

Interpretive statement on curriculum content for options and multi-discipline programs

The Accreditation Board develops statements of interpretation to clarify the intent underlying certain key expectations which generate frequent enquiries and are not otherwise covered by the Accreditation Board accreditation criteria. The following statement of interpretation addresses the issue of curriculum content for options and multi-discipline programs.

The CEAB recognizes that the content and names of programs continue to evolve as approaches to student learning and societal opportunities and challenges drive engineering to new and often more integrative disciplines. Furthermore, the CEAB understands and respects the need for higher education institutions (HEIs) to have flexibility and scope for innovation in their programs with scope for program and option names to appropriately represent the program. This interpretive statement is intended to support such flexibility and innovation while providing clarity to HEIs to facilitate compliance with Criteria 3.6.1, 3.6.2, 3.6.3, 3.6.4, 3.6.5 and 3.6.6, and guidance for visiting teams in regard to assessment of compliance with these criteria.

Program and Options Names

HEIs use a variety of terms, such as certificate, option, minor, specialization, focus area, stream, theme, and pathway, to describe a set of courses that give students a level of specialization within their degree program. This specialization may be a sub-discipline of their degree discipline or a sub-discipline of another discipline, including non-engineering disciplines. Reference to options in Criterion 3.6.5 and in this Interpretive Statement also includes the variety of terms mentioned above or other such designations **that are referenced** on the degree transcript or on the degree parchment. Where such designations are used to indicate that graduates have taken a structured specialization in an area of engineering within their degree program, Criterion 3.6.5 shall apply. Where a designation does not appear on the degree transcript or degree parchment, or where the designation is in relation to a specialization that is not in the area of engineering, Criterion 3.6.5 shall not apply.

The names for both options and programs should be appropriately descriptive of the content of the options and programs, avoid confusion, and promote clarity, particularly for employers and the public, in terms of the educational credentials of program graduates. The HEI shall explain their choice of option and program names in the Questionnaire in the responses to Criterion 3.6.3 and Criterion 3.6.5. As HEIs develop new programs or plan for changes to existing programs to introduce options or to change the program or option name, the HEI should consult with the CEAB Secretariat which can provide advice with respect to Criteria 3.6.1, 3.6.2, 3.6.3, 3.6.4, 3.6.5 and 3.6.6 and this Interpretive Statement based on the specific plans of the HEI.

In accordance with Criterion 3.6.3, the “title of an accredited engineering program must be properly descriptive of the curriculum content”, and this criterion is evaluated as a part of the regular accreditation visit process.

In accordance with Criterion 3.6.5, there is a requirement that there is “a significant amount of distinct curriculum content and that the name of each option is descriptive of that curriculum content”, and this criterion is evaluated as a part of the regular accreditation visit process.

In the case where program option designations appear on degree transcripts or degree parchments, the Accreditation Board seeks the equivalent of one semester (or 1/8 of program content) of specific content in engineering science and/or engineering design that forms the knowledge base for an option. The option name should accurately describe the specific content that constitutes the option.

Multidisciplinary and Integrative Programs

The CEAB supports innovation in engineering education, including the offering of programs that include significant content from multiple conventional or established programs, or content that represents new disciplines. Typically, these programs have program names of the form:

- X and Y Engineering (e.g. Electrical and Biomedical Engineering)
- X Y Engineering (e.g. Electrical Biomedical Engineering)
- X Engineering and Y Engineering (e.g. Electrical Engineering and Biomedical Engineering)

Program names of the forms ‘X and Y Engineering’ and ‘X Y Engineering’ are typically used for degrees based on the integration of material normally associated with a program in ‘X Engineering’ and a program in ‘Y Engineering’. Such program names are appropriate where the program **does not cover** the breadth and depth of material in a manner that would **independently** meet the Accreditation Board accreditation requirements (i.e., Criterion 3.6.4) for **each engineering discipline** but where program elements in ‘X Engineering’ and ‘Y Engineering’ are included and integrated in terms of both engineering science and engineering design content at senior levels in the program. The program should include a rough balance in subject-specific content between the engineering disciplines included in the program name. The program must draw on material from each named discipline and must demonstrate the integration of the named disciplines, including in the capstone design component. Graduates of such programs should demonstrate, for example in meetings with the visiting team during a visit, an understanding that they cannot represent themselves as having the education qualifications in ‘X Engineering’ and/or in ‘Y Engineering’ but rather they will have the educational qualification of a graduate who has completed a degree with substantial identifiable elements of the named engineering disciplines and an integration of material from these disciplines. Visits for such programs will assess the program as an integration of the named engineering disciplines. Where an HEI believes that a program of the form “X and Y Engineering” and “X Y Engineering” meets the Accreditation Board accreditation requirements separately for **each engineering discipline** named, the HEI may request a program visit to be carried out in the manner described below for programs of the form “X Engineering and Y Engineering”.

Program names of the form 'X Engineering and Y Engineering' are typically used for degrees that fully cover the depth and breadth of content normally associated with **both** a program in 'X Engineering' **and** a program in 'Y Engineering'. Graduates of such programs can reasonably represent themselves as having education qualifications in 'X Engineering' and in 'Y Engineering'. As such, the program must meet the Accreditation Board accreditation requirements for **each engineering discipline** named. It is understood that there may be common curriculum that would reasonably be included in either engineering discipline (e.g. mathematics, natural science, complementary studies and some engineering science and design) and there isn't a requirement for a duplication or replacement of material that would reasonably be viewed as being a component of either discipline. The capstone design experience(s) must draw on material from each named engineering discipline and must include design elements from each of the named disciplines. Visits for such programs will include program visitors who are able to independently assess each of the engineering disciplines. The material submitted by the HEI in advance of an accreditation visit shall include rationale and documentation (e.g. curriculum data tables, GA/CI materials) that enable a visiting team to carry out these independent assessments.

For the purpose of accreditation, the preceding statement of interpretation should be carefully considered in the development and maintenance of such offerings. As indicated previously, HEIs should consult with the CEAB Secretariat which can provide advice with respect to Criteria 3.6.1, 3.6.2, 3.6.3, 3.6.4, 3.6.5, 3.6.6 and this interpretive statement based on the specific plans of the HEI. Furthermore, the Secretariat can ensure that an appropriate visiting team is constituted to be able to assess the program.