



75 Years of the Committee on Professional Training: It's Not Just About Approval

Dr. Cynthia K. Larive, President

Time: Sunday March 27, 2011

Location: Disney's Grand Californian Hotel

1:30 p.m. Welcoming Remarks
Dr. Nancy Jackson, ACS President

1:45 p.m. History of the ACS CPT Guidelines and Approval Process
Dr. Sally Chapman, Barnard College
Dr. William Polik, Hope College

The Guidelines and Evaluation Procedures for Bachelor's Degree programs have evolved considerably over time. Undergraduate chemical education continues to change, in content, in focus, in the tools we use, and the populations of students we teach. The Committee on Professional Training does not initiate curricular and pedagogical innovation, but it has endeavored to play a role in their dissemination, while helping departments maintain the highest standards for their students.

2:15 p.m. Mandates from the ACS, the Profession, and Chemistry: Excellence and Rigor
Dr. Carlos Gutierrez, California State University, Los Angeles

In 1936, the ACS mandated the establishment of the Committee on Professional Training, and through it the creation of an activity for the approval of undergraduate professional programs in chemistry. An explicit goal of this mandate is ... "to promote and assist in the development of high standards of excellence in ... chemical education". Implicit in the mandate is the involvement of rigor in this quest for excellence: chemistry demands intellectual honesty. Excellence and rigor are contextual; each chemistry program must be cognizant of its strengths and needs as it intentionally and purposefully designs a curriculum to deliver both the disciplinary content and opportunities for developing the critical faculties associated with student excellence. Yet excellent students must be successful and competitive not only within the local context of the program, but also on national and international levels as program graduates seek either [globalized] employment or positions in graduate schools.

**2:45 p.m. Chemistry's Changing Face: Increased Diversity Correlates with Excellence
Dr. Rigoberto Hernandez, Georgia Institute of Technology**

The recent NRC Assessment of Doctoral Programs contains 20 quantitative measures of academic quality. Five of these measures assess program diversity. The fact that diversity is a metric to be measured is no surprise to the Committee on Professional Training (CPT). As it celebrates its 75th year of assessing academic programs, CPT should take pride in the role it has taken in advocating for diversity equity at all levels of academe. A parallel effort, the Open Chemistry Collaborative in Diversity Equity (OXIDE), will work directly with department heads and chairs at doctoral-granting universities to create programs that will help flatten diversity inequities. I will report on the outcomes from the first National Diversity Equity Workshop. This initial OXIDE effort combined the intellectual capacity of chemistry departmental representatives and leading social scientists. Expected outcomes include new programs created within departments to improve climate and subsequent success for its students and faculty.

3:15 p.m. Intermission

**3:25 p.m. Interdisciplinary Nature of Chemistry
Dr. Peter Dervan, California Institute of Technology**

It is interesting to reflect on the changes that have occurred in the field of chemistry over the past seven decades. In the 1950's spectroscopic and analytical methods revolutionized the pace of discovery in the core discipline, especially synthetic chemistry and, in addition, shaped mechanistic thinking underpinning bond-making and bond-breaking processes. Subsequently, chemistry and biochemistry merged, ending a separation imposed in the last century. The scale of chemistry in time and space evolved. Dynamics at femtosecond time resolution and structure elucidation of macromolecular machines to single molecule analysis became routine. Another revolution has become self-evident. Chemistry has become important at the interface with other disciplines: biology, physics, materials, and engineering. Chemistry is pivotal to areas underpinning the well-being of society such as global health, renewable energy, the environment, and the sustainability of the planet. Because it is central, will chemistry be merged into other fields?

**3:55 p.m. A Global Perspective on the Future of Chemistry
Dr. Joseph Francisco, Purdue University**

The solution to a number of global issues such as clean water, environmental degradation, and global climate change requires applying chemical knowledge across multiple disciplines. Addressing these challenges will require skilled scientists working together on an international basis. With the globalization of industries, there is a demand for a more internationally oriented work force with an increasing number of jobs linked to international trade. Educating today's chemists to work in tomorrow's world requires greater independent knowledge, skills, and global competence. The way in which chemistry "is done" will increasingly be characterized by virtual, telecommunicated, and placed-based transnational scientific networks.

Informed by findings and suggested pathways forward from a spring 2010 ACS Presidential Symposium on Educating Chemists with the Skills Needed to Compete in the New Global Economy, this presentation will address what we can do as chemical educators to better prepare tomorrow's chemists for competition in the global marketplace.

4:25 p.m. CPT: The Group You Love to Hate
Dr. Jeanne Pemberton, University of Arizona

Throughout the duration of its 75-year history, CPT has managed the exceedingly difficult charge of overseeing an approval program that can be fairly and uniformly applied to four-year chemistry degree programs at institutions of widely varying size, scope, and mission. Administering this charge requires the delicate balancing act of maintaining appropriately high standards for ACS approval while keeping approval within reach of the full range and scope of these four-year institutions. Given the diversity of educational challenges faced by institutions of different size and mission, and the equally diverse range of professional opinions that can be strongly held about educational issues, CPT is often in the position of pursuing change and formulating policy in support of this charge that can polarize various cohorts of the chemistry community. This presentation will consider exemplars from the past that illustrate the challenges for CPT inherent in this role and that sometimes make CPT “the group you love to hate.”

5:00 - 6:30 Reception
p.m.

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