WHAT ATTRIBUTES AND SKILLS SHOULD CHARACTERIZE THE B.S. ChE? Team 3

- Communication Skills oral and written
- Problem Solving
- •Team Work
- Practical application of theory

- •Ethics
- Safety
- Awareness of life cycle
- Quantitative
- People skills
- Diversity

Attributes
Engineering sense
Imaginative
Creative
Innovative
Ethical
Global thinking

HOW SHOULD WE ORGANIZE / CLASSIFY THE SUBJECT MATTER OF ChE? Team 3

Chemistry

Equilibrium

Dynamics

Math

Societal Skills

- Communication
- Safety
- Environment

Conservation principles







Nano, atomic, molecular level Molecular modeling

Intermediate level

- •Cellular
- Compounds
- Mixtures
- Lab-scale
- Phases

Macro/Meso level

- •Industrial scale
- Natural environment
- •Global
- Ecosystems

HOW SHOULD WE ARRANGE THE SUBJECT MATTER FOR PRESENTATION OVER FOUR YEARS? Team 3

Year 1 **CASE STUDIES**

- Simple
- Suite of problems

CONSERVATION LAWS

- •1st semester molecular scale
- •2nd semester macro-scale Equilibrium (micro)

MATH/SCIENCE SOCIETY

Contemporary issues

CONSERVATION

2004 April 29

Year 2 CASE STUDIES

More complex

CONSERVATION LAWS

- •1st semester meso-scale
- •2nd semester capstone Kinetics/transport (micro)

MOLECULAR level

- •Equilibrium
- Dynamics

SOCIETY

Chemistry - organic

Year 3

CASE STUDIES

Really complex

TRANSPORT

(macro)

Transport capstone

MACRO level

•Equilibrium – phase, reactor, separation

SOCIETY

music

Year 4 CASE STUDIES

Unbelievably complex

Lab

Design Control

PRACTICUM

SOCIETY

arts

Intermediate

Chemical Engineering Dept Spring Teaching Retreat

University of Utah