PROGRAMME SPECIFICATION

Training major: **ELECTRICAL AND ELECTRONICS ENGINEERING TECHNOLOGY**

Training level: Bachelor

Major code: 7.51.03.01

Date revised: December 2019

1. Awarding institution: Lac Hong University

2. Name of the final award: Engineer in Electrical and Electronics Engineering Technology

3. Training form: Full time

4. Training time: 4 years

The normal period of study for a full-time bachelor's degree is four years and the maximum period is eight years.

5. Admission criteria:

High school graduate candidates have a total mark of Mathematics, Physics and Chemistry (group A); or Mathematics, Physics and English (group A1); or Mathematics, Literature and English (group D1) in an annual National High School Graduation Examination held in July by MOET higher than the entrance mark set by the LHU based on the student admission quota from MOET. The entrance mark will be published in August.

6. Program educational objectives (PEO):

The objectives of the Electrical and Electronics Engineering Technology (EEET) programme are that most graduates within 2 to 3 years will:

- PEO1: Acquire advanced degrees or engage in advanced study in the EEET field;
- PEO2: Manage the manufacturing process in the EEET field;
- PEO3: Analyze, design, operate, and develop the EEET systems following specific requirements by organizations and enterprises;
- PEO4: Start-up by themselves as practicing engineers in the EEET field.

7. Student outcomes (SO)

After successful completion of the EEET programme, graduates will be able to attain the following SOs:

- SO1: An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
- SO2: An ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
- SO3: An ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- SO4: An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
- SO5: An ability to function effectively as a member as well as a leader on technical teams.

8. Programme structures

The programme structure comprises of the following 8 semesters.

Code	Courses	Credit number				Hours	Note
		Total credit	Theory	Practice	Exercise		
	National defense education					165	
102014	General informatics	3	2	1	0	75	
102016	Advanced mathematics A1	3	2	0	1	60	
113003	Electric Circuits	2	1	0	1	45	
114008	Basic electrical practice	1	0	1	0	45	
116050	Descriptive Geometry & Technical Drawing	3	2	0	1	60	
114045	Introduction to EE	0	0	0	1	30	
113005	Electronics fundamentals	2	1	0	1	45	
102055	English 1	2	2	0	0	30	
Total 1st semester		**16**	**10**	**2**	**5**	**390**	
102018	Advanced mathematics A2	4	4	0	0	60	
102036	General physics	3	3	0	0	45	
102056	English 2	2	1	0	1	45	
113009	Digital systems	2	1	0	1	45	
115003	Technical programming	2	1	0	1	45	
114051	Electronics fundamentals	3	3	0	0	45	
115001	Sensors and measurement techniques	2	1	0	1	45	
114040	Application electronics circuit design practice	2	1	1	0	60	
114011	Electric & CAD techniques	2	1	0	1	45	
Total 2nd semester		**19**	**13**	**1**	**5**	**390**	

102002	Physical Education 1	1	0	0	1	30	
102057	English 3	2	1	0	1	45	
116009	Pneumatic and hydraulics technology	3	3	0	0	45	
115002	Sensors and measurement techniques practice	1	0	1	0	45	
114000	Power electronics	2	1	0	1	45	
115000	Printed circuit board design	2	1	0	1	45	
114031	Electric machinery	2	1	0	1	45	
114003	Machine winding practice	1	0	1	0	45	
Total 3rd semester		**14**	**7**	**2**	**5**	**345**	
102005	Basic principles of Marxist - Leninist	5	4	0	1	90	
102058	English 4	2	1	0	1	45	
102003	Physical Education 2	1	0	0	1	30	
114001	Power electronics practice	1	0	1	0	45	
115004	Microcontroller	3	2	0	1	60	
115029	PLC programming practice	1	0	1	0	45	
Elective courses (Select 1 in 2 courses)							
115026	PCL programming						
114032	Calculation and repairing of electrical machine	3	3	0	0	45	
Total 4th semester		**16**	**10**	**2**	**4**	**360**	
114033	English for EEE	2	1	0	1	45	
102004	Physical Education 3	1	0	0	1	30	
102006	Viet Nam general law	2	2	0	0	30	
115021	Microcontroller practice	2	1	1	0	60	
115034	PLC2 programming practice	1	0	1	0	45	
114025	Electrical equipment practice	2	1	1	0	60	
114007	Electricity supply project	2	1	0	1	75	
114034	Electrical equipment	3	3	0	0	45	
Elective courses (Select 1 in 2 courses)						0	
114012	Electrical and electronic project						
114035	IoT (Internet Of Things)	1	0	0	1	30	
Total 5th semester		**16**	**9**	**3**	**4**	**420**	
102033	Ho Chi Minh' theory	2	2	0	0	30	
102059	English 5	2	1	0	1	45	
114036	Industrial electrical equipment	2	1	0	1	45	
114022	Electrical system design	4	4	0	0	60	

Code	Course						
115032	Advanced PLC programming	3	3	0	0	45	
114041	Refrigeration technique	2	1	0	1	45	
115039	Image processing	3	3	0	0	45	
114062	Industrial electrical equipment	3	3	0	0	45	
116055	Internship 1	1	0	0	1	30	
Elective courses (Select 1 in 2 courses)						0	
116037	Industrial Robot	3	3	0	0	45	
115007	Advanced microcontroller						
	Total 6th semester	**22**	**18**	**0**	**4**	**390**	
102001	History of Vietnamese communist party	3	3	0	0	45	
102060	English 6	2	1	0	1	45	
114037	Renewable energy and management	2	1	1	0	60	
114021	Relay protection and automation	3	3	0	0	45	
115050	Advanced PLC programming practice	1	0	1	0	45	
114018	Technology project	1	0	0	1	30	
115046	Mechanical and electrical systems	2	1	0	1	45	
Elective courses (Select 1 in 2 courses)							
116049	Industrial maintenance	2	1	0	1	45	
114039	Industrial Robot practice						
	Total 7th semester	**16**	**10**	**2**	**4**	**360**	
116056	Internship 2	1	0	0	1	30	
66666	Graduation project	10	10	0	0	150	
	Total 8th semester	**11**	**10**	**0**	**1**	**180**	
	Total	**130**	**87**	**12**	**32**	**2835**	

9. Progression points

Students must obtain a mark of 5.0 (scale of 10.0) for all courses. In cases, the students fail to accumulate a GPA (Grade Point Average) of 3.0 for the first year, or 3.5 for the second year, or 4.0 for the third year or 4.5 from the fourth year or over allowable study time, they will be required to withdraw from the programme.

10. Special features

A five-day introduction in the first week of the first year; a four-week internship at companies in the third and fourth year; a robot project that orally defended for the final semester; three course's projects; many courses related to experiments and practices.

11. Job opportunities

Graduates can design, develop, test and supervise the manufacturing of electrical equipment such as electric motors, communication system, and power generation equipment. In addition, the graduates also design the electrical system and automation of the manufacturing.

12. Date of issue and revision

The programme was issued in August 2017 and revised in December 2019.