Overview

Frontiers in Chemical Engineering Education is an initiative whose aim is to develop a new undergraduate chemical engineering curriculum that

- builds on our unique position in engineering
- attracts the best and brightest students
- uses the best available practices for instruction
- contains a good supply of examples, contributed from the wide community of chemical engineering
- prepares graduates for both traditional and developing industries

The Frontiers in Chemical Engineering Education Workshop was held as a Special Event at the 2005 AIChE Annual Meeting at the Hyatt Regency in Cincinnati OH, on 2005 October 30. The co-chairs were

- Robert Armstrong, Head, Department of Chemical Engineering, MIT
- Michael Thien, Vice-President of Process R&D, Merck Research Laboratories

Dr. Thien, unfortunately, could not attend due to illness.

Workshop participants were

Academic	Industrial
Alejandra Alarcon-Garcia (UDLAP-Mexico)	Cammy Kao* (Stanford)
Victor Alva (BP Refining)	Raphael Katzen (consultant)
Hamid Arastoopour (IIT)	Ralph Kummler (Wayne State)
Robert Armstrong* (MIT)	Ilsoon Lee (Michigan State)
Eric Boonstra (Bayer)	Tom Marlin (McMaster)
Richard Braatz* (Illinois, Urbana-Champaign)	Alon McCormick (Minnesota)
Rocio Chavela-Guerra (UDLAP-Mexico)	Ralph Nelson (Particle Technology)
Dingjiang Chen (Tsinghua)	Bill Olbricht* (Cornell)
Guohua Chen (MIT)	Ralph Pike (Louisiana State)
Cawas Cooper (Air Products)	Tim Raymond (Bucknell)
John Corn (Ohio State)	Janine Reimann (Genencor Int)
Tom Edgar* (Texas)	Caroline Reynolds (CR Solutions)
Scott Fogler* (Michigan)	Alberto Striolo (Oklahoma)
Jean-Francois Hamel (MIT)	Jennifer VanAntwerp (Calvin College)
Jim Henry (Tennessee, Chattanooga)	Jeremy VanAntwerp (Calvin College)
Colin Howat (Kansas)	Andrew Zydney (Pennsylvania State)

* Organizing Committee

The meeting Facilitator was Jeannette Gerzon of Belmont MA; additional planning and support were provided by Barry Johnston, Melanie Miller, and Liz Webb of MIT.

The Workshop was intended as a progress report concerning a curriculum based on three organizing principles:

- understanding of molecular scale processes
- analysis over multiple scales

- analysis and synthesis of systems

These principles were articulated in the 2003 series of Workshops (described at web.mit.edu/che-curriculum). The Frontiers initiative has been defined by the participation of the chemical engineering community. As in previous workshops, participants contributed their ideas to the new curriculum.

The Proceedings of the Cincinnati Workshop comprise

- Introduction by Armstrong
- Session 1: Initial Questions about the Curriculum
- Session 2: Discussion of Curriculum Topics
- Closing Summary by Armstrong