

Agenda (Revised June 20, 2007)
Workshops 1 and 2 of the Center for Sustainable Engineering (CSE)
University of Texas at Austin, Carnegie Mellon University, Arizona State University
July 15-20, 2007
at the University of Texas at Austin

CSE Executive Committee
CMU: Michael Bridges, Cliff Davidson, Chris Hendrickson, Scott Matthews
ASU: Braden Allenby, Yongsheng Chen, John Crittenden, Eric Williams
UT: David Allen, Cynthia Murphy
US EPA: Sharon Austin

SUNDAY JULY 15

6:30-8:00 Reception and Dinner

MONDAY JULY 16

Workshop 1

Sessions will be in the Commons Building at the Pickle Research Campus of the University of Texas at Austin.

- 9:00-9:30 1 Introduction and Goals: A Transition in Engineering Education. **Cliff Davidson**
- 9:30-10:00 2 Sustainable Engineering (SE): What is it? **Brad Allenby**
- 10:00-10:30 3 Panel discussion on SE: What can we do with it? **Panel members: Dave Allen, Scott Matthews, and John Crittenden (10 minutes each)**
- 10:30-11:00 Q&A/Open discussion
- 11:00-11:30 Break
- 11:30-12:00 4 How are engineering programs around the U.S. implementing SE? **Cindy Murphy**
- 12:00-12:30 Q&A/Open discussion
- 12:30-1:30 Lunch
- 1:30-2:30 5 Participants meet in breakout groups for four simultaneous interactive sessions. Each group will discuss elements of SE emerging from programs in the U.S. and will identify the best practices among those discussed. Breakout rooms and leaders:
Energy: *Room TBA.* **Cindy Murphy & Dave Allen**
Infrastructure: *Room TBA.* **Scott Matthews & TBA**
Transportation: *Room TBA.* **Cliff Davidson & TBA**
Water Resources: *Room TBA.* **John Crittenden & Yongsheng Chen**
- 2:30-3:15 6 Entire workshop re-convenes: One participant from each breakout group presents their list of best practices.
- 3:15-3:45 Break
- 3:45-4:15 7 Learning Objectives with examples from SE **Cliff Davidson, Dave Allen, & Brad Allenby**

- 4:15-5:15 **8** Participants meet in breakout groups for four simultaneous interactive sessions. Each participant makes a 3-minute presentation on his or her module to the breakout group, followed by brief discussion. Breakout rooms and leaders:
 Energy: *Room TBA*. **Cindy Murphy & Dave Allen**
 Infrastructure: *Room TBA*. **Scott Matthews & TBA**
 Transportation: *Room TBA*. **Cliff Davidson & TBA**
 Water Resources: *Room TBA*. **John Crittenden & Yongsheng Chen**
- 5:15-5:30 **9** Assign work due Tuesday morning: Write the learning objectives for your chosen module working individually or in groups of 2-3. Each individual prepares a powerpoint slide with the following: (1) name, university, department, and course title, (2) intended audience, e.g., freshmen in engineering, (3) major topic(s) covered in module, (4) learning objectives.
- 5:30-5:45 Group Photograph (rain date: Tuesday morning 8:45)
- 5:45-6:30 Free time
- 6:30-8:00 Dinner and speaker, *Culinary School*

TUESDAY JULY 17

- 9:00-10:00 **10** Entire workshop convenes. Two powerpoint slides from each breakout group, 8 slides total, will be chosen for presentation and discussion. (Participants will bring their laptops and copy their slides onto a memory stick during breakfast. Group leaders will choose the slides to be presented from each breakout group.)
- 10:00-11:00 **11** Meet in breakout groups to discuss SE challenges and opportunities in the breakout group topic: tools such as LCA, ecological footprint, CO2 calculators, and mass/energy balances will be discussed. Each breakout group selects one participant to report back to the main group.
 Energy: *Room TBA*. **Cindy Murphy & Dave Allen**
 Infrastructure: *Room TBA*. **Scott Matthews & TBA**
 Transportation: *Room TBA*. **Cliff Davidson & TBA**
 Water Resources: *Room TBA*. **John Crittenden & Yongsheng Chen**
- 11:00-11:30 Break – Selected speakers from breakout groups prepare powerpoint slide(s).
- 11:30-12:15 **12** Entire workshop re-convenes. Speaker from each breakout group makes a brief presentation on SE challenges/opportunities from the breakout group.
- 12:15-1:15 Lunch
- 1:15-1:45 **13** Sustainable Engineering and the ABET Process. **TBA**
- 1:45-2:30 **14** The CSE Electronic Library: using the site and contributing modules. **Scott Matthews**
- 2:30-3:00 **15** Wrap-up Session. **Cliff Davidson**
- 3:00-3:30 Workshop evaluations distributed to all participants.
- 3:30 Adjourn
- 3:30-5:30 Free time
- 5:30-6:30 Reception with those coming for Wednesday Special Sessions and Workshop 2
- 6:30-8:00 Dinner and speaker

WEDNESDAY JULY 18

Sessions will be in the Commons Building at the Pickle Research Campus of the University of Texas at Austin.

9:00-12:00 Special Session 1: Teaching Sustainable Engineering to High School Students and College Freshmen **David Allen & others TBA**

12:00-1:30 Lunch

2:00-5:00 Special Session 2: Life Cycle Assessment **Chris Hendrickson & others TBA**

6:30-8:00 Dinner and speaker

THURSDAY JULY 19

Workshop 2

Sessions will be in the Commons Building at the Pickle Research Campus of the University of Texas at Austin.

9:00-9:30 **1** Introduction and Goals: A Transition in Engineering Education. **Cliff Davidson**

9:30-10:00 **2** Sustainable Engineering (SE): What is it? **Brad Allenby**

10:00-10:30 **3** Panel discussion on SE: What can we do with it? **Panel members: Dave Allen, Chris Hendrickson, and John Crittenden (10 minutes each)**

10:30-11:00 Q&A/Open discussion

11:00-11:30 Break

11:30-12:00 **4** How are engineering programs around the U.S. implementing SE? **Cindy Murphy**

12:00-12:30 Q&A/Open discussion

12:30-1:30 Lunch

1:30-2:30 **5** Participants meet in breakout groups for four simultaneous interactive sessions. Each group will discuss elements of SE emerging from programs in the U.S. and will identify the best practices among those discussed. Breakout rooms and leaders:

Energy: *Room TBA.* **Cindy Murphy & Dave Allen**

Infrastructure: *Room TBA.* **Chris Hendrickson & TBA**

Materials & Manuf.: *Room TBA.* **Cliff Davidson & TBA**

Water Resources: *Room TBA.* **John Crittenden & Yongsheng Chen**

2:30-3:15 **6** Entire workshop re-convenes: One participant from each breakout group presents their list of best practices.

3:15-3:45 Break

3:45-4:15 **7** Learning Objectives with examples from SE **Cliff Davidson, Dave Allen, & Brad Allenby**

- 4:15-5:15 **8** Participants meet in breakout groups for four simultaneous interactive sessions. Each participant makes a 3-minute presentation on his or her module to the breakout group, followed by brief discussion. Breakout rooms and leaders:
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 Infrastructure: *Room TBA*. **Chris Hendrickson & TBA**
 Materials & Manuf.: *Room TBA*. **Cliff Davidson & TBA**
 Water Resources: *Room TBA*. **John Crittenden & Yongsheng Chen**
- 5:15-5:30 **9** Assign work due Friday morning: Write the learning objectives for your chosen module working individually or in groups of 2-3. Each individual prepares a powerpoint slide with the following: (1) name, university, department, and course title, (2) intended audience, e.g., freshmen in engineering, (3) major topic(s) covered in module, (4) learning objectives.
- 5:30-5:45 Group Photograph (rain date: Friday morning 8:45)
- 6:00-7:30 Dinner and speaker, *Culinary School*
- 7:30-9:00 Advisory Board meets with CSE Executive Committee

FRIDAY JULY 20

- 9:00-10:00 **10** Entire workshop convenes. Two powerpoint slides from each breakout group, 8 slides total, will be chosen for presentation and discussion. (Participants will bring their laptops and copy their slides onto a memory stick during breakfast. Group leaders will choose the slides to be presented from each breakout group.)
- 10:00-11:00 **11** Meet in breakout groups to discuss SE challenges and opportunities in the breakout group topic: tools such as LCA, ecological footprint, CO2 calculators, and mass/energy balances will be discussed. Each breakout group selects one participant to report back to the main group.
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