



# **ABET SELF-STUDY QUESTIONNAIRE: TEMPLATE FOR A SELF-STUDY REPORT**

2019-2020 Review Cycle

**ENGINEERING TECHNOLOGY ACCREDITATION COMMISSION**

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## INTRODUCTION

The Self-Study Report is expected to be a quantitative and qualitative assessment of the strengths and limitations of the program being submitted for review.

The Self-Study Report will provide information critical to a thorough on-site review of the program. Therefore, the report will address the extent to which the program meets applicable ABET Criteria and policies. In so doing, it is necessary that the report address all methods of instructional delivery used for the program, all possible paths that students may take to completion of the degree, and all remote offerings available to students in the program.

Each Commission of ABET provides a ***Self-Study Questionnaire*** to assist the program in completing the Self-Study Report.

## REQUIREMENTS AND PREPARATION

The program name used on the cover of the Self-Study Report **must** be identical to that used in the institutional publications, on the ABET Request for Evaluation (RFE), and on the transcripts of graduates. This will ensure that the program is correctly identified in ABET records and that graduates can be correctly identified as graduating from an accredited program.

Normally, each program requires a Self-Study Report.

While the *Questionnaire* focuses primarily on accreditation criteria, it also includes questions related to certain sections of the ABET *Accreditation Policy and Procedure Manual* (APPM).

While it is important that the overall structure in the *Questionnaire* be retained, it is not necessary to preserve notes or pages of instructions about preparing the Self-Study Report.

A program may use terminology different from that used in the *Questionnaire*. If different terminology is used, it is important that the Self-Study Report provide notes of explanation to clearly link the terminology in the Report to terminology used in the *Questionnaire*.

Tables in the *Questionnaire* may be modified in format to more clearly present the information for the program. When this is done, it is suggested that a brief explanatory footnote be included about why the table was modified. Rows may be added to or deleted from tables to better accommodate program information.

The **educational unit** is the administrative unit having academic responsibility for the program(s) being reviewed by a given Commission of ABET. For example, if a single program is being reviewed, the educational unit may be the department. If more than one program is being reviewed, the educational unit is the administrative unit responsible for the collective group of programs being reviewed by that Commission.

## SUPPLEMENTAL MATERIALS

The following materials are to be supplied in addition to the Self-Study Report:

- The general institution catalog covering course details and other institutional information applicable at the time of the review.
- Promotional brochures or literature describing program offerings of the institution.
- Official academic transcripts of recent graduates. The **official academic transcript** contains a listing of all the courses taken by a graduate, year/semester courses were taken, the grades earned, and degree(s) earned. The Team Chair will request a specific sampling of transcripts for each program and will provide a timeframe in which they should be provided to program evaluators. **Each academic transcript is to be accompanied by the program requirements for the graduate and accompanied by worksheets that the program uses to show how the graduate has fulfilled program requirements.** Master's degree programs under review must also provide copies of the students' undergraduate academic transcripts that were used to make an admission decision.

## SUBMISSION AND DISTRIBUTION OF SELF-STUDY REPORT

**NOTE: No email submission is permitted. No hard copy submission will be accepted. No submission on a data stick is permitted. The submission cannot be a combination of hard copy and electronic file.**

The Self-Study Report and Supplemental Material should be uploaded section by section as **pdf read-only files via your institution's login access to the ABET website.**

Specific instructions for how to upload your Self-Study and Supplemental Material will be provided well in advance of the due date.

Catalogs that are available only electronically must be submitted in a pdf read-only format. The catalog must be the version available at the time the Self-Study Report is prepared. Web-based versions may not be submitted.

- **To ABET Headquarters via upload by July 1** of the calendar year of the review:
  - Upload **one** Self-Study Report section by section including all appendices for **each** program
  - Upload **one** set of the supplemental materials (**without the academic transcripts**) :
- **The Team Chair and Program Evaluators will be able to access the Self Study through the ABET Accreditation Management System. There will be no need to transmit these materials to the team.**
- **The institution's primary contact will need to coordinate with the Team Chair to confirm where to send a set of transcripts for each program.**
- Please send an email to [accreditation@abet.org](mailto:accreditation@abet.org) if there are any questions.

## **CONFIDENTIALITY**

All information supplied is for the confidential use of ABET and its authorized agents. It will not be disclosed without authorization of the institution concerned, except for summary data not identifiable to a specific institution or documents in the public domain.

## **TEMPLATE**

The template for the Self-Study Report begins on the next page.

# **ABET Self-Study Report**

for the

**<Program Name>**

at

**<Institution Name>**

**<Location>**

**<Date>**

**CONFIDENTIAL**

The information supplied in this Self-Study Report is for the confidential use of ABET and its authorized agents, and will not be disclosed without authorization of the institution concerned, except for summary data not identifiable to a specific institution.

**Program Self-Study Report  
for  
ETAC of ABET  
Accreditation or Reaccreditation**

**BACKGROUND INFORMATION**

**A. Contact Information**

List name, mailing address, telephone number, fax number, and e-mail address for the primary pre-visit contact person for the program.

**B. Program History**

Include the year implemented and the date of the last general review. Summarize major program changes with an emphasis on changes occurring since the last general review.

**C. Options**

List and describe any options, tracks, concentrations, etc. included in the program.

**D. Program Delivery Modes**

Describe the delivery modes used by this program, e.g., days, evenings, weekends, cooperative education, traditional lecture/laboratory, off-campus, distance education, web-based, etc.

**E. Program Locations**

Include all locations where the program or a portion of the program is regularly offered (this would also include dual degrees, international partnerships, etc.).

**F. Public Disclosure**

Provide information concerning all the places where the Program Education Objectives (PEOs), Student Outcomes (SOs), annual student enrollment and graduation data are made accessible to the public. This information should be easily found on either the program or institutional website so please provide the URLs.

**G. Deficiencies, Weaknesses or Concerns from Previous Evaluation(s) and the Actions Taken to Address Them**

Summarize the Deficiencies, Weaknesses, or Concerns remaining from the most recent ABET Final Statement. Describe the actions taken to address them, including effective dates of actions, if applicable. If this is an initial accreditation, state it is an initial accreditation.

## **GENERAL CRITERIA**

### **CRITERION 1. STUDENTS**

For the sections below, attach in supplemental information any written policies that apply or provide a link to an appropriate page on the institution's website.

#### **A. Student Admissions**

Summarize the requirements and process for accepting new students into the program.

#### **B. Evaluating Student Performance**

Summarize the process by which overall student academic performance is evaluated and student progress towards graduation is monitored. Include information on how the program ensures and documents that students are meeting course prerequisites and how the situation is addressed when a prerequisite has not been met.

#### **C. Transfer Students and Transfer Courses**

Summarize the requirements and process for accepting transfer students and transfer credit. Include any state-mandated articulation requirements that impact the program.

#### **D. Advising and Career Guidance**

Summarize the process for advising and providing career guidance to students. Include information on how often students are advised, who provides the advising (program faculty, departmental, college or university advisor).

#### **E. Work in Lieu of Courses**

Summarize the requirements and process for awarding credit for work in lieu of courses. This could include such things as life experience, Advanced Placement, dual enrollment, test out, military experience, etc.

#### **F. Graduation Requirements**

Summarize the graduation requirements for the program and the process for ensuring and documenting that each graduate completes all graduation requirements for the program. State the name of the degree awarded (e.g., Bachelor of Science in Electrical Engineering Technology, Associate of Science in Engineering Technology, Associate of Applied Science in Civil Engineering Technology.)



## G. Transcripts of Recent Graduates

The program must provide transcripts from recent graduates to the visiting team along with any needed explanation of how the transcripts are to be interpreted. **These transcripts will be requested separately by the Team Chair.** State how the program and any program options are designated on the transcript. (See 2019-2020 APPM, Section I.E.3.a.)

## CRITERION 2. PROGRAM EDUCATIONAL OBJECTIVES

### A. Mission Statement

Provide the institutional mission statement.

### B. Program Educational Objectives

List the program educational objectives and state where these can be found by the general public. *This is typically an easy to find web page clearly linked to the program's website.*

### C. Consistency of the Program Educational Objectives with the Mission of the Institution

Describe how the program educational objectives are consistent with the mission of the institution. *A table illustrating how educational objectives support the elements of the institutional mission can be used, in addition to a brief explanation.*

### D. Program Constituencies

List the key program constituencies involved in the review of the program educational objectives. Describe how the program educational objectives meet the needs of these constituencies.

### E. Process for Review of the Program Educational Objectives

Describe the process that periodically reviews the program educational objectives including how the program's key constituencies are involved in this process. Describe how this process is systematically utilized to ensure that the program's educational objectives remain consistent with the institutional mission, the program constituents' needs and these criteria.

*A table illustrating the following may be helpful to summarize the review process:*

*Key Constituents involved in the review of PEOs*

*Time table for those constituent's review of the PEOs (schedule and when last accomplished)*

*Manner of the Review (tool or process)*

*Who/how review results are utilized*

*Also, provide information about how the processes described above are documented, which will be necessary for the ABET review process.*



## CRITERION 3. STUDENT OUTCOMES

### A. Process for the Establishment and Revision of the Student Outcomes

Describe the process used for establishing, reviewing, and revising student outcomes.

### B. Student Outcomes

List the student outcomes for the program. Indicate where the student outcomes are documented and made accessible to the public. *This is typically an easy to find web page clearly linked to the program's website but could also be in a student handbook.*

### C. Mapping of Student Outcomes to Criterion 3 Student Outcomes

Describe if the student outcomes used by the program are stated differently than the requirements listed in Criterion 3. If so, provide the mapping of the program's student outcomes to the Criterion 3 requirements one through five.

The applicable program criteria could include statements that add specificity to the requirements for student outcomes found in Criterion 3. However, ongoing changes to program criteria are removing language related to student outcomes. Contact ABET at [etac@abet.org](mailto:etac@abet.org) if you have questions about the program criteria that apply to your program.

### D. Relationship of Student Outcomes to Program Educational Objectives

Describe how the program's student outcomes prepare graduates to attain the program's educational objectives.

*It is helpful if the self-study questionnaire provides a mapping, using the table below, of the Program Educational Objectives, Student Outcomes, the ABET (1) – (5) student outcomes and the program courses that support the program student outcomes (courses where the students learn or develop competencies related to the student outcomes).*

<i>Program Educational Objective</i>	<i>Program Student Outcome</i>	<i>ABET (1)-(5)</i>	<i>Program Courses Supporting the Program Outcome</i>
PEO 1	<list supporting student outcomes>		
	Etc.		
PEO 2	<list supporting student outcomes>		
	Etc.		
PEO 3	<list supporting student outcomes>		
	Etc.		
PEO 4	<list supporting student outcomes>		
	Etc.		

#### EESP PEO:

The program educational objectives of the EESP are as follows:

1. The EESP graduates have a mastery in basic sciences and mathematics relevant to the basic competency in the field of electrical engineering (*Basic Science Skills*).
2. The EESP graduates have an ability to anticipate, to formulate and to solve problems related to the field of electrical engineering (*Professional Skills*).
3. The EESP graduates have the spirit of leadership and entrepreneurship, the academic attitude, and have an ability to compete to work in various sectors all over the world, especially in Indonesia and Asia-Pacific region (*Entrepreneur Skills*).
4. The EESP graduates have capability to continue their study to higher degree of education all over the world (*Research Skills*).

#### ABET's Students Outcomes:

- a) an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities;
- b) an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that

require the application of principles and applied procedures or methodologies;

- c) an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;
- d) an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;
- e) an ability to function effectively as a member or leader on a technical team;
- f) an ability to identify, analyze, and solve broadly-defined engineering technology problems;
- g) an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- h) an understanding of the need for and an ability to engage in self-directed continuing professional development;
- i) an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;
- j) a knowledge of the impact of engineering technology solutions in a societal and global context; and
- k) a commitment to quality, timeliness, and continuous improvement.

## CRITERION 4. CONTINUOUS IMPROVEMENT

This section of your Self-Study Report should summarize your processes for regularly assessing and evaluating the extent to which the student outcomes are being attained and for using those results for continuous improvement of the program.

Assessment is defined as one or more processes that identify, collect, and prepare the data necessary for evaluation. Evaluation is defined as one or more processes for interpreting the data acquired through the assessment processes in order to determine how well the student outcomes are being attained.

Although the program can report its processes as it chooses, the following is presented as a guide to help you organize your Self-Study Report and present your documentation.

### A. Documentation of Processes or Plan

Provide a reference to the plan (documentation of processes in the appendices or in electronic form) used to assess student outcome attainment for the purpose of continuous program improvement. In the sections below, briefly summarize key elements of that process (tabular presentation, where appropriate, is encouraged).

*Provide the written plan/graphical representation of the assessment plan clearly identifying who will do what when. If different student outcomes will be assessed in different years, provide an overview of this via a simple table (student outcome versus year of assessment).*

*As an example here is a table (one table per outcome) that captures much of what is requested below. Programs can present the information in their own preferred format.*

### B. Assessment Metrics and Methods of Student Outcomes

List the metric(s), measure(s) or performance indicator(s) used for each student outcome. Describe the process for collecting data or making assessments for each (tabular format is encouraged). Examples of assessment instruments can be electronically referenced in the self-study report and must be available for review at the time of the visit.

The direct assessments data are collected from a course's average weighted grade of students, who participate in the considered course. Each faculty teaching member or team, who taught the course, made a rubric for each contributing outcome. The measurement were made each semester. For each outcome, several performance indicators are defined. For every performance indicator, a rubric is made. The rubric is categorized into 9 achievement levels as follows:

<i>Achievement level</i>	<i>Grade Point</i>	<i>Definition</i>
Poor	0	Student's work evaluation is poor
Unsatisfactory	1	Student's work evaluation is not achieved
Marginal	2	Student's work evaluation is achieved in the minimum level
Marginal Plus	2.5	Student's work evaluation is achieved slightly above the minimum level
Proficient Minus	2.75	Student's work evaluation is achieved slightly below the minimum level
Proficient	3	Student's work evaluation is achieved in the average level
Proficient Plus	3.5	Student's work evaluation is achieved slightly above the average level
Exceptional Minus	3.75	Student's work evaluation is achieved slightly below the exceptional level
Exceptional	4	Student's work evaluation is achieved in the exceptional level

Using the aforementioned rubric categories, student work evaluation values of each course are measured. Several courses are then selected for the performance indicator data assessment collections. The PI measurement data/values should be achieved to the expected PI threshold value. When the PI measurement data is below the expected value, then attention or improvement is required for that particular performance indicator.

In the indirect assessment process, five surveys are introduced, i.e. Student Exit Survey (SES), Alumni Survey (AS) and Employer Survey (ES). In each survey, several questions are given to the surveyed personal, i.e. recently graduate, alumni and employer. The capability level is categorized into 5 levels as follows:

<i>Capacity level</i>	<i>Grade Point</i>	<i>Definition</i>
Very Low	0	The capability of capacity of the surveyed personal (alumni, graduate, employer) is in very low level
Low	1	The capability of capacity of the surveyed personal (alumni, graduate, employer) is in low level
Medium	2	The capability of capacity of the surveyed personal (alumni, graduate, employer) is in medium level
High	3	The capability of capacity of the surveyed personal (alumni, graduate, employer) is in high level
Very High	4	The capability of capacity of the surveyed



		personal (alumni, graduate, employer) is in very high level
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### **C. Assessment Schedule and Frequency**

Present the schedule and frequency for each type of assessment as well as points of accountability (tabular format is encouraged). Examples of assessments or data collected to date can be referenced electronically in the self-study report and must be available for review at the time of the visit.

### **D. Evaluation**

Present the evaluation schedule, points of accountability, and expected level of attainment for each student outcome. Provide summaries of the results of evaluation analyses over time illustrating current attainment of each student outcome and trends in attainment over time (tabular presentation is encouraged). Describe how results are communicated and preserved and provide one or more examples electronically or in appendices.

**Student Outcome (SO1):** An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science and mathematics.\_

Performance Indicators (PI) for this outcome	Courses were PI exists (use a simple list)	Specific Method of Assessment (rubric, etc.)	Courses Assessed (where the PI and related data are collected)	Cycle of When the PI Assessed (how often)	Year & Semester when Data Were Collected	Performanc e Target for PI
(1K) Ability to define and recognize learned electrical engineering subjects						
(1C) Ability to understand and grasp the meaning of the electrical engineering knowledge and problems						
(1A) Ability to analyze electrical engineering systems and problems						
(1D) Ability to design components and systems to solve electrical engineering problems						

**Student Outcome (SO2):** An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.

Performance Indicators (PI)	Courses	Specific	Courses	Cycle of	Year &	Performanc
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for this outcome	were PI exists (use a simple list)	Method of Assessment (rubric, etc.)	Assessed (where the PI and related data are collected)	When the PI Assessed (how often)	Semester when Data Were Collected	e Target for PI
(2A) Ability to analyze possible solutions to engineering problems						
(2D) Ability to design solution to solve engineering problems						
(2I) Ability to apply or implement engineering skills to actual conditions						

**Student Outcome (SO3):** An ability to communicate effectively with a range of audiences.

Performance Indicators (PI) for this outcome	Courses were PI exists (use a simple list)	Specific Method of Assessment (rubric, etc.)	Courses Assessed (where the PI and related data are collected)	Cycle of When the PI Assessed (how often)	Year & Semester when Data Were Collected	Performanc e Target for PI
(3A) Ability to analyze effective speech structure to communicate idea						
(3D) Ability to arrange speech concept and structure						

(3I) Ability to present idea in real situation (in front of audience)						
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**Student Outcome (SO4):** An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

Performance Indicators (PI) for this outcome	Courses where PI exists (use a simple list)	Specific Method of Assessment (rubric, etc.)	Courses Assessed (where the PI and related data are collected)	Cycle of When the PI Assessed (how often)	Year & Semester when Data Were Collected	Performance Target for PI
(4K) Ability to know and recognize professional code of ethics						
(4C) Ability to comprehend professional code of ethics						
(4I) Ability to apply engineering ethics in real engineering design problems						

**Student Outcome (SO5):** An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

Performance Indicators (PI) for this outcome	Courses where PI exists (use a simple list)	Specific Method of Assessment (rubric, etc.)	Courses Assessed (where the PI and related data are collected)	Cycle of When the PI Assessed (how often)	Year & Semester when Data Were Collected	Performance Target for PI
(5C) Ability to comprehend leadership skills in a project-based education						
(5D) Ability to design project plan in a simulated engineering project						
(5I) Ability to lead a team in real engineering projects						

**Student Outcome (SO6):** An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.

Performance Indicators (PI) for this outcome	Courses where PI exists (use a simple list)	Specific Method of Assessment (rubric, etc.)	Courses Assessed (where the PI and related data are collected)	Cycle of When the PI Assessed (how often)	Year & Semester when Data Were Collected	Performance Target for PI
(6A) Ability to analyze practically and						

interpret data to draw conclusions						
(6D) Ability to design practical module and conduct experiment independently						
(6I) Ability to apply or implement engineering knowledge in laboratory scales						

**Student Outcome (SO7):** An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Performance Indicators (PI) for this outcome	Courses were PI exists (use a simple list)	Specific Method of Assessment (rubric, etc.)	Courses Assessed (where the PI and related data are collected)	Cycle of When the PI Assessed (how often)	Year & Semester when Data Were Collected	Performance Target for PI
(7C) Ability to identify new issues in electrical engineering fields of study						
(7A) Ability to analyze possible alternative solutions to solve a trending problem						
(7I) Ability to give						

novel scientific contribution to solve current problems						
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### **Summary of Aggregated Assessment Data (across all PIs):**

The EESP uses two assessment types to collect the assessment data, i.e. direct assessment method (rubric-based measurement method) and indirect assessment method (student exit survey, alumni survey and employer survey). In the direct assessment method, the Performance Indicators (PIs) measurement values of each student outcome are aggregated in within 4 years, i.e. in our current Self-Study Report (SSR), the data are aggregated in the last month of the Second Semester for academic year of 2018/2019. The direct or rubric-based assessment method, the PI assessment data are collected for:

- The First Semester of academic year 2015/2016 – indicated in the table XX1 as **2015(1)**;
- The Second Semester of academic year 2015/2016 – indicated in the table XX2 as **2015(2)**;
- The First Semester of academic year 2016/2017 – indicated in the table as XX3 **2016(1)**;
- The Second Semester of academic year 2016/2017 – indicated in the table XX4 as **2016(2)**;
- The First Semester of academic year 2017/2018 – indicated in the table XX5 as **2017(1)**;
- The Second Semester of academic year 2017/2018 – indicated in the table XX6 as **2017(2)**;
- The First Semester of academic year 2018/2019 – indicated in the table XX7 as **2018(1)**;

In the indirect assessment method, the Performance Indicators (PIs) measurement values of each student outcome are aggregated during the First Semester of academic year 2018/2019 or 2018(1). Table XX8 presents the PI measurement of each student outcome.

*Describe how the assessment data from each PI is aggregated and provide an overall assessment data set. Use charts or formulas as necessary but include the numbers of students that were assessed.*

### **Results of Evaluation of Aggregated Assessment Data:**

*Based on aggregated assessment data, provide evaluation and analysis to illustrate the extent to which the student outcome is being attained. Use of charts/graphs with an explanation is recommended.*

### **Actions for Continuous Improvement:**

*Briefly list the actions for program improvement that have resulted from the results of evaluation processes described above. Indicate any significant future program improvement plans based upon recent evaluations. Provide a brief rationale for each of these planned changes. Details can be provided in the following report section.*

<p><b>Results of Actions for Improvement</b></p> <p><i>Briefly describe the results of any changes (whether or not effective) in those cases where re-assessment of the results has been completed. Details can be provided in the following report section.</i></p>
<p><b>Assessment Instruments:</b></p> <p><i>How are the assessment and evaluation results documented and maintained? Attach copies of the assessment instruments or materials referenced in your table. Attach samples of student work at various levels (poor, satisfactory, very good). This can be an appendix or separate file.</i></p>



## **E. Using Results for Continuous Improvement**

Describe how the results of the evaluations (from section D above) and any other available information are systematically used as input in the continuous improvement of the program. Present points of accountability, schedule and frequency. Summarize deliberations, decisions and actions which have been implemented as a result of these evaluations and indicate any significant future program improvement plans including the rationale for each. Provide references in the appendices or electronically as evidence of deliberations and decisions on improvements and input used. Evidence might include evaluation reports, agendas, minutes, memos, etc.

*The example table above has boxes for this information.*

## CRITERION 5. CURRICULUM

### A. Program Curriculum

The applicable program criteria could include statements that add specificity to the curricular requirements found in Criterion 5 to differentiate the discipline designated by the program's title. These should be included in the program's coursework. Contact ABET at [etac@abet.org](mailto:etac@abet.org) if you have questions about the program criteria that apply to your program.

1. Complete Table 5-1 that describes the plan of study for students in this program including information on course offerings in the form of a recommended schedule by year and term along with average section enrollments for all courses in the program over the two years immediately preceding the visit. State whether the program is based on a quarter system or a semester system and complete a separate table for each option in the program.
2. Describe how the curriculum aligns with the program educational objectives.
3. Describe how the curriculum and its associated prerequisite structure support the attainment of the student outcomes.
4. Attach a flowchart or worksheet that illustrates the prerequisite structure of the program's required courses.
5. Describe how your program meets the specific requirements for this program area in terms of hours and depth of study for each curricular area (Math and Basic Sciences, Discipline Specific Topics) specifically addressed by either the general criteria or the specific program criteria as shown in Table 5-1. It is helpful to describe how the coverage of algebra and trigonometry (for A.S. programs) or differential and integral calculus or other mathematics above the level of algebra and trigonometry (for B.S. programs) is accomplished. Please describe how the curriculum develops student proficiency in the use of equipment and tools common to the discipline is appropriate to the student outcomes and the discipline.
6. Describe how the curriculum accomplishes a capstone or culminating experience (addressed by either the general or program criteria) and describe how this experience helps students attain related student outcomes as appropriate to the discipline and the degree (not degree level). Such description should give, consideration to factors such as engineering standards and codes; public health and safety; and local and global impact of engineering solutions on individuals, organizations and society.
7. Describe how professional and ethical responsibilities, respect for diversity, and quality and continuous improvement are addressed in the curriculum.

8. If your program allows cooperative education or internships to satisfy curricular requirements specifically addressed by either the general or program criteria, describe the academic component of this experience and how it is evaluated by the faculty.
9. Describe by example how the evaluation team will be able to relate the display materials, i.e. course syllabi, textbooks, sample student work, etc., to each student outcome. (See the 2019-2020 APPM Section I.E.5.b. (2) regarding display materials.)

Display Materials at the Time of the Visit-Evaluators will review samples of displayed course materials including course syllabi, textbooks, example assignments and exams, and examples of student work, typically ranging from excellent through poor for only those courses that:

- a) support attainment of the program's student outcomes; and
- b) develop subject areas supporting attainment of student outcomes or contained in specific program criteria requirements.

At the program's discretion, other materials that document efforts made to continuously improve curricula, or that illustrate novel, unusual or creative efforts to enrich the curriculum and/or attainment of student outcomes may be provided.

Wherever possible, materials should be provided online or electronically.

## **B. Course Syllabi**

In Appendix A of the Self-Study Report, include a syllabus for each course used for the degree.

## **C. Advisory Committee**

Describe the composition of the program's advisory committee and describe how it is representative of organizations being served by the program's graduates. Describe activities of the advisory committee and provide evidence that it periodically reviewing the program's curriculum and advising the program on its program educational objectives and the current and future aspects of the technical fields for which the graduates are being prepared.

**Table 5-1 Curriculum**

**Name of Program**

Course (Department, Number, Title) List all courses in the program by term starting with first term of the first year and ending with the last term of the final year.	Indicate Whether Course is Required, Elective, or a Selective Elective by an R, an E or an SE <sup>2</sup>	Curricular Area (Credit Hours)				Last Two Terms the Course was Offered: Year and, Semester, or Quarter	Average Section Enrollment for the Last Two Terms the Course was Offered <sup>1</sup>
		Math and Basic Sciences	Discipline Specific Topics	General Education	Other		
<i>Add rows as needed to show all courses in the curriculum.</i>							
OVERALL TOTAL CREDIT HOURS FOR THE DEGREE							
PERCENT OF TOTAL							

1. For courses that include multiple elements (lecture, laboratory, recitation, etc.), indicate the average enrollment in each element.
2. Required courses are required of all students in the program, elective courses are optional for students, and selected electives are courses where students must take one or more courses from a specified group.

Instructional materials and student work verifying compliance with ABET criteria for the categories indicated above will be required during the campus visit.

## **CRITERION 6. FACULTY**

### **A. Faculty Qualifications**

Describe the qualifications of the faculty and how they are adequate to cover all the curricular areas of the program and also meet any applicable program criteria. This description should include the composition, size, credentials, and experience of the faculty. Complete Table 6-1. Include faculty curriculum vitae in Appendix B.

### **B. Faculty Workload**

Complete Table 6-2, Faculty Workload Summary and describe this information in terms of workload expectations or requirements for the current academic year.

### **C. Faculty Size**

Discuss the adequacy of the size of the faculty and describe the extent and quality of faculty involvement in interactions with students, student advising, and oversight of the program.

### **D. Professional Development**

Provide a description of program professional development support for faculty and a general description of how faculty avail themselves of these opportunities (specific recent activities for each faculty member should be noted in their CV in Appendix B).

### **E. Authority and Responsibility of Faculty**

Describe the role played by the faculty with respect to course creation, modification, and evaluation, their role in the definition and revision of program educational objectives and student outcomes, and their role in the attainment of the student outcomes. Describe the roles of others on campus, e.g., dean or provost, with respect to these areas.

**Table 6-1. Faculty Qualifications**

**Name of Program**

Faculty Name	Highest Degree Earned- Field and Year	Rank <sup>1</sup>	Type of Academic Appointment <sup>2</sup> T, TT, NTT	FT or PT <sup>3</sup>	Years of Experience			Professional Registration/ Certification	Level of Activity <sup>4</sup> H, M, or L		
					Govt./Ind. Practice	Teaching	This Institution		Organizations	Professional Development	Professional Consulting/summer work in industry

Instructions: Complete table for each member of the faculty in the program. Add additional rows or use additional sheets if necessary. Updated information is to be provided at the time of the visit.

1. Code: P = Professor ASC = Associate Professor AST = Assistant Professor I = Instructor A = Adjunct O = Other
2. Code: TT = Tenure Track T = Tenured NTT = Non-Tenure Track
3. At the institution
4. The level of activity, high, medium or low, should reflect an average over the year prior to the visit plus the two previous years.

**Table 6-2. Faculty Workload Summary**

**Name of Program**

Faculty Member (name)	PT or FT <sup>1</sup>	Classes Taught (Course No./Credit Hrs.) Term and Year <sup>2</sup>	Program Activity Distribution <sup>3</sup>			% of Time Devoted to the Program <sup>5</sup>
			Teaching	Research or Scholarship	Other <sup>4</sup>	

1. FT = Full Time Faculty or PT = Part Time Faculty, at the institution
2. For the academic year for which the Self-Study Report is being prepared.
3. Program activity distribution should be in percent of effort in the program and should total 100%.
4. Indicate sabbatical leave, etc., under "Other."
5. Out of the total time employed at the institution. *If a faculty member teaches for more than one program or is an administrator, indicate level of effort for only specific program activities (teaching, etc.).*
6. *Do not include faculty in units that teach service courses, e.g., math or science.*

## **CRITERION 7. FACILITIES<sup>1</sup>**

### **A. Offices, Classrooms and Laboratories**

Summarize each of the program's facilities in terms of their ability to support the attainment of the student outcomes and to provide an atmosphere conducive to learning.

1. Offices (such as administrative, faculty, clerical, and teaching assistants) and any associated equipment that is typically available there.
2. Classrooms and associated equipment that are typically available where the program courses are taught.
3. Laboratory facilities including those containing computers (describe available hardware and software) and the associated tools and equipment that support instruction. Include those facilities used by students in the program even if they are not dedicated to the program and state the times they are available to students. Complete Appendix C containing a listing of the major pieces of equipment used by the program in support of instruction.

### **B. Computing Resources**

Describe any computing resources (workstations, servers, storage, networks including software) in addition to those described in the laboratories in Part A, which are used by the students in the program. Include a discussion of the accessibility of university-wide computing resources available to all students via various locations such as student housing, library, student union, off-campus, etc. State the hours the various computing facilities are open to students. Assess the adequacy of these facilities to support the scholarly and professional activities of the students and faculty in the program.

### **C. Guidance**

Describe how students in the program are provided appropriate guidance regarding the use of the tools, equipment, computing resources, and laboratories.

### **D. Maintenance and Upgrading of Facilities**

Describe the policies and procedures for maintaining and upgrading the tools, equipment, computing resources, and laboratories used by students and faculty in the program.

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<sup>1</sup> Include information concerning facilities at all sites where program courses are delivered.



## **E. Library Services**

Describe and evaluate the capability of the library (or libraries) to serve the program including the adequacy of the library's technical collection relative to the needs of the program and the faculty, the adequacy of the process by which faculty may request the library to order books or subscriptions, the library's systems for locating and obtaining electronic information, and any other library services relevant to the needs of the program.

## **F. Overall Comments on Facilities**

Describe how the program ensures the facilities, tools, and equipment used in the program are safe for their intended purposes. (See the 2019-2020 APPM section I.E.5.b.(1).)

## **CRITERION 8. INSTITUTIONAL SUPPORT**

### **A. Leadership**

Describe the leadership of the program and discuss its adequacy to ensure the quality and continuity of the program and how the leadership is involved in decisions that affect the program.

### **B. Program Budget and Financial Support**

1. Describe the process used to establish the program's budget and provide evidence of continuity of institutional support for the program. Include the sources of financial support including both permanent (recurring) and temporary (one-time) funds.
2. Describe how teaching is supported by the institution in terms of graders, teaching assistants, teaching workshops, etc.
3. To the extent not described above, describe how resources are provided to acquire, maintain, and upgrade the infrastructures, facilities, and equipment used in the program.
4. Assess the adequacy of the resources described in this section with respect to the students in the program being able to attain the student outcomes.

### **C. Staffing**

Describe the adequacy of the staff (administrative, instructional, and technical) and institutional services provided to the program. Discuss methods used to retain and train staff.

### **D. Faculty Hiring and Retention**

1. Describe the process for hiring of new faculty.
2. Describe strategies used to retain current qualified faculty.

### **E. Support of Faculty Professional Development**

Describe the adequacy of support for faculty professional development, how such activities such as sabbaticals, travel, workshops, seminars, etc., are planned and supported.

## PROGRAM CRITERIA

Describe how the program satisfies any applicable program criteria. If already covered elsewhere in the self-study report, provide appropriate references.

[NOTE: It can be useful to list the program criteria requirements and then include a description or reference for how the program satisfies each of those requirements. The applicable program criteria could include statements that add specificity to the requirements for student outcomes found in Criterion 3. These statements differentiate the discipline designated by the program's title and should be included in the mapping to the program's student outcomes. The applicable program criteria could also include statements that add specificity to the curricular requirements found in Criterion 5 to differentiate the discipline implied by the title of the program criteria. These should be included in the program's required coursework.]

*This section can consist of the listing of required topics and indicating which courses contain that content. The program should expect to provide examples of student work in each topic area to validate that the students are doing work related to each topic.*

## APPENDICES

### APPENDIX A – COURSE SYLLABI

Please use the following format for the course syllabi (2 pages maximum in Times New Roman 12 point font)

1. Course number and name
2. Credits and contact hours
3. Instructor's or course coordinator's name
4. Text book, title, author, and year
  - a. other supplemental materials
5. Specific course information
  - a. brief description of the content of the course (catalog description)
  - b. prerequisites or co-requisites
  - c. indicate whether a required, elective, or selected elective (as per Table 5-1) course in the program
6. Specific goals for the course
  - a. specific outcomes of instruction, ex. The student will be able to explain the significance of current research about a particular topic.
  - b. explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.
7. Brief list of topics to be covered

## APPENDIX B – FACULTY VITAE

Please use the following format for the faculty vitae (2 pages maximum in Times New Roman 12 point type)

1. Name
2. Education – degree, discipline, institution, year
3. Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 1990-1995), full time or part time
4. Non-academic experience – company or entity, title, brief description of position, when (ex. 1993-1999), full time or part time
5. Certifications or professional registrations
6. Current membership in professional organizations
7. Honors and awards
8. Service activities (within and outside of the institution)
9. Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation
10. Briefly list the most recent professional development activities

## **APPENDIX C – EQUIPMENT**

Please list the major pieces of equipment used by the program in support of instruction.

## APPENDIX D – INSTITUTIONAL SUMMARY

Programs are requested to provide the following information.

### 1. The Institution

- a. Name and address of the institution.
- b. Name and title of the chief executive officer of the institution.
- c. Name and title of the person submitting the Self-Study Report.
- d. Name the organizations by which the institution is now accredited, and the dates of the initial and most recent accreditation evaluations.

### 2. Type of Control

Description of the type of managerial control of the institution, e.g., private-non-profit, private-other, denominational, state, federal, public-other, etc.

### 3. Educational Unit

Describe the educational unit in which the program is located including the administrative chain of responsibility from the individual responsible for the program to the chief executive officer of the institution. Include names and titles. An organization chart may be included.

### 4. Academic Support Units

List the names and titles of the individuals responsible for each of the units that teach courses required by the program being evaluated, e.g., mathematics, physics, etc.

### 5. Non-academic Support Units

List the names and titles of the individuals responsible for each of the units that provide non-academic support to the program being evaluated, e.g., library, computing facilities, placement, tutoring, etc.

### 6. Credit Unit

It is assumed that one semester or quarter credit normally represents one class hour or three laboratory hours per week. One academic year normally represents at least 28 weeks of classes, exclusive of final examinations. If other standards are used for this program, the differences should be indicated.

## 7. Tables

Complete the following tables for the program undergoing evaluation.



**Table D-1. Program Enrollment and Degree Data**

**Name of Program**

	Academic Year		Enrollment Year					UndergradTotal	GradTotal	Degrees Awarded			
			1st	2nd	3rd	4th	5th			Associates	Bachelors	Masters	Doctorates
Current Year		FT											
		PT											
1		FT											
		PT											
2		FT											
		PT											
3		FT											
		PT											
4		FT											
		PT											

Give official fall term enrollment figures (head count) for the current and preceding four academic years and undergraduate and graduate degrees conferred during each of those years. The "current" year means the academic year preceding the on-site visit.

FT--full time

PT--part time

**Table D-2. Personnel**

**Name of Program**

Year<sup>1</sup>: \_\_\_\_\_

	HEAD COUNT		FTE <sup>2</sup>
	FT	PT	
Administrative <sup>2</sup>			
Faculty (tenure-track) <sup>3</sup>			
Other Faculty (excluding student Assistants)			
Student Teaching Assistants <sup>4</sup>			
Technicians/Specialists			
Office/Clerical Employees			
Others <sup>5</sup>			

Report data for the program being evaluated.

1. Data on this table should be for the fall term immediately preceding the visit. Updated tables for the fall term when the ABET team is visiting are to be prepared and presented to the team when they arrive.
2. Persons holding joint administrative/faculty positions or other combined assignments should be allocated to each category according to the fraction of the appointment assigned to that category.
3. For faculty members, 1 FTE equals what your institution defines as a full-time load.
4. For student teaching assistants, 1 FTE equals 20 hours per week of work (or service). For undergraduate and graduate students, 1 FTE equals 15 semester credit-hours (or 24 quarter credit-hours) per term of institutional course work, meaning all courses — science, humanities and social sciences, etc.
5. Specify any other category considered appropriate, or leave blank.

## Submission Attesting to Compliance

Only the Dean or Dean's Delegate can electronically submit the Self-study Report.

ABET considers the on-line submission as equivalent to that of an electronic signature of compliance attesting to the fact that the program conducted an honest assessment of compliance and has provided a complete and accurate disclosure of timely information regarding compliance with ABET's *Criteria for Accrediting Engineering Programs* to include the General Criteria and any applicable Program Criteria, and the ABET *Accreditation Policy and Procedure Manual*.