the development of a Doctor of Nursing Practice (DNP) degree program that was approved by the Alabama Commission on Higher Education in December 2007. The OHN faculty received NORA funding for their Managed Preventive Care for Employee Health clinical trial beginning 2007. PhD students gain further research training experiences in OHN research projects and in interdisciplinary ERC activities that focus on NORA and the AAOHN priorities.

The OS&E and OIPRT Programs relocated into new advanced state of the art teaching and research facilities of the Shelby Center for Engineering Technology in December 2007. A search was approved by the university, and initiated for a third full-time faculty member with

expertise in occupational safety-ergonomics and injury prevention. The Auburn Industrial and Systems Engineering (ISE) Department Graduate Program (of which the OSE and OIPRT Programs are key components) was ranked 15th nationwide among public institutions by U.S. News and World Reports, and is the highest ranked graduate program on the Auburn University campus. Student levels remained strong in the OS&E program through the year with five on campus doctoral students and eight masters students and 12 outreach program students (2 doctoral and 10 masters), and six masters and one doctoral student were graduated from the program. Enrollment levels in the OIPRT Program remained strong with three fulltime on-campus students and one part-time off campus trainee, and one student graduated from the program in 2008.

In the fall semester of 2007 the Environmental Health Sciences Department began offering a PhD degree with emphases in Occupational Health and Safety that is applicable to IH students. This curriculum is focused on research and contains advanced courses in various topics, seminars and journal clubs. There are already two students enrolled in this program conducting active research in exposure assessment modeling and respiratory protection. IH and HSAT students presented three papers in the Student Poster Session at the AIHCe in Minneapolis, MN. Jo Anne Balanay's paper titled: *Comparison of Adsorption Characteristics between Granular Activated Carbon (GAC) and Activated Carbon Fibers (ACF) for Toluene* received an award for "Best in Session". There were four masters students and one doctoral student enrolled in the IH program, and three students enrolled in the HSAT program in 2007-2008.

The Deep South Center continues to be a regional resource for practicing occupational safety and health professionals, other academic institutions, government organizations, and industries in this region. Some examples of our services to these organizations are listed below:

- Almost 70% of the graduates from the Center academic programs continue to practice in our region.
- The CE /HST programs annually offers a significant number of discipline-specific and interdisciplinary courses throughout the region, and also presents in-house training courses for regional industries. The program collaborates with a number of governmental agencies and professional organizations to co-sponsor additional programs.
- The Center provides materials to help other educational programs teach or promote the field of occupational safety and health, including providing faculty lecturers in courses or seminars, and materials for undergraduate career days.
- The Center provides industry with materials and videotapes to help develop in-house training courses. We have also presented lectures at regional workplaces, provided assistance to state and local health departments in developing workshops on occupational health and safety.
- Center faculty and students conduct research projects to assist regional industries with occupational health and safety problems.
- Some ERC courses that are taught in a video- or web-based format are also available to practicing OHS professionals and other professional disciplines.
- The Center interacts with various professional organizations in the region by providing speakers for meetings and assisting in planning of professional activities.