

## **Exploring the ACS Guidelines and Expectations for the First Two Years of Chemistry**

**Monday, July 28, 2008**

**8:00-10:50 am**

**Abstract:** This interactive symposium will explore the questions that have arisen about the first two years of chemistry in response to the revisions to the ACS Guidelines for Bachelor's Programs and the proposed revisions to the ACS Guidelines for Chemistry Programs in Two-Year Colleges. What are the expectations for general chemistry? What should the foundation laboratory experience entail? What skills should be developed during the first two years of the chemistry curriculum? The importance of these questions with respect to student transfer will also be discussed.

**8:00 a.m. Opening remarks**

**8:10 a.m. General Chemistry Experiences at Two-Year and Four-Year Programs**

***John Clevenger and Will Polik***

A goal of the General Chemistry course is to prepare students for the science and engineering professions. This course varies at different institutions depending on mission, goals, programs, student characteristics, and enrollment demand. The current and proposed two-year and the new four-year ACS Guidelines regarding this course will be presented. Participants in this session will explore the course content, laboratory skills, and other strategies appropriate for facilitating student transfer among two-year and four-year programs.

**8:55 a.m. Foundation Chemistry Laboratory Experiences**

***Doug Sawyer and Cynthia Larive***

The new ACS guidelines require students to have laboratory experience in four of the five "foundation" sub-disciplines: analytical, biochemistry, inorganic, organic and physical chemistry. The focus of this session is on the foundation laboratory. Participants in this session will explore the skills that chemistry students should acquire through their foundation laboratory experiences. The concepts reinforced by these skills will be discussed and the required instrumentation/resources outlined. Participants will also outline a set of minimum hands-on laboratory activities for different foundation areas. Participants will also be asked to consider the role that simulated laboratory activities should play in the foundation-level laboratory experience.

**9:25 a.m. Break**

**9:35 a.m. Discussion (Foundation Chemistry Laboratory Experiences)**

**10:00 a.m. Integrating and Assessing Student Skills**

***Joel Shulman and Uni Suskind***

Formal course work in chemistry provides students with an education in chemical concepts as well as training in laboratory practices. The newly revised ACS guidelines include the development of additional skills that will allow students to become more successful in their careers. These skills include laboratory safety, the use of chemical literature, written and oral communication, team building, and ethics. Ideas will be explored on how these additional skills can be integrated and evaluated within the context of the curriculum – not only in a four-year college chemistry program but also which skills can be appropriately integrated and evaluated in a two-year college chemistry transfer program. Participants will consider how each student skill can be incorporated into two- and four-year college curricula and what evaluation criteria can be used to assess each skill.

**10:45 a.m. Closing remarks**