

**ASCE “Raise The Bar” Newsletter
Vol. 1, No. 2**

**By: Committee on Academic Prerequisites
for Professional Practice (CAP³)**

Welcome to the second edition of our newsletter. ASCE continues its effort to raise the educational requirements for practicing civil engineers at the professional level. We have taken a body of knowledge (BOK) approach to our effort. The BOK defines the knowledge, skills, and attitudes necessary to *enter* the practice of civil engineering at the professional level and is described in the report, *Civil Engineering BOK for the 21st Century: Preparing the Civil Engineer for the Future* www.asce.org/raisethebar. This effort is on going and long-term. This newsletter discusses recent key activities and on-going activities.



Completed Activities

The **CAP³ committee** has modified Policy Statement 465 Academic Prerequisites for Licensure and Professional Practice. The committee has suggested changes to bring the policy in line with a BOK focus, as opposed to an advanced degree focus. The policy is currently being reviewed by the ASCE Policy Committee. We expect to hear from the committee in the coming months with possible ASCE Board of Direction (BOD) action in October of 2004

The **CAP³ committee** participated in the National Academy in Engineering Convocation. About 60 people attended representing a cross section of engineering societies. We gave a presentation on our BOK approach. The need for additional education beyond the BS and the BOK were well received. Additionally, the committee is currently analyzing data from a recent survey conducted by the US CORP of Engineers on the educational backgrounds of over 1,150 employees.

The **Curricula Committee** met recently in Salt Lake City in connection with the American Society for Engineering Education (ASEE) annual meeting. The committee has agreed upon a standard format to report curriculum mapping. Seven schools have completed an initial mapping of their curriculum. Results indicated that all 15 outcomes cannot be achieved with current undergraduate programs. The committee is working on a draft report and will have feedback on the BOK by the end of the calendar year. Two schools presented their BOK mapping results at the ASEE conference. Professor James Nelson, the Chair at Western Michigan Univ., has become the next chair of the committee. Two schools have been added to the Curricula committee—Univ. of Nebraska and Univ. of Wisconsin. Presentations were made to the CEE faculty at Stanford Univ. and Univ. of Michigan.

The **Licensure Committee** has been busy visiting with licensing board members at National Council of Examiners for Engineering and Surveying (NCEES) zonal meetings. In April and May, 2004, presentations were made at each of the four NCEES Zone Meetings by the chair of the licensure committee, Craig Musselman. The presentations were tailored to the NCEES audience consisting primarily of PE Board members and board administrators. The presentations stressed the decrease in technical content of undergraduate engineering curricula over the past 60 years (26% of US engineering schools surveyed by ASEE decreased their credit requirements between 1998 and 2002), and by presenting alternative additional engineering education requirement language that PE Boards could consider. The desire to increase the leadership role of civil engineers in society and to improve the image of civil engineers was mentioned, but de-emphasized in comparison to other ASCE CAP³ presentations,

because of the dominant public health, safety and welfare perspective of NCEES.

The first zone presentation taught us that engineers of other disciplines were surprised to learn that ASCE was anticipating that additional education will likely be required of all disciplines in the future. At subsequent zone meetings, it was explained that, rather than advocating discipline-specific licensure, ASCE was encouraging other disciplines to consider their requisite BOKs for professional practice. There was interest expressed in having a presentation at the NCEES national meeting in August focused in more detail on licensure-related aspects, including implementation details of the B+30 and 150 minimum credit options; how mobility and expedited comity would be maintained; and how “grandfathering” provisions might work as additional engineering education is required.

Although there is a long way to go in this 10 to 15 year process of change, some solid progress has been made. The leadership of NCEES has been most cooperative in arranging for these zone meetings and in providing input to CAP³. Through these on-going activities, PE Board members throughout the country are to considering the need for additional engineering education, as well as implementation options.

The **Accreditation Committee** has been actively preparing draft, basic level civil engineering criteria as well as advanced level general criteria. They also recently met in Salt Lake City. The committee is being expanded to include key stakeholders such as CEE department heads and ABET representatives.

On-Going Activities

Curricula Committee: The committee will work on preparing feedback on the first edition of the BOK. They have a session planned for the ASCE annual meeting this fall, and are continuing to add additional universities as corresponding members to the committee.

Licensure Committee: Licensure initiatives for the next year will focus upon providing appropriate input in the NCEES Committee or Task Force deliberations (assuming a positive vote on considering additional engineering education at the August, 2004 NCEES Annual Meeting), and providing input and assistance to Nebraska and Wyoming, the two states expressing interest in early implementation of additional engineering education requirements.

Accreditation Committee: The accreditation committee will continue to work on refining and implementing their master plan leading to possible changes to the basic-level civil engineering program criteria and the advanced level general criteria.

Revision of First Edition of BOK: Revisions to the first edition of the BOK are in the works. Under the leadership of Stu Walesh, who served as chair of the Body of Knowledge Committee, plans to revise the BOK to release the second edition are being made. Based upon input from members and on-going committees, it is expected to be released in late spring of 2005.

Creation of a New Committee: We are working toward the creation of a new committee—the BOK Fulfillment and Validation committee. The charge of the committee is to recommend means to validate the fulfillment of the BOK, including distance education, corporate universities, public agencies programs, and professional society course offerings. A primary committee focus will be determining and describing the quality of education that meets the spirit of Policy Statement 465 and the BOK.

The licensure, accreditation, and curricula committees will be preparing reports for the ASCE BOD as well as public dissemination. Questions or suggestion, please contact Jeffrey S. Russell at russell@engr.wisc.edu, Stuart G. Walesh at stuwalesh@comcast.net, or Thomas A Lenox at tlenox@asce.org