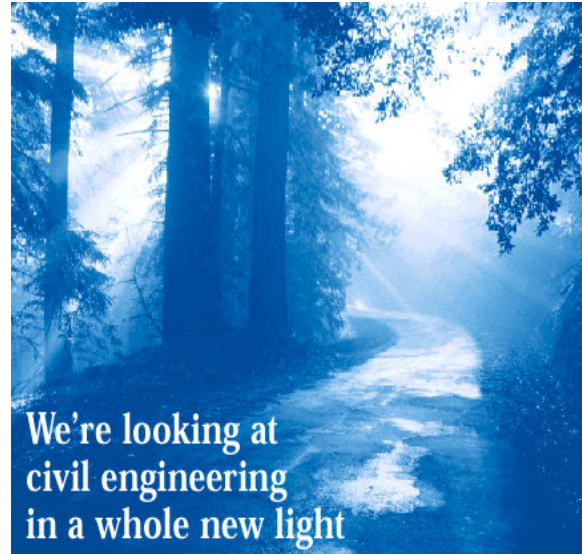


**ASCE “Raise The Bar” Newsletter
Vol. 1, No. 3**

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

Welcome to the third edition of our newsletter. The last two years have seen major progress in ASCE’s “Raise the Bar” initiative, from the publication of the *Civil Engineering Body of Knowledge*, to a sea change in the reaction towards this initiative. Overall, the negative reaction encountered two years ago in some venues has been transformed into a thoughtful consideration now typically encountered almost everywhere. There are encouraging signs on many fronts, including the recent vote of the National Council of Examiners for Engineering and Surveying (NCEES) Annual Meeting to consider an implementation plan for requiring additional engineering education. Still, there is far more left to be done, than has been done to date to achieve successful implementation. This newsletter will highlight some of the recent work being done by the CAP³.



The **CAP³ Body of Knowledge Committee** has recently published the first edition of the *Civil Engineering Body of Knowledge for the 21st Century*. This effort moved the focus of ASCE’s initiative from one referencing degrees to a new focus on the requisite areas of knowledge, including those beyond the scope of the current bachelor’s degree curriculum, necessary for the professional practice of engineering in the future. This committee has been sunset earlier this year. Yes, we actually sunset a committee!

The **CAP³ Accreditation Committee** has been formulating draft *ABET civil engineering program criteria*. The goal of this endeavor is to incorporate the basic components of the Body of Knowledge into undergraduate civil engineering curricula. The Accreditation Committee has also been working on modifications to the ABET advanced level general criteria to provide assurance that graduates of a master’s degree in civil engineering have accumulated the full civil engineering body of knowledge. To this end, the committee has been working to facilitate the ABET accreditation of engineering master’s programs in the U.S. In general, *flexibility* is being sought to allow universities to efficiently obtain accreditation of both undergraduate and graduate programs of the same engineering discipline. Such flexibility does not currently exist within current interpretations of ABET policies.

The **CAP³ Curricula Committee** consists of 16 Civil and Environmental Engineering Departments and several representatives from ASCE institutes. They have been reviewing the BOK and mapping their existing curricula against the Body of Knowledge. They have concluded that obtaining the BOK in a bachelor’s program is simply not feasible. The committee has also been looking at issues such as how to assess the attainment of the level of competence for the 15 outcomes.

The **CAP³ BOK Fulfillment and Validation Committee** is beginning work in the fall of 2004 on two fronts. They are exploring concepts to allow alternative education providers *other than universities* to provide post-graduate, creditable engineering education. To become viable, such alternative education channels must be equivalent in academic rigor and individual performance assessment to upper level undergraduate and graduate level education at traditional universities.

The CAP³ Licensure Committee has continued to provide input to CAP³ and to each of its committees from a licensure perspective. The *licensure community* has its own language, and conforming ASCE's initiative with engineering licensure boards has been an on-going task of the subcommittee.

The Licensure Committee has closely monitored the activities of the National Council of Examiners for Engineering and Surveying (NCEES) regarding the *Model Law*. The Model Law is a policy template promulgated to assist individual jurisdictions when they work with their legislatures to make changes to their engineering statutes. Potential changes to the Model Law are first considered by NCEES at the national level. NCEES agreed to allow an article on ASCE Policy Statement 465 by current ASCE President Patricia Galloway, PE to be published in the February, 2004 issue of NCEES internal publication "Licensure Exchange," and to allow for an ASCE presentation to be made at each of the four NCEES Zone Meetings in April and May of 2004. At the 2004 NCEES Annual Meeting in Cleveland, NCEES voted by a clear but not overwhelming majority to initiate the process of evaluating "raising the bar" in engineering education and incorporating additional engineering education requirements into the Model Law. This matter will likely be referred to the NCEES Uniform Procedures and Legislative Guidelines Committee for a proposal of specific Model Law language changes to be voted upon again at a subsequent Annual Meeting. These actions are clearly "down the road" but a huge step in the right direction. ASCE will need to monitor this process and offer whatever assistance is deemed necessary by the Licensure Committee of CAP³.

Other engineering disciplines will likely be critical to long-term success in requiring additional engineering education and changes to the *NCEES Model Law*. It is highly unlikely that additional engineering education requirements would pertain only to civil engineers. Rather, changes to the NCEES Model Law would pertain to all disciplines across the board. This should be raised by ASCE at NCEES'S Participating Organizations Liaison Committee (POLC) meetings each year, and ASCE CAP³ plans to redouble efforts in dealing with the Institute of Electrical and Electronics Engineers (IEEE), the American Society of Mechanical Engineers (ASME), and societies representing other engineering disciplines. Success in changing the NCEES Model Law will, in all likelihood, require the cooperation and support (or at least acquiescence) of IEEE, ASME, and other professional engineering societies. Active opposition from other engineering disciplines is likely to severely limit the likelihood of altering the Model Law or effecting any meaningful change. Encouragingly, there is one member of IEEE on one of the CAP³ committees. CAP³ is considering inviting representatives from other disciplines to serve on its various subcommittees.

The process to change the Model Law is well underway. The more daunting task will be changing the requirements in each of the 56 individual U.S. jurisdictions that regulate licensure. It will be important for ASCE to generate bottom up support for this concept. Accordingly, the CAP³ Licensure Committee continues to *seek and identify states* that may wish to consider early implementation of additional engineering education requirements. In the last year, two states—Nebraska and Wyoming—have indicated potential interest in considering early implementation of additional engineering education requirements as a prerequisite for licensure. The Nebraska Board will be considering this input at its September board meeting. New legislative action, which may or may not include additional engineering education requirements, is anticipated in Nebraska by early 2005. Wyoming was the first state in the nation to institute engineering licensure requirements in the early part of the 20th century. Offers have been made by CAP³ to the Wyoming PE Board, the Wyoming Section of ASCE, and the Wyoming state society of NSPE to make presentations on behalf of ASCE.

The committees of CAP³ continue to prepare 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. Welsh at stuwalesh@comcast.net, or Thomas A Lenox at tlenox@asce.org.