



**EAC of ABET  
Readiness Review Report  
for the  
Electrical Engineering Study Program  
at  
Hasanuddin University  
Makassar**

**September 20<sup>th</sup>, 2018**

**CONFIDENTIAL**

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## BACKGROUND INFORMATION

### A. Contact Information

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### B. Program History

The Electrical Engineering Study Program (EESP) at Hasanuddin University, Makassar, Indonesia was founded in 1963 as a part of the Faculty of Engineering established a few years earlier. The campus was originally located at Baraya, near the downtown of Ujung Pandang which was the old name of the city of Makassar. In early 1980s, the university campus was relocated to Tamalanrea, about 10 km north-east of downtown Makassar. More than 30 years later, the Faculty of Engineering was relocated again to its new campus at Gowa, 20 km south of Tamalanrea, and the EESP - under the Department of Electrical Engineering - officially settled at its new facilities in the new campus at Gowa in 2017.

During the first years after its establishment in mid 1960s, most EESP students of Hasanuddin University continued and completed their undergraduate degrees in 2 (two) major universities in Indonesia, namely Gadjah Mada University (UGM) in Yogyakarta and Bandung Institute of Technology (ITB) in Bandung. The majority of the graduates from this period made their careers as academicians, or as engineers at the state-owned power company (PLN) and telecommunication (TELKOM), or started their own private companies related to electricity and telephone businesses.

A major change of curriculum was implemented in 1980. The EESP was split into 2 (two) sub-study programs or concentrations, namely: (1) The Electrical Power Engineering and (2) The Telecommunication and Electronic Engineering. It was an 8 (eight) semester undergraduate engineering study program provided in 4 (four) academic years. In the first three semesters, the students took common courses on the fundamentals of Electrical Engineering and the required mathematics, physics and chemistry. Beginning at the fourth semester, the students voluntarily selected their preferences of concentration, and took different required and elective courses accordingly.

The next stage of curriculum development was started in 1995. A new concentration was established by divided the Telecommunication and Electronic Engineering sub-study program into 2 (two), i.e. (1) The Telecommunication Engineering and Information Systems, and (2) The Computer, Control and Electronic Engineering sub-study programs. Common courses for both new concentrations were listed until the fourth semester. The basis of the curriculum establishment was the nationally decreed higher education curriculum development in Indonesia: Competency-Based Curriculum (KBK).

Most recently, a major change in the EESP curriculum was made related to the campus relocation to Gowa in 2015. The new campus is designed to support the Laboratory-based Education (LBE) system adopted by the Faculty of Engineering. By this time the EESP has established its Masters and Doctoral Degree programs supported by no less than 20 research laboratories and working groups. The process of curriculum development was managed by a Focus Group Discussion (FGD) on Curriculum 2015 in a 5 (five) year working period from 2012 to 2017, with a tagline: “From Competency To Contribution”.

The main idea of the recent curriculum change is to extend the competency-based curriculum previously implemented to a brand new curriculum called the “R&D-(research and development)-based curriculum”. The existing (since 1995) three concentrations were discontinued and all merged back to only one EESP. The curriculum structure is now composed of 4 (four) semesters of fundamentals and 2 (two) semesters of (elective) course packages to develop the competency, and the final laboratory-based, or R&D-based, 2 (two) semesters to make the contribution.

**Table 1-1** Summary of Major Changes in the History of Hasanuddin University.

<b>Year</b>	<b>Events</b>
1963	The Electrical Engineering Study Program (EESP) founded
1980	Split into 2 (two) sub-study programs:
	(1) Electrical Power Engineering Sub-Study Program
	(2) Telecommunication and Electronic Engineering Sub-Study Program
1984	Relocated from Baraya Campus to Tamalanrea Campus
1995	Split into 3 (three) concentrations:
	(1) Electrical Power Engineering
	(2) Telecommunication Engineering
	(3) Computer, Control and Electronic Engineering
2000	Minor Revisions of Curriculum
2005	Minor Revisions of Curriculum, competency-based curriculum (KBK)
2010	Minor Revisions of Curriculum, competency-based curriculum (KBK)

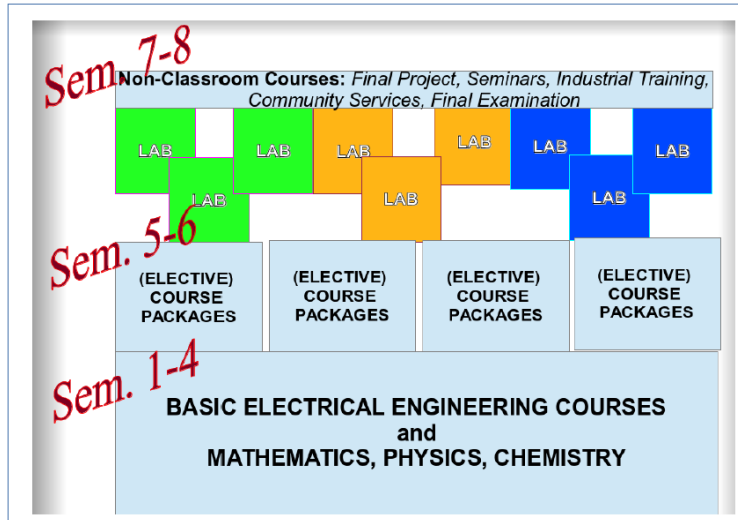
2012	Focus Group Discussion (FGD) on Curriculum 2015 established
2015	Relocated to the Faculty of Engineering Campus at Gowa
	Commencement of the Laboratory-based Education System (LBE)
2016	Implementation of the R&D-based Curriculum 2015
2017	Focus Group Discussion (FGD) on Curriculum 2015 dismissed

The timeline of the EESP 55 year history is summarized in Table 1-1. After 1995, in fact the EESP curriculum has been revised every 5 (five) years, in 2000, 2005 and 2010 consecutively, but only with minor revisions.

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The main idea of the recent curriculum change is to extend the competency-based curriculum previously implemented to a brand new curriculum called the “R&D (research and development)-based curriculum”. The existing (since 1995) three concentrations were discontinued and all merged back to only one EESP. The curriculum structure is now composed of 4 (four) semesters of fundamentals and 2 (two) semesters of (elective) course packages to develop the competency, and the final laboratory-based, or R&D-based, 2 (two) semesters to make the contribution (see Figure 1-1 in the next section).

The timeline of the EESP 55 year history is summarized in Table 1-1. After 1995, in fact, the EESP curriculum has been revised every 5 (five) years, in 2000, 2005 and 2010 consecutively, but only with minor revisions.



**Figure 1-1** The Curriculum Structure.

### C. Options

The main structure of the curriculum is shown by Figure 1-1. In the first 4 (four) semesters, freshmen and sophomores spend most of their time in classrooms and supporting teaching laboratories to develop their knowledge on required mathematics and basic sciences (physics and chemistry), and the Electrical Engineering fundamentals, especially the 4 (four) basics namely1: (1) Electric Circuits, (2) Electro-magnetics, (3) Solid-state Electronics and (4) Digital Logic Circuits. They also begin to develop their skills to conduct simple experiments, to analyze, interpret and present data, to enhance their knowledge on the required subjects.

After completing all basic and fundamental courses, in the third year the students are supposed to take at least one elective-course package per semester consisting of 3 to 4 courses in a specific area of electrical engineering that will - but not necessarily - lead to one of the research laboratories or working groups in the fourth year that they are interested to apply. Roughly 6 to 8 elective-course packages are offered each semester to juniors, covering the total of more than 50 elective-courses.

Beginning in the fifth semester, a junior should make a decision to choose **at least one** of the following 5 (five) options by solicitedly selecting the related package of elective courses:

- Option 1: Electrical Power Engineering and Electricity
- Option 2: Telecommunication Engineering and Information Systems
- Option 3: Computer Engineering and Robotics
- Option 4: Control Systems and Instrumentation
- Option 5: Electronic Engineering

The ultimate learning process is at the final fourth year. Seniors are required to apply to one of the research laboratories or working groups. When a senior is admitted to a

research laboratory or working group then he or she becomes a member of the laboratory or group by signing an annual contract with the head of the laboratory or the chairman of the group. The seniors will work together with professors and their associates and assistants, their fellows graduate and undergraduate students, to develop their ability to apply their knowledge and to design experiments, systems, processes and/or components to meet desired needs. They also learn how to work effectively not only as individuals but also in teams, either as leaders or members.

After completing all basic and fundamental courses, in the third year the students are supposed to take at least one elective-course package per semester consisting of 3 to 4 courses in a specific area of electrical engineering that will - but not necessarily – lead to one of the research laboratories or working groups in the fourth year that they are interested to apply. Roughly 6 to 8 elective-course packages are offered each semester to juniors, covering the total of more than 50 elective-courses.

**Tabel 1-2** List of Available Research Laboratories and Working Groups in the Academic Year of 2018-2019.

Area	Research Laboratories And Working Groups
Electrical Power Engineering and Electricity	Electric Machines and Power Drives
	Power System Stability, Control and Protection
	Power Electronics
	High Voltage and Insulation
	Power System Distribution and Installation
	Renewable Energy and Intelligent Systems
	Energy and Power Systems
	Electricity Infrastructures
	Distributed Power Generation
	Electricity Market and Power Systems
Telecommunication Engineering	Antenna And Wave Propagation
	Radio Telecommunications and Microwave
	Wireless Communication Technology
	Transmission And Telecommunication Network
	Radio Engineering
	Multimedia Telecommunication and Artificial Intelligence
Computer And Robotics	Telematics, Radar and Satellite
	Cognitive, Social and Intelligent Robotics
Control Systems and Instrumentation	Computer Engineering and Network
	Control Systems and Instrumentation
Electronic Engineering	Electronics and Devices

In the seventh semester, the students are expected to learn how to identify and formulate a problem, present it and propose a final project in a seminar to solve it. They should be able to define the scope of the problem so that they could complete the solution within months in the next eighth semester.

The final examination at the end of eighth semester is a special occasion to give an opportunity for graduating students to show their in-depth technical competence in at least one area of Electrical Engineering and to prove their academic contributions by demonstrating and defending their final undergraduate projects.

#### **D. Program Delivery Modes**

The Faculty of Engineering officially runs all academic activities in working hours 07:00 AM to 05:00 PM Monday to Friday, 2 (two) semesters per academic year, 16 weeks per semester. Traditional or regular lecture courses are delivered during these working hours, while other activities, including non-lecture activities, may be delivered in these working hours or in the other time.

An EESP graduate must complete at least 145 credit hours of courses, a total of 28 credits hours equivalent of those are non-lecture courses, including:

- a) The Undergraduate Final Project Report (called “*Skripsi*”), presented and defended in a Final Examination, 4 credit hours
- b) Seminar on the Undergraduate Final Project Results, 2 credit hours
- c) Seminar on the Undergraduate Final Project Proposal, 2 credit hours
- d) Community Services (called “*Kuliah Kerja Nyata*” or *KKN*), an off-campus 1 month activity run by the university, usually in a remote area or a village, 4 credit hours
- e) Practical (Industrial or “On Job”) Training, an off-campus 1 to 2 month activity, typically in an industrial site, 2 credit hours
- f) Laboratory 1, an intra-laboratory or working-group R&D activity, semester 7, 8 credit hours, to develop an undergraduate final project proposal
- g) Laboratory 2, an intra-laboratory or working-group R&D activity, semester 8, 8 credit hours, to produce a contribution from the undergraduate final project

The remaining 117 credit hours are delivered as regular lecture courses in classrooms supported by prescribed syllabii and text books, and/or by conducting experiments in the teaching laboratories: *Basic Physics Laboratory*, *Basic Electrical Engineering Laboratory* and *Computer Software Laboratory*.

#### **E. Program Locations**

All academic teaching and learning processes are located in the new Faculty of Engineering campus at Gowa, about 20 km to the south from the old campus at Tamalanrea, Makassar. The new campus is designed to accommodate the concept of Laboratory-based Education (LBE) adopted by the Faculty of Engineering. Common facilities such as classrooms, the central library and the Faculty of Engineering administrative offices, are located in the main area of campus. A three-story building as seen in Fig. 1-2 is functioned as the Classroom Building to house classrooms with the capacity of 20 to 100 students. Lecture theaters for an audience of hundreds of students are also available for general lectures. For smaller classes, less than 20



students, the seminar and meeting rooms in laboratories at the Electrical Engineering Building can be used, as shown in Fig. 1-3.



**Figure 1-2** The Faculty Engineering's Common Classroom Building.



**Figure 1-3** The Electrical Engineering Building

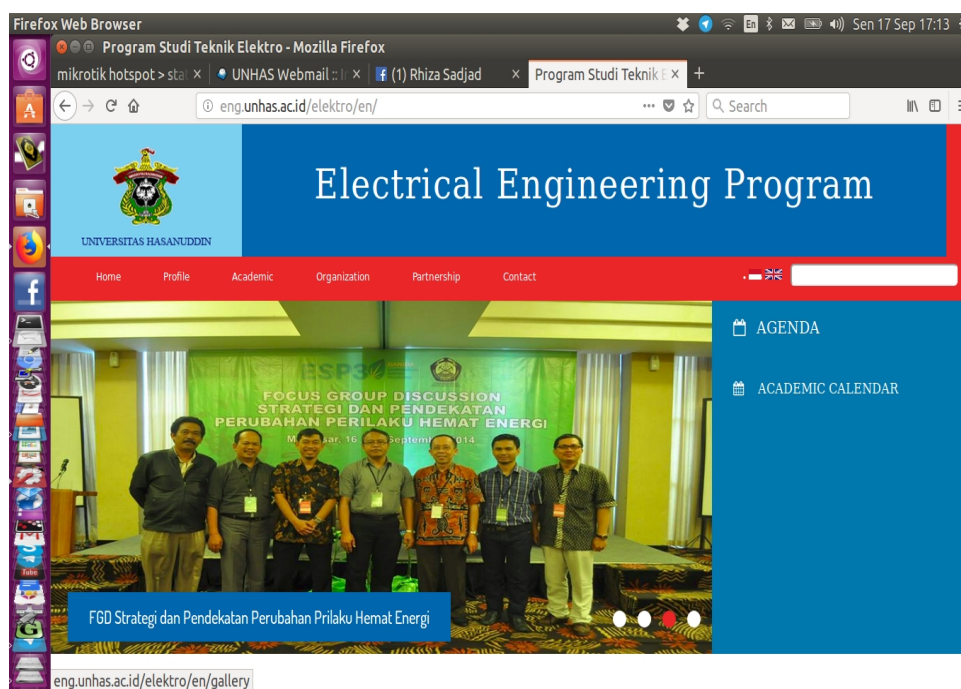




**Figure 1-4** The Standing Banners in Front of the Department's Administrative Office

## F. Public Disclosure

The information regarding the PEOs, SOs, annual student enrollment and graduation data, etc. is posted both on the standing banners in front of the Department's administrative office (see Fig. 1-4) and in the official website of the EESP (see Fig. 1-5): <http://elektro.unhas.ac.id/> or <http://eng.unhas.ac.id/elektro/en/>



**Figure 1-5** The Screen-Shot of the Front Page of the EESP Official Website.

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

Not yet applicable for Readiness Review.



## GENERAL CRITERIA

### CRITERION 1. STUDENTS

#### A. Student Admissions

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

#### B. Evaluating Student Performance

Not yet submitted submit for Readiness Review.

#### 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

Until the EESP has not implemented the requirements and process for awarding credit for work in lieu of courses.

#### F. Graduation Requirements

An EESP graduate must complete at least 145 credit hours of courses, a total of 28 credits hours equivalent of those are non-lecture courses. In the final year, a student must present and defend his/her undergraduate Final Project Report, called “*Skripsi*”, having 4 credit hours. In the last semester, before the Final Project Report, a student must also present in a seminar his/her the Undergraduate Final Project Results, having 2 credit hours, undertake a Community Service, called “*Kuliah Kerja Nyata*” or *KKN*, one-month off-campus activity run by the university, usually in a remote area or a village, 4 credit hours, and undertake a Practical (Industrial or “On Job”) Training, one-/two-month off-campus activity, typically in an industrial site, having 2 credit hours.

In the last year, a student must also do a research activity termed as Laboratory Work 1 (for Semester 7) and Laboratory Work 2 (for Semester 8). The Laboratory Work 1 is an intra-laboratory or working-group R&D activity, having 8 credit hours, to develop an undergraduate final project proposal. The Laboratory Work 2 is an intra-laboratory or working-group R&D activity, having 8 credit hours, to produce a contribution from the undergraduate final project.

## **G. Transcripts of Recent Graduates**

An example of a recent graduate can be found in the attachments.

## **CRITERION 2. PROGRAM EDUCATIONAL OBJECTIVES**

### **A. Mission Statement**

Not yet submitted for Readiness Review.

### **B. Program Educational Objectives**

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.
2. The EESP graduates have an ability to anticipate, to formulate and to solve problems related to the field of electrical engineering.
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.
4. The EESP graduates have capability to continue their study to higher degree of education all over the world..

These Program Educational Objectives are posted in the official website of the Department and also shown to visitors on standing banners in front of the Department's administrative office.

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

Not yet submitted for Readiness Review.

### **D. Program Constituencies**

At the time of what so called the era of “disruption”, the era of the emergence of entirely new kinds of business like Uber and Airbnb, it is almost impossible to predict who or what will be the EESP's main constituencies in the future when the graduates start to enter the job market. Therefore, it is important to strengthen the basics, especially mathematics, basic sciences and basic electrical engineering, and the spirit of entrepreneurship that will give the graduates a strong self-confidence to face the new strange world, and then successfully create jobs at least for themselves, and also for others.

Relying merely on the traditional constituencies such as the state-owned enterprises in electrical power systems and electricity, telecommunication, general contractors and consultants, etc., has a potential to leave the graduates irrelevant in the future which is more dangerous than becoming out of job. The issue of relevance is the most important factor to be considered when stating the Program Educational Objectives above.

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

The EESP curriculum is subject to be reviewed periodically every five years since 1995. The process for review usually begins with a tracer study by surveying the alumni's well-being and their views on the curriculum after they leave campus all that long. The alumni's points of view are the most important consideration in the development of new curriculum. In the last tracer study in 2013, the alumni were asked what courses that they still remember after graduation. The alumni's strong memory on specific courses indicates how important the courses are for them now, or how good the courses were delivered during their tenure as students in previous years.





## CRITERION 3. STUDENT OUTCOMES

### A. Student Outcomes

By participating in various academic programs in EESP, the students will attain the basic competency in the field of electrical engineering, and at least one of the following options:

#### *Option 1: Electricity and Electrical Power Engineering*

1. an ability to design and to analyse electricity systems both technically and economically
2. a mastery in power system generation, instalation, transmission and distribution, and power station operation
3. a mastery in electric machines applications, maintenance, control and operation.

#### *Option 2: Telecommunication and Information System*

1. a mastery in system management and control of network, hardware and multimedia software applications in telecommunication and information systems
2. an ability to anticipate, to formulate and to solve problems related to the network, hardware and multimedia software applications in telecommunication and information systems
3. an ability to participate in the science and technology development, especially in the area of telecommunication and information systems, and always being adaptive to the advancement of science and technology in this area

#### *Option 3: Computer Engineering*

1. an ability to utilize the computer software packages for modeling and simulation of various electrical engineering problems, and general engineering problems
2. a mastery in concepts, design and application of the digital computer hardware

#### *Option 4: Control Engineering*

a mastery in the basic control theory, both classical and modern control theory, and its application in the control systems analysis and design

#### *Option 5: Electronic Engineering*

a mastery on the knowhow of design, fabrication and application of electronic devices, circuits and systems, and microelectronics, including the utilization of software packages for integrated circuit layout design

In addition to the specific student outcomes above, the following ABET criteria are also made as references:

#### *General Enginering Criteria (ABET)*

1. an ability to apply knowledge of mathematics, science, and engineering
2. an ability to design and conduct experiments, as well as to analyze and interpret data.

3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. an ability to function on multi-disciplinary teams
5. an ability to identify, formulate, and solve engineering problems
6. an understanding of professional and ethical responsibility
7. an ability to communicate effectively
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
9. a recognition of the need for, and an ability to engage in life-long learning
10. a knowledge of contemporary issues
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

*Electrical Engineering Criteria (ABET)*

1. breadth of knowledge over all areas within electrical engineering (electromagnetic, power, electronics, signals and systems, and computer engineering)
2. depth of knowledge in at least one area
3. knowledge of probability and statistics, including applications to electrical and computer systems
4. knowledge of mathematics through differential and integral calculus
5. knowledge of basic sciences, computer science, and engineering sciences necessary to analyze and design complex electrical and electronic devices, software, and systems containing hardware and software components
6. knowledge of advanced mathematics, linear algebra, complex variables, and discrete mathematics
7. background for graduate study

## **B. Relationship of Student Outcomes to Program Educational Objectives**

Not yet submitted for Readiness Review.

## CRITERION 4. CONTINUOUS IMPROVEMENT

The EESP assesses regularly and evaluate the extent to which the student outcomes have been attained. The student outcomes related to the basic knowledge to solve an engineering problem can be achieved after Semester 6 (third year). Therefore, student outcomes are assessed using a specific exam questions and internally developed assessment exams. The student outcomes

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 Readiness Review Report.

### A. Student Outcomes

It is recommended that this section include (a table may be used to present this information):

1. A listing and description of the assessment processes used to gather the data upon which the evaluation of each student outcome is based. Examples of data collection processes may include, but are not limited to, specific exam questions, student portfolios, internally developed assessment exams, senior project presentations, nationally-normed exams, oral exams, focus groups, industrial advisory committee meetings, or other processes that are relevant and appropriate to the program.
2. The frequency with which these assessment processes are carried out
3. The expected level of attainment for each of the student outcomes
4. Summaries of the results of the evaluation process and an analysis illustrating the extent to which each of the student outcomes is being attained
5. How the results are documented and maintained

### B. Continuous Improvement

As inputs in the continuous improvement of the EESP student's outcomes, we plan to develop an online questioner systems for industries, institutions and other employers. From the employers, the EESP will get feedback that can be used to evaluate and improve the educational process in the EESP.

### C. Additional Information

Not yet submitted for Readiness Review.

## CRITERION 5. CURRICULUM

### A. Program Curriculum

The Program Curriculum of the EESP is designed to meet the program educational objectives.

The EESP requires that all educational programs must have a freshman year that consists of mathematics and basic science, a set of general education, and engineering topics. With these constraints, the implementation of the EESP curriculum consists of three elements and with a total minimum of 145 credits hours as shown in the Figure 5-1.

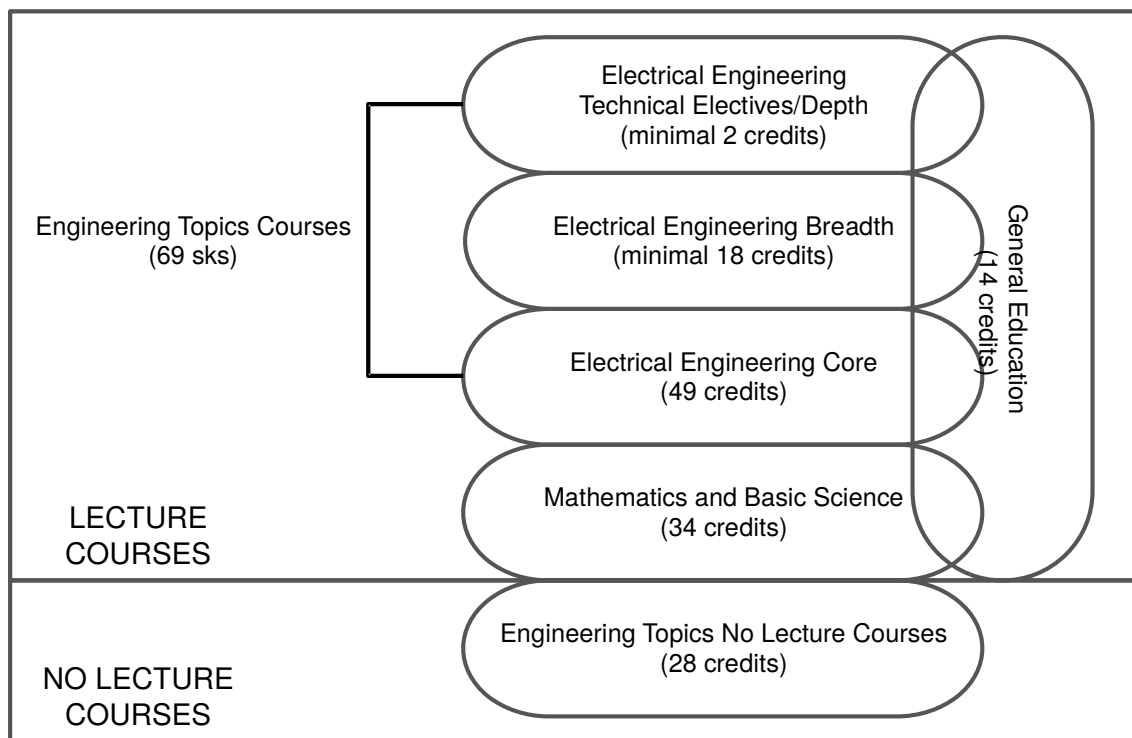
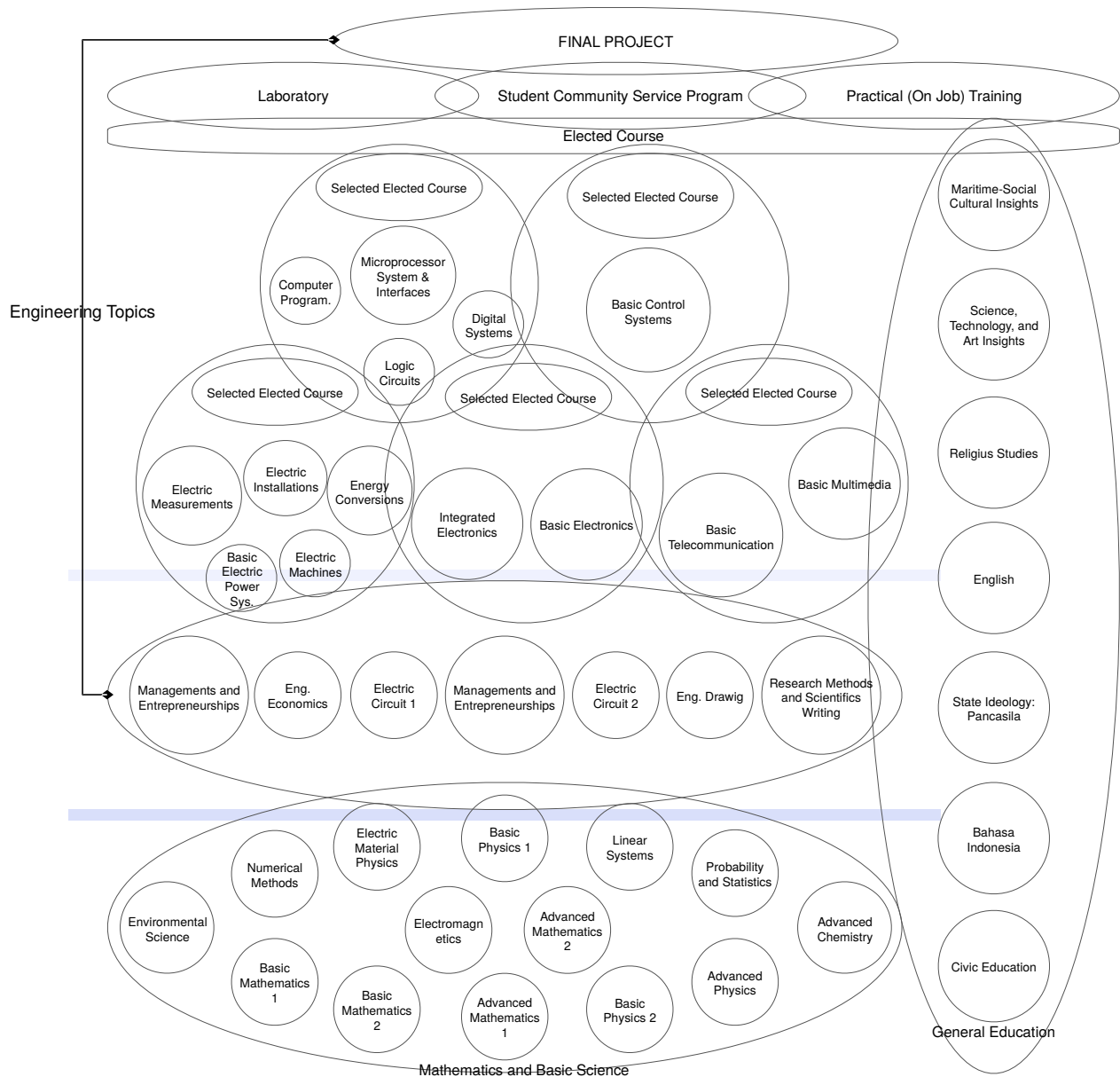


Figure 5.1 Overview of EESP curriculum.

Table 5-1 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 maximum section enrollments for all courses in the program.

The flowchart or worksheet that illustrates the prerequisite structure of the program's required courses is shown in Figure 5-2.



**Figure 5-2** flowchart or worksheet that illustrates the prerequisite structure of the program.

## B. Course Syllabi

The Course Syllabi can be found in Appendix A of this Readiness Review Report.

# Table 5-1 Curriculum

## Electrical Engineering Study Program

Course Electrical Engineering	Required, Elective, or a Selected Elective	Subject Area (Credit Hours)				Last Two Terms the Course was Offered: Year and Semester or Quarter	Maximum Section Enrolment for The Last Two Terms the Course was Offered
		Math & Basic Sciences	Engineering Topics Check if Contains Significant Design	General Education	Other		
Lecture Courses							
011U0032 Civic Education	R			2		I; 1	
009U0032 Bahasa Indonesia	R			2		I; 1	
016U0033 Basic Mathematics 1	R	3				I; 1	
020U0033 Basic Physics 1	R	3				I; 1	
101D4113 Electrical Circuits 1	R		3			I; 1	
102D4112 Logic Circuits	R		2			I; 1	
103D4112 Engineering Drawing	R		2			I; 1	
104D4112 Advanced Chemistry	R	2				I; 1	
001U0032 Religious Studies (Islam, Catholic, etc)	R			2		I; 2	
012U0032 State Ideology: Pancasila	R			2		I; 2	
010U0032 English	R			2		I; 2	
017U0033 Basic Mathematics 2	R	3				I; 2	
022U0033 Basic Physics 2	R	3				I; 2	
105D4123 Electric Circuits 2	R		3			I; 2	
106D4122 Digital Systems	R		2			I; 2	
107D4122 Computer Programming	R		2			I; 2	
108D4121 Electric Circuits Laboratory	R		1			I; 2	
109D4121 Digital Systems Laboratory	R		1			I; 2	

<i>Course Electrical Engineering</i>	<i>Required, Elective, or a Selected Elective</i>	<i>Subject Area (Credit Hours)</i>				<i>Last Two Terms the Course was Offered: Year and Semester or Quarter</i>	<i>Maximum Section Enrolment for The Last Two Terms the Course was Offered</i>
		<i>Math &amp; Basic Sciences</i>	<i>Engineering Topics Check if Contains Significant Design</i>	<i>General Education</i>	<i>Other</i>		
008U0032 Science, Technology and Art Insights	R			2		II;3	
201D4113 Advanced Mathematics 1	R	3				II;3	
202D4112 Basic Electric Power (Systems)	R		2			II;3	
203D4112 Basic Telecommunication (Systems)	R		2			II;3	
204D4112 Basic Electronics	R		2			II;3	
205D4112 Electric Material Physics	R	2				II;3	
206D4112 Advanced Physics	R	2				II;3	
207D4111 Basic Electric Power laboratory	R		1			II;3	
208D4111 Basic Telecommunication Laboratory	R		1			II;3	
209D4111 Basic Electronics Laboratory	R		1			II;3	
007U0032 Maritime Social-Cultural Insight	R			2		II;4	
210D4123 Advanced Mathematics 2	R	3				II;4	
211D4122 Linear Systems	R	2				II;4	
212D4122 Electric Machines	R		2			II;4	
213D4122 Basic Multimedia	R		2			II;4	
214D4122 Integrated Electronics	R		2			II;4	
215D4122 Microprocessor Systems and Interfaces	R		2			II;4	
216D4122 Basic Control Systems	R		2			II;4	
217D4122 Electric Installation and Laboratory	R		2			II;4	
218D4121 Integrated Electronics Laboratory	R		1			II;4	
219D4121 Microprocessor Systems and Interfaces Laboratory	R		1			II;4	
301D4112 Engineering Economics	R		2			III;5	
302D4112 Probability and Statistics	R	2				III;5	



Course Electrical Engineering	Required, Elective, or a Selected Elective	Subject Area (Credit Hours)				Last Two Terms the Course was Offered: Year and Semester or Quarter	Maximum Section Enrolment for The Last Two Terms the Course was Offered
		Math & Basic Sciences	Engineering Topics Check if Contains Significant Design	General Education	Other		
303D4112 Electric Measurement	R		2			III;5	
304D4112 Electromagnetics	R	2				III;5	
Selected Elective Course (1 Package)*	SE		9			III;5	
342D4122 Numerical Methods	R	2				III;6	
343D4122 Energy Conversion	R		2			III;6	
344D4122 Environmental Science	R	2				III;6	
345D4122 Management and Entrepreneurship	R		2			III;6	
Selected Elective Course (1 Package)*	SE		9			III;6	
402D4112 Research Methods and Scientific Writing	R		2			IV;7	
Elective Course**	E		2			IV;7	
Total Required Minimum Lecture Courses		34	69	14	0		
Total-ABET Basic Level Requirements							
Total Credit Hours for Lecture Courses	117						
Percent of Total		29,1%	59,0%	12,0%	0,0%		
Total Must Satisfy Either Credit Hours of Percentage	Minimum Semester Credit Hours	32 Hours	48 Hours				
	Minimum Percentage	25,0%	37,5%				
Non-Lecture Courses							
401D4112 Practical (On Job) Training	R		2			IV;7	
403D4112 Final Project Proposal	R		2			IV;7	
Laboratory 1	R		8			IV;7	
491D4124 Student Community Service Programs	R		4			IV;8	

<i>Course Electrical Engineering</i>	<i>Required, Elective, or a Selected Elective</i>	<i>Subject Area (Credit Hours)</i>				<i>Last Two Terms the Course was Offered: Year and Semester or Quarter</i>	<i>Maximum Section Enrolment for The Last Two Terms the Course was Offered</i>
		<i>Math &amp; Basic Sciences</i>	<i>Engineering Topics Check if Contains Significant Design</i>	<i>General Education</i>	<i>Other</i>		
492D4122 Final Project Results	R		2			IV;8	
Laboratory 2	R		8			IV;8	
493D4122 Final Project Report	R		2			IV;8	
Total Credit Hours for Non-Lecture Courses	28						
Overall Minimum Total Credit Hours For Completion of The Program	145						

The following information provides the components of the EESP curriculum.

### General Education

The general education consists of 7 courses (total 14 credit hours). The general educations are listed in Table 5.2 General Education Component below. These fourteen credit hours satisfy all the requirements of the Hasanuddin University general education curriculum, which is design to accomplish the goals of Hasanuddin University as defined by its mission statements.

**Table 5-2 General Education Component**

Code	General Education	Credit	Course (%)	Lab (%)	Other (%)
011U0032	Civic Education				
009U0032	Bahasa Indonesia				
001U0032	Religious Studies				
012U0032	State Ideology: Pancasila				
010U0032	English				
008U0032	Science, Technology, and Art Insights				
007U0032	Maritime Social-Cultural Insights				

### Mathematics and Basic Science

The mathematics and basic science consist of 34 (thirty-four) credit hours. It divides to 18 (eighteen) credit hours of mathematics as shown in the Table 5.3 and 16 (sixteen) credit hours of basic science as shown in The Table 5-4.

**Table 5-3 Mathematics Component**

Code	General Education	Credit	Course (%)	Lab (%)	Other (%)
016U0033	Basic Mathematics 1				
017U0033	Basic Mathematics 2				
201D4113	Advanced Mathematics 1				
210D4123	Advanced Mathematics 1				
211D4122	Linear Systems				
302D4112	Probability and Statistics				
342D4122	Numerical Methods				

**Table 5-4 Basic Science Component**

<b>Code</b>	<b>General Education</b>	<b>Credit</b>	<b>Course (%)</b>	<b>Lab (%)</b>	<b>Other (%)</b>
020U0033	Basic Physics 1				
022U0033	Basic Physics 2				
206D4112	Advanced Physics				
104D4112	Advanced Chemistry				
205D4112	Electric Material Physics				
304D4112	Electromagnetics				
344D4122	Environmental Science				

### **Engineering Topics**

The engineering topics component divides to 69 (minimum) credit hours of lecture course as shown in the Table 5-5 and 28 credit hours of no lecture course as shown in the Table 5-6.

**Table 5-5 Lecture Courses**

<b>Code</b>	<b>General Education</b>	<b>Credit</b>	<b>Course (%)</b>	<b>Lab (%)</b>	<b>Other (%)</b>
101D4113	Electric Circuits 1				
102D4112	Logic Circuits				
103D4112	Engineering Drawing				
105D4123	Electric Circuits 2				
106D4122	Digital Systems				
107D4122	Computer Programming				
108D4121	Electric Circuits Laboratory				
109D4121	Digital Systems Laboratory				
202D4112	Basic Electric Power (Systems)				
203D4112	Basic Telecommunication (Systems)				
204D4112	Basic Electronics				
207D4111	Basic Electric Power Laboratory				
208D4111	Basic Telecommunication Laboratory				
209D4111	Basic Electronics Laboratory				
212D4122	Electric Machines				
213D4122	Basic Multimedia				
214D4122	Integrated Electronics				
215D4122	Microprocessor Systems and Interfaces				
214D4122	Basic Control Systems				
217D4122	Electric Installation and Laboratory				

218D4121	Integrated Electronics Laboratory				
219D4121	Microprocessor Systems and Interfaces Lab				
301D4112	Engineering Economics				
303D4112	Electric Measurements				
343D4122	Energy Conversions				
345D4122	Management and Entrepreneurships				
402D4112	Research Methods and Scientific Writing				
	Selected Elective Course (2 package)				

**Table 5-6 Non-Lecture Courses**

<b>Code</b>	<b>General Education</b>	<b>Credit</b>	<b>Course (%)</b>	<b>Lab (%)</b>	<b>Other (%)</b>
401D4112	Practical (On Job) Training				
491D4124	Student Community Service Programs				
	Laboratory 1				
	Laboratory 2				
403D4112	Final Project Proposal				
492D4122	Final Project Results				
493D4122	Final project Report				

## **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 resumes in Appendix B.

### **B. Faculty Workload**

Table 6-2 presents the Faculty Workload Summary and describes this information in terms of workload expectations or requirements.

### **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 counseling, university service activities, professional development, and interactions with industrial and professional practitioners including employers of students.

### **D. Professional Development**

The summary of professional development activities for each faculty member is presented Table 6.3.

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

Faculty members at the EESP have responsibility related to academic program in electrical engineering which is approved by faculty. Besides semester evaluation, every five years, faculty members evaluate / review the implementation of academic program as a whole including such as program goals, curriculum, student ratings, and equipment resources. The review is intended to know the implementation level of the academic program so it can be used as a reference in designing the next academic program. If there are big changes such as deleting or adding new course, then it is proposed to department and forwarded to faculty for final approval. Faculty members have authority for course modifications.

**Table 6-1. Faculty Qualifications**

**Electrical Engineering Study Program (EESP)**

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	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. FT = Full Time Faculty or PT = Part Time Faculty, at the institution.
4. The level of activity, high, medium or low, should reflect an average over the three years prior to the visit.



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

**Electrical Engineering Study Program**

No	Faculty Member (name)	PT or FT <sup>1</sup>	Classes Taught* (Course No.**/Credit Hrs.***) Term and Year****	Program Activity Distribution (%) <sup>3</sup>						% of Time Devoted to the to the Program5
				Teaching		Research or Scholarship		Other <sup>4</sup>		
			1st Sem.	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.	
1	Muhammad Tola	PT	1. SCIE6 (25/B), 1st Sem. 2. ENGR124 (136/B), 2nd Sem.	N/A	N/A	N/A	N/A	N/A	N/A	
2	Salama Manjang	FT	1. ENGR12 (24/B), 1st Sem. 2. ENGR27 (43/B), 1st Sem. 3. ENGR32 (44/B), 1st Sem. 4. ENGR88 (100/B), 2nd Sem. 5. ENGR84 (96/B), 2nd Sem.	45	48	24	19	32	33	
3	Ansar Suyuti	FT	1. ENGR25 (40/B), 1st Sem. 2. ENGR26 (42/B), 1st Sem. 3. ENGR129 (141/B), 1st Sem. 4. ENGR22 (37/B), 2nd Sem. 5. ENGR17 (32/B), 2nd Sem. 6. ENGR30 (42/B), 2nd Sem. 7. ENGR107 (119/B), 2nd Sem.	48	53	22	13	30	33	

4	Andani Achmad	FT	1. ENGR2 (6/B), 1st Sem. 2. ENGR11 (23/B), 1st Sem. 3. ENGR15 (28/A), 1st Sem. 4. SCIE8 (41/B), 1st Sem. 5. ENGR68 (80/B), 1st Sem. 6. ENGR60 (72/B), 1st Sem. 7. ENGR92 (104/B), 2nd Sem. 8. ENGR5 (15/B), 2nd Sem. 9. ENGR115 (127/B), 2nd Sem.	44	42	26	29	30	29	
5	Syafruddin Syarif	FT	1. ENGR56 (68/B), 1st Sem. 2. ENGR61 (73/B), 1st Sem. 3. ENGR52 (64/B), 1st Sem. 4. ENGR93 (105/B), 2nd Sem. 5. ENGR96 (108/B), 2nd Sem. 6. ENGR105 (117/B), 2nd Sem. 7. ENGR100 (112/B), 2nd Sem.	43	58	26	12	31	30	
6	Sri Mawar Said	FT	1. ENGR1 (5/C), 1st Sem. 2. ENGR13 (26/A), 1st Sem. 3. ENGR9 (23/B), 1st Sem. 4. ENGR42 (54/B), 1st Sem. 5. ENGR85 (97/B), 2nd Sem. 6. ENGR7 (17/A), 2nd Sem. 7. ENGR4 (14/C), 2nd Sem	46	66	23	5	31	29	
7	Zaenab Muslimin	FT	1. ENGR1 (5/C), 1st Sem. 2. SCIE8 (41/B), 1st Sem. 3. ENGR4 (14/C), 2nd Sem. 4. ENGR7 (17/A), 2nd Sem. 5. ENGR16 (31/B), 2nd Sem.	50	61	20	8	30	32	

8	Elyas Palantei	FT	1. ENGR27 (43/B), 1st Sem. 2. ENGR47 (59/B), 1st Sem. 3. ENGR45 (57/B), 1st Sem. 4. ENGR18 (33/B), 2nd Sem.	44	43	22	23	34	34	
9	Gassing	FT	1. SCIE3 (20/C), 1st Sem. 2. ENGR13 (26/A), 1st Sem. 3. ENGR9 (23/B), 1st Sem. 4. SCIE6 (25/B), 1st Sem. 5. ENGR17 (32/B), 2nd Sem. 6. ENGR22 (37/B), 2nd Sem. 7. SCIE9 (39/B), 2nd Sem.	46	48	20	23	35	29	
10	Zulfajri B. Hasanuddin	FT	1. SCIE8 (41/B), 1st Sem. 2. ENGR56 (68/B), 1st Sem.	51	60	24	9	24	31	
11	Rhiza S. Sadjad	FT	1. ENGR68 (80/B), 1st Sem. 2. ENGR21 (36/B), 2nd Sem. 3. ENGR115 (127/B), 2nd Sem.	57	60	10	9	32	31	
12	Zahir Zainuddin	FT	1. ENGR2 (6/B), 1st Sem. 2. ENGR3 (7/B), 1st Sem. 3. ENGR20 (35/B), 2nd Sem. 4. ENGR24 (39/A), 2nd Sem.	45	50	26	24	30	26	
13	Indar Chaerah Gunadin	FT	1. SCIE6 (25/B), 1st Sem. 2. ENGR13 (26/A), 1st Sem. 3. ENGR9 (23/B), 1st Sem. 4. ENGR26 (42/B), 1st Sem. 5. ENGR44 (56/B), 1st Sem. 6. ENGR21 (36/B), 2nd Sem. 7. ENGR29 (41/B), 2nd Sem.	41	42	29	25	29	33	

14	Yusran	FT	1. SCIE3 (12/C), 1st Sem. 2. SCIE6 (25/B), 1st Sem. 3. ENGR26 (42/B), 1st Sem. 4. ENGR27 (43/B), 1st Sem. 5. ENGR17 (32/B), 2nd Sem. 6. SCIE7 (30/C), 2nd Sem. 7. ENGR29 (41/B), 2nd Sem.	53	50	16	18	31	32	
15	Syafaruddin	FT	1. ENGR32 (44/B), 1st Sem. 2. ENGR40 (52/B), 1st Sem. 3. 1. SCIE9 (39/B), 2nd Sem. 4. ENGR28 (40/B), 2nd Sem.	45	47	24	23	31	31	
16	Yustinus Upa S	FT	N/A	0	0	100	100	0	0	
17	Dewiani	FT	1. ENGR10 (22/B), 1st Sem. 2. ENGR14 (27/A), 1st Sem. 3. SCIE5 (20/C), 1st Sem. 4. SCIE8 (41/B), 1st Sem. 5. ENGR60 (72/B), 1st Sem. 6. ENGR16 (31/B), 2nd Sem. 7. SCIE7 (30/C), 2nd Sem.	55	46	13	20	32	34	
18	Intan Sari Areni	FT	1. SCIE5 (20/C) 1st Sem. 2. ENGR10 (22B), 1st Sem. 3. ENGR14 (27/A), 1st Sem. 4. SCIE5-3 (20/C), 1st Sem. 5. ENGR61 (73/B), 1st Sem. 6. ENGR52 (64/B), 1st Sem. 7. ENGR96 (108/B), 2nd Sem. 8. ENGR16 (31/B), 2nd Sem.	47	46	22	23	31	32	
19	Indrabayu	FT	1. ENGR25 (40/B), 1st Sem. 2. ENGR18 (33/B), 2nd Sem.	46	48	20	21	35	31	
20	Tajuddin Waris	FT	N/A	0	0,0	100	100	0	0	

21	Ingrid Nurtanio	FT	1. SCIE53 (20/C), 1st Sem. 2. SCIE7 (30/C), 2nd Sem.	45	49	18	19	37	32	
22	Amil Ahmad Ilham	FT	1. ENGR5 (15/B), 2nd Sem. 2. ENGR107 (119/B), 2nd Sem.	43	46	21	22	35	32	
23	Wardi	FT	1. ENGR10 (22B), 1st Sem. 2. ENGR11 (23/B), 1st Sem. 3. ENGR14 (27/A), 1st Sem. 4. ENGR15 (28/A), 1st Sem. 5. ENGR18 (33/B), 2nd Sem.	50	52	19	21	31	27	
24	A. Ejah Umraeni Salam	FT	1. ENGR2 (6/B), 1st Sem. 2. ENGR11 (23/B), 1st Sem. 3. ENGR15 (28/A), 1st Sem. 4. ENGR21 (34/B), 2nd Sem. 5. ENGR16 (31/B), 2nd Sem. 6. ENGR19 (34/B), 2nd Sem.	44	51	23	17	32	32	
25	Muhammad Niswar	FT	1. ENGR2 (6/B), 1st Sem. 2. ENGR63 (75/B), 1st Sem. 3. ENGR5 (15/B), 2nd Sem. 4. ENGR6 (16/B), 2nd Sem.	47	42	21	26	32	32	
26	Yusri Syam Akil	FT	1. ENGR13 (26/A), 1st Sem. 2. ENGR9 (23/B), 1st Sem. 3. ENGR26 (42/B), 1st Sem. 4. ENGR26 (42/B), 1st Sem. 5. ENGR129 (141/B), 1st Sem. 6. ENGR28 (40/B), 2nd Sem.	45	45	23	23	32	32	
27	Christoforus Yohannes	FT	1. SCIE3 (20/C), 1st Sem. 2. ENGR79 (91/B), 1st Sem. 3. ENGR20 (35/B), 2nd Sem. 4. ENGR19 (34/B), 2nd Sem. 5. ENGR24 (39/A), 2nd Sem.	47	60	21	7	32	32	

28	Faizal Arya Samman	FT	1. ENGR11 (23/B), 1st Sem. 2. ENGR15 (28/A), 1st Sem. 3. ENGR81 (93/B), 1st Sem. 4. ENGR74 (86/B), 1st Sem. 5. ENGR23 (38/A), 2nd Sem. 6. ENGR5 (15/B), 2nd Sem. 7. ENGR8 (18/A) 2nd Sem. 8. ENGR21 (36/B), 2nd Sem. 9. ENGR19 (34/B), 2nd Sem.	41	47	29	21	30	33	
29	Adnan	FT	1. ENGR2 (6/B), 1st Sem. 2. ENGR6 (16/B), 2nd Sem.	48	49	21	19	30	32	
30	Ardiaty Arief	FT	1. ENGR39 (51/B), 1st Sem. 2. ENGR40 (52/B), 1st Sem. 3. ENGR44 (56/B), 1st Sem. 4. ENGR28 (40/B), 2nd Sem. 5. ENGR87 (99/B), 2nd Sem.	44	47	26	23	30	30	
31	Ikhlas Kitta	FT	1. ENGR13 (26/A), 1st Sem. 2. ENGR9 (23/B), 1st Sem. 3. ENGR12 (24/B), 1st Sem. 4. ENGR39 (51/B), 1st Sem. 5. ENGR22 (35/B), 2nd Sem. 6. ENGR84 (96/B), 2nd Sem.	40	62	33	8	27	31	
32	Fitriyanti Mayasari	N/A		0	0,0	100	100	0	0	
33	Hasniaty A.	FT	1. ENGR1 (5/C), 1st Sem. 2. SCIE3 (12/C), 1st Sem. 3. SCIE6 (25/B), 1st Sem. 4. ENGR7 (17/A), 2nd Sem. 5. ENGR4 (14/C), 2nd Sem. 6. SCIE7 (30/C), 2nd Sem.	61	58	0	4	39	38	

34	Merna Baharuddin	FT	1. ENGR10 (22B), 1st Sem. 2. ENGR14 (27/A), 1st Sem. 3. ENGR47 (59/B), 1st Sem. 4. ENGR45 (57/B), 1st Sem. 5. ENGR100 (112/B), 2nd Sem. 6. ENGR18 (33/B), 2nd Sem. 7. ENGR92 (104/B), 2nd Sem.	55	64	17	11	28	25	
35	Muhammad Bachtiar Nappu	FT	1. SCIE6 (25/B), 1st Sem. 2. ENGR26 (42/B), 1st Sem. 3. ENGR87 (99/B), 2nd Sem. 4. SCIE9 (39/B), 2nd Sem.	45	48	24	22	31	30	
36	Muh. Anshar	FT	1. ENGR3 (7/B), 1st Sem. 2. ENGR15 (28/A), 1st Sem. 3. ENGR11 (23/B), 1st Sem. 4. ENGR19 (34/B), 2nd Sem. 5. ENGR20 (35/B), 2nd Sem. 6. ENGR19 (34/B), 2nd Sem. 7. ENGR24 (39/A), 2nd Sem.	45	46	25	23	31	31	
37	Ida Rachmaniar Sahali	FT	1. ENGR58 (70/B), 1st Sem. 2. ENGR63 (75/B), 1st Sem. 3. ENGR79 (91/B), 1st Sem. 5. ENGR6 (16/B), 2nd Sem. 6. ENGR5 (15/B), 2nd Sem.	50	74	17	5	33	21	
38	Andini Dani Achmad	FT	1. ENGR2 (6/B), 1st Sem. 2. ENGR10 (22B), 1st Sem. 3. ENGR14 (27/A), 1st Sem. 4. SCIE5 (20/C), 1st Sem. 5. ENGR6 (16/B), 2nd Sem. 6. ENGR5 (15/B), 2nd Sem. 7. SCIE7 (30/C), 2nd Sem.	53	59	16	10	31	31	



39	Muhammad Arief	PT	1. ENGR39 (51/B), 1st Sem. 2. ENGR88 (100/B), 2nd Sem.	N/A	N/A	N/A	N/A	N/A	N/A	
40	Andreas Vogel	PT	1. ENGR81 (93/B), 1st Sem. 2. ENGR83 (95/B), 1st Sem. 4. ENGR19 (33/B), 2nd Sem. 5. ENGR23 (38/A), 2nd Sem. 6. ENGR8 (18/A), 2nd Sem.	N/A	N/A	N/A	N/A	N/A	N/A	
41	Sonny Taniadji	PT	1. ENGR42 (54/B), 1st Sem. 2. ENGR85 (97/B), 2nd Sem.	N/A	N/A	N/A	N/A	N/A	N/A	

1. FT = Full Time Faculty or PT = Part Time Faculty, at the institution

**Table 6-3 Summary of Professional Development Activities for Faculty Members.**

	Faculty Name	Conference		Workshop		Instructional Training	Other
		Presenter	Attendance	Presenter	Attendance		
	Ansar Suyuti	9	9	0	3	4	3
	Syafruddin Syarif	3	10	2	5	5	3
	Andani Achmad	6	7	0	5	3	3
	Salama Manjang	10	3	1	3	5	4
	Zaenab Muslimin	1	0	0	1	3	1
	Sri Mawar Said	1	1	0	1	2	1
	Elyas Palantei						
	Gassing	1	2	2	1	4	1
	Zulfajri Basri Hasanuddin	6	6	4	7	2	3
	Zahir Zainuddin	5	5	2	2	2	0
	Indar Chaerah Gunadin	5	3	3	2	4	3
	Yusran	4	2	1	2	2	1
	Rhiza Samsoe'oad Sadjad	0	0	0	0	1	2
	Dewiani	4	0	0	2	3	1
	Indrabayu						
	Intan Sari Areni	7	4	1	3	3	2

	Syafaruddin	26	3	0	1	2	3
	Amil Ahmad Ilham						
	Wardi	5	3	2	2	2	3
	Muhammad Niswar	6	0	1	0	2	5
	Faizal Arya Samman	13	2	2	0	2	3
	Inggrid Nurtanio						
	Ejah Umraeni Salam	5	10	0	3	2	1
	Ardiaty Arief	14	0	3	0	2	3
	Yusri Syam Akil	10	3	0	2	2	3
	Ikhlas Kitta	2	4	1	1	1	3
	Christoforus Yohannes						
	Muhammad Bachtiar Nappu	28	0	3	0	3	3
	Adnan						
	Hasniaty A.	5	4	0	6	2	0
	Elly Warny						
	Zulkifli Tahir	7	3	2	1	2	0
	Ida Rachmaniar Sahali	1	2	0	2	4	1
	Novy Nur R.A. Makobombang						
	Muhammad Anshar	9	0	2	0	0	0
	Merna Baharuddin	10	5	0	2	2	1
	Andini Dani Achmad	3	5	0	2	0	1

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

Not yet submitted for Readiness Review.

## CRITERION 8. INSTITUTIONAL SUPPORT

Not yet submitted for Readiness Review.

## **PROGRAM CRITERIA**

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

The EESP evaluates the aforementioned outcomes regularly using two types of student performance assessments, i.e. direct and indirect assessments. In the direct assessments, each student's is evaluated for certain performance criteria. These assessments may be part of the grading of student works in courses.

The indirect measurements are done through surveys. Upon completing their course, students are asked to take the surveys through the EESP and UNHAS webpages. Graduating students are also asked to take the senior exit survey which is a self-assessments for the student's outcomes.

## **APPENDIX A – COURSE SYLLABI**

### **FOR THIS REPORT, ONLY COURSE SYLLABI FOR THE DISCIPLINE-SPECIFIC COURSES OF THE PROGRAM ARE INCLUDED FOR READINESS REVIEW**

The information provided in each syllabus in this report is as follows.

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), and 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.
  - b. Explicit indication 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

### **FOR THIS REPORT, ONLY RESUMES FOR THE FACULTY MEMBERS WHO TEACH ENGINEERING COURSES LISTED IN TABLE 5-1 ARE INCLUDED**

The information provided in the faculty vitae in this report is as follows.

1. Name
2. Education – degree, discipline, institution, year
3. Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), timeline, full time or part time
4. Non-academic experience – company or entity, title, brief description of position, timeline, 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. Brief list of the most important publications and presentations from the past five years
10. Brief list of the most recent professional development activities

## APPENDIX C – EQUIPMENT

Not yet submitted for Readiness Review.

## APPENDIX D – INSTITUTIONAL SUMMARY

### 1. The Institution

- a. Universitas Hasanuddin  
Jl. Perintis Kemerdekaan Km. 10, Makassar 90245  
Sulawesi Selatan, Indonesia
- b. The name of Chief Executive Office of the Institution (Rector):  
Prof. Dr. Dwia Aries Tina Pulubuhu, MA.
- c. Name and title of the person submitting the Report:  
Prastawa Budi, PhD.
- d. Name the organizations by which the institution is now accredited, and the dates of the initial and most recent accreditation evaluations.  
Accredited with grade A by the Ministry of Research, Technology and Higher Education, the Republic of Indonesia.

### 2. Type of Control

The Universitas Hasanuddin is a state university with special status as autonomy university (*PTNBH – Perguruan Tinggi Negeri Berbadan Hukum*) given by the Ministry of Research, Technology and Higher Education, the Republic of Indonesia.

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 for readiness, 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 for readiness, 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 the Readiness Review.

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

**Electrical Engineering Studi Program (EESP)**

	Academic Year	Enrollment Year					UndergradTotal	GradTotal	Degrees Awarded			
		2014	2nd	3rd	4th	5th			Associates	Bachelors	Masters	Doctorates
Current Year	Enrolment	75	82	66	84	110						
	Graduates	113	79	62	107	72*						

\*Data provided until September 2018.

## Table D-2. Personnel

### Electrical Engineering Studi Program (EESP)

Year<sup>1</sup>: 2018/2019

	HEAD COUNT		FTE <sup>2</sup>
	FT	PT	
Administrative <sup>2</sup>	2	0	48 hour/week
Faculty (tenure-track) <sup>3</sup>	48	0	10 hours/week
Other Faculty (excluding student Assistants)	10	0	10 hours/week
Student Teaching Assistants <sup>4</sup>	25	0	6 hours/week
Technicians/Specialists	4	0	8 hours/week
Office/Clerical Employees	1	0	48 hours/week
Others <sup>5</sup> (cleaning service)	3	0	48 hours/week

## **Signature Attesting to Compliance**

Do **not** submit for Readiness Review.