The mapping between the criteria are presented in three tables, one for the introductory section, including definitions (Table 1) and one for each of the two criteria (Criterion 3 in Table 2 and Criterion 5 in Table 3). Each table contains one column with the current (Cycle 2017-18) elements and one with the language that was approved by the Engineering Area Delegation on October 20, 2017.

Table 1. Changes in Introduction, Including Definitions

Current Language **EAC Criteria effective 2017-18 and 2018-19 Cycles**	**New Language** **Approved by the EAD October 20, 2017** **Applicable beginning in the 2019-20 cycle**
These criteria are intended to assure quality and to foster the systematic pursuit of improvement in the quality of engineering education that satisfies the needs of constituencies in a dynamic and competitive environment. It is the responsibility of the institution seeking accreditation of an engineering program to demonstrate clearly that the program meets the following criteria.	These criteria apply to all accredited engineering programs. Furthermore, these criteria are intended to foster the systematic pursuit of improvement in the quality of engineering education that satisfies the needs of its constituencies in a dynamic and competitive environment. It is the responsibility of the institution seeking accreditation of an engineering program to demonstrate clearly that the program meets the following criteria.
Definitions in the current criteria are embedded in Criterion 3 and Criterion 5 (as indicated below)	**Definitions** The Engineering Accreditation Commission of ABET recognizes that its constituents may consider certain terms to have certain meanings; however, it is necessary for the Engineering Accreditation Commission to have consistent terminology. Thus, the Engineering Accreditation Commission will use the following definitions in applying the criteria:
Currently in Criterion 5: Basic sciences are defined as biological, chemical, and physical sciences.	<u>Basic Science</u> – Basic sciences are disciplines focused on knowledge or understanding of the fundamental aspects of natural phenomena. Basic sciences consist of chemistry and physics and other natural sciences including life, earth, and space sciences.
Not explicitly defined in current criteria.	<u>College-level Mathematics</u> – College-level mathematics consists of mathematics that requires a degree of mathematical sophistication at least equivalent to that of introductory calculus. For illustrative purposes, some examples of college-level mathematics include calculus, differential equations, probability, statistics, linear algebra, and discrete mathematics.

Not explicitly defined in current criteria.	Complex Engineering Problems - Complex engineering problems include one or more of the following characteristics: involving wide-ranging or conflicting technical issues, having no obvious solution, addressing problems not encompassed by current standards and codes, involving diverse groups of stakeholders, including many component parts or sub-problems, involving multiple disciplines, or having significant consequences in a range of contexts.
From current Criterion 3. …-within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability From current Criterion 5: Engineering design is the process of devising a system, component, or process to meet desired needs. It is a decision-making process (often iterative), in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet these stated needs.	Engineering Design – Engineering design is a process of devising a system, component, or process to meet desired needs and specifications within constraints. It is an iterative, creative, decision-making process in which the basic sciences, mathematics, and engineering sciences are applied to convert resources into solutions. Engineering design involves identifying opportunities, developing requirements, performing analysis and synthesis, generating multiple solutions, evaluating solutions against requirements, considering risks, and making trade-offs, for the purpose of obtaining a high-quality solution under the given circumstances. For illustrative purposes only, examples of possible constraints include accessibility, aesthetics, codes, constructability, cost, ergonomics, extensibility, functionality, interoperability, legal considerations, maintainability, manufacturability, marketability, policy, regulations, schedule, standards, sustainability, or usability.
Currently in Criterion 5: The engineering sciences have their roots in mathematics and basic sciences but carry knowledge further toward creative application. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practice on the other.	Engineering Science – Engineering sciences are based on mathematics and basic sciences but carry knowledge further toward creative application needed to solve engineering problems. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practice on the other.
Not explicitly defined in current criteria.	Team – A team consists of more than one person working toward a common goal and should include individuals of diverse backgrounds, skills, or perspectives.

Table 2. Changes in Criterion 3 - Student Outcomes

Current Language **EAC Criteria effective 2017-18 and 2018-19 Cycles**	**New Language** **Approved by the EAD October 20, 2017** **Applicable beginning in the 2019-20 cycle**
Criterion 3. Student Outcomes The program must have documented student outcomes that prepare graduates to attain the program educational objectives. Student outcomes are outcomes (a) through (k) plus any additional outcomes that may be articulated by the program.	**Criterion 3. Student Outcomes** The program must have documented student outcomes that support the program educational objectives. Attainment of these outcomes prepares graduates to enter the professional practice of engineering. Student outcomes are outcomes (1) through (7), plus any additional outcomes that may be articulated by the program.
(a) an ability to apply knowledge of mathematics, science, and engineering (e) an ability to identify, formulate, and solve engineering problems	1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
(b) an ability to design and conduct experiments, as well as to analyze and interpret data	6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
(d) an ability to function on multidisciplinary teams	5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
(f) an understanding of professional and ethical responsibility (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context (j) a knowledge of contemporary issues	4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
(g) an ability to communicate effectively	3. an ability to communicate effectively with a range of audiences
(i) a recognition of the need for, and an ability to engage in life-long learning	7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies
(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	Implied in 1, 2, and 6

Table 3. Changes in Criterion 5 - Curriculum

Current Language **EAC Criteria effective 2017-18 and 2018-19 Cycles**	**New Language** **Approved by the EAD October 20, 2017** **Applicable beginning in the 2019-20 cycle**
The curriculum requirements specify subject areas appropriate to engineering but do not prescribe specific courses. The faculty must ensure that the program curriculum devotes adequate attention and time to each component, consistent with the outcomes and objectives of the program and institution. The professional component must include:	The curriculum requirements specify subject areas appropriate to engineering but do not prescribe specific courses. The program curriculum must provide adequate content for each area, consistent with the student outcomes and program educational objectives, to ensure that students are prepared to enter the practice of engineering. The curriculum must include:
(a) one year of a combination of college level mathematics and basic sciences (some with experimental experience) appropriate to the discipline. Basic sciences are defined as biological, chemical, and physical sciences.	(a) a minimum of 30 semester credit hours (or equivalent) of a combination of college-level mathematics and basic sciences with experimental experience appropriate to the program.
(b) one and one-half years of engineering topics, consisting of engineering sciences and engineering design appropriate to the student's field of study. The engineering sciences have their roots in mathematics and basic sciences but carry knowledge further toward creative application. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practice on the other. Engineering design is the process of devising a system, component, or process to meet desired needs. It is a decision-making process (often iterative), in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet these stated needs.	(b) a minimum of 45 semester credit hours (or equivalent) of engineering topics appropriate to the program, consisting of engineering and computer sciences and engineering design, and utilizing modern engineering tools.
(c) a general education component that complements the technical content of the curriculum and is consistent with the program and institution objectives.	(c) a broad education component that complements the technical content of the curriculum and is consistent with the program educational objectives.
Students must be prepared for engineering practice through a curriculum culminating in a major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate engineering standards and multiple realistic constraints.	(d) a culminating major engineering design experience that 1) incorporates appropriate engineering standards and multiple constraints, and 2) is based on the knowledge and skills acquired in earlier course work.