TEMPLATE FOR A READINESS REVIEW REPORT

2019-2020 Readiness Review Cycle

Extracted from 2018-19 EAC Self-Study Questionnaire

ENGINEERING ACCREDITATION COMMISSION (EAC)

ABET
415 N. Charles St.
Baltimore, MD 21201
Phone: 410-347-7700
Email: ReadinessReview@abet.org
Website: http://www.abet.org

CRITERION 5. CURRICULUM

A. Program Curriculum

Electrical Engineering od Hasanuddin University (EEUH) Program Curriculum is designed to meet the program educational objectives. Furthermore, it is also designed to satisfy the general and Electrical Engineering EAC/ABET requirements and the curricular requirement of Hasanuddin University.

EEUH 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 EEUH program curriculum consists of three elements and with a total minimum of 145 credits hours as shown in the Figure 5.1.

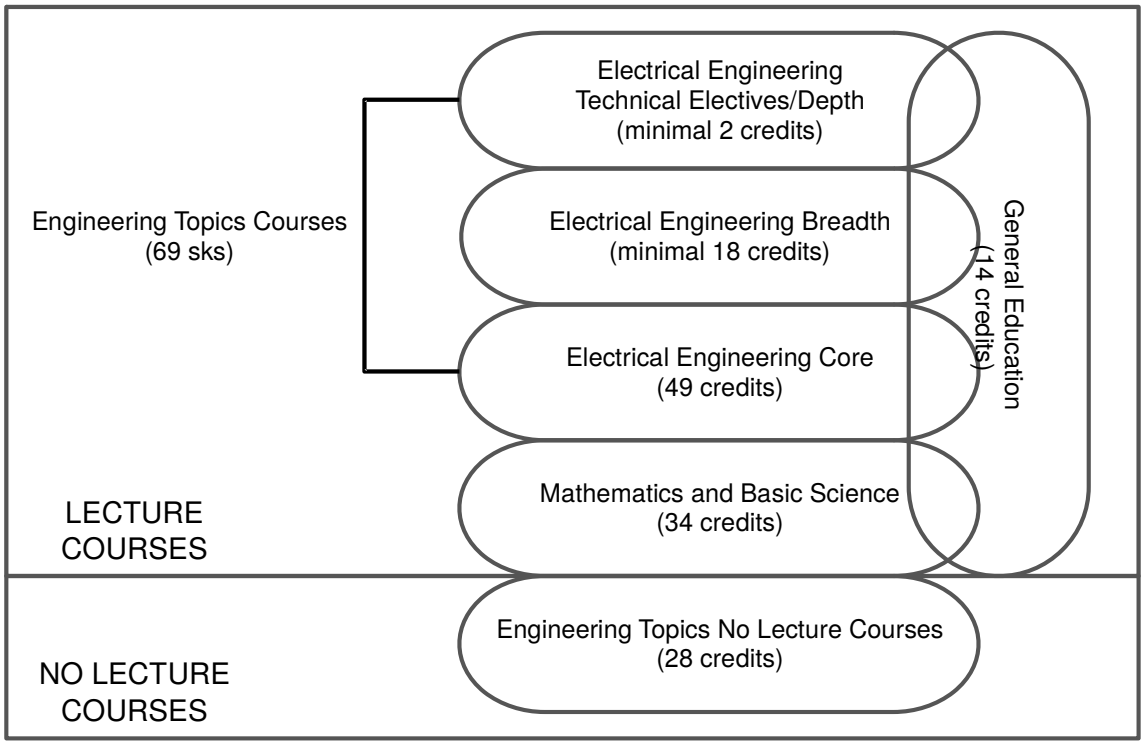

Figure 5.1

1. Attach a flowchart or worksheet that illustrates the prerequisite structure of the program's required courses.

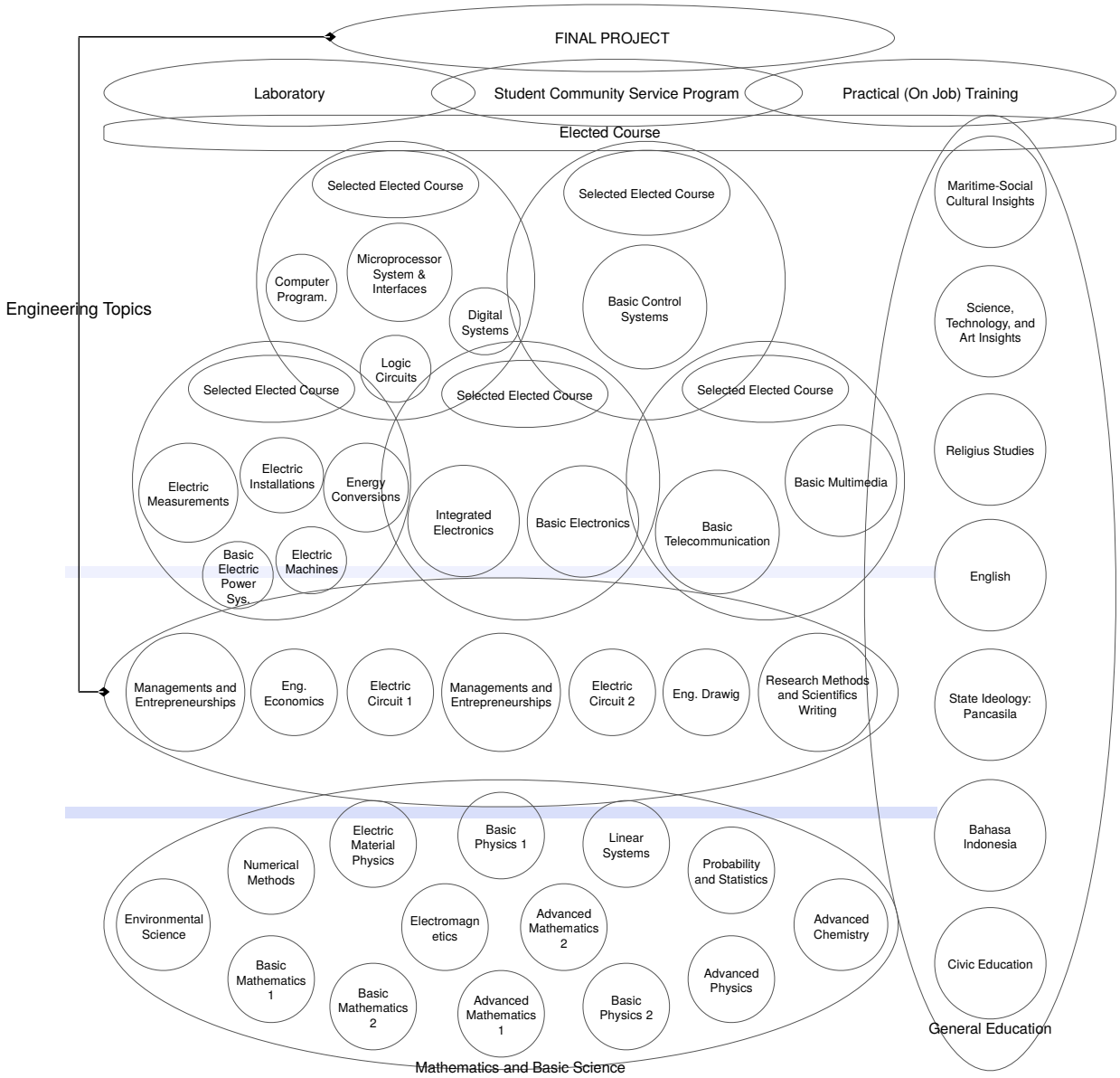

Figure 5.2

2. Describe how the program meets the requirements in terms of hours and depth of study for each subject area (Math and Basic Sciences, Engineering Topics, and General Education) specifically addressed by either the general criteria or the program criteria.
   a. 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				

b. 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

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

c. 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

Code	General Education Credit	Course (%)	Lab (%)	Other (%)	
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

Code	General Education	Credit	Course (%)	Lab (%)	Other (%)	
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					

3. Describe the major design experience that prepares students for engineering practice. Describe how this experience is based upon the knowledge and skills acquired in earlier coursework and incorporates appropriate engineering standards and multiple design constraints.
4. If the program allows cooperative education 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.

Table 5-1 Curriculum

Electrical Engineering

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 Enrollment 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	

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 Enrollment for The Last Two Terms the Course was Offered
		Math & Basic Sciences	Engineering Topics Check If Contains Significant Design ()	General Education	Other		
109D4121 Digital Systems Laboratory	R		1			I; 2	
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	

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 Enrollment for The Last Two Terms the Course was Offered**
		Math & Basic Sciences	**Engineering Topics Check If Contains Significant Design ()**	**General Education**	**Other**		
301D4112 Engineering Economics	R		2			III;5	
302D4112 Probability and Statistics	R	2				III;5	
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	

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 Enrollment for The Last Two Terms the Course was Offered
		Math & Basic Sciences	Engineering Topics Check If Contains Significant Design ()	General Education	Other		
403D4112 Final Project Proposal	R		2			IV;7	
Laboratory 1	R		8			IV;7	
491D4124 Student Community Service Programs	R		4			IV;8	
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						

1. **Required** courses are required of all students in the program, **elective** courses (often referred to as open or free electives) are optional for students, and **selected elective** courses are those for which students must take one or more courses from a specified group.
2. For courses that include multiple elements (lecture, laboratory, recitation, etc.), indicate the maximum enrollment in each element. For selected elective courses, indicate the maximum enrollment for each option.

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