MARSHALL'S STRATEGIC VISION - *Our Bold Constellation for the Future*

Status Update for:

Complete the necessary steps to establish a 4-year, ABET-accredited engineering school

Overview

Planning and preparation for a fall 2009 ABET (Accreditation Board for Engineering and Technology) visit for the bachelor of science in engineering degree program proceeded according to the goals and timetables previously established. As evidenced by the process and actions outlined below, faculty and staff of the College of Information Technology and Engineering (CITE), working together with the university and industry partners, undertook and completed all aspects of a comprehensive self-study and addressed the necessary resource requirements in preparation for this visit.

- A Bachelor of Science in Engineering (BSE) Advisory Board has been created, consisting of representatives from major engineering employers throughout the state, region and county, including Toyota, CSX, U.S. Army Corps of Engineers, Chesapeake Energy, State Electric Company, Dow, J.H. Fletcher Equipment Company and others. Advisory board members meet regularly for working sessions, and are active participants in curriculum planning and development. Board members also played an important role in the ABET visit and in the ongoing assessment and updating of the program after accreditation.

Chesapeake Energy Scholarship Award Participants(Click to enlarge).
Front row, from left: Caitlyn Davis-McDaniel, Dean Dr. Betsy Dulin, Jennifer Cox, Mary Beth Anderson, and Krysta Jenkins.
Back row: Dr. Ron Area, Matthew Cayton, Nate Stansberry, Dr. William Pierson, Adam Hager, Jessica Johnson, and LCOB Dean Dr. Chong Kim.

- BSE program faculty worked diligently on the preparation of the ABET self-study, and assembling required course materials and student portfolios.

To learn more visit this Strategic Initiative at:
http://www.marshall.edu/president/strategic/EngineeringSchool.asp/

- Curriculum additions and changes continue to be implemented, based on joint recommendations of program faculty and the advisory board. The latest curriculum changes required before the ABET visit were approved by the Faculty Senate Curriculum Committee in April 2009.
- A detailed assessment plan, based on previously adopted programmatic objectives and learning outcomes, was finalized; however, work on course assessment plans is ongoing.
- Construction of the privately funded Arthur Weisberg Family Engineering Laboratories building and the purchase of associated laboratory and office equipment were completed in time for occupancy in fall 2008. This engineering facility construction project was announced in April 2007 and the building dedication was celebrated on August 19, 2008.

- Formal notice and request for an on-site visit was submitted to ABET in January 2009 (as required for a fall 2009 visit), followed by required submission of the self-study in June 2009. Throughout this period, CITE administrators and faculty participated in a number of ABET meetings, workshops and conferences.

Other developments of note:

- The first group of the new bachelor of science in computer science students graduated in May 2008.
- On April 25-26 2008, the West Point Bridge statewide competition took place on Marshall's campus. Using software developed by the United States Military Academy at West Point, teams of students throughout the state used software to virtually design, build and strength-test bridges. The program is funded by the university's Rahall Transportation Institute, the West Virginia Department of Transportation and the West Virginia Department of Education.
- The VISE Lab at Marshall University in Huntington, WV, is a visualization facility housed in the new Arthur Weisberg and Family Engineering Laboratories building, which was completed in the Fall of 2008. Its centerpiece is a Virtual Interactive Simulation Environment (VISE) developed initially as a virtual training technology component of the Mine Safety Technology Innovation Capability and Regional Business Development for the U.S. Mining Industry project VISE is a unique and valuable resource to Marshall University and the community at large. By leveraging highly accessible, emerging, and enabling technologies, VISE blends virtual and real worlds into an immersive interactive environment for applications in industry, education and government. It's also well-poised to create new opportunities for business and economic development in the region. VISE provides a variety of services through its staff and student interns. These include content

creation, programming, hosting, and training, to support the application of 3-D visualization and virtual worlds in the areas of simulation, training, conferencing, social networking, and the arts. It welcomes the opportunity to work with University faculty, staff and students to incorporate this technology into courses, student projects, research, and campus events. Inquiries from regional businesses, non-profit organizations, and government agencies are also welcome.

- The ninth annual "Exploring Engineering: Academy of Excellence," a residential summer camp for high school students interested in engineering, took place in June 2009. The camp is free to participating students due to the premiere sponsorship support of Chesapeake Energy, the Nick J. Rahall II Transportation Institute; the team sponsorship support of J.H. Fletcher & Co., Kanawha Stone, GRW Engineers, Inc., Chapman Technical Group, The Dow Chemical Company, American Society of Civil Engineers, West Virginia Section, the Society of American Military Engineers, Huntington Post; and the activity sponsorship support provided by West Virginia American Water, Toyota Motor Manufacturing West Virginia, and the West Virginia Higher Education Policy Commission Division of Science and Research.
- An ABET team visited the Marshall campus in September 2009 and submitted their report to ABET.
  - Evaluation Report (*Draft*)
    - Four institutional & programmatic strengths cited (e.g., new building, university support, advisory board, local and regional industry support)
    - No deficiencies
    - Two weaknesses identified concerning assessment (correctable)
    - One concern cited concerning sufficient number of faculty (being addressed through recruitment of mechanical engineering faculty)
  - Future Areas of Emphasis Development Priorities
    - Mechanical Engineering
    - Transportation Engineering
    - Bioengineering