

Chapter 19

Accreditation of Undergraduate Curricula

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AIChE “Invents” Engineering Accreditation

Degree programs entitled “chemical engineering” began to appear in the late 19th century. Most consisted of studies in mechanical engineering and industrial chemistry in different proportions and had little in common. Hence, an early goal of AIChE’s founders was to define a unique nature for chemical engineering and the education necessary to become a chemical engineer. One of the Institute’s first actions in 1908 was to establish a Committee on Chemical Engineering Education, charged with determining the appropriate educational preparation for chemical engineers. For several years the committee labored without agreement, and not until the landmark report by Arthur D. Little to the President of MIT in 1915 was the concept of “unit operations” set forth and with it the identification of a unique body of

chemical engineering knowledge, distinct from the fields of industrial chemistry and mechanical engineering¹.

The committee under Little's chairmanship continued its work in spite of delays caused by World War I and in 1922 was at last able to agree on a recommended curricular structure. A reconstituted standing Committee on Chemical Engineering Education was established containing five members from education and five from industry, chaired by H. C. Parmelee, Chief Editor of *Chemical and Metallurgical Engineering*. This committee was charged to evaluate chemical engineering programs over the next three years and to publish a list of those institutions whose programs satisfied the recommended criteria (Reynolds, 1983, pp. 9-14). This committee has operated continuously since 1922 and is currently known as the AIChE Education and Accreditation (E&A) Committee.

The first list of 14 schools whose programs were judged acceptable was published in 1925 and marks the beginning of formal accreditation of any engineering programs in the United States (AIChE, 1936). A list of accredited programs in chemical engineering is in Table I.

Accreditation Expands to Other Engineering Disciplines: Formation of ECPD

Other engineering societies' interest in accreditation was stimulated by report of the Society for the Promotion of Engineering Education² in 1929, *A Comparative Study of Engineering Education in the United States and Europe*, known as the Wickenden report (Grayson, 1977). An important recommendation of the report was to create an organization to set standards for engineering educational programs and to conduct reviews of programs for compliance with these standards. This was realized

¹ The concept of viewing chemical engineering in terms of operations common to a broad range of industries, rather than on an industry-by-industry basis was first advanced by George E. Davis in England in the 1880's (Davies, 1980). Little drew on Davis' ideas and apparently was the first to describe them with the term "unit operations."

² Now American Society for Engineering Education (ASEE)

Table I

Accredited Programs in Chemical Engineering

*By Year of Initial Accreditation (ABET, 2008; Reynolds 1983, pp. 191-193) Prior to 1936,
Accredited by AIChE Alone*

1925 - Carnegie Mellon University	1939 - Louisiana State University
1925 - Case Western Reserve University	1939-1942, 1951 - University of North Dakota
1925 - University of Cincinnati	1939 - Pratt Institute ⁵
1925 - Columbia University	1939 - University of Tennessee
1925 - Illinois Institute of Technology	1940-1949, 1951 - University of Detroit Mercy ⁶
1925 - Iowa State University	1940-1948, 1958-1968, 1983 - Johns Hopkins University ⁷
1925 - Massachusetts Institute of Technology	1940 - University of Missouri
1925 - University of Michigan	1940 - University of Oklahoma
1925 - University of Minnesota	1940 - Syracuse University
1925 - Ohio State University	1941 - The Cooper Union
1925 - Polytechnic University ¹	1941 - University of Delaware
1925 - Rensselaer Polytechnic University	1941 - Rice University
1925 - University of Wisconsin	1941 - University of Rochester
1925-1965, 1982 - Yale University	1942 - Bucknell University
1926 - California Institute of Technology	1942 - University of Florida
1926-1950, 1953 - University of Iowa	1942 - University of Maryland
1926 - University of Washington	1942 - Northeastern University
1931-1965, 1967 - University of Pittsburgh	1942 - Oregon State University
1932-1951, 1953 - Lehigh University	1942 - Worcester Polytechnic Institute
1933 - University of Illinois	1943 - University of Texas
1933 - Purdue University	1943 - University of Virginia
1934 - Princeton University	1946 - Texas A&M University
1935 - University of Louisville ²	1947 - Michigan Technological University
1936 - Cornell University	1947 - Northwestern University
1936-1947, 1949 - Drexel University	1949 - University of Kansas
1936 - Pennsylvania State University	1948 - Montana State University
1936 - University of Pennsylvania ³	1948 - North Carolina State University
1938 - Clarkson University	1948 - Washington University
1938 - Georgia Institute of Technology ⁴	1948 - West Virginia University
1938 - Virginia Polytechnic Institute	1949 - University of Notre Dame
¹ Now accredited as Chemical and Biological Engineering	1949 - Vanderbilt University
² Now accredited at the Master's level	⁵ Program discontinued in 1993
³ Now accredited as Chemical and Biomolecular Engineering	⁶ Program discontinued in 2005
⁴ Now accredited as Chemical and Biomolecular Engineering	⁷ Now accredited as Chemical and Biomolecular Engineering

- 1950 - University of Alabama
 1950 - Auburn University
 1950 - University of Colorado
 1950 - University of Idaho
 1950 - University of Maine
 1950 - New Jersey Institute of Technology
 1950 - Oklahoma State University⁸
 1950 - Rose-Hulman Institute of Technology
 1950-1952, 1960 - University of Southern California
 1950 - Wayne State University
 1951 - Kansas State University
 1951 - Missouri University of Science and Technology
 1951 - Villanova University
 1951 - Washington State University
 1952 - University of Arkansas
 1952 - University of California-Berkeley
 1952 - Tufts University
 1952 - University of Utah
 1953 - City College of the City University of New York
 1954-1963, 1966 - Cleveland State University
 1954 - Michigan State University
 1954 - University of Mississippi
 1954 - University of Nebraska
 1954 - University of Rhode Island
 1954 - Tulane University
 1956 - Colorado School of Mines
 1956 - Lafayette College
 1956-1963, 1967 - University of Louisiana-Lafayette
 1956 - Louisiana Tech University
 1956 - University of South Carolina
 1957 - University of Houston
 1958 - Lamar University
 1958 - University of Massachusetts
 1958 - University of Tulsa
 1959 - Clemson University
 1959 - Stanford University
- 1960 - South Dakota School of Mines and Technology
 1961 - Brigham Young University
 1963 - University of Arizona
 1963 - Ohio University
 1964 - University of Connecticut
 1964 - Manhattan College
 1964 - Mississippi State University
 1964 - University of New Hampshire
 1964 - University of Toledo
 1965 - Texas Tech University
 1966 - Arizona State University
 1966 - University of California-Davis
 1966 - State University of New York at Buffalo
 1966 - San Jose State University
 1967 - Catholic University of America⁹
 1967 - New Mexico State University
 1968 - University of California-Santa Barbara
 1969 - University of Dayton
 1969 - University of Kentucky
 1970 - University of Akron
 1970 - University of Puerto Rico
 1970 - Tennessee Technological University
 1971 - University of Massachusetts-Lowell
 1971 - Rutgers University
 1972 - California State Polytechnic University-Pomona
 1972 - West Virginia University Institute of Technology
 1974 - University of Wyoming
 1974 - Youngstown State University
 1976 - University of Illinois-Chicago
 1976 - University of New Mexico
 1976 - University of South Florida
 1977 - Howard University
 1978 - Texas A&M University-Kingsville
 1979-1988, 1990 - Tri-State University

⁸ Master's degree program until 1976

⁹ Program discontinued in 1988

- 1980 - California State University-Long Beach
- 1981 - Colorado State University
- 1983 - University of California-Los Angeles
- 1983 - Florida Institute of Technology
- 1984 - Tuskegee University
- 1985 - Brown University
- 1985 - University of California-San Diego
- 1985 - Christian Brothers University
- 1985 - University of South Alabama
- 1985 - Widener University
- 1986 - University of Alabama-Huntsville
- 1986 - University of Maryland-Baltimore County
- 1986 - Stevens Institute of Technology
- 1987 - Florida A&M University/Florida State University
- 1987 - University of Nevada-Reno
- 1990 - University of Minnesota-Duluth
- 1991 - North Carolina A&T University
- 1992 - Hampton University
- 1994 - Prairie View A&M University
- 1995 - University of California-Riverside
- 1995 - University of New Haven
- 1996 - University of California-Irvine
- 1999 - New Mexico Institute of Mining and Technology
- 2001 - University of California-Davis¹⁰
- 2001 - Rowan University
- 2001 - Virginia Commonwealth University
- 2003 - University of Kentucky-Paducah
- 2003 - Western Michigan University
- 2007 - Massachusetts Institute of Technology¹¹
- 2007 - State University of New York at Stony Brook¹²
- 2007 - Polytechnic University of Puerto Rico
- 2007 - University of Tennessee-Chattanooga

¹⁰ Programs now offered in Chemical Engineering and Biochemical Engineering

¹¹ Programs now offered in Chemical Engineering and Chemical-Biological Engineering

¹² Now accredited as Chemical and Molecular Engineering

in 1932 with the formation of the Engineers' Council for Professional Development (ECPD), established "as a cooperative movement for improving the selection, education, post-college training, and methods of recognizing attainment of engineers (ECPD, 1947). AIChE was one of the founding members of ECPD, along with the American Institute of Electrical Engineers³, the American Institute of Mining and Metallurgical Engineers⁴, the American Society of Civil Engineers, the American Society of Mechanical Engineers, the National Council of Engineering Examiners⁵, and the Society for the Promotion of Engineering Education. By 1931, on the eve of the founding of ECPD, the number of chemical engineering programs accredited by AIChE had grown to 18 (AIChE, 1931). Along with the list of accredited programs, the Committee on Chemical Engineering Education reported the procedures and criteria used by AIChE for accreditation; these included preparation of a questionnaire by the program under review, a site visit by a committee of peers, and a report to the Committee on Chemical Engineering Education, which voted an accreditation recommendation based on its analysis of the questionnaire and a report of the visiting committee. Accreditation recommendations were approved by Council.

These procedures were quite similar to those subsequently adopted by ECPD when it began accrediting programs in all engineering disciplines in 1935-36. Hence, when AIChE became one of the founding members of ECPD, it was able to continue its accreditation program with essentially the same personnel, procedures, and criteria as before. It was also able to negotiate a "special status" within ECPD (Reynolds, 1983, p.15), which allowed the AIChE Committee on Chemical Engineering Education (later the Education and Accreditation Committee):

³ Now Institute of Electrical and Electronics Engineers (IEEE) following merger with the Institute of Radio Engineers.

⁴ Now divided into three societies, the Society for Mining, Metallurgy, and Exploration (SME); the Society of Petroleum Engineers (SPE), and the Minerals, Metals, and Materials Society (TMS).

⁵ Now the National Council of Examiners of Engineers and Surveyors (NCEES).

1. To designate the evaluator for each chemical engineering program visited (rather than being designated by the visiting team chair, as was the case for other engineering programs) and
2. To take an accreditation action different from that recommended by the ECPD Committee on Engineering Schools (now the ABET Engineering Accreditation Commission), with the ECPD Council accepting the less favorable of the two actions.

The designation of program evaluators by AIChE caused little trouble and was, in fact, appreciated by many visiting team chairs. Currently, several professional societies perform a similar service in recommending evaluators for a particular program. The separate accreditation action, however, led to serious difficulties after the incorporation of “due process” in accreditation reviews in the 1970’s.

Difficulties with AIChE’s Special Status

Prior to 1973, institutions whose engineering programs were being accredited did not see any part of the report of the visiting committee until ECPD had taken its final accreditation action and formally communicated the results to the institution. With encouragement from the U.S. Office of Education, however, a “due process” procedure was adopted, beginning with the 1973-74 accreditation cycle, in which a draft statement was sent to the institution following the visit, to allow correction of errors in fact and rebuttal of findings that the institution felt were incorrect. ECPD action was then based on the original statement, the institution’s response, and an evaluation by the visiting committee of the validity of the institution’s claims (ECPD 1974). Under these conditions, it was possible for the AIChE E&A Committee to take a more severe action than ECPD, based on factors not identified in the draft statement to the institution, and to which the institution had no opportunity to respond. This indeed occurred, to the embarrassment of ECPD and the outrage of the institution involved.

The resulting furor led to extensive negotiations between the AIChE and ECPD leadership, and, in response the E&A Committee, adopted the following procedures.

1. Agreement as a matter of policy to base its actions only on conditions identified in the draft statement to the institution
2. Assignment of two committee members to each visitor to a chemical engineering program, who were responsible for studying the institution's questionnaire in advance, communicating with the visitor concerns and points to watch for during the visit, and reviewing the visitor's report to help assure that any potential concerns of the E&A Committee were addressed in the visitor's report and subsequently in the draft statement to the institution, and
3. Advancing the E&A Committee meeting schedule so that it could review the draft statement to the institution before any accreditation actions were recommended.

This parallel review process significantly improved agreement between ECPD and AIChE accreditation actions for chemical engineering programs. However, lingering animosity toward AIChE was rekindled each year when, after an accreditation action for a chemical engineering program by the ECPD Engineering Education and Accreditation Committee (which in 1980 became the Engineering Accreditation Commission of ABET), an AIChE representative announced the AIChE accreditation action.

Recognizing that discrepancies between AIChE and ABET accreditation actions were almost nonexistent due to the parallel E&A committee review, the E&A Committee approached the AIChE Council with a proposal that AIChE accept the EAC/ABET accreditation action as its own, consistent with the policies of all other ABET member societies. A significant factor lessening the need for a separate accreditation action was the introduction by ABET in 1983 of Program Criteria, applicable to individual engineering disciplines, in addition to the general accreditation criteria (ABET, 1983). This allowed AIChE to specify that important subjects, in particular advanced chemistry, be included in chemical engineering curricula as a part of the overall ABET accreditation requirements. After a trial period starting in the mid-1980's, in which the high degree of consistency between EAC/ABET and AIChE E&A Committee recommendations continued, Council approved the

procedure on a permanent basis, and AIChE ceased to act as a separate accrediting body.

Engineering Accreditation Reform and AIChE's Contributions

A broad-ranging consequence of the due process review as well as concern over possible legal challenges to unfavorable accreditation decisions prompted ECPD/ABET to adopt increasingly detailed and prescriptive accreditation criteria. This was intended as a good-faith effort to protect engineering programs from the arbitrary decisions and personal agendas of some accreditation visitors, but the unintended consequence was a rapid increase in the specificity of the criteria, which grew in length from less than three pages in 1971 to more than 26 pages of smaller type by 1988 (Prados, 2007, pp 169-170). Increasingly, ABET was perceived as an impediment to innovation. Institutions that attempted to develop more flexible and innovative programs were harassed in accreditation reviews and were forced to make their curricular requirements more restrictive to avoid loss of accreditation. ABET had clearly become a stumbling block to reform (Prados, 2004).

Complaints from the engineering education community intensified. Fortunately, the ABET leadership recognized the validity of these concerns and took action. In addition to a series of steps to make the accreditation process more “user friendly,” a new set of engineering accreditation criteria, much briefer than the previous set, were developed and eventually approved. These new criteria, Engineering Criteria 2000 (EC2000), rather than focusing on curricular content and other program characteristics, placed strong emphases on definition of *program objectives*, specifying the desired achievements of graduates, and *learning outcomes*, specifying the intellectual skills students should acquire by the time of graduation. Specification of curricular content was significantly reduced in both general and program criteria. At the heart of EC2000 was a continuous improvement process based on evaluation of the achievement of these outcomes and objectives and the use of evaluation results for program improvement.

Over the years, AIChE members have provided significant leadership to ABET and its predecessor organization, ECPD. AIChE members who have served as ABET or ECPD president are listed in Table II, and those who have chaired the ABET Engineering Accreditation Commission (or ECPD Engineering Education and Accreditation Committee) are shown in Table III.

Table II.

AIChE Members Serving as ECPD/ABET President

Robert B. Beckmann	1974-1976
William H. Corcoran	1982 ⁶
John W. Prados	1991-1992
Robert R. Furgason	1993-1994
Stanley I. Proctor	1996-1997
Richard C. Seagrave	2005-2006

Table III.

*AIChE Members Serving as Chairs of the ABET Engineering Accreditation Commission
(ECPD Engineering Education and Accreditation Committee)*

Robert B. Beckmann	1968-1969
William H. Corcoran	1972-1973
George Burnet	1975-1976
James G. Knudsen	1977-1978
John W. Prados	1984-1985
Robert R. Furgason	1987-1988
Richard C. Seagrave	1996-1997
Larry A. Kaye	2002-2003

AIChE members were also instrumental in the development and implementation of ABET Engineering Criteria 2000. Among these were two of the six members of the *ad hoc* committee that drafted the original version of the criteria, Richard Seagrave and John Prados. Robert Furgason, as 1993-1994 ABET President provided critical leadership in

⁶ William H. Corcoran was elected President of ABET in 1982, but died before taking office.

obtaining initial approval of the new criteria and their publication for comment by the ABET Board of Directors the following year (ABET, 1996).

Accreditation of Chemical Engineering Technology Programs

In the early years of the 20th century, institutions known as technical institutes began to emerge to provide applied technical education at a level beyond secondary school. Such programs varied widely in length and quality, and it was not until the approach of World War II that interest developed in providing quality assurance for such programs through accreditation. Early in 1940, a group of technical institutes approached ECPD asking for “a study of the possibility of some form of accrediting for technical institutes,” and a subcommittee of the ECPD Committee on Engineering Schools was formed to study this issue (ECPD, 1940). In 1944, the subcommittee issued a report recommending: “(1) that recognition or certification of educational programs of the technical institute type be initiated by the Engineers’ Council for Professional Development. . .,(2) that . . . an accrediting group be set up which would include representatives of institutions offering educational programs of the technical institute type and of industries served by them . . ., and (3) that this movement . . .be inaugurated as soon as this can be done appropriately in view of the war situation.” The report also included suggested accreditation criteria (ECPD 1944). Such a program was, indeed, inaugurated as soon as the war ended, and the first “List of Accredited Programs of Technical Institute Type” appeared in ECPD’s Fourteenth Annual Report in 1946 (ECPD, 1971).

In the 1950’s, programs in Chemical Technology began to appear. Although records of this era are incomplete, it appears that AIChE became involved in accreditation of such programs through ECPD by providing visitors for accreditation teams, probably recruited from the E&A Committee and its list of accreditation visitors.

The first program bearing the name “Chemical Engineering Technology” was offered at Broome Technical Community College beginning in 1963. This was, in fact, a name change from an older program in “Chemical Technology” established in 1958. Additional programs were added in the

ensuing years, and in 1972, AIChE established the Technicians' Affairs Committee, charged to "Develop methods and programs that help technicians perform as team members and that stimulate the contribution to the profession; advises schools on curricula and cooperates in the accreditation of programs for the education and training of chemical engineering technicians." (AIChE, 2007) This committee works closely with the Technology Accreditation Commission (TAC) of ABET in developing and updating program criteria for two-year programs in chemical engineering technology (and those with related titles) and providing accreditation visitors for teams evaluating such programs.

Other recent activities of the Technicians' Affairs Committee include developing and producing a video tape course entitled "Chemical Engineering Fundamentals for Operators, Technicians, Designers, and Draftspersons" which was funded by AIChE and DuPont and offered for sale by AIChE. The committee also provided input to the '98-99 edition of the U.S. Department of Labor "Career Guide to Industries." (Byrne, 2008). An AIChE member, James B. Byrne, served as chair of the ABET TAC in 2004-2005.

In response to the increasing emphasis on mathematics and science in engineering curricula and the corresponding decline in hands-on, practice-oriented material, the ECPD Engineering Technology Committee in 1965 began to develop criteria for accreditation of four-year baccalaureate programs in engineering technology (ECPD, 1965), and the first two such programs were accredited in 1967 (ECPD, 1967). Also in 1967, ECPD formally recommended use of the terms "engineering technician" and "engineering technologist" to describe graduates of the two-year and four-year programs, respectively (Alden, 1986).⁷ AIChE, however, took the position that the spectrum of chemical engineering functions could be covered adequately by graduates of the two-year technology programs and baccalaureate (and above)

⁷ At most institutions, graduates of the two-year programs receive the degree of Associate of Applied Science (AAS), and graduates of the four-year programs receive the degree of Bachelor of Science (BS) or Bachelor of Science in Engineering Technology (BSET).

chemical engineering programs and that four-year programs in chemical engineering technology were not needed. Hence, program criteria for four-year programs were only recently developed, and one baccalaureate program is currently evaluated under these criteria.

In recent years, all but two institutions have ceased to offer programs in chemical engineering technology. These are the University of Houston Downtown Campus, offering a program in “Process Piping Design Engineering Technology” (option in Engineering Technology, four-year program) and McNeese State University, offering programs in “Engineering Technology in Process Plant” (two-year and four-year programs). As the process industries have increasingly adopted computer simulations to replace pilot plants, the demand for chemical engineering technicians as pilot-plant operators, a primary employment opportunity for two-year chemical engineering technology graduates, has declined and with it the demand for graduates of such programs. The McNeese State programs, by contrast, have focused on preparing process operators. As processes have employed more sophisticated computer controls, the need has arisen for formal operator preparation well beyond the apprenticeship model of past years. A study by Byrne in 2001 revealed a list of 29 programs for preparing process operators, the majority offered by educational institutions in the Gulf Coast region. Almost none of these, however, were accredited by any organization. Should such programs begin to seek accreditation through ABET, a major demand would be placed on the AIChE Technicians’ Affairs Committee (Byrne, 2008).

Table IV lists the programs in chemical engineering technology (and related titles) that have been accredited through the efforts of the Technicians’ Affairs Committee, together with the dates of their operation.

Current Activities

The E&A Committee continues to take an active role in the accreditation of each chemical engineering program. Members of the committee serve as a liaison resource team for each evaluation visit being conducted. Prior to the annual meeting of ABET’s Engineering Accreditation Commission

Table IV.

Accredited Programs in Chemical Engineering Technology (and Related Titles) By Year of Initial ECPD/ABET Accreditation (ABET, 2008; various ECPD/ABET Annual Reports)

Institution	Program Title	Year of Initial Accreditation	Year Discontinued
Ohio College of Applied Science ¹	Chemical Technology	1955	1999
Broome Technical Community College	Chemical Engineering Technology ²	1958	1980
Franklin Technical Institute	Chemical Technology	1958	1960
Erie County Technical Institute	Chemical Technology ³	1959	1976
New York City Community College	Chemical Technology	1959	1965
Farmingdale, State University Agricultural & Technical College	Chemical Technology	1965	1971
Norwalk State Technical College	Engineering Technology - Chemical	1965	1987
Iowa State University	Chemical Industries Technology	1967	1972
Three Rivers Community -Technical College ⁴	Engineering Technology - Chemical	1967	1998
Naugatuck Valley Community -Technical College ⁵	Engineering Technology - Chemical	1967	2000
Midlands Technical Education Center ⁶	Chemical Engineering Technology	1969	1971
The Pennsylvania State University ⁷	Chemical Engineering Technology	1969	1987
Hudson Valley Community College	Chemical Engineering Technology ⁸	1970	1984
Milwaukee School of Engineering	Chemical Engineering Technology	1970	1973
Wake Technical College ⁹	Chemical Engineering Technology ¹⁰	1972	1990
Nashville State Technical Institute	Chemical Engineering Technology	1973	1988
Southwest Tennessee Community College ¹¹	Chemical Engineering Technology	1976	2004
Trident Technical College	Chemical Engineering Technology	1977	2002
Pellissippi State Technical Community College ¹²	Chemical Engineering Technology ¹³	1978	2005
University of Houston	Process Piping Design - BS	1980	
Kansas State University -- Salina	Chemical Engineering Technology	1990	1992
Michigan Technological University	Chemical Engineering Technology	2000	2006
McNeese State University	Engineering Technology - Process Plant AAS	2003	
McNeese State University	Engineering Technology - Process Plant BS	2005	

¹ Division of the University of Cincinnati

² Accredited as Chemical Technology, 1958-1962, 1966-1980

³ Accredited as Industrial Chemistry Technology, 1959-1964

⁴ Thames Valley State Technical College until 1993

⁵ Waterbury State Technical College until 1993

⁶ Richland Technical Education Center in 1969

⁷ Various Regional Campuses

⁸ Accredited as Chemical Technology, 1970-1981

⁹ Holding Technical Institute; 1972-1973; Wake Technical Institute, 1974-1979

¹⁰ Accredited as Chemical Technology, 1972-1983

¹¹ State Technical Institute at Memphis until 2001

¹² State Technical Institute at Knoxville until 1988

¹³ Accredited as Chemical and Environmental Engineering Technology, 1992-2005

(EAC), the E&A Committee conducts a parallel review of each program. This involves an analysis of the evaluator's report and a recommendation by the committee of the accreditation action to be taken. This recommendation is based on both the report and the assessments made by the liaison team. The full AIChE E&A Committee meets on the evening before the Summer ABET EAC meeting. The four AIChE EAC members (and any AIChE members serving on EAC executive positions) have access to the final ABET documentation for each visit detailing the visit findings, the accreditation recommendations, and the history of the due process responses and after-visit materials submitted by the institution.

The E&A Committee uses this meeting to check all of the final proposed chemical engineering accreditation actions for consistency. On occasion, if the committee is not in agreement with the proposed accreditation action about to be moved by the Team Chair at the subsequent EAC meeting, the E&A Committee charges the AIChE EAC representatives to offer an amended recommendation motion to the EAC. ABET EAC recognizes the seriousness with which the E&A Committee takes consistency and usually gives serious consideration to our amended motions. This system works well because chemical engineering program evaluators maintain timely contact with their liaison team from the E&A Committee (AIChE E&A Committee, 2000; Siirola, 2008).

A revised mission statement for the E&A Committee was approved by the AIChE Career and Education Operating Council in 2002 (AIChE E&A Committee Minutes, 2002), as shown below:

“It shall (a) advise the Institute on the accreditation status of chemical engineering educational programs in the United States and its territories, (b) act as the agent of the Institute in all aspects of the accreditation of chemical and similarly named engineering programs in the United States and its territories by the Accreditation Board for Engineering and Technology (ABET), (c) train evaluators for accreditation visits to chemical engineering programs, (d) advise the Institute, through its annual report of activities, and individual chemical engineering education

programs, through its appointed program evaluators, on how to improve the effectiveness of programs and (e) cooperate with other committees in the Institute on programs aimed at improvement of chemical engineering education in general.”

A revised Manual of Procedure was issued by the committee in 2006 (AIChE, 2006). In view of the rapid growth of biologically-related material in chemical engineering curricula, the E&A Committee has been proactive in asserting AIChE control over accreditation of such programs. Currently, AIChE has been designated by ABET as the lead society for chemical, biochemical, biomolecular, and similarly named engineering programs. AIChE is also a cooperating society for bioengineering and biomedical engineering and similarly named engineering programs (lead society is the Biomedical Engineering Society) and in biological and similarly named engineering programs (lead society is the American Society of Agricultural and Biological Engineers).

The accreditation activities of AIChE depend on countless hours of volunteer work contributed by the members of the E&A Committee, the Technicians’ Affairs Committee, and the chemical engineers from academic institutions and industry who serve as program evaluators (accreditation visitors) in chemical engineering and chemical engineering technology. AIChE owes these dedicated individuals a debt of gratitude for their efforts to assure the quality of preparation of the chemical engineering and chemical engineering technology graduates on whom the future of our profession depends.

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