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# AMD and the National Academy of Engineering Recognize Engineering Programs With Real-World Relevance

## Report Showcases 29 Exemplary Programs That Use Real-World Experiences to Enhance the Quality of Undergraduate Engineering Education and Workforce Preparedness

AUSTIN, TX -- (Marketwire) -- 11/13/12 -- AMD (NYSE: AMD) and the National Academy of Engineering (NAE) today announced the release of 'Infusing Real World Experiences into Engineering Education,' a compilation of engineering programs at colleges and universities across the nation that incorporates real-world experiences in an effort to better prepare students for a globally competitive workforce. By highlighting successful models and best practices, the report is designed to guide engineering faculty and administrators in assessing and adapting effective programs at their own institutions. According to the Center for Advancement of Engineering Education, without real-world preparation engineering students may not be fully armed with the communication and professional skills required to succeed in today's global workplace(1).

While engineering education has historically focused on primarily teaching technical skills, engineers entering today's workforce require a broad mix of both technical and professional skills. Many forward-thinking universities, such as those with the programs presented in this report, are driving exciting educational change including incorporating multidisciplinary team-based projects in their curricula that help develop skills in decision-making, leadership, written and oral communication, organization and time management, cultural awareness and problem-solving. By offering real-world, hands-on education experiences, these institutions are better preparing engineering graduates to be successful.

"Simply mastering technical engineering is no longer enough to successfully compete and lead in today's marketplace," said Mark Papermaster, AMD senior vice president and chief technology officer. "We see firsthand at AMD that our engineers must also be able to solve complex problems, communicate clearly and collaborate globally. The innovative approaches taken by these leading engineering schools will help prepare our future engineers."

"This nation's prosperity, security and quality of life are direct results of leadership in the engineering achievements that drive society forward," said Dr. Charles M. Vest, president of the National Academy of Engineering. "These programs are strategically preparing students to become the engineers who will tackle the technical and social complexities that lie ahead in the 21st century."

The best-practice case studies included in the NAE report compare anticipated versus actual program outcomes to demonstrate how each institution is improving the level of preparedness of its engineering students. In addition to illustrating best practices, the report

also identifies frequent impediments to embedding real-world experiences into engineering programs, and suggests ideas for overcoming these barriers to program implementation. The most frequent obstacles cited include lack of funding and financial support, faculty workload concerns and challenges encountered with partners.

Nearly 100 nominations for inclusion in the report were received from accredited four-year undergraduate schools with engineering or engineering technology programs. Submissions were reviewed by the NAE's Real World Engineering Education committee and judged based on seven factors: program creativity, innovation, attention to diversity (including geographic, institution, racial/ethnic and gender), sustainability plan, assessment of student learning, level of real-world experience, and anticipated versus actual outcomes.

To access the full report, please visit http://nextgenengineer.amd.com/ or go to National Academies Press.

Programs at the following schools are recognized in the report:

- Arizona State University
- Auburn University
- Boise State University
- Cornell University
- Duke University
- Georgia Institute of Technology
- Grand Valley State University
- Harvey Mudd College
- Illinois Institute of Technology
- Lehigh University
- Massachusetts Institute of Technology
- Michigan Technical University
- Northwestern University
- Purdue University
- Rice University
- Santa Clara University
- The Pennsylvania State University
- University of Arkansas
- University of California San Diego
- University of Idaho
- University of Massachusetts, Amherst
- University of Rhode Island
- University of Texas at Austin
- University of Utah
- University of Wisconsin-Madison
- Virginia Commonwealth University
- West Virginia University
- Worcester Polytechnic Institute

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technologies are found in a variety of solutions ranging from game consoles, PCs to supercomputers. For more information, visit www.amd.com.

*About NAE*
The mission of the National Academy of Engineering is to advance the well-being of the nation by promoting a vibrant engineering profession and by marshaling the expertise and insights of eminent engineers to provide independent advice to the federal government on matters involving engineering and technology.

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(1) http://www.engr.washington.edu/caee/report_press_release.html

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