

(Translated Document)

Rules and Procedures for Accreditation of Engineering Education

Guideline Document

for

Bachelor Degree of Engineering Program Accreditation
Accreditation Cycle 2559-2564 B.E. (2016 – 2021 A.D.)

The Council of Engineers, Thailand

487/1, Soi Ramkhamhaeng 39 (Thepleela 1),

Ramkhamhaeng Road, Wangthonglang District, Bangkok 13010.

Tel: +66 2 021 4747, Fax +66 2 935 6695

Website: <http://www.coe.or.th>

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1. Introduction

These Rules and Procedures for Accreditation of Engineering Education is a guideline document and is used as a control document for accreditation of engineering education programs that award a bachelor degree of engineering within the Kingdom of Thailand. These guidelines are prepared and approved by the Council of Engineers for use of recognition of quality education program based on the evaluation of educational program outcomes during accreditation cycle between academic years 2559-2564 B.E.

Educational Institutions that apply for an accreditation of engineering program at bachelor degree of engineering is voluntarily required to comply with accreditation framework prescribed in this document and other related guidelines and control documents of the accreditation of engineering education prepared by the Council of Engineers.

2. Definitions, Objectives and Scopes of Educational Program Accreditation

2.1 Definitions

For organizations and personnel involving in accreditation of engineering education to have thoroughly understanding of related roles and functions of operational framework leading to the accreditation of bachelor of engineering degree programs, the Thailand Accreditation Board of Engineering Education (TABEE), as a subcommittee within the Council of Engineers, provides the explanation of terms and definitions related to the accreditation as prescribed in **Attachment 1 Terms and Definitions**.

2.2 Objectives

The Thailand Accreditation Board of Engineering Education (TABEE), as a subcommittee within the Council of Engineers, has set up the objectives of accreditation of engineering educational program as follows;

- 1) To evaluate quality of engineering education program and to announce the result of program evaluation to enrolling students, stakeholders, and to society at large regarding the quality of engineering education program accredited by the Thailand Accreditation Board of Engineering Education (TABEE), as a subcommittee within the Council of Engineers. This is to ensure, students and public at large, the quality and attributes of engineering graduates from the accredited program in accordance with program objectives prescribed in program curriculum.
- 2) To enhance educational programs in provision of quality education and continuous quality improvement to program students.

- 3) To develop educational assessment methods, teaching and learning, and to provide personnel development relating to the outcome based evaluation of engineering educational program.

2.3 Scope of Educational Program Accreditation

The accreditation of engineering educational program prescribed within this document is used for recognition of quality educational program in particular to the bachelor degree of engineering program with equivalent to graduation requirements of 4 years education period and 120-150 credits in semester system.

3. Curricula Eligible to Program Accreditation

Curricula that apply for engineering program accreditation shall meet the following requirements;

1. The program which offers the bachelor degree of engineering for the 4 years education period and has been approved by the University Council of the educational program.
2. The program has offered in full teaching and learning courses to all student classes of the program.
3. The educational program emphasizes on program outcome based.
4. The program courses must adequately provide the study of knowledge and application of basic sciences, mathematics, basic engineering subjects, and specific engineering subjects to fulfill the requirements of engineering profession career development.

In case of the multi-disciplinary or cross disciplinary programs applying for accreditation, TABEE will accredit only the program major subject or specified specialization field of engineering.

4. Accreditation Procedures

The accreditation of educational program is a quality evaluation process that is recognized by the Thailand Accreditation Board of Engineering Education (TABEE), as a subcommittee within the Council of Engineers for quality education administrated by educational program. The evaluation is based on quality level of educational program in accordance with accreditation criteria prescribed by TABEE.

Upon receiving the request for program accreditation and submission of program self-evaluation report, TABEE will appoint a program evaluation team consisting of a chairman, a member from academia and one member from professional practitioner in

that particular discipline. There will be a coordinating officer from TABEE and observers. The evaluation team shall be acceptable from the educational program. In case of objection by the program on ground of conflict of interest, TABEE will appoint another evaluation team, acceptable by both parties. This evaluation team, then, shall perform document review based on documents and evidence supports provided by the program for accreditation consideration.

The program accreditation consists of 3 review processes;

- 1) review of self-evaluation report
- 2) Program visit
- 3) Evaluation Reporting

The evaluation team shall review the program self-evaluation report and supporting documents based on checklist provided by TABEE, then arranges the program visit, and report result of evaluation together with preliminary comment to program for acknowledgement.

After program visit, the evaluation team reports result of evaluation to TABEE for consideration.

4.1 Review of self-evaluation report

The educational program seeking accreditation shall prepare self-evaluation report, in accordance with guideline documents prescribed by TABEE together with supporting documents and related evidences. The accreditation request and self-evaluation report then are submitted to TABEE for evaluation team to perform document review. During the review, evaluators may request additional explanation and supporting documents. Additional explanation and supporting documents must be submitted to TABEE prior to the program visit.

Upon completion of document review, the evaluation team shall make appointment with educational program for program visit.

In case the evaluation team, after a careful document review, decides that the program does not comply with the criteria set forth by TABEE and that the quality is well below the prescribed accreditation criteria the evaluation team may consider the program to be in Deficiency (D) without further making appointment for program visit.

4.2 Program Visit

The TABEE evaluation team makes an appointment for 3 days program visit with the program. Upon the appointment schedule, the evaluation team shall perform as follows,

- 1) Assess the teaching and learning course portfolio relating to basic engineering and engineering professional subjects that are taught by the program teaching staff for the knowledge content, homework, assignment, term report that are given to students during classes etc. and the class evaluation.
- 2) Meet with the Dean, high level university executives, program chair and faculty to discuss about schedules and activities during the program visit. Evaluator may ask about educational program quality management in accordance with the prescribed TABEE program outcomes.
- 3) Assess the class teaching and learning, laboratory equipment and facilities, library, information technology support system, and academic environment as prescribed in TABEE accreditation criteria.
- 4) Interview the program chair, teaching staff, laboratory and supporting staff about program quality management, program teaching and learning responding to program objectives, learning and program outcomes as prescribed in the curriculum.
- 5) Interview the program students (from all classes), the number of which is to be specified by the program evaluators.
- 6) Interviewing program alumni, the number of which is to be specified by the program evaluator.
- 7) Interview the program alumni who currently practice engineering profession in the industry, the number of which is to be specified by the program evaluator.
- 8) At the end of the visit, the evaluation team will made a preliminary conclusion and give a briefing to the university executives and program executives and respond to the questions asked by the program executives.

An exemplar of program visit here below is tentatively scheduled and is given to the educational program for visiting preparation as follows;

Day 1

9.00-16.00 hr.	Evaluation team reviews the visiting plan and activities.
	Evaluation team checks course portfolio and support documents prepared by the program.

Day 2

9.00-12.00 hr.	Meet with the Dean, high level university executives, program chair and faculty to discuss about schedules and activities during the program visit.
	Meet with the program chair to discuss about self-evaluation report and the program quality system.
13.00-16.00 hr.	Assess the class teaching and learning, laboratory equipment and facilities, library, information technology support system, and academic environment as prescribed in TABEE accreditation criteria.
	Interview the program executive, teaching staff, laboratory staff and supporting staff to about program quality management, program teaching and learning.

Day 3

9.00-12.00 hr.	Interview the program students (from all classes) as requested by the program evaluator.
	Interview the program alumni, as requested by the program evaluator.
13.00-16.00 hr.	Interview the program alumni who currently practice engineering profession in the industry as requested by the program evaluators.
	Brief with the Dean and university executives, and program chair for preliminary results of program evaluation and comments, and respond to questions asked by the program executives.

4.3 Evaluation Report and Accreditation Cycle

The Evaluation team arranges meeting and submits results of program evaluation using TABEE report form for the TABEE approval.

The results of program evaluation are classified as follows;

- 1) **A = Accredited.** Accredited indicates that TABEE has granted an accredited status to the educational program. It indicates that the program has attained a quality educational management, provision of quality teaching and learning to the program student, and together with continuous educational improvement in accordance with TABEE accreditation criteria. The accreditation is valid for 6 years accreditation cycle.
- 2) **P = Provisional.** Provisional indicates that TABEE has granted a provisional accredited status to the educational program. It indicates that the program has attained a quality educational management and provision of quality teaching and learning to the program student in accordance with TABEE accreditation criteria under conditions that the educational program must further improve on some issues of program quality management to achieve the continuous educational improvement within the next program evaluation. The accreditation is temporarily valid for 3 years.
- 3) **W = Waiting for improvement.** Waiting for improvement indicates that TABEE has not yet granted an accredited status to the educational program. It indicates that the program has not attained a quality educational management and provision of quality teaching and learning to the program student in accordance with TABEE accreditation criteria. TABEE is waiting for the result of improvement on some of program quality management to meet TABEE accreditation criteria. Upon the improvement of the program quality process and attainment for the quality level in accordance with the TABEE accreditation criteria, the educational program shall be considered as Provisional (P) status with temporary validity of 3 years period.
- 4) **D = Deficiency.** Deficiency indicates that TABEE has decided that the educational program is not to be accredited for the program has not attained the quality education management in accordance with the TABEE accreditation criteria. The program would require no less than 3 years to improve on essential quality management to meet the quality level in accordance with TABEE accreditation criteria. Upon the improvements, the

program then shall be able to request for accreditation of the next accreditation cycle.

5. Accreditation Criteria for accreditation cycle academic year 2559 – 2564 B.E.

These accreditation criteria based on evaluation of program outcomes requires that an educational program seeking for accreditation of engineering education voluntarily submits supporting evidences, documents and reports, to TABEE to consider recognition of quality education management and attainment of quality educational component in accordance with TABEE criteria. The accreditation criteria are described as follows;

Criterion 1 Students

Quality and professional competence of program graduates are essential components of program outcomes evaluation. The educational program seeking for accreditation is required to have process for assessment of student learning outcomes with adequate student advisory on activities towards his/her profession career development. The program must have formative and summative assessments and program monitoring throughout the education period to ensure that they have attained both quality and attributes set forth in the curriculum objectives.

An educational program seeking for accreditation must have program control procedures and admission statement for selecting student enrollment or admission of student to the program, the transfer of educational credits from other institutes to the program, and work procedures for program teaching and learning to ensure that the students are able to graduate from the program with the quality and attributes as prescribed by the program.

Criterion 2 Educational Objectives

An educational program seeking for accreditation must have a program statement describing the program objectives indicating expected field of engineering profession in which the graduates are going to work after the graduation.

An educational program seeking for accreditation must have the following components;

- 1) **Curriculum objectives** that have been published and distributed. The curriculum objectives and contents must relate to institutional mission and complying with TABEE criteria.
- 2) **Process to establish the curriculum objectives** which are the results of assessment and periodical review of the curriculum. The curriculum objectives

set forth by the program must respond to the demand of engineering profession from all constituents beneficiary of program outcomes.

- 3) **Curriculum, program teaching and learning, and program management** that serve to achieve the set forth curriculum objectives and the program outcomes.
- 4) **Program outcomes assessment and evaluation process** that have been used for reviewing and improvement of curriculum for program students to benefit from quality education.

Criterion 3 Program Outcomes and Evaluation

The program outcomes used as accreditation criteria are statements indicating that the program graduates are expected to attain knowledge, professional skills and behavioral attributes as they are required in engineering field of professional practice.

The educational program seeking for accreditation must submit evidences to TABEE; showing the mapping between curriculum objectives indicated in criterion 2 and program outcomes, together with work process and supporting documents, including the evaluation of program outcomes based on student achievement and the use of program outcomes assessment and evaluation in the reviewing and improvement of curriculum for program students to benefit from quality education.

Program outcomes as they are indicated by attributes of program graduates are as follows;

1. Knowledge of Mathematics, Sciences and Engineering

Ability to apply knowledge of mathematics, natural sciences, engineering fundamentals and an engineering specialization to conceptualize the engineering models, definitions, and/or to respectively apply methodologies, processes, and/or engineering systems in the work place.

2. Engineering Problems Analysis

Ability to identify, formulate, research literature review, solve, and analyze complex engineering problems reaching substantiated conclusions using principles of mathematics, natural sciences and engineering sciences.

3. Design and Development finding Solutions for Complex Engineering Problems

Ability to design and find solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, environmental impacts, and/or professional code of practices.

4. Investigation

Ability to conduct investigations, diagnosis, and evaluation of complex engineering problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.

5. Modern Tool Usage

Ability to create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering problems, with an understanding of their limitations.

6. Individual and Team Work

Function effectively as an individual, and as a member or the leader of teams consisting of diverse members and in multi-disciplinary settings.

7. Communication

Communicate effectively with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

8. Society, Environment, Sustainability, and Engineering Profession

Understand and be responsible for engineering professional practice to societal and environmental contexts and evaluate the sustainability and impact of professional engineering work in the solution of complex engineering problems in societal, environmental and sustainable contexts.

9. Ethics

Apply ethical principles and commit to professional ethics and responsibilities and norms or codes of engineering practice.

10. Project Management and Finance

Demonstrate knowledge and understanding of the principles of economics, investment, and engineering management under consideration of risk and uncertainties.

11. Lifelong Learning

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning.

Criterion 4 Professional Component

The professional component criteria requires that the program seeking for accreditation must appropriately and adequately provide academic knowledge of the specific engineering contents to engineering graduates of the program to pursue his/her professional occupation in accordance with set forth educational objectives of the program. The curriculum must have curriculum course structure complying with the knowledge contents required by each engineering field and in accordance with the Thai Qualification Framework for Higher Education (2552 B.E.), bachelor degree program, of which is regulated by the Office of Higher Education Commission, Quality Assurance Manual for Higher Education, and other international recognition agreements as follows;

- 1) Adequate knowledge content on mathematics and basic sciences (including laboratory) suitable for specific engineering field.
- 2) Adequate knowledge content on basic engineering and specific engineering for engineering design using mathematics, basic sciences, and basic engineering concepts for program graduates to appropriately practice their engineering profession under work requirements.
- 3) Knowledge content on general education study to enhance the graduate's quality in accordance with prescribed graduate attributes, program objectives and educational objective of the institution.

For a multi-disciplinary education program, the accreditation of engineering education is limited only to the program major or program field of specialization in accordance with prescribed TABEE accreditation criteria.

Criterion 5 Faculty

Educational institution must provide adequate number of faculty in accordance with requirements for bachelor degree program, regulated by Ministry of Education. The faculty must attain the educational qualification with professional competence relevance to the program specialization. The faculty must also provide adequate student advisory relating to students' professional career development and other activities related with professional society and industry.

The program teaching staff must demonstrate, both academic and professional competence, regarding student advisory and student career development including teaching and student evaluation for the continuous quality improvement of teaching to achieve learning outcomes as prescribed in curriculum objectives.

Criterion 6 Facilities

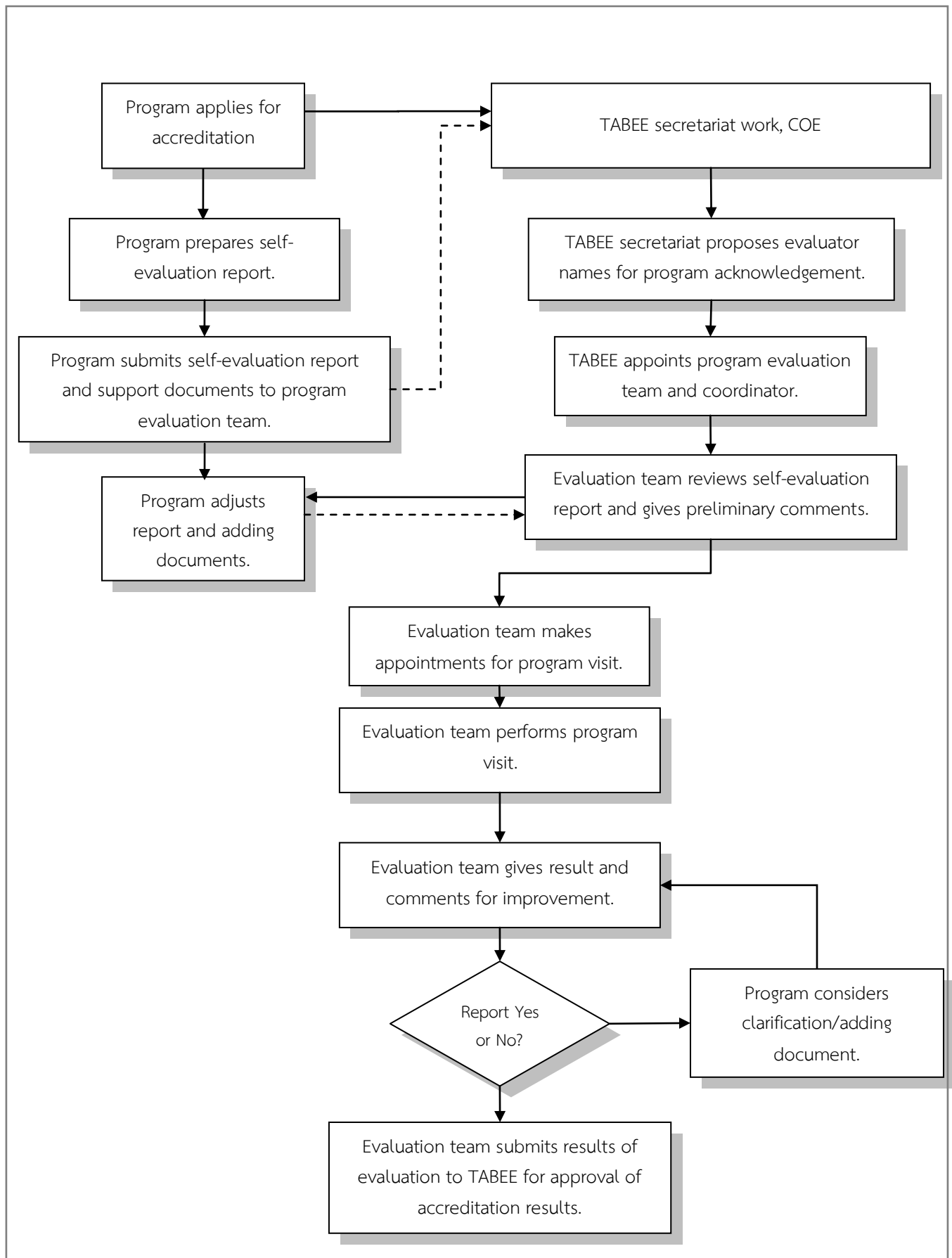
The educational program must provide continuous support to the program with adequate facilities, including classrooms, laboratories, library, and other supporting infrastructure to accommodate academic environment, academic development, professional activities of student, as well as quality education. The program must continuously stimulate student learning opportunities by providing modern tools and equipment, information technology and communication network for students and academic staff to serve demand for academic development and extra-curriculum activities in accordance with curriculum objectives and educational objectives.

Criterion 7 Financial Support and Budgeting

Educational institution must possess administrative structure which demonstrate sufficient financial support and budgeting for the program seeking for accreditation to enable it to function with quality and with continuous improvement. The provided program managerial resources must be sufficient to attract and retain a well-qualified staff, and to provide them with opportunities for continued professional career development. The program's budgetary planning process must also be sufficiently and appropriately provided for the acquisition, repair, maintenance and replacement of physical facilities and equipment. In addition, the educational institute must also provide sufficient supporting staff for the necessity of program teaching.

6. Work Flow Diagram

The accreditation procedure and activities are shown in the following work flow diagram,



7. Schedule

TABEE sets up a schedule for program accreditation into 2 work cycle annually. The time table given below briefly shows activities and the work schedule.

Accreditation Time Table			
No.	Activities	Work Cycle 1	Work Cycle 2
1.	Educational Program submits the application form for accreditation of engineering education to TABEE.	1 st week of March	1 st week of August
2.	TABEE secretariat proposes evaluator names to the program to acknowledge.	2 nd week of April	2 nd week of September
3.	Program makes payment for accreditation fee to Council of Engineers.	April	September
4.	Program starts preparing self-evaluation report in accordance with TABEE guidelines and formats.	April	September
5.	TABEE appoints the program evaluation team.	2 nd week of May	2 nd week of October
6.	TABEE organizes workshop and training to program evaluator regarding evaluation guidelines and reporting of evaluation results.	3 rd week of May	3 rd week of October
7.	Program submits self-evaluation report and support documents to TABEE office /program evaluation team.	1 st week of June	1 st week of November
8.	Evaluation team reviews self-evaluation report and supporting documents and gives preliminary comments/suggestions to educational program for clarification, correction or additional documents.	3 rd week of June	3 rd week of November
9.	Program submits updated report and supporting documents.	2 nd week of July	2 nd week of December

10.	Evaluation Team makes appointment for program visit.	3 rd week of July	3 rd week of December
11.	Evaluation team performs program visit.	1-3 rd week of August	1-3 rd week of January
12.	Program submits clarification note and supporting documents according to the comments of the evaluation team.	4 th week of September	4 th week of February
13.	Evaluation team submits results of program evaluation to TABEE for approval of accreditation results.	2 nd week of October	2 nd week of March
14.	TABEE considers the approval of accreditation results.	4 th week of October	4 th week of March
15.	TABEE secretariat notifies program of the result of accreditation.	2 nd week of November	2 nd week of April

8. Preparation of Accreditation Document and Program Preparation Prior to and During the Program Visit

The educational program seeking for accreditation from TABEE should arrange its readiness for TABEE document review and program visit as follows;

- 1) The program chair should review the TABEE prescribed accreditation requirements and criteria for the accreditation cycle and establish essential educational quality work processes for achievement of curriculum objectives and program graduate attributes in the related field of professional specialization.
- 2) The educational program may consider the quality process review using quality cycle (The Deming Cycle: Plan – Do – Check – Act; process and operational planning on activities and projects; review and assessment of activities and project outcomes; and using that of activities or projects outcome assessment requirements for correction etc.) for continuous quality improvement. Then the program evaluation team shall review on the evidences and related documents used in educational quality system to assure that the educational program seeking for accreditation possess the program teaching with the effective use of educational resources to achieve

the prescribed program graduate attributes and to serve the societal requirements for engineering profession.

- 3) The educational program must keep records and document filings containing evidence of program management plans, minute of meetings, guidelines, work reports, assessment reports relating to program and learning outcomes, and including student survey, alumni survey, and stakeholder survey reports. The documents and filings must be prepared for document review and program evaluation.
- 4) The educational program prepares 5 copies of self-evaluation report and data set together with support documents for the program accreditation and submits to TABEE in accordance with prescribed accreditation schedule.
- 5) During the program visit, the educational program must comprehensively prepare: evidences of readiness for program teaching and learning assessment, all program course files (course portfolio) containing course syllabus, course teaching plan, knowledge contents, teaching notes, references, home works, problems, assignments, study reports, course evaluation, examples of examination paper and examples graded examination answer sheets, etc.
- 6) During assessment of program supporting laboratory, the educational program must provide, for evaluator inspection, evidences and document support to demonstrate the usage and maintenance of laboratory equipment comprising name of responsible staff, laboratory equipment work schedule , laboratory and equipment instruction manual, safety manual, list of experiment and instruction, experiment problems, example of experiment report that in accordance with prescribed curriculum objectives and program outcomes.
- 7) The evaluation team shall consider the program quality level based on only written documents submitted by the program; the program, therefore, must provide written explanation to all questions from evaluator.

The program evaluation team shall consider only program quality level in accordance with evaluation format document based on program reference documents, reports and program data records.

9. Work Preparation of TABEE Secretariat Office

TABEE secretariat office functions as coordinating work unit for the accreditation of engineering education. The office is responsible for coordinating work between the evaluating team and the educational program for appointments, meetings, filings

accreditation documents and report forms to ensure transparency and achievement of program accreditation in accordance with prescribed accreditation schedule.

10. Accreditation Results and Accreditation Cycle

TABEE shall consider program accreditation results based on the report form and recommendation submitted by the program evaluation team in accordance with accreditation schedule. The accreditation is valid for 6 year cycle and on the last academic year of accreditation cycle, accredited program must request for renewal accreditation in accordance with the accreditation criteria prescribed for the next accreditation cycle.

In case the accredited program curriculum has made minor changes to program curriculum and not related to curriculum structure, curriculum objectives, program outcomes and modification of program graduate attributes, the educational program must notify TABEE of such minor changes and maintain the validity of accreditation until the next accreditation cycle.

In case the accredited program has made major changes to program curriculum relating to curriculum structure, curriculum objectives, program outcomes and modification of program graduate attributes, the educational program, must request for a new accreditation based on the modified program within the starting academic year of the new curriculum commencement.

11. Appeal Request

The educational program may appeal the results of accreditation by filing an appeal request with attached support documents to TABEE within 30 days from the stamped receiving date of accreditation results letter.

TABEE shall consider the appeal based on the additional support documents submitted by the educational program within 60 days from the stamped date of receiving appeal request. The decision on the appealed accreditation results are considered final.

12. Publication of Accredited Programs

The TABEE secretariat office is responsible for the registration list of only TABEE accredited programs. The list is then published regularly for societal recognition of the quality of engineering education programs that have been accredited by TABEE.

13. Attachments

Attachment 1	Terms and Definitions
Attachment 2	Guidelines for Program Self-Evaluation Report
Attachment 3	Checklist for Program Evaluation
Attachment 4	Program Evaluation Report
Attachment 5	Guidelines for Program Evaluator
Attachment 6	Guidelines for Observers

Attachment 1 Terms and Definitions

Attachment 1 Terms and Definitions

(reviewed on August 4, 2558 B.E.)

#	Terms	Explanation
1	Engineering program accreditation	A process of monitoring and evaluation on quality educational program by which the program is required to prepare self-evaluation report for quality evaluation performed by an evaluation team consisting of academia and engineering profession practitioners. The program evaluation is assessed for the quality program management, the program outcomes, and continuous improvement in accordance with prescribed accreditation criteria for the program to achieve educational mission and curriculum objectives for the program graduates to attain the attributes according to the requirements for engineering professional competence.
2	Engineering program	The program includes curriculum document, curriculum structure, program courses, program management, faculty, teaching assistants, laboratory instructors, supporting staff, teaching and learning infrastructure, and the use of program resources to attain the program graduate attributes according to prescribed curriculum objectives.
3	Accreditation results	The consideration of TABEE on quality of an educational program and/or academic institution. The result of accreditation include; accredited, provisional, waiting for improvement and deficiency
4	Evaluation team	A team consisting of academia and engineering professional practitioner that have been accepted by educational program to visit and evaluate the quality of program management and teaching and learning arrangement in accordance with prescribed accreditation criteria. The result of program evaluation is reported to TABEE secretariat office.

5	Assessment	A process of systematic monitoring and evaluation of program management including review of work processes, work documents, teaching documents, exercises, examination papers, teaching evaluation and reports, for consideration of quality level whether or not attain curriculum objectives, and program outcomes as prescribed in the curriculum.
6	Graduate attributes	Educational program outcomes that specify scope of knowledge, professional competence and skills, attitude and behavior of program graduates requirements for engineering profession.
7	Learning outcomes	Outcomes that students are expected to attain from studying the program courses. The learning outcomes should conform to behavioral objectives described in course syllabus. The learning outcomes combining the extra-curriculum activities should assist students to attain program graduate attributes.
8	Self-evaluation report, self-assessment report	Report document which the educational program seeking for accreditation has preparing and combining according to report template and submit to TABEE secretariat office for the use of program evaluation. The report shows work system and quality educational processes, learning outcomes, monitoring and assessment of the program to achieve curriculum objectives and program graduate attributes in accordance with prescribed accreditation criteria.
9	Accreditation cycle	A 6 years period of accreditation. In the last academic year of the accreditation cycle, the program must file a request for renewal of accreditation according to the prescribed accreditation criteria of the next accreditation cycle. For the accreditation result: provisional status, the accreditation cycle is temporarily valid for 3 years.
10	Course portfolio	Program course files containing; course syllabus, course teaching plan, knowledge content, teaching note, references, home works, problems, assignments, study reports, course evaluation, examples of examination paper, and examples graded examination answer sheets.

11	Quality cycle	The Deming Cycle: Plan – Do – Check – Act; process and operational planning on activities and projects; review and assessment of activities and project outcomes; and using that of activities or projects outcome assessment requirements for correction used for continuous quality improvement.
12	Program visit, site visit, on site visit	The program evaluation requires evaluation team to assess the educational program quality at program location to review classrooms, the use of educational resources, academic environment, and to interview faculty, supporting staff and students to ensure the quality of education as described in the self-evaluation report. The evaluation team consisting of academia and engineering professional practitioner relating to the program field of specialization shall schedule the 3 days visit to the program.
13	Observer	External/ invited guests to monitor on program evaluation team during the program visit. Observer is not allowed to participate in questioning, or make comments, or participate in team decision during the program visit.

Attachment 2
Guidelines for Program Self-Evaluation Report

(Translated Document)
Guidelines for Program Self-Evaluation Report

Guidelines Document
For
Bachelor Degree of Engineering Program Accreditation
Accreditation Cycle 2559-2564 B.E. (2016 – 2021 A.D.)

The Council of Engineers, Thailand

487/1, Soi Ramkhamhaeng 39 (Thepleela 1),
Ramkhamhaeng Road, Wangthonglang District, Bangkok 13010.

Tel: +66 2 021 4747, Fax +66 2 935 6695

Website: <http://www.coe.or.th>

General Instruction

1. Guidelines for program self-evaluation report are developed to assist the program seeking for accreditation to use as a template for the self-evaluation report writing which is required by TABEE.
2. Name of the program which is printed on the report cover page must be the same name approved for the program degree and the same name that is given in an academic transcript and in the program published bulletin.
3. In the case that vocabulary used in self-evaluation report differs from the vocabulary used by the educational institute, terms and definitions should be clarified for understanding.
4. In case that curriculum tables and information are changed from tables and information given in the report, footnote or remarks of the table must be given for explanation.
5. The symbol “{word}” indicates that the program is required to prepare relevance statement or explanation replacing the symbol “{word}” on the program report template.
6. The explanation given on the report headings is printed in *italic font*.

Submission of Program Self-Evaluation Report

1. The educational program seeking for accreditation must submit 5 copies of the program self-evaluation report together with supporting documents and a copy of report and data disc to TABEE, Council of Engineers at the address given below

Thailand Accreditation Board of Engineering Education

Council of Engineers

487/1, Soi Ramkhamhaeng 39 (Thepleela 1),

Ramkhamhaeng Road, Wangthonglang District, Bangkok 13010.

Tel: +66 2 021 4747, Fax +66 2 935 6695

2. Upon receiving of preliminary suggestion for report correction from the program evaluator, the educational program submit other 5 copies of the updated self-evaluation report with supporting documents to the program evaluation team for use during the program visit.

Confidentiality Statement

The program self-evaluation report together with supporting documents used in program evaluation for TABEE accreditation is confidential. They are not allowed for public disclosure without written permission from the educational program, except tables and data of general information that do not specifically refer to program name or education institution.

Template for Program Self-Evaluation Report

The program may prepare self-evaluation report using report headings, tables, figures and data according to description given in the template as following;

Program Self-Evaluation Report

For

Accreditation Cycle

Academic Year 2559-2564 B.E. (2016 – 2021 A.D.)

Submitted to

Thailand Accreditation Board of Engineering Education (TABEE)

Council of Engineers

For

Accreditation of Engineering Program

{Program Name}

{Program Discipline/ Major}

{University Name}

{Address}

{Date}

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Program Self-Evaluation Report

{Program Name}

{Program Discipline/ Major}

{Degree Name}

{University Name}

Part 1. General Information

1. Program Name

Specify program name and engineering discipline/ major of the educational program which offers to students correspondingly both in Thai and in English.

2. Degree Name and Program Discipline

Specify full degree name and degree abbreviation correspondingly both in Thai and in English in accordance with university's regulation of which conforms to Ministry of Education Regulation on Educational Degree Name.

3. Program Discipline or Program Major Requesting for Accreditation

Specify program discipline or program field, branch or major or even for multidiscipline area that the program request for accreditation.

4. Name of Responsible Staff and Contact Address

Specify name of responsible staff, address, telephone number, fax number and e-mail address for the TABEE to contact and communicate for program visit such as Dean, Department Head and Program Chair according to the table given below.

No.	Name	Position	Telephone	e-mail

5. Program Background

Specify when the program was started and briefly describe list of curriculum changes and revisions by highlighting on modification that has taken place after the previous program evaluation. Please also indicate the university board approval date on the program requesting for accreditation. In case that the program has been accredited or evaluated for quality education, please specify name of organization and the date of accreditation.

6. Cooperation with other organization/ industries/or other educational Institution

Specify whether the program requesting for accreditation is directly responsible for program teaching or else the program is cooperative program between educational institution and other organization/industry or another educational institution. Name of cooperative organization/educational institution should also be listed.

7. Campus location

Describe clearly where the program courses and classrooms are held. In case of having cross-campus program or having classroom arrangement in another campus, list all the campus locations that offer the program courses and clearly indicate which program campus is requesting for accreditation.

Part 2. Criterion: 1 Students

The educational program must demonstrate process for evaluation of learning outcomes, student advisory on academic and professional activities, and monitoring process on student development towards program outcomes and learning outcomes for quality and competence as prescribed in curriculum objectives and conforming to TABEE prescribed criteria.

The educational program seeking for accreditation must have criteria for student admission to the program, student transfers and academic credit transfer from/to other educational institutions. The program must have work process and procedures in program administration for the program students to learn and graduate from the program with outcomes as they are prescribed in the curriculum.

1. Academic Plan to meet market demand for Engineering Graduates

Describe potential demand for engineering graduates employment in industry/organization and specify in particular specialization that program graduates may obtain in the field of engineering professional works. The program may demonstrate the expected future demand for graduate employment.

2. Criteria for Student Admission to The Program

Describe the criteria and method for student admission or student enrollment into the program. Also describe particular student skill needed (If any).

3. Criteria for academic Equivalence or Academic Credit Transfer From Other Educational Institutions

In case that of students transfer from other academic institutions to the educational program seeking for accreditation, describe the criteria for academic qualification equivalent, transfer of credit to the program.

4. Academic process and work procedure used in academic program management

Identify and describe the various practices and procedures/sample documents used in academic program management to ensure that educational program are able to manage the teaching and learning to achieve the learning outcomes and thus consequently attain graduates attributes in accordance with TABEE criteria of the Accreditation of engineering program, and the professional competence required by the industry for engineering graduates from the program.

5. Student Advisory on academic and professional activities

Identify and describe the process and faculty in charge of student advisory on teaching and learning, extra-curriculum activities and professional related activities. The educational program may put tables showing adequate the number of events, frequencies, and number of students participating in student activities and services, and examples of related documents.

6. Student Learning Outcomes, Program Outcomes, and Graduate Attributes Assessments

Identify and describe the procedures and methods used in assessment/evaluation of student learning outcomes, program outcomes, and graduate attributes. The educational program must demonstrate the frequency of the assessments and the reports and sample documents relating to the assessments/evaluations.

7. Program Review and Improvement

Describe the process and method on which educational program used for review the results of the evaluation and assessment of the students learning outcomes and program outcomes for the curriculum review and program improvement. Show related sample documents and reports.

Part 3. Criterion 2: Educational Objectives

The educational program must indicate the curriculum objectives and expected program graduates to attain the program outcomes which are required for use in the professional practice. The program must describe and demonstrate the process of determination of the curriculum objectives which represent participations from program stakeholders and societal organization who are beneficial of program outcomes. The program also is required to demonstrate curriculum objectives mapping with learning outcomes and program outcomes in accordance with the prescribed TABEE criteria. The program also is required to demonstrate mapping of program teaching and learning, course evaluation, and reviewed learning outcomes conforming to the following headings.

1. Educational Objectives

Specify the curriculum objectives and the program outcomes together with the published documents indicating the curriculum objectives and institutional mission that conform to the criteria for accreditation of engineering education.

The program shows linkage between curriculum objectives and program outcomes and the TABEE prescribed program outcomes as following tables.

Template of Table Demonstrating Linkage between Curriculum Objectives and Program Outcomes

Curriculum Objectives	Program Outcomes				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Objective 1	●	●	○		
Objective 2			●	●	
Objective 3				●	
Objective 4					●
Objective 5					●

Remark ● = Direct linkage
 ○ = Indirect linkage

2. Defining Educational Objectives

Describe process or procedure and method to define the curriculum objectives, learning outcomes, and the program outcomes which demonstrate stakeholders and industrial participation to the program in conjunction with societal and organizations demand for the use of program graduate attributes. Indicate names and organization involved.

Template of Table Demonstrating Linkage between Program Outcomes and Professional Required Program Graduate Attributes

No.	Professional Required Program Graduate Attributes	Program Outcomes					
		Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6
1							
2							
3							
4							
5							
6							
7							
8							
9							

Remark



= Direct linkage



= Indirect linkage

3. Program Teaching and Academic Program Management

Specify name of faculty in charge of program teaching as well as program academic management and describe procedure and method relating to the program teaching and management to achieve the prescribed program learning outcomes. Give example of documents, forms, and reports of the program management.

4. Learning Outcomes, Program Outcomes and Outcomes Assessments

Specify name of faculty in charge of program learning outcomes and program outcomes assessments described in program teaching and program management to achieve the prescribed program outcomes. Give example of documents, forms, and reports involved including the review of assessment for use in curriculum improvement for the program student s to benefit from improvement of program quality.

Part 4. Criterion 3: Program Outcomes and Evaluation

Describe and provide examples of documents and evidences, demonstrating linkage between curriculum objectives and program learning outcomes as prescribed in TABEE criteria. The program must describe work procedures, learning outcomes assessment/evaluation, assessment frequencies, and assessment review to achieve the improvement on student learning outcomes. Demonstrate example documents relating to the use of attainment on outcomes assessment in procedure/process review use in curriculum improvement for the program students to benefit from improvement of program quality.

Educational program may demonstrate the above prescribed linkage using the following table template.

Template of Table Demonstrating Linkage of Program Learning Outcomes, Methods, Outcomes Assessment, and Assessment Review

No.	Program Learning Outcomes	Methods	Outcomes Assessment/ Frequencies	Assessment Review
1	<i>Learning Outcomes 1</i>			
2	<i>Learning Outcomes 2</i>			
3	<i>Learning Outcomes 3</i>			
4	<i>Learning Outcomes 4</i>			
5	<i>Learning Outcomes 5</i>			
6	<i>Learning Outcomes 6</i>			
7	<i>Learning Outcomes 7</i>			
8	<i>Learning Outcomes 8</i>			
9	<i>Learning Outcomes 9</i>			
10	<i>Learning Outcomes 10</i>			
11	<i>Learning Outcomes 11</i>			

Template of Table Demonstrating Linkage of TABEE Prescribed Program Outcomes and Program Learning Outcomes

No.	TABEE prescribed Program Outcomes	Program Learning Outcomes					
		OC 1	OC 2	OC 3	OC 4	OC 5	OC 6
1	<p>Knowledge of Mathematics, Sciences and Engineering</p> <p><i>Ability to apply knowledge of mathematics, natural sciences, engineering fundamentals and an engineering specialization to conceptualize the engineering models, definitions, and/or to respectively to apply methodologies, processes, and/or engineering systems in the work place.</i></p>	●					
2	<p>Engineering Problems Analysis</p> <p><i>Ability to identify, formulate, research literature, solve, and analyze complex engineering problems reaching substantiated conclusions using principles of mathematics, natural sciences and engineering sciences.</i></p>		●				
3	<p>Design and Develop Solutions for Complex Engineering</p> <p><i>Ability to design and find solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal,</i></p>			●			

	<i>environmental considerations, and/or professional code of practices.</i>						
4	Investigation <i>Ability to conduct investigations, diagnosis, and evaluation of complex problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions</i>				●		
5	Modern Tool Usage <i>Ability to create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering problems, with an understanding of its limitations.</i>					●	
6	Individual and Team Work <i>Ability to function effectively as an individual and as a member or leader in multi-disciplinary teams.</i>						●
7	Communication <i>Ability to communicate effectively with the engineering community and with the society at large, such as being able to comprehend and write effective reports and design documentation, make effectively presentations, and give and receive clear instructions.</i>						●

8	<p>Society, Environment, Sustainability, and Engineering Profession</p> <p><i>Understand and responsible for engineering professional practice in the societal and environmental contexts and evaluate the sustainability and impact of professional engineering work in the solution of complex engineering problems in societal and environmental contexts.</i></p>						●
9	<p>Ethics</p> <p><i>Understand and apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.</i></p>						●
10	<p>Project Management and Finance</p> <p><i>Demonstrate knowledge and understanding of the principles of economics, investment, and engineering management under consideration of risk and uncertainties.</i></p>		●				
11	<p>Lifelong Learning</p> <p><i>Recognize the need for, and have the preparation and ability to engage in independent and life-long learning.</i></p>						○

Remark ● = Direct linkage

○ = Indirect linkage

Part 5. Criterion 4: Professional Component

Describe program professional component which includes sufficient comprehensive academic contents so that the program graduates can apply to his/her professional works of which are responding to prescribed curriculum objectives. The professional component should be described as followings;

1. Curriculum Structure

Describe curriculum structure which contains the knowledge contents that are essential to professional occupations and that are conforming to the Thailand Qualification Framework (B.E. 2552) for Bachelor's degree of engineering, the Educational Qualification Standard for Higher Education, Ministry of Education, and the compatible criteria for accreditation of engineering education according to the related international mutual recognition agreements. The curriculum structure may be exhibited as following table;





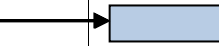






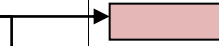





Template of Table Demonstrating Curriculum Structure

General Education Courses		<i>Not less than 30 credits</i>	
Specific Courses		<i>Not less than 84 credits</i>	
	Basic Courses		<i>credits</i>
	- Basic Sciences and Mathematics		<i>credits</i>
	- Basic Engineering		<i>credits</i>
	Specific Engineering Courses*		<i>credits</i>
	- Compulsory Engineering Courses		<i>credits</i>
	- Elective Engineering Courses		<i>credits</i>
Free Electives Courses		<i>Not less than 6 credits</i>	
Total Credits		<i>Not less than 120 credits and not more than 150 credits</i>	

2. Course Schedule

Demonstrate curriculum course schedule linkage with curriculum learning outcomes as following table;

Template Table Demonstrating Linkage between Course Schedule and Curriculum Learning Outcomes

Curriculum Learning Outcomes	Course Schedule									
	1 st Yr.		2 nd Yr.		3 rd Yr.		4 th Yr.			
	1 st Sem.	2 nd Sem.	3 rd Sem.	4 th Sem.	5 th Sem.	6 th Sem.	7 th Sem.	8 th Sem.		
Learning Outcome 1										
										
										
Learning Outcome 2										
Learning Outcome 3										
Learning Outcome 4										
Learning Outcome 5										
Learning Outcome 6										

3. Course Description

Specify course number, Course name, course credits, and course description in Thai and English

4. Course Learning Outcomes and Prescribed TABEE program outcomes

Demonstrate linkage between course learning outcomes and prescribed TABEE program outcomes as following table.

Template Table Demonstrating Linkage between Course Learning Outcomes and Prescribed TABEE program outcomes

Course No. / Name	Prescribed TABEE program outcomes										
	OC 1	OC 2	OC 3	OC 4	OC 5	OC 6	OC 7	OC 8	OC 9	OC 10	OC 11
<input type="text"/>	●	●	○								
<input type="text"/>				●	○						
<input type="text"/>						●	●				
<input type="text"/>								●			
<input type="text"/>									●	○	○

Remark ● = Direct linkage
 ○ = Indirect linkage

Part 6. Criterion 5: Faculty

The educational institution must provide sufficient responsible faculty for program management and program teaching in accordance with rules and regulations on criteria for quality higher education of Ministry of Education. Program faculty must have educational qualification and professional competence in the field of engineering that is required for the program curriculum. The number of responsible teaching staff should be sufficient to provide professional advisory to program students including professional advice, professional career development, and extra-curriculum activities relating to professional society, companies and industries, on regular basis.

In the table below, specify the number and names of program faculty both in Thai and English, by separating fulltime lecturers from part time lecturer. The list also must provide academic tittle, academic qualification, field of specialization, university of graduation, published academic papers, research works or published textbook (if available) including teaching load and student advisory (details can be described in this section or in attachment).

The program must provide details of faculty, academic papers, resume', academic activities or activities relating with professional society, companies and industries in attachment of the report.

1. Responsible Faculty

Specify full time faculty who are responsible for program management, teaching and research and student advisory.

Template of Table demonstrating name list of program faculty

No.	Acad. Title	Name	Degree	Field of Specialization	Grad. Yr.	Admin/ Research/Teaching/ Advisory Work Load

2. Full Time Lecturer

List fulltime lecturer who are responsible for program teaching and research work.

Template Table demonstrating list of full time lecturer

No.	Acad. Title	Name	Degree	Field of Specialization	Grad. Yr.	Admin/ Research/Teaching/ Advisory Work Load

3. Part Time Lecturer

List part time lecturer who are responsible for course teaching.

Template Table demonstrating list of Part Time lecturer

No.	Acad. Title	Name	Degree	Field of Specialization	Grad. Yr.	Course

4. Supporting Staff

Template Table demonstrating list of Supporting Staff

No.	Name	Degree	Field of Specialization	Grad . Yr.	Work Load and Job Function

Part 7 Criterion 6: Facilities

Educational program must demonstrate lists of classrooms, laboratory, library, computer rooms and equipment that facilitate program teaching, adequately and appropriately, and are enhancing academic environment, academic development, and continuation of professional related activities. The program must provide an opportunity for students to learn and to operate on modern engineering equipment and tools. The educational program must provide academic learning through information technology infrastructure, thus, to allow students and faculty to develop the academic knowledge contents and to promote academic activities that are responding to the prescribed educational objectives and the curriculum objectives.

1. Classroom and Utilization of Academic Space

Demonstrate list of classrooms, student rooms, student activity rooms and space. Capacity, floor space, and usage frequencies should be given.

2. Laboratory

Demonstrate list of laboratory, equipment, floor space, and usage frequencies.

3. Library

Describe library capacity, reference books, floor space, and daily service hours.

4. Computer Rooms

Describe number of computers available for student service, list of software application, capacity, floor space, and daily service hours.

5. Information Technology Infrastructure

Describe information technology system and infrastructure and service capacity for academic development and program teaching.

Part 8 Criterion 7: Financial Support and Budgeting

Describe the program administrative structure, financial resources and budgeting in order to demonstrate that the program seeking accreditation has managerial ability to achieve desired on educational quality and continuous improvement. The managerial resources provided for the program must be sufficient to attract faculty to have his/her continuous professional development and to retain good quality faculty. The resources and funding provided for the program must be sufficient to provide and maintain appropriate facilities for an effective utilization of class rooms, laboratory, library, and equipments supporting the program teaching and learning. Detail description can be arranged as follows.

1. Program Strategy and Planning

Identify and describe together with support document regarding to process to establish the program strategy and planning. Demonstrate example of related documents.

2. Financial and Budget Evaluation Process

Describe program work process used for financial and budget evaluation to confirm achievement of program learning outcomes and prescribed TABEE program outcomes. Demonstrate example of related documents.

3. Past 3 Years Program Budget

Describe table of past 3 years program budget to demonstrate the use of program financial and budget responding to program learning outcomes and prescribed TABEE program outcomes.

4. Program Work Plan and Expected Next 3 Years Program Budget

Describe program work plan and expected program budgets during the next 3 years to demonstrate program obligations and managerial activities to attain the program learning outcomes and prescribed TABEE program outcomes.

5. Laboratory Equipment Acquisition Plan

Describe the program existing laboratory equipment and equipment acquisition and laboratory physical improvement plan to attain the program learning outcomes and prescribed TABEE program outcomes (if there is).

Part 9. Checklist for Preliminary Program Self-Evaluation

The program seeking for accreditation is required to complete the checklist for preliminary self-evaluation as following checklist form.

Checklist for Preliminary Program Self – Evaluation

1. Checklist for preliminary program self – evaluation consists of 8 parts conforming to accreditation criteria as follows;

- Part 1. Criterion 1 Students
- Part 2. Criterion 2 Education Objectives
- Part 3. Criterion 3 Program Outcomes and Evaluation
- Part 4. Criterion 4 Professional Component
- Part 5. Criterion 5 Faculty
- Part 6. Criterion 6 Facilities
- Part 7. Criterion 7 Financial Support and Budgeting
- Part 8. Conclusion of Preliminary Program Self – Evaluation

2. Quality Rating

Rating	Quality Description
NA	Not in place, not available, or not applicable to quality management of the program
0	No work system or not in operation.
1	On – going development of system or work process.
2	Starting up the system or work process.
3	Work system or process is already in place and has been used in program management.
4	Work system or process is already in place and has been assessed for improvement.
5	Work system or process is already in place and has been assessed for improvement. The work system or process has been reviewed and adjusted for improvement at least 1 quality cycle (PDCA)

Part 1. Criterion 1 Students				
No.	Questionnaire	Rating	Support Document	Description
1.1	Does the program have system and work procedure for program enrollment which is publicly announced for selecting student qualification, with fairness and transparency, to achieve the curriculum objectives and learning outcomes and/ or program outcomes?			
1.2	Does the program have a system for monitoring and evaluation of program enrollment procedure responding to program outcomes and student learning for the next coming operational planning?			
1.3	Does the program have a systems and work procedure with public announcement for acceptance student transfer into the program?			
1.4	Does the program have monitoring process to ensure that program students have attained program outcomes in both quality and competence as they are prescribed in the curriculum objectives and learning outcomes which are conforming to prescribed TABEE criteria?			
1.5	Does the program have sufficient student advisory relating to academic and professional activities with continuous monitoring on student's development towards the program outcomes?			
1.6	Does the program have planning for appropriate number of program graduates which serves market demand from industries and stakeholders for engineering graduate employment?			
	Average			

Part 2. Criterion 2 Education Objectives				
No.	Questionnaire	Rating	Support Document	Description
2.1	Does the program have curriculum management committee who is responsible for establishing program direction and objectives, program management, program planning, and monitoring of the program with clearly defined term, qualification and acquisition of such the committee?			
2.2	Does the program have curriculum objectives, program outcomes, or graduate attributes conforming to the vision and mission of the faculty/ educational institution?			
2.3	Does the program have work procedure for announcement or distribution of curriculum objectives, program outcomes or program graduate attributes to program students and to public in general?			
2.4	Does the program have work procedure/ methodology for setting up curriculum objectives and program outcomes which involve stakeholders' participation, societal demand and beneficiary of program outcomes?			
2.5	Does the program have curriculum objectives, program outcomes or program graduate attributes conforming to prescribed TABEE criteria?			
2.6	Does the program have work procedure relating to program teaching and learning, and program management to attain the prescribed curriculum objectives and program outcomes?			
2.7	Does the program have work procedure for monitoring of program teaching and learning, and the program management in attainment of prescribed outcomes?			
	Average			

Part 3. Criterion 3 Program Outcomes and Evaluation				
No.	Questionnaire	Rating	Support Document	Description
3.1	Does the program have program management that ties in curriculum objective with curriculum learning outcome, work procedures, outcome evaluation, assessment frequencies, and work procedure review for improvement of learning outcome?			
3.2	Does the program have systematic evaluation of student's learning outcome with different methodologies and with appropriate approach towards each of learning outcome?			
3.3	Does the program have system that tie in program teaching and learning with student activities to attain the learning outcome?			
3.4	Is program student allowed to access the monitoring system, evaluation of student learning outcomes and program outcome of each individual student for his/her own improvement on student learning outcome?			
3.5	Does program graduates attain learning outcome conforming to prescribed TABEE program outcome and attain engineering knowledge and skill with professional competence conforming to curriculum objectives?			
	Average			

Part 4. Criterion 4 Professional Component				
No.	Questionnaire	Rating	Support Document	Description
4.1	Does the program have curriculum structure and academic contents conforming to essence of knowledge body of related engineering professional discipline which also conforms to National Qualification Framework (NQF) for engineering bachelor degree program?			
4.2	Does the program have benchmarking standard with international recognized accreditation criteria?			
4.3	Does the program have academic program planning corresponding to learning outcomes and program outcomes?			
4.4	Does program course syllabus clearly specify knowledge contents, learning methodology, learning objectives method and criteria for course evaluation, conforming to prescribed TABEE program outcome?			
4.5	Does program course syllabus clearly specify knowledge contents, learning methodology, learning objectives method and criteria for course evaluation, conforming to course learning outcome?			
	Average			

Part 5. Criterion 5 Faculty				
No.	Questionnaire	Rating	Support Document	Description
5.1	Does the program have sufficient number of responsible and teaching faculty conforming to Ministry of Education's regulation on qualification of quality higher education for engineering program?			
5.2	Does the program faculty obtain both academic qualification and professional competence as prescribed requirements for the engineering degree program?			
5.3	Does the program have a sufficient number of responsible and teaching faculties to provide student advisory, professional counseling, professional development and related activities with professional society/industries on regular basis?			
5.4	Does the program have work process for staff development and faculty development for program teaching and learning, student advisory, professional counseling, and professional development to achieve curriculum objective and program outcomes?			
5.5	Does the program have monitoring and evaluation of teaching to confirm the course teaching confirming to curriculum objective and program outcomes?			
5.6	Does the program have a sufficient number of supporting staff for program management?			
	Average			

Part 6. Criterion 6 Facilities				
No.	Questionnaire	Rating	Support Document	Description
6.1	Does the program have sufficient space and number of classrooms, student room, and activity room with adequate maintenance for the program usage?			
6.2	Does the program have adequate facilities management for utilization and maintenance of laboratory in program teaching conforming to curriculum objective and program outcomes?			
6.3	Does the program have a sufficient library, computers and information technology system to support program teaching and academic development requirements?			
	Average			

Part 7. Criterion 7 Financial Support and Budgeting				
No.	Questionnaire	Rating	Support Document	Description
7.1	Does the educational institution have a work system for financial resource management and budgeting to support the program operation management for attainment of quality education and program continuous improvement?			
7.2	Does the educational institution have financial support and budget for academic and professional continuous improvement on qualification of faculty and supporting staff?			
7.3	Does the educational institution have work procedure for monitoring the program budget on attainment of program outcomes?			
7.4	Does the educational institution have work procedure for monitoring program quality management based on performance indicators for attainment of program learning outcomes and prescribed TABEE program outcomes?			
	Average			

Part 8. Conclusion of preliminary Program Self-Evaluation			
No.	Questionnaire	Average Rating	Remark / observation
1	Part 1. Criterion 1 Students		
2	Part 2. Criterion 2 Educational Objectives		
3	Part 3. Criterion 3 Program Outcomes and Evaluation		
4	Part 4. Criterion 4 Professional Component		
5	Part 5. Criterion 5 Faculty		
6	Part 6. Criterion 6 Facilities		
7	Part 7. Criterion 7 Financial Support and Budgeting		
	Average		

Part 10 Attachments

Attachment 1 Program Curriculum

Provide a copy of the approved program curriculum by The University Board or Institution Governing Board that emphasis on program learning outcomes.

Attachment 2 Course Syllabus

Provide a folder of program course syllabus containing all program courses that show program teaching in accordance with prescribed program learning outcomes.

Attachment 3 Faculty Qualification

Provide academic staff qualification and his/her publications and/ or professional works provide together. Also work load relating to administration, teaching, research, and student activity/ advisory.

Attachment 4 Classrooms, Library, Equipment and Laboratory

The educational program is required to prepare a folder for program evaluation containing, documents demonstrating laboratory management and maintenance of laboratory equipment and laboratory utilization in the program teaching. The document consists of a list of responsible staff, utilization record on tools and equipment usage, equipment manual and instruction, safety manual, experimental worksheet and exercise and example of experiment arrangement that conforming to curriculum objectives and program learning outcomes, etc.

Attachment 5 Educational Information

Describe the program fact and data related to program management and faculty development.

Attachment 3 Checklist for Preliminary Program Self-Evaluation

Checklist for Preliminary Program Self-Evaluation

1. Checklist for preliminary program self-evaluation consists of 8 parts conforming to accreditation criteria as follows,

- Part 1. Criterion 1 Students
- Part 2. Criterion 2 Educational Objectives
- Part 3. Criterion 3 Program Outcomes and Evaluation
- Part 4. Criterion 4 Professional Component
- Part 5. Criterion 5 Faculty
- Part 6. Criterion 6 Facilities
- Part 7. Criterion 7 Financial Support and Budgeting
- Part 8. Conclusion of Preliminary Program Self-Evaluation

2. Quality Rating

Rating	Quality Description
NA	Not in place, not available, or not applicable to quality management of the program
0	No work system or not in operation.
1	On-going development of system or work process.
2	Starting up the system or work process.
3	Work system or process is already in place and has been used in program management.
4	Work system or process is already in place and has been assessed for improvement.
5	Work system or process is already in place and has been assessed for improvement. The work system or process has been reviewed and adjusted for improvement at least 1 quality cycle (PDCA).

Part 1. Criterion 1 Students				
No.	Questionnaire	Rating	Support Document	Description
1.1	Does the program have system and work procedure for program enrollment which is publicly announce for selecting student qualification, with fairness and transparency, to achieve the curriculum objectives and learning outcomes and/or program outcomes?			
1.2	Does the program have a system for monitoring and evaluation of program enrollment procedure responding to program outcomes and student learning for the next coming operational planning?			
1.3	Does the program have a systems and work procedure with public announcement for acceptance student transfer into the program?			
1.4	Does the program have monitoring process to ensure that program students have attained program outcomes in both quality and competence as they are prescribed in the curriculum objectives and learning outcomes which are conforming to prescribed TABEE criteria?			
1.5	Does the program have sufficient student advisory relating to academic and professional activities with continuous monitoring on student's development towards the program outcomes?			
1.6	Does the program have planning for appropriate number of program graduates which serves market demand from industries and stakeholders for engineering graduate employment?			
	Average			

Part 2. Criterion 2 Educational Objectives				
No.	Questionnaire	Rating	Support Document	Description
2.1	Does the program have curriculum management committee who is responsible for establishing program direction and objectives, program management, program planning, and monitoring of the program with clearly defined term, qualification and acquisition of such the committee?			
2.2	Does the program have curriculum objectives, program outcomes, or graduate attributes conforming to the vision and mission of the faculty/educational institution?			
2.3	Does the program have work procedure for announcement or distribution of curriculum objectives, program outcomes or program graduate attributes to program students and to public in general?			
2.4	Does the program have work procedure/methodology for setting up curriculum objectives and program outcomes which involve stakeholders' participation, societal demand, and beneficiary of program outcomes?			
2.5	Does the program have curriculum objectives, program outcomes or program graduate attributes conforming to prescribed TABEE criteria?			
2.6	Does the program have work procedure relating to program teaching and learning, and program management to attain the prescribed curriculum objectives and program outcomes?			
2.7	Does the program have work procedure for monitoring of program teaching and learning and the program management in attainment of prescribed program outcomes?			
	Average			

Part 3. Criterion 3 Program Outcomes and Evaluation				
No.	Questionnaire	Rating	Support Document	Description
3.1	Does the program have program management that ties in curriculum objectives with curriculum learning outcomes, work procedures, outcomes evaluations, assessment frequencies, and work procedure review for improvement of learning outcomes?			
3.2	Does the program have systematic evaluation of student's learning outcomes with different methodologies and with appropriate approach towards each of learning outcomes?			
3.3	Does the program have a system that tie in program teaching and learning with student activities to attain the program learning outcomes?			
3.4	Is program student allowed to access the monitoring system, evaluation of student learning outcomes and program outcomes of each individual student for his/her own improvement on student learning outcomes?			
3.5	Do the program graduates attain learning outcomes conforming to prescribed TABEE program outcomes and attain engineering knowledge and skill with professional competence conforming to curriculum objectives?			
	Average			

Part 4. Criterion 4 Professional Component				
No.	Questionnaire	Rating	Support Document	Description
4.1	Does the program have curriculum structure and academic contents conforming to essence of knowledge body of related engineering professional discipline which also conforms to National Qualification Framework (NQF) for engineering bachelor degree program?			
4.2	Does the program have benchmarking standard with international recognized accreditation criteria?			
4.3	Does the program have academic program planning corresponding to learning outcomes and program outcomes?			
4.4	Does program course syllabus clearly specify knowledge contents, learning methodology, learning objectives, method and criteria for course evaluation, conforming to prescribed TABEE program outcomes?			
4.5	Does the program course syllabus clearly specify knowledge contents, learning methodology, learning objectives, method and criteria for course evaluation, conforming to course learning outcomes?			
	Average			

Part 5. Criterion 5 Faculty				
No.	Questionnaire	Rating	Support Document	Description
5.1	Does the program have a sufficient number of responsible and teaching faculty conforming to Ministry of Education's regulation on qualification of quality higher education for engineering program?			
5.2	Does the program faculty obtain both academic qualification and professional competence as prescribed requirements for the engineering degree program?			
5.3	Does the program have a sufficient number of responsible and teaching faculty to provide student advisory, professional counseling, professional development and related activities with professional society/industries on regular basis?			
5.4	Does the program have work process for staff development and faculty development for program teaching and learning, student advisory, professional counseling, and professional development to achieve curriculum objectives and program outcomes?			
5.5	Does the program have monitoring and evaluation of program teaching to confirm the course teaching conforming to curriculum objectives and program outcomes?			
5.6	Does the program have sufficient number of supporting staff for program management?			
	Average			

Part 6. Criterion 6 Facilities				
No.	Questionnaire	Rating	Support Document	Description
6.1	Does the program have sufficient space and number of classrooms, student room, activity room with adequate maintenance for the program usage?			
6.2	Does the program have adequate facilities management for utilization and maintenance of laboratory in program teaching conforming to curriculum objectives and program outcomes?			
6.3	Does the program have sufficient library, computer and information technology system to support program teaching and academic development requirements?			
	Average			

Part 7. Criterion 7 Financial Support and Budgeting				
No.	Questionnaire	Rating	Support Document	Description
7.1	Does the educational institution have a work system for financial resource management and budgeting to support the program operational management for attainment of quality education and program continuous improvement?			
7.2	Does the educational institution have financial support and budget for academic and professional continuous improvement on qualification of faculty and supporting staff?			
7.3	Does the educational institution have work procedure for monitoring the program budget on attainment of program outcomes?			
7.4	Does the educational institution have work procedure for monitoring program quality management based on performance indicators for attainment of program learning outcomes and prescribed TABEE program outcomes?			
	Average			

Part 8. Conclusion of Preliminary Program Self-Evaluation			
No.	Questionnaire	Average Rating	Remark / Observation
1	Part 1. Criterion 1 Students		
2	Part 2. Criterion 2 Educational Objectives		
3	Part 3. Criterion 3 Program Outcomes and Evaluation		
4	Part 4. Criterion 4 Professional Component		
5	Part 5. Criterion 5 Faculty		
6	Part 6. Criterion 6 Facilities		
7	Part 7. Criterion 7 Financial Support and Budgeting		
	Average		

Attachment 4 Checklist for Program Evaluation

Checklist for Program Evaluation

(This checklist will be used by program evaluation team during the document review and program visit.)

1. This checklist which will be used for program evaluation and confirmation on facts and findings during the program visit consists of 8 parts conforming to accreditation criteria as follows.

Part 1. Criterion 1 Students	Part 5. Criterion 5 Faculty
Part 2. Criterion 2 Educational Objectives	Part 6. Criterion 6 Facilities
Part 3. Criterion 3 Program Outcomes and Evaluation	Part 7. Criterion 7 Financial Support and Budgeting
Part 4. Criterion 4 Professional Component	Part 8. Preliminary Conclusion of Program Evaluation

2. Quality Rating

Rating	Quality Description
NA	Not in place, not available, or not applicable to quality management of the program
0	No work system or not in operation.
1	On-going development of system or work process.
2	Starting up the system or work process.
3	Work system or process is already in place and has been used in program management.
4	Work system or process is already in place and has been assessed for improvement.
5	Work system or process is already in place and has been assessed for improvement. The work system or process has been reviewed and adjusted for improvement at least 1 quality cycle (PDCA).

3. Program evaluation team reviews factual evidences and documents during review on program self-evaluation report and perform quality rating during the program visit with remark for improvement.
4. Program evaluation team concludes the result of program evaluation and preliminaries informs the Dean or Program Chair allowing adequate discussion on related matters.
5. The evaluation team arranges team meeting and reports program evaluation result to TABEE for approval.

Result of program evaluation is classified as follows;

- 1) **A = Accredited.** “Accredited” indicates that TABEE has granted an accreditation status to the educational program. The program has attained a quality educational management, provision of quality teaching and learning to the program students, and together with continuous educational improvement in accordance with TABEE accreditation criteria. The accreditation is valid for 6 years cycle.
- 2) **P = Provisional.** Provisional indicates that TABEE has granted provisional accreditation status to the educational program. The program has attained a quality educational management and provision of quality teaching and learning to the program student in accordance with TABEE accreditation criteria under conditions that the educational program must further improve on some manor issues of program quality management to achieve the continuous educational improvement within the next program evaluation. The accreditation is temporarily valid for 3 years.
- 3) **W = Waiting for improvement.** Waiting for improvement indicates that TABEE has not yet granted an accreditation result to the educational program. The program has not attained a quality educational management and provision of quality teaching and learning to the program student in accordance with TABEE accreditation criteria. TABEE is waiting for the result of improvement on some of program quality management to meet TABEE accreditation criteria. Upon the improvement of the program quality process and attainment for the quality level in accordance with the TABEE accreditation criteria, the educational program will be considered as Provisional (P) status with temporary validity of 3 years period.

- 4) **D = Deficiency.** Deficiency indicates that TABEE has not granted any accreditation status to the educational program. The program has not attained the quality education management in accordance with the TABEE accreditation criteria. The program may require no less than 3 years to improve on essential quality management to meet the quality level in accordance with TABEE accreditation criteria. Upon the improvements, the program then may apply for accreditation of the next accreditation cycle.

Part 1. Criterion: 1 Students				
No.	Questionnaire	Program's Rating	Evaluator's Rating	Remark/Description
1.1	Does the program have system and work procedure for program enrollment which is publicly announce for selecting student qualification, with fairness and transparency, to achieve the curriculum objectives and learning outcomes and/or program outcomes?			
1.2	Does the program have a system for monitoring and evaluation of program enrollment procedure responding to program outcomes and student learning for the next coming operational planning?			
1.3	Does the program have a systems and work procedure with public announcement for acceptance student transfer into the program?			
1.4	Does the program have monitoring process to ensure that program students have attained program outcomes in both quality and competence as they are prescribed in the curriculum objectives and learning outcomes which are conforming to prescribed TABEE criteria?			
1.5	Does the program have sufficient student advisory relating to academic and professional activities with continuous monitoring on student's development towards the program outcomes?			
1.6	Does the program have planning for appropriate number of program graduates which serves market demand from industries and stakeholders for engineering graduate employment?			
	Average			

Part 2. Criterion 2: Educational Objectives				
No.	Questionnaire	Program's Rating	Evaluator's Rating	Remark/Description
2.1	Does the program have curriculum management committee who is responsible for establishing program direction and objectives, program management, program planning, and monitoring of the program with clearly defined term, qualification and acquisition of such the committee?			
2.2	Does the program have curriculum objectives, program outcomes, or graduate attributes conforming to the vision and mission of the faculty/educational institution?			
2.3	Does the program have work procedure for announcement or distribution of curriculum objectives, program outcomes or program graduate attributes to program students and to public in general?			
2.4	Does the program have work procedure/methodology for setting up curriculum objectives and program outcomes which involve stakeholders' participation, societal demand ,and beneficiary of program outcomes?			
2.5	Does the program have curriculum objectives, program outcomes or program graduate attributes conforming to prescribed TABEE criteria, or not?			
2.6	Does the program have work procedure relating to program teaching and learning, and program management to attain the prescribed curriculum objectives and program outcomes?			
2.7	Does the program have work procedure for monitoring of program teaching and learning and the program management in attainment of prescribed program outcomes?			
	Average			

Part 3. Criterion 3 Program Outcomes and Evaluation				
No.	Questionnaire	Program's Rating	Evaluator's Rating	Remark/Description
3.1	Does the program have program management that ties in curriculum objectives with curriculum learning outcomes, work procedures, outcomes evaluations, assessment frequencies, and work procedure review for improvement of learning outcomes?			
3.2	Does the program have systematic evaluation of student's learning outcomes with different methodologies and with appropriate approach towards each of learning outcomes?			
3.3	Does the program have a system that tie in program teaching and learning with student activities to attain the program learning outcomes?			
3.4	Is program student allowed to access the monitoring system, evaluation of student learning outcomes and program outcomes of each individual student for his/her own improvement on student learning outcomes?			
3.5	Do the program graduates attain learning outcomes conforming to prescribed TABEE program outcomes and attain engineering knowledge and skill with professional competence conforming to curriculum objectives?			
	Average			

Part 4. Criterion 4 Professional Component				
No.	Questionnaire	Program's Rating	Evaluator's Rating	Remark/Description
4.1	Does the program have curriculum structure and academic contents conforming to essence of knowledge body of related engineering professional discipline which also conforms to National Qualification Framework (NQF) for engineering bachelor degree program?			
4.2	Does the program have benchmarking standard with international recognized accreditation criteria?			
4.3	Does the program have academic program planning corresponding to learning outcomes and program outcomes?			
4.4	Does program course syllabus clearly specify knowledge contents, learning methodology, learning objectives, method and criteria for course evaluation, conforming to prescribed TABEE program outcomes?			
4.5	Does the program course syllabus clearly specify knowledge contents, learning methodology, learning objectives, method and criteria for course evaluation, conforming to course learning outcomes?			
	Average			

Part 5. Criterion 5 Faculty				
No.	Questionnaire	Program's Rating	Evaluator's Rating	Remark/Description
5.1	Does the program have a sufficient number of responsible and teaching faculty conforming to Ministry of Education's regulation on qualification of quality higher education for engineering program?			
5.2	Does the program faculty obtain both academic qualification and professional competence as prescribed requirements for the engineering degree program?			
5.3	Does the program have a sufficient number of responsible and teaching faculty to provide student advisory, professional counseling, professional development and related activities with professional society/industries on regular basis?			
5.4	Does the program have work process for staff development and faculty development for program teaching and learning, student advisory, professional counseling, and professional development to achieve curriculum objectives and program outcomes?			
5.5	Does the program have monitoring and evaluation of program teaching to confirm the course teaching conforming to curriculum objectives and program outcomes?			
5.6	Does the program have sufficient number of supporting staff for program management?			
	Average			

Part 6. Criterion 6 Facilities				
No.	Questionnaire	Program's Rating	Evaluator's Rating	Remark/Description
6.1	Does the program have sufficient space and number of classrooms, student room, and activity room with adequate maintenance for the program usage?			
6.2	Does the program have adequate facilities management for utilization and maintenance of laboratory in program teaching conforming to curriculum objectives and program outcomes?			
6.3	Does the program have sufficient library, computer and information technology system to support program teaching and academic development requirements?			
	Average			

Part 7. Criterion 7 Financial Support and Budgeting				
No.	Questionnaire	Program's Rating	Evaluator's Rating	Remark/Description
7.1	Does the educational institution have a work system for financial resource management and budgeting to support the program operational management for attainment of quality education and program continuous improvement?			
7.2	Does the educational institution have financial support and budget for academic and professional continuous improvement on qualification of faculty and supporting staff?			
7.3	Does the educational institution have work procedure for monitoring the program budget on attainment of program outcomes?			
7.4	Does the educational institution have work procedure for monitoring program quality management based on performance indicators for attainment of program learning outcomes and prescribed TABEE program outcomes?			
	Average			

Part 8. Preliminary Conclusion of Program Evaluation			
No.	Questionnaire	Program's Rating	Evaluator's Rating
1	Part 1. Criterion 1 Students		
2	Part 2. Criterion 2 Educational Objectives		
3	Part 3. Criterion 3 Program Outcomes and Evaluation		
4	Part 4. Criterion 4 Professional Component		
5	Part 5. Criterion 5 Faculty		
6	Part 6. Criterion 6 Facilities		
7	Part 7. Criterion 7 Financial Support and Budgeting		
	Average		

Attachment 5 Result of Program Evaluation Report

Result of Program Evaluation Report

Date

Program Name (Thai) (English)	Professional Discipline (Thai) (English)
Educational Institution	Department
Program Coordinator	Program Visit Date
Recommended Accreditation Result	Accreditation Conditions Required
Evaluator Names 1. 2. 3.	Accreditation Cycle From Academic Year To Academic Year
Evaluation Team's Comments	

Quality Level of Program Evaluation

No	Criteria	Average Score
1	Criterion 1 Students	
2	Criterion 2 Educational Objectives	
3	Criterion 3 Program Outcomes and Evaluation	
4	Criterion 4 Specific Program	
5	Criterion 5 Faculty	
6	Criterion 6 Facilities	
7	Criterion 7 Financial Support and Budgeting	
	Average Quality Score	

Attachment 6 Guidelines for Program Evaluators

(Translated Document)
Guidelines for Program Evaluators

1. No conflicts of interest.

Evaluators, TABEE coordinating officers, and observers should not be individuals that may have conflicts of interest in the process of accreditation.

2. Confidentiality

Evaluators, TABEE coordinating officers, and observers should not reveal information or contents of documents obtained during the document review and program visit to individuals or to organizations not involved in the process of that particular engineering program accreditation.

3. No use of the contents of the documents for any other purposes not related to the Evaluators, TABEE coordinating officers and observers

Shall not reveal or use information or the contents of documents obtained during the program visit and use as references or use for other benefits not relating to the process of accreditation, and that is not for the intention of the document.

4. No criticisms that may lead to conflict.

Evaluators, TABEE coordinating officers, and observers should refrain from criticizing the work of educational program or related organization in the accreditation that may cause conflict and negative effect on the accreditation results.

5. Conduct the assessment with fairness.

Evaluators shall review documents and evaluate level of program quality based on evidences and facts, with transparency and fairness.

6. Keep documents at TABEE secretariat office.

Evaluators, TABEE coordinating officers, and observers must maintain book keeping on various evidence documents received from document review and program visits at TABEE secretariat office for a period of not less than the period of accreditation cycle.

Attachment 7 Guidelines for Observers

(Translated Document)
Guidelines for Observers

1. Follow the guidelines for program evaluators.
2. Remain passive throughout the program visit.
3. Refrain from criticizing or participating in expression of opinion during the program visit.
4. Refrain from criticize the assessment of program evaluation team or expressing any opinion if not sollected.
5. In case of international observers, the TABEE secretariat office will arrange for translation and explanation as appropriate, without interfering with the assessment of program evaluators.
6. The international observers (except COE guests) will be responsible for his/her expenses concurring during the program visit.