

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 Workshop on Industrial Vision and Needs was held at the Crowne Plaza Atlanta Perimeter Northwest, in Atlanta GA, during 2005 June 8-10. The co-chairs were

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

Workshop participants were

Academic	Industrial
Robert Armstrong* (MIT)	Monty Alger (General Electric)
Clark Colton (MIT)	Thomas Blacklock (Novartis)
Richard Dickinson (Florida)	Gary Broberg (Practical Applications)
Pat Doyle (MIT)	Manny Cano (Shell)
Michael Duncan (Cornell)	John Church (General Mills)
Tom Edgar* (Texas)	Eliana Clark (Genzyme)
John Ekerdt (Texas)	Hunter Ficke (Dupont)
Erik Fernandez (Virginia)	William Grieco (Rohm and Haas)
Christos Georgakis (Tufts)	George Harriott (Air Products)
Bill Green (MIT)	James Haverland (General Motors)
Yinlun Huang (Wayne State)	Richard Helling (Dow)
Duane Johnson (Alabama)	Lloyd Johnston (Alkermes)
Cammy Kao (Stanford)	Beth Junker (Merck)
David Kofke (SUNY Buffalo)	Mike Thien* (Merck)
Helen Lou (Lamar)	Stephen Yu (Schering-Plough)
Michael Malone (Massachusetts)	
Lealon Martin (RPI)	
Greg McRae (MIT)	
Bill Olbricht* (Cornell)	
Bridget Rogers (Vanderbilt)	
Ronald Rousseau* (Georgia Tech)	
Greg Rutledge (MIT)	
Mike Solomon (Michigan)	
Bernhardt Trout (MIT)	
Phil Westmoreland (Massachusetts)	
Ted Wiesner (Texas Tech)	

* Organizing Committee

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

The Workshop was intended to assess the needs of a wide range of industry, and to test against these needs a curriculum based on three organizing principles:

- molecular processes
- multiscale analysis
- systems analysis and synthesis

These principles were articulated in the 2003 series of Workshops (described at web.mit.edu/che-curriculum).

The Proceedings of the Atlanta Workshop comprise

- Introduction by Armstrong and Thien (2 files)
- Session 1: Speculation about 2015 (2 files)
- Session 2: Advice from Industry and Summary Report (2 files)
- Session 3: Status of the Academic Theme Areas (1 file)
- Session 4: Keeping Industry Involved (1 file)
- Session 5: Curriculum Structure Models (1 file)
- Session 6: Focus on Skills and Attributes (1 file)
- Closing and Next Steps