

CommunityMatters™

A Monthly Newsletter for the ABET Community

June 2007

InsideABET

NAE President Charles Vest Among Speakers for 2007 Annual Meeting

Many of the speakers for this year's ABET Annual Meeting — *The Global Workforce: The Future of Technological Education* — have been confirmed.

The keynote speaker for the event will be **Charles M. Vest**, who will be installed as the next President of the National Academy of Engineering on July 1. Vest, who is currently President Emeritus of the Massachusetts Institute of Technology (MIT), will provide an overview of how he expects technical education to evolve over the next 25 years.

Additionally, speakers for the meeting's four main sessions will include the following:

- ▶ **Roger Gonzalez**, Director of the LeTourneau Engineering Global Solutions (L.E.G.S.) project at LeTourneau University
- ▶ **Deborah G. Johnson**, Chair of Technology, Culture, and Communication for the University of Virginia's School of Engineering & Applied Science
- ▶ **Amin Karim**, Director of Technology Programs at DeVry University
- ▶ **Eduardo Marti**, President of Queensborough Community College
- ▶ **Richard K. Miller**, President of Franklin W. Olin College of Engineering
- ▶ **Jean Avnet Morse**, Executive Director of the Middle States Commission on Higher Education
- ▶ **Karen Paulson**, Senior Associate at the National Center for Higher Education Management Systems (NCHEMS)
- ▶ **G.P. "Bud" Peterson**, Chancellor of the University of Colorado at Boulder

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VolunteerSpotlight

Dave Holger

David K. Holger, Ph.D., joined the faculty in the Department of Engineering Science and Mechanics at Iowa State University in 1974 and, since then, has worked his way up to his current posts as the institution's Associate Provost for Academic Programs and Dean of the Graduate College. Despite the responsibilities that have accompanied his many positions over the years, Dave has always found time to devote his energies and expertise to ABET.

Dave was appointed to the Engineering Accreditation Commission (EAC) as a representative of the American Institute of Aeronautics and Astronautics (AIAA) in 1997. He went on to chair the EAC's Criteria Committee and eventually the commission itself for the 2004-2005 accreditation cycle. In the fall of 2006, he was named a Fellow of ABET and also began his first term as a representative for AIAA on the ABET Board of Directors.

This summer, Dave will complete a two-year term as the Chair of the ABET Accreditation Council. Each year, this body is comprised of the leadership of the four ABET accreditation commissions as well as the Chair of the International Activities Council. Their collective goal is to work as a team to improve the ABET accreditation process for all involved.



"The Accreditation Council provides a forum for commission leadership to share successful practices, to seek common solutions to pressing accreditation issues, and to develop consistent approaches to accreditation across all four commissions" he said. "In addition, the council has rapidly developed into an important component of ABET's ongoing effort to align accreditation policies, processes, and criteria."

The Accreditation Council has unveiled a renumbered version of the general criteria for all four commissions that made parallel the titles of the criteria and the order in which they appear. The council's aim in renumbering the criteria was to present a more consistent approach to ABET accreditation, particularly for the institutions that produce graduates in multiple technical disciplines. New self studies and accreditation procedure documents reflecting the improvements will be available on July 1.

"ABET's volunteers and professional staff are clearly dedicated to improving the preparation of graduates for successful careers in the applied science, computing, engineering, and technology disciplines," Dave said. "This overarching commitment has guided and will continue to guide the continuous improvement of ABET policies and processes."

LookAhead

- June 8** — Deadline for commissioners to register and request hotel accommodations for the Summer Commission Meeting
- June 17-22** — International Engineering Meetings, Washington, D.C.
- June 24** — Faculty Workshop on Assessing Program Outcomes, Honolulu, HI

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- ▶ **Jill Tietjen**, representing the United States Council for International Engineering Practice (USCIEP)

The 2007 ABET Annual Meeting will take place at the Hyatt Regency Resort & Casino in Lake Tahoe, NV, on Thursday, November 1, and Friday, November 2.

Former ABET President Eleanor Baum Named to Women's Hall of Fame

1998 ABET President **Eleanor K. Baum, Ph.D.**, has been chosen as one of nine outstanding American women who will be inducted into the National Women's Hall of Fame this fall.



Baum contributed greatly to ABET during her service with the organization. She represented the American Society for Engineering Education (ASEE) on the ABET Board of Directors from 1990 to 1993 and was named a Fellow of ABET in 1994. In the fall of 1997, she became the second woman to serve as ABET President, following in the footsteps of Leslie Benmark (1990-1991). From 1999 to 2001, Baum chaired the Washington Accord.

An electrical engineer by training who worked in the aerospace industry before turning to academe, Baum is currently the Dean of the Albert Nerken School of Engineering at the Cooper Union in New York City and the Executive Director of the Cooper Union Research Foundation. She made history as the first female engineer ever named as the dean of a college of engineering in the United States. Later, she became the first female president of ASEE with her election in 1995.

The National Women's Hall of Fame is a national, educational nonprofit organization that recognizes and celebrates the achievements of individual American women. Since its founding in 1969, the organization has inducted 217 distinguished women who have made outstanding contributions to American society. Among this year's other inductees are chef Julia Child; *On Death and Dying* author Elisabeth Kübler-Ross; environmental activist and former vice presidential candidate Winona LaDuke; and Judith L. Pipher, whose groundbreaking work in the field of infrared astronomy culminated in the development of a camera for the Spitzer Space Telescope that was launched in 2003. More information about the National Women's Hall of Fame is available at www.greatwomen.org.

What's Going on with ABET This Summer?

CommunityMatters is going on a summer hiatus, but that doesn't mean that ABET will be. Here's just a short schedule of the events that will occur before our return in September:

- ▶ **ABET Program Evaluator Training**
 - ▶ Saturday, June 9, and Sunday, June 10
 - ▶ Denver, CO
- ▶ **2007 International Engineering Meetings (IEM)**
 - ▶ Sunday, June 17, to Friday, June 22
 - ▶ Washington, DC
- ▶ **ABET Faculty Workshop on Assessing Program Outcomes**
 - ▶ Sunday, June 24
 - ▶ Honolulu, HI

- ▶ **2007 Summer Commission Meeting**
 - ▶ Wednesday, July 18, to Sunday, July 22
 - ▶ Crystal City, VA
- ▶ **The 2007 Institute for the Development of Excellence in Assessment Leadership (IDEAL)**
 - ▶ Monday, July 30, to Friday, August 3
 - ▶ Baltimore, MD
 - ▶ *You still have time to submit your application! Visit www.abet.org/ideal.shtml for details!*
- ▶ **ABET Industry Advisory Council Meeting**
 - ▶ Thursday, August 16, to Saturday, August 18
 - ▶ Baltimore, MD
- ▶ **ABET Finance Committee Meeting**
 - ▶ Friday, August 24
 - ▶ Baltimore, MD

In addition to hosting these events, ABET is continuing work on the following projects:

- ▶ Its 75th anniversary retrospective book
- ▶ The Partnership to Advance Volunteer Excellence (PAVE)
- ▶ A web portal to facilitate communication among its volunteers
- ▶ New self-study documents to coordinate with the renumbered accreditation criteria
- ▶ The programs for its Society and Commission Summits this fall
- ▶ And much, much more!

You can keep up with us this summer — and all year long — by subscribing to *ABET E-NEWS*: www.abet.org/sign_up.asp. See you in September!

ABETOnline

- ▶ Download the new ABET-accredited logos from www.abet.org/promote.shtml.
- ▶ Prepare your nominations for this year's President's Award for Diversity: www.abet.org/diversity.shtml.
- ▶ Apply for this summer's IDEAL at www.abet.org/ideal.shtml.

CommunityMatters™

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Assessment101

Assessment Tips with Gloria Rogers, Ph.D.

Using Classroom Assessment to Understand Program Assessment

The program assessment process can be understood when compared to the more familiar process of classroom assessment.

This article describes the similarities between the two and illustrates a common framework.

Classroom Assessment

Within each course, a faculty member makes decisions about which topics will be included based on the learning outcomes that students are to achieve and how the course contributes to the rest of the curriculum. Choice of topics depends on a number of factors — whether the course is required or an elective, whether it is applied or theoretical, length of course, characteristics of the course's students, etc.

Once the topics have been chosen, the faculty member must decide which concepts to focus on for each topic. This includes a decision about the level of learning expected for each of the concepts. It is at the 'concept' level where assessment data are collected as evidence of student achievement of the topic areas. The faculty member assigns each student a grade for the course based on overall performance on each concept for each topic.

Decisions about which concepts to include are made based on local factors.

Program Assessment

The process of institutional/program assessment begins with consulting constituents about attributes that employers/graduate schools would expect graduates to demonstrate (educational objectives). Based on this understanding, it is necessary to determine

the outcomes that students will need to demonstrate by the time of graduation to achieve the educational objectives. Each outcome must be defined in terms of measurable performance criteria that create a unifying focus of program teaching/learning strategies and data collection. The table below compares the similarity between classroom and program assessment structure. In both cases, data are taken at the concept/performance criteria levels and inferences are made about student learning related to the topic/outcome.

Notice the similarity in the structure of the dimensions of learning moving from general to specific learning attributes. Assessment (data collection) takes place at the point where the outcomes are defined and measurable — at the 'concept' level in classroom assessment and at the 'performance criteria' level in program assessment. Once the assessment has been made, inferences can be made about the extent of student learning at the topic/outcome levels.

It is important to note that, in classroom assessment, faculty are assessing individual students to provide feedback on their performance in the form of grades. In program assessment, faculty are collecting data from students to provide feedback to the program on its performance. In the example below, the performance criteria being used to assess 'ethical responsibilities' may never appear in a course in ethics being taught by a philosopher. The question is not "How do we measure ethics or lifelong learning?" The question is "What do we want our students to demonstrate so that we are confident that they are meeting the outcome?" By creating a few measurable performance criteria, the rest of the assessment process falls into place.

Classroom Assessment			Program Assessment		
Course	Topics	Concepts	Objective	Outcome	Performance Criteria
Strength of Materials	Terminology	Stress	Graduates should be able to identify and respond to ethical situations	Students should demonstrate an understanding of ethical responsibilities	Students should know the professional code of ethics for their discipline
		Strain			
	Material Properties	Tensile Strength			
		Ductility			
	Beams	Shear force			
		Bending moment			
	Torsion	Angle of twist			
		Power transmission			
	Columns	Euler buckling			
	Fatigue	Crack growth			
S-N curves					
					Students should be able to evaluate the ethical dimensions of a problem in their discipline

YourCorner

Board of Directors

As discussed at the March meeting, a teleconference to keep the Board members informed between meetings is being planned. This first Board Briefing is scheduled for Tuesday, July 31, at 2 p.m. Eastern time. Rachele Daucher will provide you with more details soon.

Commissioners

The Summer Commission Meeting is just around the corner, so make your reservations by June 8. Contact ABET's Accreditation Manager Ellen Stokes at estokes@abet.org if you need assistance.

You should already have received your assignment(s) for fall 2007 visits. It's time to make initial contact with your institutional representative(s) and schedule dates for your visit(s). Log into the secure website and click "Manage Visit Team" for contact information.

Institutions

If you are expecting a visit in 2007, you should already have received notification about your assigned ABET team chair. If not, please contact ABET's Accreditation Director Maryanne Weiss at mweiss@abet.org. Remember: It is your prerogative to decline your assigned team chair because of conflict of interest. For more information on real or perceived conflict of interest, please see ABET's Conflict of Interest Policy at www.abet.org/code.shtml.

Member Societies

As you know, ABET has introduced new PEV application tools, and many potential program evaluators have already begun to submit applications through the ABET website. Make sure that you are going to <http://abethome.abet.org/online> regularly to retrieve applications for your society. If you need assistance in this regard, contact Stephanie Engelhardt, ABET's Meetings and Member Services Specialist, at sengelhardt@abet.org.

Program Evaluators

ABET's member societies are in the process of assigning PEVs to visits. Please be sure your bio information is up-to-date. Follow the link at www.abet.org/pev.shtml to log in and make needed changes.

Member Societies

ABET is a federation of 28 professional and technical societies representing the fields of applied science, computing, engineering, and technology:

American Academy of Environmental Engineers	Health Physics Society
American Congress on Surveying and Mapping	IEEE, Inc.
American Industrial Hygiene Association	Institute of Industrial Engineers, Inc.
American Institute of Aeronautics and Astronautics, Inc.	ISA
American Institute of Chemical Engineers	Materials Research Society
American Nuclear Society	National Council of Examiners for Engineering and Surveying
American Society of Agricultural and Biological Engineers	National Institute of Ceramic Engineers
American Society of Civil Engineers	National Society of Professional Engineers
American Society for Engineering Education	Society of Automotive Engineers
American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc.	Society of Manufacturing Engineers
American Society of Safety Engineers	Society for Mining, Metallurgy, and Exploration, Inc.
ASME	Society of Naval Architects and Marine Engineers
Biomedical Engineering Society	Society of Petroleum Engineers
CSAB, Inc.	The Minerals, Metals, and Materials Society



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