

**RESPONSE TO ABET STATEMENT**

**FROM**

**The Electrical Engineering Study Program (EESP)**

**Universitas Hasanuddin at Makassar**

**INDONESIA**



In Conjunction to

**VISIT DATES: OCTOBER 23-25, 2019**

**ACCREDITATION CYCLE CRITERIA: 2019-2020**

**MARCH, 2020**

**INTRODUCTION**

The EESP Response to ABET Statement #1:

**1. Criterion 2:** **Program Educational Objectives**

This criterion requires the program to have published program educational objectives that are consistent with the mission of the institution, the needs of the program’s various constituencies, and the engineering accreditation criteria. It further requires that there be a documented, systematically utilized, and effective process, involving program constituents, for periodic review of these program educational objectives that ensures they remain consistent with the institutional mission, the program’s constituent’s needs, and the engineering accreditation criteria. The program lists its students, faculty members, industrial advisory board, major employers, and alumni as constituents. There was no evidence that any of these groups, aside from the faculty members, participated in the periodic review of program educational objectives. Without involvement of all constituencies in the process the program educational objectives may not meet the needs of the program’s constituents. Thus, the strength of compliance with this criterion is lacking.

**The EESP Response:**

We have made meetings with stake holders discussing about the reviews of the EESP program educational objectives and the review of the student outcome achievements. The first meeting was made in October 12, 2019, and the second meeting was organized in March 7, 2020.

In the first meeting,

In the second meeting, we have received many inputs and suggestion from stake-holders. The man points of the meeting are as follows:

1. Special attentions to certified apprentice program proposed by companies. The EESP should make more intensive contact to local industries and major employers and assign EESP students to conduct the apprentice program. This program is very helpful to improve the student outcome
2. The improvement of student entrepreneurship skills.

In the following attachments, you can find:

1. The minutes of the both meetings presenting in the involvement of all constituencies in the periodic review process of the program educational objectives.
2. The list of attendances (stake-holders)

The EESP Response to ABET Statement #2:

**2. Criterion 4. Continuous Improvement**

This criterion requires that the program must regularly use appropriate, documented processes for assessing and evaluating the extent to which the student outcomes are being attained. The results of these evaluations must be systematically utilized as input for the continuous improvement of the program. In fall 2018, the institution implemented a university-wide outcome-based assessment process. The program presented an assessment plan in which the seven student outcomes were mapped to courses in the curriculum, but the course instructional materials and student work did not always support the student outcomes identified to be assessed in the course. In addition, documentation of the materials and student work used to assess the level to which student outcomes were attained was incomplete. The assessment results were submitted to the university quality assurance office, but the use of the results as input to the continuous improvement of the program was not documented. Thus, the strength of compliance with this criterion is lacking.

**The EESP Response:**

In every semester, we have plan to organize a meeting to review the assessment results of each student outcome. In this case, we have made a meeting to review the attainment of the student outcomes attended by faculty members of the EESP.

In the following attachment, you can find:

1. The minutes of the meeting documenting the use of the assessment results as the input to the continuous improvement
2. The list of attendances
3. Example of a selected course that presents student works, where the course objectives are mapped to any of student outcomes

The EESP Response to ABET Statement #3:

**3. Criterion 5. Curriculum**

This criterion requires that the program must include a culminating major engineering design experience that incorporates appropriate engineering standards and multiple constraints. The program has a capstone experience that is distributed over several courses. Appropriate engineering standards and multiple constraints were addressed indirectly in some senior design projects, but most project reports did not include evidence of the incorporation of engineering standards and constraints. Without adequate experience in the application of design constraints and engineering standards, students in the program may not be adequately prepared for engineering practice. Thus, the strength of compliance with this criterion is lacking.

**The EESP Response:**

The EESP has implemented principally or implicitly capstone design courses in the final project of each final year student. In the final project, students have incorporated engineering standards and constraints.

The EESP has reorganized the EESP curriculum, where capstone design course I and II are proposed in the first and second semester for each academic year.

In the following attachment, you can find:

1. Examples of student final project that represents capstone design.
2. The list of course for the new curriculum presenting the capstone design course I and II
3. The meeting minutes attended by faculty members where a project seminar and exhibition will be organized each year, where last year students will present their software/hardware prototypes in the seminar and exhibition event

The EESP Response to ABET Statement #4:

**4. Criterion 7. Facilities**

This criterion requires that classrooms, offices, laboratories, and associated equipment must be adequate to support attainment of the student outcomes and to provide an atmosphere conducive to learning. Modern tools, equipment, computing resources, and laboratories appropriate to the program must be available, accessible, and systematically maintained and upgraded to enable students to attain the student outcomes and to support program needs. The program has facilities to support attainment of student outcomes, but in some cases the number of students using the facility was large, such that each student may not receive the full benefit of the experience. In addition, the limited functionality of student versions of software for electrical circuit simulation, numerical computation and general office functions impeded the ability of students to fully attain the student outcomes. Without sufficient and appropriate equipment and software, student learning through hands- on laboratory experience may be inadequate. Thus, strength of compliance with this criterion is lacking.

**The EESP Response:**

We are now under the process to improve the facilities of our department. The procurements of a professional edition of a numerical simulation program such as Matlab and full version of an electric and electronic circuit simulator such as PSpice as well as backup units of the lab equipment are still ongoing. We need several months until the facilities are completely installed in our department.

In the following attachment, you can find:

1. A letter to the engineering faculty dean for the lab equipment procurement
2. The document of the list of equipment under procurement process