

ASEE Multidisciplinary Engineering Division 2007

Session Number	Session Day & Time	Session Title	Session Description	Moderator	Authors
1371	Monday June, 25 2007 10:30 a.m.-Noon	Multidisciplinary and Liberal Education	Multidisciplinary engineering encompasses multiple engineering disciplines but is often even broader, putting a stronger emphasis on the liberal arts. The ABET "soft" criteria indicate the importance of such an approach. This session looks at curriculum and pedagogy issues related to teaching engineering with an eye to the broader context.	Charles Pezeshki, Professor - Washington State University, pezeshki@wsu.edu	[AC 2007-1064] "A NEW MULTIDISCIPLINARY ENGINEERING EDUCATION INITIATIVE" Fernando Tovia <toviaf@philau.edu>., [AC 2007-1241] "DRAMATIZING ENGINEERING EDUCATION: THE PERFORMANCE OF TEAMWORK" April Kedrowicz <A.Kedrowicz@utah.edu>., [AC 2007-1391] "A LAB FOR ALL SEASONS, A LAB FOR ALL REASONS: COLLABORATIVE REPRESENTATIONS OF ENGINEERING WITHIN THE UNIVERSITY" David Ollis <ollis@ncsu.edu>., [AC 2007-3068] "DEVELOPING ENGINEERING CURRICULUM IN A GLOBALISED ENVIRONMENT" Josef Rojter <Josef.Rojter@vu.edu.au>., REVERE IN THE SCIENCE LAB: INTEGRATING HUMANITIES AND ENGINEERING PEDAGOGIES TO DEVELOP SKILLS IN CONTEXTUAL UNDERSTANDING AND SELF-DIRECTED LEARNING Rob Martello
1471	Monday June, 25 2007 12:30 p.m.-2:00 p.m.	Sustainability & Environmental Issues	The 1987 Brundtland Report noted that "Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs." This session addresses the multidisciplinary aspect of sustainability as well as environmental issues.	Ruth Davis, Santa Clara University, rdavis@scu.edu	[AC 2007-1561] "ENGINEERING FOR SUSTAINABILITY □ WHAT CAPABILITIES ARE REQUIRED?" Roger Hadgraft <roger.hadgraft@rmit.edu.au>., [AC 2007-1826] "ASSESSING AND IMPROVING A MULTIDISCIPLINARY ENVIRONMENTAL LIFE CYCLE ANALYSIS COURSE" Sean McGinnis <smcginn@vt.edu>., [AC 2007-1928] "CULTIVATING A SUSTAINABILITY CULTURE IN IRISH SECOND LEVEL SCHOOLS" William Gaughran <William.Gaughran@ul.ie>., [AC 2007-2020] "ENVIRONMENTAL SUSTAINABILITY IN UNDERGRADUATE ENGINEERING EDUCATION" William Gaughran <William.Gaughran@ul.ie>.,
1571	Monday June, 25 2007 2:15 p.m.-4:00 p.m.	Multidisciplinary Curriculum Innovation	Papers in this session will focus on multidisciplinary innovation of engineering curricula (including sequences of courses, entire degree programs).	Phillip Sanger, Western Carolina University, sanger@email.wcu.edu	[AC 2007-1048] "EDUCATIONAL COMPUTER SCIENCE FUN PROJECTS FOR INTEGRATING MULTIDISCIPLINARY CONCEPTS OF MATHEMATICS, SCIENCE, AND ENGINEERING" Mahmoud Quweider <mahmoud.quweider@utb.edu>., [AC 2007-1387] "DEVELOPING A PROFESSIONAL SCIENCE MASTER'S DEGREE PROGRAM" James Petrosky <james.petrosky@afit.edu>., [AC 2007-1461] "INTEGRATED ENGINEERING: AN ENGINEERING DEGREE FOR THE NEXT GENERATIONS WORK ENVIRONMENT" Blair McDonald <mcdonald@suu.edu>., [AC 2007-2386] "DEVELOPMENT OF INTEGRATED PROJECT TRACKS FOR A COLLEGE-WIDE MULTIDISCIPLINARY ENGINEERING DESIGN PROGRAM AT RIT" Marcos Esterman <mxaeie@rit.edu>., [AC 2007-3044] "A MULTIDISCIPLINARY GRADUATE PROGRAM IN TECHNOLOGY-BASED LEARNING WITH DISABILITY" Forouzan Golshani <golshani@wright.edu>.,
2271	Tuesday June, 26 2007 8:30 a.m.-10:15 a.m.	Multidisciplinary Teams	Papers in this session focus on issues related to multidisciplinary teams: forming teams, managing teams, teaching team-skills such as conflict resolution and divergent thinking, grading, assessment, and so forth.	R. Keith Stanfill – University of Florida, stanfill@ufl.edu	[AC 2007-693] "USING THE ENGINEERING DESIGN PROCESS TO RE-ENVISION MULTIDISCIPLINARY EDUCATIONAL EXPERIENCES FOR ENGINEERING STUDENTS" Carolyn Plumb <cplumb@coe.montana.edu>., [AC 2007-803] "MEASURING STUDENT ABILITY TO WORK ON MULTIDISCIPLINARY TEAMS: BUILDING AN ASSESSMENT AND EVALUATION PLAN FROM OBJECTIVES TO RUBRIC" Carolyn Plumb <cplumb@coe.montana.edu>., [AC 2007-860] "OVERCOMING THE HURDLES ASSOCIATED WITH INDUSTRY SPONSORSHIP OF MULTIDISCIPLINARY, PROJECT-BASED LEARNING" Robert Crockett <rcrocket@calpoly.edu>., [AC 2007-1016] "IMPACT: INNOVATION THROUGH MULTIDISCIPLINARY PROJECTS AND COLLABORATIVE TEAMS" Kelly Crittenden <kellyc@coes.latech.edu>., [AC 2007-1508] "MULTIDISCIPLINARY TEAM ASSESSMENT" Steven Northrup <snorthru@wnc.edu>.,
2571	Tuesday June, 26 2007 2:15 p.m.-4:00 p.m.	ABET Accreditation of Multidisciplinary Programs	In 2005, ASEE became the lead society for ABET accreditation of non-traditional engineering programs, including those designated general engineering, engineering, engineering physics, engineering science and engineering technology programs. This session begins with a look at activities related to ABET accreditation for these multidisciplinary programs. The other papers in the session explore a variety of multidisciplinary programs.	Fred DePiero - Cal Poly State University, fdepiero@calpoly.edu	[AC 2007-539] "ASEE'S NEW ROLE AS THE LEAD SOCIETY FOR THE ABET ACCREDITATION REVIEW OF MULTIDISCIPLINARY ENGINEERING PROGRAMS: AN UPDATE AND A LOOK AHEAD" James Farison <Jim_Farison@baylor.edu>., [AC 2007-1708] "TEACHING ENGINEERING CONCEPTS ACROSS MULTIPLE DISCIPLINES USING A SINGLE PLATFORM BASED ON VIRTUAL INSTRUMENTATION" Shekhar Sharad <shekhar.sharad@ni.com>., [AC 2007-2365] "ELECTRICAL ENGINEERING WITHIN A MULTI-DISCIPLINARY PROGRAM" Robert Grondin <bob.grondin@asu.edu>., [AC 2007-2527] "MULTI-DISCIPLINARY EXPERIENCES FOR UNDERGRADUATE ENGINEERING STUDENTS" Fred DePiero <fdepiero@calpoly.edu>., [AC 2007-2905] "CATALYZING SYSTEMIC CHANGE TOWARDS A MULTIDISCIPLINARY, PRODUCT INNOVATION FOCUS" Harvey Palmer <hjeeen@rit.edu>.,
2671	Tuesday June, 26 2007 4:30 p.m.-6:00 p.m.	Annual Multidisciplinary Engineering Division Business Meeting	This is the annual business meeting of the Multidisciplinary Engineering Division membership. Other ASEE guests are welcome. Topics of discussion will include our division program for the 2008 ASEE conference and the role of ASEE as lead society for ABET accreditation of general engineering programs.	Jim Farison, Baylor University, Jim_Farison@baylor.edu	

3171	Wednesday June, 27 2007 7:00 a.m.-8:15 a.m.	Experiential and Service learning	Experiential learning is increasingly seen as an essential part of an engineering education. It can be found in internships, service learning, and many other forms. This session focuses on the multidisciplinary nature of such learning.	Josué Njock Libii - Indiana University-Purdue University, libii@enr.ipfw.edu	[AC 2007-83] "THE ROLE OF EDUCATION IN THE PROGRESSION FROM TECHNOLOGIST TO GENERAL MANAGER" Larry Bland <lbland@jbu.edu>, [AC 2007-701] "LEARNING THROUGH THE DESIGN OF A FISH HATCHERY FOR A COMMUNITY IN THE CHEYENNE RESERVATION □ AN EWB SERVICE-LEARNING PROJECT" Yusuf Mehta <mehta@rowan.edu>, [AC 2007-1814] "USING THE EXPERIENTIAL LEARNING MODEL TO TRANSFORM A MULTIDISCIPLINARY CAPSTONE DESIGN COURSE" Margaret Bailey <mbbeme@rit.edu>, [AC 2007-1936] "FACILITATING MULTIDISCIPLINARY TEAMS IN A SERVICE LEARNING ENVIRONMENT" Gregory Bucks <gbucks@purdue.edu>.
3271	Wednesday June, 27 2007 8:30 a.m.-10:15 a.m.	Multidisciplinary Poster Session	Posters on Multidisciplinary Engineering	Steve VanderLeest, Calvin College, svleest@calvin.edu	[AC 2007-733] "A CROSS-DISCIPLINARY GRADUATE DEGREE CONCENTRATION IN NANOTECHNOLOGY" , [AC 2007-1278] "TECHNOLOGY CAMP FOR TEACHERS □ BRINGING MULTIDISCIPLINARY ENGINEERING INTO THE MIDDLE SCHOOL CLASSROOM" Catherine Skokan <cskokan@mines.edu>, [AC 2007-2761] "BEYOND THE BS" Jeremy Haefner <haefner@eas.uccs.edu>, [AC 2007-2773] "CONSENSUS BUILDING: IDENTIFYING THE CONTENT OF A GENERAL ENGINEERING PROGRAM USING BENCHMARKING AND THE FUNDAMENTALS OF ENGINEERING EXAMINATION" Stephanie Sullivan <sullivans@ecu.edu>, [AC 2007-2810] "AN UPDATE ON THE IMPLEMENTATION OF A NEW MULTIDISCIPLINARY ENGINEERING PROGRAM" Chell Roberts <chell.roberts@asu.edu>, [AC 2007-2836] "A MULTIDISCIPLINARY MASTER'S PROGRAM IN HOMELAND SECURITY AND SAFETY ENGINEERING" Howard Evans <hevans@nu.edu>, [AC 2007-2913] "MINOR IN ENGINEER STUDIES: A NEW PROGRAM FOR A NEW ERA" Mani Mina <mmina@iastate.edu>.
3471	Wednesday June, 27 2007 12:30 p.m.-2:00 p.m.	Capstone Design & Project Courses	This session will present papers dealing with experiences and research on conducting multidisciplinary capstone and project-based courses.	Yong Zeng – University of Illinois at Urbana-Champaign, zeng2@uiuc.edu	[AC 2007-796] "AN INTEGRATED TECHNOLOGY PROJECT AND ITS POTENTIAL IMPACT ON INTERDISCIPLINARY UNDERGRADUATE ENGINEERING EXPERIENCE" P. Ruby Mawasha <ruby.mawasha@wright.edu>, [AC 2007-1195] "TEN YEARS OF EXPERIENCE WITH A PROFESSIONAL DEVELOPMENT COURSE SEQUENCE FOR ENGINEERS: LESSONS LEARNED" Richard Smith <smithr@rpi.edu>, [AC 2007-1382] "REDESIGNING A COLLEGE-WIDE MULTIDISCIPLINARY ENGINEERING DESIGN PROGRAM AT RIT" Mark Smith <mwspd21@rit.edu>, [AC 2007-1926] "TEACHING DESIGN AND MANUFACTURE OF MECHANICAL SYSTEMS" William Waldron <waldronw@gvsu.edu>, [AC 2007-2001] "DEVELOPMENT OF ENGINEERING CONNECTIONS ENVIRONMENTS TO CONTEXTUALIZE ENGINEERING CONTENT MODULES" Darryl Morrell <morrell@asu.edu>, [AC 2007-2697] "EFFECTIVELY IMPLEMENTING THE INTERDISCIPLINARY SENIOR DESIGN EXPERIENCE: A CASE STUDY AND CONCLUSIONS" Matthew Green <matthew.green@alumni.utexas.net>.
3571	Wednesday June, 27 2007 2:15 p.m.-4:00 p.m.	Multidisciplinary Course Innovation	Papers in this session will focus on multidisciplinary innovation of a single course (or a small group of similar courses).	Catherine Skokan – Colorado School of Mines, cskokan@mines.edu	[AC 2007-296] "A MULTIDISCIPLINARY EFFORT INTEGRATING WIRELESS SENSOR TECHNOLOGY INTO THE CURRICULUM" Jeff Frolik <jfrolik@uvm.edu>, [AC 2007-336] "AN ELECTRICAL SYSTEMS COURSE IN A GENERAL ENGINEERING PROGRAM" Jason Yao <yaoj@ecu.edu>, [AC 2007-390] "BOUTIQUE ENGINEERING: STUDENT LEARNING IN A" James Sweeney <jsweeney@fgcu.edu>, [AC 2007-1179] "DEVELOPING A MULTI-DISCIPLINARY ONLINE CYBER-INFRASTRUCTURE COURSE THROUGH PROJECT-CENTRIC BIO-INFORMATICS" Bruce Mutter <bmutter@bluefieldstate.edu>, [AC 2007-2538] "INTEGRATING BIOMEMS AND BIOMEDICAL MICROSYSTEMS INTO ELECTRICAL ENGINEERING EDUCATION: A THREE-YEAR PILOT STUDY" Ian Papautsky <ipapauts@ececs.uc.edu>, [AC 2007-2710] "A MULTIDISCIPLINARY GRADUATE COURSE IN BUILDING COMPUTER CONTROLLED MACHINES" Hugh Jack <jackh@gvsu.edu>.