

Liberal Education Division Program

2005 ASEE Annual Meeting, Portland, Oregon

Sunday, June 12

0461: Communication Skills in the Curriculum

12:30 - 2:30 p.m. Oregon Convention Center D136

This workshop presents models for integrating communication skills into the engineering curriculum in order to meet ABET Communication Outcomes. The presenters come from three diverse institutions that have developed exemplary programs in communication for engineering students -- Roberta Harvey (Rowan University), Judith Norback (Georgia Institute of Technology), and Julia Williams (Rose-Hulman Institute of Technology). The emphasis will be on practical issues, with hands-on exercises for the participants. Participants will receive a resource packet including instructional tools and sample communication-based assignments for engineering courses.

Monday, June 13

1161: The Citizen Engineer: Why and How We Engage City, State and Federal Governments on Behalf of Engineering Education and Research

7:00 - 8:15 a.m. Oregon Convention Center E144

Moderator: Charles Pezeshki, Washington State University

Engineering education and research are central activities in social advancement, and engineers need to promote these activities by engaging city, state, and federal governments. A panel of activist citizen engineers will discuss their experiences.

Barbara Waugh, Hewlett-Packard Company

Charles Pezeshki, Washington State University

Isadore Davis, Raytheon Company

Lueny Morell, Hewlett-Packard Company

Tom Roberts, Kansas State University

1461: A Century of College Education for Engineers

12:30 - 2:00 p.m. Oregon Convention Center E145

Moderator: Sarah Pfatteicher, University of Wisconsin, Madison

The year 1905 marked the first time engineers with college degrees outnumbered engineers without one. What forces have shaped the past century of college education for engineers, and what trends are likely to emerge during engineering education's second century?

A CENTURY OF COLLEGE EDUCATION FOR ENGINEERS

Sarah Pfatteicher, University of Wisconsin-Madison

Amy Bix, Iowa State University

Bruce Seely, Michigan Technological University

Glenn Ellis, Smith College

Jeffrey Russell, University of Wisconsin, Madison

Richard O. Anderson, Somat Engineering, Inc.

PATTERNS IN THE HISTORY OF ENGINEERING EDUCATION REFORM

Bruce Seely, Michigan Technological University

A CENTURY-PLUS OF COEDUCATION: WOMEN'S ENGINEERING EDUCATION IN THE UNITED STATES

Amy Bix, Iowa State University

ASCE'S BODY OF KNOWLEDGE: PREPARING FOR THE FUTURE

Jeffrey Russell, University of Wisconsin-Madison

1661: Writing and Communication I

4:30 - 6:00 p.m. Oregon Convention Center F150

Moderator: Julia Williams, Rose-Hulman Institute of Technology

This session will feature several short presentations about tips and effective practices for bringing writing and communication assignments into engineering courses.

MORE THAN JUST LAB WORK: A SUMMER INTERN PROGRAM TEACHES UNDERGRADUATES HOW TO COMMUNICATE THEIR RESEARCH

Joanne Lax, Purdue University

Amy Van Epps, Purdue University, West Lafayette

TEACHING PERSUASIVE WRITING SKILLS USING PROPOSALS AND COVER LETTERS

Gunter Georgi, Polytechnic University

Elisa Linsky, Polytechnic University

DEPARTMENTAL TO INTER-COLLEGIATE ENGINEERING POETRY CONTESTS

Ann Christy, Ohio State University

Julie Graf, Ohio State University

INFORMATION LITERACY TEAMS: BRIDGING THE FLUENCY DIVIDE

Judith Collins, Kansas State University-Salina

Alysia Starkey, Kansas State University, Salina

Beverlee Kissick, Kansas State University, Salina

Jung Oh, Kansas State University, Salina

IMPROVING THE WRITING-EVALUATION ABILITIES OF GRADUATE TEACHING ASSISTANTS IN ECE LABS

John Brocato, Mississippi State University

Bill Chapman, Mississippi State University

Jim Harden, Mississippi State University

TEACHING TECHNICAL COMMUNICATIONS IN AN INTRODUCTORY DESIGN CLASS THROUGH INTERVENTIONS FROM THE UNIVERSITY'S WRITING CENTER

Richard Bannerot, University of Houston

Cari-Sue Wilmot, University of Houston

Colley Hodges, University of Houston

Robert Askew, University of Houston

"I THOUGHT IT WAS PRETTY GOOD": STUDENT PERCEPTIONS OF COMMUNICATION EFFECTIVENESS

April Kedrowicz, University of Utah

Trine Kvidal, University of Utah

WHEN LESS IS MORE: INTEGRATING TECHNICAL WRITING INSTRUCTION IN A LARGE, FIRST-YEAR ENGINEERING COURSE

William Manion, University of Maine

David Adams, University of Maine

INTEGRATING DISCIPLINE-SPECIFIC COMMUNICATION INSTRUCTION BASED ON WORKFORCE DATA INTO TECHNICAL COMMUNICATION COURSES

Lisa McNair, Virginia Tech

Ben Miller, Georgia Institute of Technology

Judith Norback, Georgia Institute of Technology

LED Traditional Dinner

7:30 p.m. Off Site – the Paragon Restaurant in the Pearl District

Members of the Liberal Education Division traditionally gather for a festive dinner during the ASEE annual meeting. This year we are dining at the Paragon Restaurant in Portland's historic Pearl District. The Paragon features American Bistro cuisine, and it is located at 1309 NW Hoyt at 13th. **Directions:** The Paragon is about a ¾ mile walk north/northwest from the Galleria/SW 10th Ave Station of the MAX light rail system (north on SW 10th Ave to Hoyt and then west to the restaurant). The return station is Library/SW 9th Ave (east on Hoyt and then south on SW 9th Ave. There is no fare for this trip from the Convention Center or any of the conference hotels.

Tuesday, June 14

2161: Integrating H&SS in Engineering I

7:00 - 8:15 a.m. Oregon Convention Center E147

Moderator: John Krupczak, Hope College

Integrating H&SS content and methods into engineering education has been a central issue since the adoption of ABET 2000. The presentations in this session will discuss successful integrated degree programs and general approaches to addressing the issue.

"WRITE THINGS WORTH READING, OR DO THINGS WORTH THE WRITING:" A DUAL-DEGREE PROGRAM IN ENGINEERING AND THE LIBERAL ARTS

Joseph Herkert, North Carolina State University

Jerome Lavelle, North Carolina State University

ESTABLISHING AN ENTERTAINMENT ENGINEERING CURRICULUM

Robert Boehm, University of Nevada-Las Vegas

Brackley Frayer, University of Nevada, Las Vegas

Joe Aldridge, University of Nevada, Las Vegas

AN INTERDISCIPLINARY ARTS AND ENGINEERING INITIATIVE FOR EXPERIENTIAL MULTIMEDIA

Andreas Spanias, Arizona State University

Andreas Spanias, Arizona State University

Hari Sundaram, Arizona State University

Jiping He, Arizona State University

Thanassis Rikakis, Arizona State University

DECONSTRUCTING ENGINEERING DESIGN

Steven VanderLeest, Calvin College

STRATEGIES FOR EMPHASIZING GLOBAL LIBERAL ARTS EDUCATION FOR ENGINEERING STUDENTS

Heinz Luegenbiehl, Rose-Hulman Institute of Technology

MONITORING AIR BAG PERFORMANCE: EXPLORING THE SOCIAL FACETS OF ENGINEERING WITH STS

Jameson Wetmore, University of Virginia

2261: LED Business Meeting Breakfast

8:30 - 10:15 a.m. Off Site -- Marriott City Center Hotel (520 Southwest Broadway)

Moderator: Julia Williams, Rose-Hulman Institute of Technology

This is the annual business meeting of the Liberal Education Division, with a free breakfast buffet. All conference attendees who are interested in the liberal education of engineering students are invited to attend. The LED program for the 2006 conference will be a major item of discussion. **Directions:** The Marriott is two blocks south on Broadway from the Pioneer Square Station of the MAX light rail system, which also has a stop at the Convention Center. There is no fare for this trip.

2461: Writing and Communication II

12:30 - 2:00 p.m. Oregon Convention Center E145

Moderator: Jerry Gravander, Clarkson University

Presentations in this session will be more general in focus than the presentations in Writing and Communication I. The speakers will discuss successful programs and general approaches for incorporating writing and communication in the engineering curriculum.

HOW ISSUES OF ENROLLMENT, FUNDING, AND RESOURCE ALLOCATION HAVE SHAPED THREE ENGINEERING COMMUNICATION PROGRAMS AT GEORGIA TECH

Christina Bourgeois, Georgia Institute of Technology

Jeffery Donnell, Georgia Institute of Technology

Lisa Rosenstein, Georgia Institute of Technology

ESTABLISHING SCHOOL-WIDE STANDARDS FOR ENGINEERING WRITING: A DATA-DRIVEN APPROACH

Penny Hirsch, Northwestern University
Bugrahan Yalvac, Northwestern University
Gulnur Birol, Northwestern University
H. David Smith, Northwestern University
Jeanine Casler, Northwestern University
John Anderson, Northwestern University
John Troy, Northwestern University

PRELIMINARY FINDINGS OF THE ENGINEERING WRITING INITIATIVE AT THE UNIVERSITY OF TEXAS AT TYLER: A LONGITUDINAL STUDY OF HOW ENGINEERS LEARN TO WRITE

David Beams, University of Texas at Tyler
Lucas Niiler, University of Texas, Tyler

DISCOVERING THE POWER OF POWERPOINT: RETHINKING THE DESIGN OF PRESENTATION SLIDES FROM A SKILLFUL USER'S PERSPECTIVE

Michael Alley, Virginia Tech
Kathryn Neeley, University of Virginia

EXPERIENCES IN ENHANCING AND ASSESSING COMMUNICATIONS SKILL DEVELOPMENT IN THE ENGINEERING CURRICULUM

David McDonald, Lake Superior State University
David Baumann, Lake Superior State University
Morrie Walworth, Lake Superior State University
Nael Barakat, Lake Superior State University
Paul Duesing, Lake Superior State University

2661: Integrating H&SS in Engineering II

4:30 - 6:00 p.m. Oregon Convention Center E147

Moderator: Kathryn Neeley, University of Virginia

Integrating H&SS content and methods into engineering education has been a central issue since the adoption of ABET 2000. This session on integrating the H&SS into engineering education will move from the general to specific. The speakers will present specific course approaches for doing so.

LEARNING FROM A WIZARD: LESSONS FROM NIKOLA TESLA FOR ENGINEERING STUDENTS

W. Carlson, University of Virginia

ESSENTIAL HIGHLIGHTS OF THE HISTORY OF FLUID MECHANICS

Kurt Rosentrater, U.S. Department of Agriculture
Kurt Rosentrater, U.S. Department of Agriculture
Radha Balamuralikrishna, Northern Illinois University

PREPARING FOR UNCERTAINTY – ADDRESSING GLOBALIZATION IN AN ENGINEERING CURRICULUM

Stephen Williams, Milwaukee School of Engineering
Joerg Mossbrucker, Milwaukee School of Engineering
Owe Petersen, Milwaukee School of Engineering
Steven Reyer, Milwaukee School of Engineering

USING THE ENGINEERING METHOD TO RESEARCH AND WRITE ABOUT CORPORATE PRACTICE: A MODEL FOR TEACHING ENGINEERING ETHICS

Christy Moore, University of Texas, Austin
Billy Koen, University of Texas, Austin

FROM HENRY V TO STARMAN: LINKING THE HUMANITIES AND SOCIAL SCIENCES TO ENGINEERING

Kenneth Hunter, Tennessee Technological University

Wednesday, June 15

3161: New Endeavors

7:00 - 8:15 a.m. Oregon Convention Center E147

Moderator: Steven VanderLeest, Calvin College

Two relatively new endeavors for engineering educators are service learning and technological literacy courses for non-engineers. Both bring engineering and non-engineering faculty together in new collaborations. Presentations in this session will touch on both of these endeavors.

LESSONS LEARNED FROM AN INTERNATIONAL SERVICE LEARNING PROJECT

Carmine Polito, Valparaiso University

Rachel Husfeld, Valparaiso University

COMMUNITY-BASED PROJECTS BY FIRST-YEAR ENGINEERING STUDENTS

Troy McBride, Elizabethtown College

Jean Fullerton, Elizabethtown College

Vivian Bergel, Elizabethtown College

TECHNOLOGY LITERACY: CONNECTING STUDENTS TO CONTEXT, CONTENT, AND CONTRAPTION

David Ollis, North Carolina State University

RESULTS FROM AN NSF-SPONSORED WORKSHOP ON IMPROVING THE TECHNOLOGICAL LITERACY OF UNDERGRADUATES

John Krupczak, Hope College

David Ollis, North Carolina State University

TEACHING NON-MAJORS TO "ENGINEER"

Kurt DeGoede, Elizabethtown College

3461: Assessing Where We Stand

12:30 - 2:00 p.m. Oregon Convention Center F151

Moderator: Bruce Seely, Michigan Technological University

Engineering education has now fully embraced ABET 2000. How can we assess the fit between general education programs and the ABET criteria? Do our curricula bring the right courses to the fore?

AN EVALUATION OF HUMANITIES AND SOCIAL SCIENCE REQUIREMENTS IN AN UNDERGRADUATE ENGINEERING CURRICULUM

Kenneth Van Treuren, Baylor University

Steve Eisenbarth, Baylor University

AN OBJECTIVES-BASED APPROACH TO ASSESSMENT OF GENERAL EDUCATION

Robert Pangborn, Pennsylvania State University

Renata Engel, Pennsylvania State University, University Park

KEEPING LIBERAL EDUCATION FRONT AND CENTER

Caroline Carvill, Rose-Hulman Institute of Technology

Anneliese Watt, Rose-Hulman Institute of Technology

Caroline Carvill, Rose-Hulman Institute of Technology

Julia Williams, Rose-Hulman Institute of Technology

3661: Integrating H&SS in Engineering III

4:30 - 6:00 p.m. Oregon Convention Center E147

Moderator: Jerry Gravander, Clarkson University

Integrating H&SS content and methods into engineering education has been a central issue since the adoption of ABET 2000. This session on integrating the H&SS into engineering education continues the focus of session 2661 on implementation. The speakers will present specific course approaches for integrating H&SS into engineering education.

COMMON GROUND: HOW A COURSE COLLABORATION BETWEEN ENGINEERING AND WOMEN'S STUDIES PRODUCED FINE ART

Donna Riley, Smith College

Elisabeth Armstrong, Smith College

INTERACTION OF ENGINEERING TECHNOLOGY AND FINE ARTS THROUGH INSTRUCTOR COLLABORATION

Andrew Rose, University of Pittsburgh, Johnstown

Valerie Grash, University of Pittsburgh, Johnstown

TEACHING ABOUT DIFFERENCE, POWER AND PRIVILEGE

Michelle Bothwell, Oregon State University

CONVERSATIONS WITH NANOTECHNOLOGY RESARCHERS

Rosalyn Berne, University of Virginia

HARMONIOUS COMBINATION OF TRADITION AND INNOVATION

Wayne Sanders, Rose Hulman Institute of Technology

Yuko Hoshino, Kanazawa Institute of Technology