

IABEE International Common Criteria

Preamble

The Indonesian Accreditation Board for Engineering Education (IABEE) builds this set of Criteria using outcome-based education approach. All engineering education programs seeking international accreditation from IABEE shall fulfill the following Criteria.

Criterion 1: Orientation of the Graduate Competence

1. Program shall define the profile of graduates to be envisaged as autonomous professionals by considering country's potential resources, cultures, needs and interests.
2. Program shall inform its students and faculty with the envisaged autonomous professional profile and widely publicize it.
3. Program shall establish its expected learning outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the following (a) to (j) items to be acquired by the student at the time of completion of the study:
 - (a) an ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles.
 - (b) an ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective.
 - (c) an ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment.
 - (d) an ability to identify, formulate, analyze, and solve engineering problems.
 - (e) an ability to apply methods, skills and modern engineering tools necessary for engineering practices.
 - (f) an ability to communicate effectively in oral and written manners.
 - (g) an ability to plan, accomplish, and evaluate tasks under given constraints.,
 - (h) an ability to work in multidisciplinary and multicultural team.
 - (i) an ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems.
 - (j) an ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues.

Criterion 2: Learning Implementation

2.1 Curriculum

- (1) Curriculum shall include the following subject areas:
 - (a) Mathematics and discipline-specific natural sciences
 - (b) Discipline-specific engineering science and technology
 - (c) Information and communication technology
 - (d) Engineering design and problem based experiments
 - (e) General education, which includes morality, ethics, socio-culture, environment and management
- (2) Curriculum development shall consider input from Program stakeholders.
- (3) Curriculum shall indicate the structural relationship and contributions of the subject courses to fulfill learning outcomes. Procedures, including syllabus, shall be established and documented so that the expected learning process can be implemented in a controlled way.
- (4) Curriculum shall ensure that the students are exposed to engineering practices and major design project experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work.

2.2 Faculty

- (1) Program shall provide necessary number, qualification and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the learning outcomes.
- (2) Program shall ensure that the faculty members are aware of the relevance and importance of their roles and contributions to the learning outcomes.

2.3 Students and Academic Atmosphere

- (1) Program shall define and implement an entry standard for both new and transfer students, as well as transfer of credits.
- (2) Program shall define and implement an ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments.
- (3) Program shall create and maintain good academic atmosphere conducive to successful learning.

- (4) Program shall promote co-curricular activities for character building and enhancing the students' awareness on the country's needs.

2.4 Facility

Program shall ensure the availability and accessibility of facilities for effective functioning of the learning process and attainment of the learning outcomes.

2.5 Institutional Responsibility

- (1) Program shall define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning.
- (2) Institution shall make efforts to establish resource, supporting service and cooperation with stakeholders on research, education and/or service to community with due consideration to existing local resources.

Criterion 3: Assessment of the Expected Learning Outcomes

- 3.1 Program shall ensure that an effective assessment process of learning outcomes based on established performance indicators is implemented and maintained at planned intervals using appropriate methods.
- 3.2 Program shall ensure that graduates of the program achieve all expected learning outcomes.

Criterion 4: Continual Improvement

- 4.1 Based on the assessment results, Program shall perform an evaluation at planned intervals with output in the form of decisions to improve the effectiveness of the educational process, the suitability of the learning outcomes related to the needs of stakeholders, and resources.
- 4.2 Program shall maintain documents and records related to the implementation of evaluation, the results and their follow-up.

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