Interprofessional Approach to Developing a Diverse Workforce Ready to Address Emerging Technologies in Occupational Health and Safety

K. Brisolara, ScD, MSPH, S. Cormier, PhD, M. Reams, PhD

With the establishment of a collaborative centered on emerging technologies in occupational health and safety, Louisiana State University Health Sciences Center – New Orleans (LSUHSC-NO), Louisiana State University at Baton Rouge (LSU-BR) and the University of Tennessee Health Sciences Center (UTHSC) along with Rhodes College has developed an innovative, interprofessional approach to workforce development.

Overview

Core Strategy

- Provide training in the area of emerging technologies in occupational health and safety through interprofessional, field-based instruction in the form of workshops and one additional graduate course.
- Utilizing a watershed approach, further augment workforce diversity
- Boost the dissemination of this training in emerging technologies through the participation of non-traditional students (such as those from Business and Law) in the workshops and one graduate level for-credit course.

Team

LSU Health

- Kari Brisolara, MSPH, ScD
  Program Director/Principal Investigator
  - Adrienne Katner, DEnv
  - Dan Harrington, ScD, CIH
- Erin Kaplan, PhD

Rhodes College

- Stephanie Cormier, PhD
  UTHSC Project Director
- Toney Oyanna, PhD

LSU Cost & Environment

- Margaret Reams, PhD
  LSU-BR Project Director
- Slawom Lomnicki, PhD
- Blake Hudson, PhD
- Jon Irving

Workshops

E-waste and Electronics Industry Workshop (Dr. Lomnicki, LSU-BR)
Summer 2018
- Course description: This workshop will delineate the potential exposures associated with the electronics industry with particular focus on heavy metals. By the end of the workshop, participants will be able to assess and quantify exposures specific to the electronics industry in addition to demonstrating knowledge of the emerging issues with the industry and certification programs.

Bioremediation Workshop (Dr. Katner, LSUHSC-NO)
Fall 2018
- Course description: This 3-day workshop will introduce participants to basic principles of bioremediation, the knowledge of which is essential to managing a bioremediation site. Lectures will be reinforced through a field trip to an active bioremediation site. By the end of the workshop, students will be able to select optimal bioremediation approaches for specific chemicals under different environmental conditions.

Economics of Emerging Technologies (Dr. Kaplan, Rhodes College)
Summer 2019
- Course description: This workshop will apply basic microeconomic theory to topics concerning occupational health and the environment. This workshop analyzes the operation (and failure) of markets for resources and environmental goods, and the policies governments use to intervene in such markets.

Law and Technological Innovation (Dr. Hudson, LSU-BR)
Fall 2019
- Course description: This workshop will facilitate the analysis of environmental law and technological innovation through case studies that encapsulate the most salient and prominent aspects of the subject.

GIS/GPS Workshop I: Basics in GIS and GPS for Emerging Occupational Health Practice (Dr. Oyanna, UTHSC)
Spring 2020
- Course description: Workshop I will provide basic concepts in GIS and GPS for Health applications. This workshop will target beginners and participants without basic knowledge and skills in GIS.

E C O L E

Emerging Technologies in Occupational Health and the Environment

Advisory Board

- Membership:
  - Sandra Howell, Memphis Bioworks
  - Samuel Windom, Marathon Petroleum
  - Edward Flynn, Louisiana Chemical Association

Interprofessional

- With a focus on interprofessional education (IPE) methods, teams of students can learn about, from and with each other to broaden students’ perspectives on occupational health and develop novel solutions to emerging technology issues.
- A new Center for Interprofessional Education and Practice established at LSUHSC-NO will serve to evaluate the program from an interprofessional perspective including certification as officially recognized IPE activities to be reflected on student transcripts.

New Interprofessional Master’s Course: Interprofessional Occupational Health

- The course will concentrate on the roles various professions play in the field of occupational health and how they may better work together to achieve interventions and solutions that are safe, timely, efficient, effective, and equitable.
- Topics will include:
  - Characteristics of Effective Teams and Teamwork.
  - Interprofessional Cultural Competence (IDea).
  - Occupational Health Team: Roles and Responsibilities.