



International University (IU)

Viet Nam National University - Ho Chi Minh City (VNUHCM)

Quarter 6, Linh Trung Ward, Thu Duc City, Ho Chi Minh City, Vietnam

Phone : (+84) 28 3724 4270 - Ext: 4455

Fax : (+84) 28 3724 4271

Website: <https://www.hcmiu.edu.vn/>

DIPLOMA SUPPLEMENT

The purpose of the Diploma Supplement is to provide sufficient independent information to improve the international transparency and fair academic and professional recognition of qualifications. It is designed to provide a description of the nature, level, context, content, and status of the studies that were pursued and successfully completed by the individual student on the original qualification to which this supplement is appended.

1. Qualification

1.1 Name of qualification

Name of qualification (full, abbreviated; in original language):

Bachelor of Engineering in Control Engineering and Automation, B.Eng. Control Engineering and Automation; Kỹ sư Kỹ thuật Điều khiển và Tự động hóa (former name applied from cohort 2017 and backward: Automation and Control Engineering)

Title conferred (full, abbreviated; in original language):

Bachelor of Engineering in Control Engineering and Automation; Kỹ sư Kỹ thuật Điều khiển và Tự động hóa

1.2 Major: Control Engineering and Automation

1.3 Institution awarding the qualification:

International University, Vietnam National University, Ho Chi Minh City (IU-VNUHCM)

1.4 Faculty/Department offering the Degree Programme:

School of Electrical Engineering/ Department of Control Engineering and Automation

1.5 Language of instruction: English

2. Level of the qualification

2.1 Level of qualification: Bachelor of Engineering/ Engineer

2.2 Official length of programme: 4.5 years/ 152 credits/ 250.35 ECTS

2.3 Access requirement:

The admission of a candidate to IU-VNUHCM is based on his/her performance obtained from either one of the following 06 schemes:

(1) National High School Achievement Exam: based on the score of three subjects which students have registered for their expected University or college.

(2) Best Academic Records of students from designated high schools.

(3) Enrollment without entrance exam: the best students based on regulation from MOET on selection and enrollment, or the best students at the high schools.

(4) Results from the Scholastic Aptitude Exam held by VNUHCM.

(5) Admission for candidates with International Baccalaureate.

(6) Academic Records during the 10th, 11th and 12th grades of designated high schools (applied for twinning programs): based on the average score of three subjects during the 10th, 11th and 12th grades.



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3. Aim of education

The School of Electrical Engineering (SEE) of IU-VNUHCM developed its Program Educational Objectives (PEOs) to educate graduates with highly specialized knowledge and skills to:

- (1) Be a capable Engineer who may contribute in different areas of Electrical and Electronic industries,
- (2) Be engaged in lifelong learning and researching to adapt rapid changes in global economic and technologies,
- (3) Serve efficiently the community, society, and industry in an ethical and responsible manner,
- (4) Have professional working style and leadership.

4. Specialized orientation

- Process control & Automation
- Robotics
- Control Applications
- Vision & AI

5. Career opportunities

Students who graduate from Control Engineering and Automation (CEA) have great chances to:

- Design and management engineering of production lines in factories
- Software engineering includes designing and programming chip, embedded programming applications for mobile phones, car, and smart devices
- Sales engineering and field engineering specialized in installation, maintenance, and management
 - Instrument related to control and automation field, measurement, and smart control
 - Control and monitoring systems (PLCs and SCADA)
 - Industrial and autonomous robotics

6. Program structure and content

6.1 Mode of study: **full time**

6.2 Program outcomes:

The School of Electrical Engineering, International University, Vietnam National University HCMC uses the Student Outcomes from 1 to 7 based on ABET student outcomes (version 2021- 2022). The intended learning outcomes of CEA Program are detailed below:

- (1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- (2) 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
- (3) an ability to communicate effectively with a range of audiences
- (4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts



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- (5) 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
- (6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- (7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

6.3 Program structure:

The structure of the CEA undergraduate curriculum consists of four main modules:

1. General Education (31 credits)
2. Mathematics and Basic Sciences (30 credits)
3. Core Major (75 credits)
4. Elective courses (16 credits)

The CEA Program has 152 credits including 31 credits of General Education, 30 credits of Math & Basic Science and 91 credits of CEA Engineering Discipline (Core Major and Elective Courses). The four main modules of CEA program have been clearly defined as:

Module I consists of 4 groups. Group 1 (Political Education) and Group 2 (Extra courses) have 11 credits in General Education are extra-curriculum activities. Group 3 (English Proficiency) is mainly focused on academic listening and scientific writing skills. It runs to bridge the English gaps of Vietnamese students. Group 4 (Social Science & General Elective) provides students with the logical reasoning, how to start-up a business, ethics, and a broader education. 20 credits from Group 3 and Group 4 are used to enhance soft skills of our students.

Module II is solidly built on 30 credits of mathematics and basic science. The Department of Mathematics provides all mathematics topics ranging from functional analysis, series, and complex number to the advanced one such as linear algebra, differential equation, and probability. In addition, the Department of Physics is responsible for providing the antecedent to all the Physics and laboratories.

Module III and Module IV accounts for 91 credits. The core major courses provide the foundation of the CEA engineering. Students are trained with basic skills for the major such as programming, conducting experiments, forming and solving basic electrical and control problems.



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6.4 Distribution of academic curriculum

Modules	Group	Freshmen (credit)			Sophomore (credit)			Junior (credit)			Senior (credit)			Total			
		Compulsory	Elective	Total	Compulsory	Elective	Total	Compulsory	Elective	Total	Compulsory	Elective	Total	Compulsory	Elective	Total	%
I	Political Education	9	-	9	-	-	-	2	-	2	-	-	-	11	-	11	7
	Extra courses (non-counting)	0	-	0	-	-	-	-	-	-	-	-	-	0	-	0	
	English Proficiency	8	-	8	-	-	-	-	-	-	-	-	-	8	-	8	5
	Social Science & General Elective	3	-	3	-	-	-	3	3	6	3	-	3	9	3	12	8
II	Mathematics	10	-	10	11	-	11	-	-	-	-	-	-	21	-	21	14
	Basic Sciences	4	-	4	5	-	5	-	-	-	-	-	-	9	-	9	6
III	Core major Courses	6	-	6	23	-	23	34	-	34	12	-	12	75	-	75	49
IV	Elective Courses	-	-	-	-	-	-	4	4	-	12	12	-	16	16	11	
Total		40	-	40	39	-	39	42	4	46	15	12	27	133	19	152	100

6.5 Classification/Grading scheme:

Students' overall performance throughout the semester is formally monitored through course grades which are at least 50 (maximum score of 100) to pass each course

Grade Level	100 Point Grading Scale	Grading Scale in letters	4-Point Grading Scale
Excellent	90 ≤ GPA ≤ 100	A+	4.0
Very Good	80 ≤ GPA < 90	A	3.5
Good	70 ≤ GPA < 80	B+	3.0
Average Good	60 ≤ GPA < 70	B	2.5
Ordinary	50 ≤ GPA < 60	C	2

7. Additional information

7.1 English entrance tests

All academic lectures are taught using English, there is the requirement of English entrance test which has similar structure of TOEFL iBT) administered by IU-VNUHCM. Students must pass these tests to



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proceed to their main course of study. Otherwise, they are required to take intensive English courses before taking any subject in the main course. Any equivalent English qualification such as TOEFL iBT, TOEIC, IELTS... can be submitted to Office of Undergraduate Academic Affairs in advance to be omitted from the English entrance test.

7.2 Extracurricular activities:

- **Social activities:** many social activities such as Green summer, Blood donation, Full moon festival for orphans, donation for the poor people... are offered. Students can take part in any activity opened by the societies regardless of their membership status. These social activities can help them not only practice their soft skills in any circumstances, but also to polish their skills, and expand their networks.
- **Academic activities:** Students in EE school can take part in some academic clubs such as E-Tech club belonging to EE Youth Union. These academic clubs support students through the courses' projects and various school-wise academic competitions and help them utilize their accumulated knowledge.

7.3 Further information sources:

- Institution: <https://hcmiu.edu.vn/en/>
- School of Electrical Engineering: <https://see.hcmiu.edu.vn>
- Institutional organizational chart: <https://hcmiu.edu.vn/en/offices-and-centers/>

7.4 The person in charge of the programme

Dr. Vo Tan Phuoc

Vice Dean of Electrical Engineering, Head of Department of Control Engineering and Automation

Email: vtphuoc@hcmiu.edu.vn; Phone: +84 283 7244 270 (Ext: 3231)

8. Certification

The Diploma Supplement will be provided to individual student with his/her certificate degree and transcript.

Ho Chi Minh City, August 9, 2023

HEAD

Office of Undergraduate Academic Affairs

Huynh Kha Tu