



American Society of Civil Engineers

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**W.F. Marcuson III,**  
**Ph.D., P.E., Hon.M.ASCE**  
President

December 4, 2006

Dr. Richard C. Seagrave  
President 2005-2006, ABET  
111 Market Place, Suite 1050  
Baltimore, MD 21202-4012

Dear Dr. Seagrave:

This is in response to your request for input concerning the prohibition on dual-level accreditation of engineering programs. Based on nearly ten years of study and collaborative deliberation, the American Society of Civil Engineers (ASCE) has concluded that the EAC's prohibition on dual-level accreditation represents an unnecessary constraint on academic preparation for the professional practice of engineering. The prohibition limits flexibility and creativity in the development of alternative paths to professional licensure. For these reasons—and because the common objections to dual-level accreditation can easily be addressed through the careful formulation of the associated accreditation procedures and processes—***ASCE requests that ABET remove the EAC's prohibition on dual-level accreditation of engineering programs as soon as practical.***

For almost a decade, ASCE has been engaged in serious review of the preparation required for entry into the engineering profession. This effort led to ASCE's publication in January 2004 of the *Civil Engineering Body of Knowledge for the 21<sup>st</sup> Century* – a report describing the knowledge, skills, and attitudes necessary for entry into the practice of civil engineering at the professional level. The conclusions of ASCE's study are consistent with the conclusions of *Educating the Engineer of 2020* from the National Academy of Engineering (NAE) – “the exploding body of science and engineering knowledge cannot be accommodated within the context of the traditional four-year baccalaureate degree.” As a result, we have reviewed and revised the accreditation criteria for our basic and advanced programs. We have kept ABET's leaders and staff informed of our work – they have been very supportive of our efforts.

In parallel to revising our accreditation criteria, ASCE has participated in the nationwide discussion regarding the prohibition on dual level accreditation of engineering programs. The current leaders of the ASCE's educational community have carefully reviewed the public discussion on this subject—including the supportive recommendations of the National Academy of Engineering and the opposing positions of the ASEE Engineering Deans Council and the ASCE Department Heads Council Executive Committee. In addition, we have actively promoted public discussion of this issue within the civil engineering community. Specifically, civil engineering educational leaders have made presentations and promoted open discussion on this topic at the Annual Conference & Exposition of ASEE in 2003, 2005, and 2006. Each of the three presentations was supported by a paper published in the conference proceedings.



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After completing this review, ASCE's four leading educational/accreditation committees formally and independently voted on this issue in October-November 2006. In each of these cases, the committee vote was one short of unanimous in support of the position that ABET remove the prohibition on dual level accreditation of engineering programs as soon as practical.

ASCE forwards the attached paper, authored by four of ASCE's engineering educational leaders, directly addressing the principal points of opposition to removing the prohibition on dual level accreditation of engineering programs – to include all of the points made by the Engineering Deans Council. ASCE acknowledges the Deans' concerns; however, we strongly believe that these concerns can be addressed through intelligent formulation of accreditation procedures and processes associated with advanced-level accreditation. ASCE requests that this paper be shared with the leadership of ABET and its Engineering Accreditation Commission.

In addition to the arguments advanced in the attached paper, ASCE's position on the removal of the prohibition is further supported by the September 2006 vote by the National Council of Examiners for Engineering & Surveying (NCEES) to change the licensure Model Law effective in 2015. The new Model Law will require that an engineer intern have a bachelor's degree with (1) an additional 30 credits of acceptable upper-level undergraduate or graduate-level coursework, (2) a master's degree in engineering, or (3) a doctorate in engineering. This additional education requirement is consistent with the recommendations of NAE and ASCE. In all cases, **the future NCEES Model Law requires that engineer interns are graduates of an undergraduate OR graduate program accredited by EAC/ABET**, or the equivalent, and have passed an eight-hour written examination in the fundamentals of engineering. While undergraduate programs accredited by EAC/ABET will continue to be in demand, graduate programs accredited by EAC/ABET will be a practical path to licensure for:

- Domestic students with engineering degrees from programs not accredited by EAC/ABET.
- Domestic students with engineering technology degrees.
- Domestic students with undergraduate degrees in physics, chemistry, biology, ecology, geology, and other science and non-engineering fields.
- Graduates from foreign institutions.

If the prohibition on dual level accreditation of engineering programs is not removed, the availability of graduate programs accredited by EAC/ABET will be limited – and a practical path to licensure will be closed to many foreign and domestic students. ASCE believes that the prohibition on dual level accreditation of engineering programs unnecessarily constrains an individual's entry into the engineering profession – and should be removed as soon as practical.

Finally, ASCE recognizes that realization of dual level accreditation of engineering programs will not occur instantaneously – and must be carefully planned, organized, and implemented. A long-standing (and understandable) point of opposition to the removal of the prohibition is

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that the accreditation of master's degree programs will impose a significant additional administrative burden on academic institutions. ASCE believes that careful, intelligent formulation of new procedures and processes associated with advanced-level accreditation can serve to minimize any additional administrative burden—and consequently would significantly lessen institutions' misgivings about removing the prohibition. ASCE volunteers to be part of the representative group that works to establish these revised policies and processes to implement dual level accreditation in an efficient and effective manner.

ASCE appreciates the opportunity to provide input to the discussion regarding the prohibition on dual level accreditation of engineering programs. We applaud your leadership in engaging the professional societies that comprise ABET in this important and timely discussion.

Sincerely,

A handwritten signature in black ink, appearing to read "W F Marcuson III". The signature is fluid and cursive, with a prominent "W" and "F" at the beginning and a stylized "III" at the end.

William F. Marcuson III, Ph.D., P.E., Hon. M.ASCE  
ASCE President

cc: William S. Clark, President, ABET 2006-2007  
Gerald S. Jakubowski, Chair, EAC/ABET  
Peter J. Carrato, Chair, Criteria Committee, EAC/ABET  
Daniel S. Turner, ASCE Representative to the ABET Board of Directors  
Phillip E. Borrowman, ASCE Representative to the ABET Board of Directors  
Beverly W. Withiam, ASCE Representative to the ABET Board of Directors  
George D. Peterson, Executive Director, ABET  
Maryanne Weiss, Accreditation Director, ABET  
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