WHAT ATTRIBUTES AND SKILLS SHOULD CHARACTERIZE THE B.S. ChE?

**ChE Skills**
- Apply fundamentals
- Identify components
- Identify problem
- Bridge disciplines
- Order of magnitude / scale analysis

**Personal Attributes**
- Courage
- Imagination
- Ambition
- Comfortable with ambiguous, open-ended problems
- Curiosity
- Adaptability
- Tenacity
- Ability to communicate
- Holistic
- Concrete / specific

**Chemical Engineering Dept Spring Teaching Retreat**

2004 April 29

University of Utah
HOW SHOULD WE ORGANIZE / CLASSIFY THE SUBJECT MATTER OF ChE?  Team 2

Attributes of Classification:
• support ChE skills and attributes
• inspire bright students to join
• clearly present complexity
• integrate parallel concepts
• adaptable to future development

Classifications:

continuum  systems
meso        synthesis
molecular   analysis
quantum     physical properties

simulation / experimentation / communication / management
HOW SHOULD WE ARRANGE THE SUBJECT MATTER FOR PRESENTATION OVER FOUR YEARS? Team 2

- **Year 1**: conservation principles
- **Year 2**: equilibrium processes
- **Year 3**: rate processes
- **Year 4**: synthesis & complex processes

**Teams (faculty, students, and industry)**
- molecular class
- meso-scale class
- continuum class
- global class
- simulation and experiment lab
- general education

**One physical classroom per year**

biology/chemistry/physics/math/social science/economics