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I. INTRODUCTION

WELCOME TO SCHOOL OF ELECTRICAL ENGINEERING (SEE)

1. University life – Student life

You are now a part of the SEE with the coolest students, who are in many ways look like you! You are all going to experience the most colorful part of your life!

Memory is always the most valuable thing in human life. The years studying at university are the memories that many people will usually look back and remember with joy. They are the years of hardship, enjoyment, friendship, challenges, sadness, etc. and it is all worth it!

University life is something very special. It is a time when you devote yourself to study.

Student life is fantastic! You can organize and enjoy party with your fellow students. At university, you can study alone and win the medal at your graduation ceremony. However, you are recommended to study in a team/group. Your collaboration in the teamwork is important. Teamwork brings forth several advantages. It provides you with the opportunity to develop ideas and look at the problem from different perspective with the help of your fellow students. You learn how to participate in professional discussions, and practice your communicating skill with your partners. With effective teamwork, your team can support you and they can also receive help in return. You can see the world with an analytical approach which helps you to recognize problems, and gain knowledge of theories and methods for solutions. Ultimately, after four years studying at SEE-IU you will have experienced numerous projects, conflicts, theories, and successes.

Always, teamwork requires a lot of work, engagement, and the acceptance of the critiques. Teamwork can be sometimes hard and monotonous. So, remember to have fun during working with your team, and you may find friends for life if you have a positive teamwork's atmosphere.

Save time for enjoyment and keep in mind that the joyful moments are just as important as the professional ones. These moments that will let you enjoy your study life, and these are the moments you will remember for a very long time.

So, university life – student life is the time that you build the knowledge, friendships and memories that would be important later in life.

ABOUT THE SEE

Founded in 2004, School of Electrical Engineering (SEE) was among the most distinguished and the earliest members of International University – Vietnam National University Ho Chi Minh city (IU - VNU HCMC). SEE is dedicated to providing strong engineering education in the fields of Electronics & Telecommunications Engineering as well as Control Engineering & Automation.

ET program received the assessment and accreditation of quality by AUN-DAAD in 2013, as well as accreditation by ABET (Accreditation Board for Engineering and Technology, United States) in 2019.

This success has firmed up our motivation and encourages us to pursue a higher level in research and teaching activities.

2. Vision of SEE

Advanced teaching methodology:

- ✓ Provide students with fundamental and advanced theories and link them to engineering application.
- ✓ Interact with students both inside and outside classrooms.
- ✓ Support students with blended teaching.
- ✓ Inspire students to engage in research and solve technical problems.

State-of-The-Art research:

- ✓ Build the modern laboratories involved in research areas of the school and foster students to join.
- ✓ Prepare the academic curriculum involved in research.

Innovation:

- ✓ Guide students to comprehend the social, economic, and technical contexts.
- ✓ Encourage students to recognize current and future problems.
- ✓ Teach students creative and critical thinking.
- ✓ Foster students to collaborate with others in solving integrated problems.

3. Missions of SEE

Being consistent with the mission of the IU – VNU HCMC, SEE aims to:

- ✓ Help students take the best advantage of their educational opportunities and prepare them with the necessary knowledge to be able to adapt to rapid changes in technology.
- ✓ Conduct high-quality research that benefits students, scholar and communities.
- ✓ Transfer technology to solve community problems and create strong collaboration with industry.

About the EE

The field of electrical engineering is an engineering discipline which creates technologies for the human's purposes. The field is concerned with the **study, design and application of equipment, devices and systems** which use electricity, electronics, and electromagnetism, actually. Electrical engineering has played a great role in the applications in such fields as transportation, communication, aviation and aerospace, etc. Now, it is continuing to make essential contributions to society, creating unlimited innovations, such as robots, AI, IoT, smart home/city, and self-driving vehicles. Therefore, it is extremely important to gain a solid understanding of the fundamentals, in order to sustain interest when encountering complex theories and calculations later.

4. Student Outcomes of SEE

Graduates who have successfully completed the SEE-IU's program are prepared to enter a global workforce and possess these abilities (based on the ABET standard):

- 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.
- 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.

Career Opportunities

Students who graduate from SEE have great chances to:

- Work in domestic or foreign companies related to IC design, consumer electronics, information technology, and automation
- Develop start-up companies and introduce new electrical and communication products to the market
- Work in domestic or foreign communication/network corporations, mobile network, air freight companies
- Develop start-up companies and introduce new electrical and communication products to the market.

II. ACADEMIC PROGRAMS

SEE offers graduate program: the full-time master program at IU, and the bridging programs (called BS-MS programs). Details of these curricula are provided in the following sections. The curricula includes graduate program (Master of Electrical Engineering) and the combined BS-MS program are also offered.

SEE offers two Master programs (Coursework program and Research program). Students must spend about 2 years and choose to follow either of the two programs: coursework program or research program, including various specializations:

- Communications
- RF and Antenna
- Microelectronics
- Signal Processing
- Automation /Control
- Sensor and Devices
- Embedded Systems
- Artificial Intelligence Applications

1. Master Program

1.1. The Full Time Program

The full time program (study 2 years at IU, code: 8520203) consists of two specific options: (1) *The Research 2 program* and (2) *The Coursework 2 program*. Both options lead to the “**Master of Electronics Engineering**” degree (in Vietnamese: **Thạc sĩ Kỹ thuật Điện tử**). The degree is issued by IU – VNU, HCMC.

Every undergraduate IU program is the credit-based system which is conducted on a semester basis. SEE provides a solid foundation in core subjects, combined with General and EE elective courses. Students are required to complete at least 60 credits (including thesis) with English proficient certificate to accomplish the program.

The Master of Electronics Engineering (MEE) curriculum consists of four main blocks:

1. General Education (1 course - 3 credits)
2. Major requirement (2 courses- 6 credits)
3. Elective courses (7 to 11 courses- 21 to 33 credits)
4. Internship and thesis (2 courses – 18 to 30 credits)

1.2. Curriculum: Master of Electronics Engineering

The curriculum map offers a quick summary of the main features of the curriculum

Note: Choices should be made with planning, and consultation with student's advisor.

THE RESEARCH 2 PROGRAM

No.	Course ID	Course Names	Number of credits			Semester
			Total	Theory	Practice Lab	
I	GENERAL COURSES		3	3	0	
1	PE505	Phylosophy (Triết học)	3	3	0	1
II	FUNDAMENTAL COURSES		6	6	0	
1	EE500	Research Methodology (Phương pháp NCKH)	2	2	0	1
2	EE505	Linear System and Random Process (Hệ thống tuyến tính và quá trình ngẫu nhiên)	4	4	0	
III	ELECTIVE COURSES (CHOOSE 7 COURSES)		21			
1	EE565	Digital and Embedded System Design (Kỹ thuật số và thiết kế hệ thống nhúng)	3	2	1	1
2	EE569	Digital Processing of Speech and Image Signal (Xử lý số tín hiệu tiếng nói và ảnh)	3	2	1	
3	EE580	Instrumentation and Sensors (Thiết bị và cảm biến)	3	2	1	2
4	EE534	Advanced Machine Learning and Artificial Intelligence (Máy học và Trí tuệ nhân tạo nâng cao)	3	3	0	
5	EE535	Internet Vạn vật nâng cao (Advanced Internet of Things)	3	2	1	
6	EE536	Advanced Robotics (Robot nâng cao)	3	3	0	
7	EE511	Wireless Communications (Thông tin vô tuyến)	3	3	0	3
8	EE513	Data Communications and Networking (Thông tin dữ liệu và mạng)	3	3	0	
9	EE561	Advanced Digital Signal Processing (Xử lý tín hiệu số nâng cao)	3	3	0	
10	EE528	Advanced Telecommunications Networks (Mạng viễn thông nâng cao)	3	3	0	

11	EE530	Computational for Electromagnetics (Mô phỏng và tính toán trường điện từ)	3	3	0	
12	EE531	Advanced Antenna Design (Thiết kế anten nâng cao)	3	2	1	
13	EE532	Microwave Circuits and Measurement (Mạch siêu cao tần và đo lường)	3	2	1	
14	EE533	Monolithic Microwave Integrated Circuit (Thiết kế vi mạch cao tần đơn khối)	3	3	0	
15	EE540	Semiconductor Device Physics (Vật lý linh kiện bán dẫn)	3	3	0	
16	EE541	VLSI Design (Thiết kế mạch tích hợp mật độ cao)	3	3	0	3
17	EE582	Engineering Control Systems (Hệ thống điều khiển kỹ thuật)	3	2	1	
18	EE591	Neural Network and Fuzzy Control (Mạng Nơ ron và điều khiển mờ)	3	3	0	
19	EE592	Optimal Control (Điều khiển tối ưu)	3	2	1	
20	EE594	Fault Diagnostic and System Identification (Chẩn đoán lỗi và nhận dạng hệ thống)	3	3	0	
21	EE595	Applied Control Engineering (Kỹ thuật điều khiển ứng dụng)	3	2	1	
22	EE596	Advanced Theory of Automatic Control (Lý thuyết điều khiển tự động nâng cao)	3	3	0	
23	EE597	Advanced PC Based Control and SCADA System (Hệ thống điều khiển giám sát và thu thập dữ liệu kết nối máy tính nâng cao)	3	3	0	
IV	RESEARCH PROJECT		15			
1	EE604	Research Project (Chuyên đề kỹ thuật điện tử và ứng dụng)	15			3
V	THESIS		15			
1	EE605	Thesis (Luận văn)	15			4
TOTAL			60			

THE COURSEWORK 2 PROGRAM

No.	Course ID	Course Names	Number of credits			Semeste
			Total	Theory	Practice Lab	
I	GENERAL COURSES		3	3	0	
1	PE505	Phylosophy (Triết học)	3	3	1	1
II	FUNDAMENTAL COURSES		6	6	0	
1	EE500	Research Methodology (Phương pháp NCKH)	2	2	1	1
2	EE505	Linear System and Random Process (Hệ thống tuyến tính và quá trình ngẫu nhiên)	4	4	2	
III	ELECTIVE COURSES (CHOOSE 11 COURSES)		33			
1	EE565	Digital and Embedded System Design (Kỹ thuật số và thiết kế hệ thống nhúng)	3	2	1	1
2	EE569	Digital Processing of Speech and Image Signal (Xử lý số tín hiệu tiếng nói và ảnh)	3	2	1	1
3	EE580	Instrumentation and Sensors (Thiết bị và cảm biến)	3	2	1	2
4	EE534	Advanced Machine Learning and Artificial Intelligence (Máy học và Trí tuệ nhân tạo nâng cao)	3	2	1	
5	EE535	Advanced Internet of Things (Internet Vạn vật nâng cao)	3	2	1	
6	EE536	Advanced Robotics (Robot nâng cao)	3	2	1	
7	EE511	Wireless Communications (Thông tin vô tuyến)	3	3	0	3
8	EE513	Data Communications and Networking (Thông tin dữ liệu và mạng)	3	3	0	
9	EE561	Advanced Digital Signal Processing (Xử lý tín hiệu số nâng cao)	3	3	0	
10	EE528	Advanced Telecommunications Networks (Mạng viễn thông nâng cao)	3	3	0	
11	EE530	Computational for Electromagnetics (Mô phỏng và tính toán trường điện từ)	3	3	0	
12	EE531	Advanced Antenna Design (Thiết kế anten nâng cao)	3	2	1	

13	EE532	Microwave Circuits and Measurement (Mạch siêu cao tần và đo lường)	3	2	1		
14	EE533	Monolithic Microwave Integrated Circuit (Thiết kế Vi mạch cao tần đơn khối)	3	3	0		
15	EE540	Semiconductor Device Physics (Vật lý linh kiện bán dẫn)	3	3	0		
16	EE541	VLSI Design (Thiết kế mạch tích hợp mật độ cao)	3	3	0		
17	EE582	Engineering Control Systems (Hệ thống điều khiển kỹ thuật)	3	2	1		
18	EE591	Neural Network and Fuzzy Control (Mạng Nơ ron và điều khiển mờ)	3	3	0		
19	EE592	Optimal Control (Điều khiển tối ưu)	3	2	1		
20	EE594	Fault Diagnostic and System Identification (Chẩn đoán lỗi và nhận dạng hệ thống)	3	3	0		3
21	EE595	Applied Control Engineering (Kỹ thuật điều khiển ứng dụng)	3	2	1		
22	EE596	Advanced Theory of Automatic Control (Lý thuyết điều khiển tự động nâng cao)	3	3	0		
23	EE597	Advanced PC Based Control and SCADA System (Hệ thống điều khiển giám sát và thu thập dữ liệu kết nối máy tính nâng cao)	3	3	0		
IV	INTERNSHIP		9				
1	EE611	Internship (Thực tập)	9			3	
V	GRADUATION PROJECT		9				
1	EE612	Graduation Project (Đề án tốt nghiệp)	9			4	
TOTAL			60				

2. Bridging Programs (BS-MS Programs)

A special **bridging** program introduced by SEE-IU offers **engineering students** the opportunity to obtain the Master of electronics engineering within **12 to 18 months** after **the completion of undergraduate program**. Students who interested in the bridging program should review the BS-MS program. An application to the program should be filled in the Fall/Spring term of the junior year.

2.1. The Full Time Program

The program is designed to help students register the master courses that used both undergraduate and graduate program at junior and senior years. The SEE consists of two undergraduate programs (**Electronics and Telecommunications Engineering**, and **Control Engineering and Automation**, see the Handbook of Undergraduate Programs) that are eligible to be bridged to the “**Master of Electronics Engineering**” (Section II). *The students in each undergraduate program can take courses at master level and these courses (called bridging courses) are counted to both undergraduate and graduate programs of the bridging students.*

The students enrolled in the BS-MS program are following the curricula of undergraduate and master programs consecutively. When students finish undergraduate program, the engineering degree is delivered and when students finish master program, the master degree is qualified.

The benefits of students in BS-MS programs:

- **Reduce the study duration by prior-taking master courses**
- **Follow research early with professors and doctors for higher education**
- **Minimize the tuition fee thanks to the bridging courses and scholarships**

2.2. Curriculum and Bridging Courses

The students in the **Electronics and Telecommunications Engineering** undergraduate program can register the bridging courses as below:

No.	Undgraduate Program			Master Program		
	Course ID	Course Name	No. Credits	Course ID	Course Name	No. Credits
1	EE070IU	Wireless Communications Systems (Thông tin vô tuyến)	3	EE511	Wireless Communications (Thông tin vô tuyến)	3
2	EE072IU	Computer and Communication Networks (Mạng máy tính và truyền thông)	3	EE513	Data Communications and Networking (Thông tin dữ liệu và mạng)	3
3	EE092IU	Digital Signal Processing (Xử lý tín hiệu số)	3	EE561	Advanced Digital Signal Processing (Xử lý tín hiệu số nâng cao)	3
4	EE104IU	Embedded Real-time Systems (Hệ thống nhúng thời gian thực)	3	EE565	Digital and Embedded System Design (Kỹ thuật số và thiết kế hệ thống nhúng)	3
5	EE103IU	Image Processing and Computer Vision (Xử lý ảnh và thị giác máy tính)	3	EE569	Digital Processing of Speech and Image Signal (Xử lý số tín hiệu tiếng nói và ảnh)	3
6	EE105IU	Antenna and Microwave Engineering (Ăng-ten và kỹ thuật Viba)	3	EE531	Advanced Antenna Design (Thiết kế anten nâng cao)	3
7	EE125IU	RF Circuit Design (Thiết kế mạch siêu cao tần)	3	EE532	Microwave Circuits and Measurement (Mạch siêu cao tần và đo lường)	3
8	EE066IU	VLSI Design (Thiết kế VLSI)	3	EE541	VLSI Design (Thiết kế mạch tích hợp mật độ cao)	3

9	EEAC008IU	Sensors and Instrumentation (Cảm biến và thiết bị)	3	EE580	Instrumentation and Sensors (Thiết bị và cảm biến)	3
10	EE127IU	Machine learning and Artificial Intelligence (Máy học và trí tuệ nhân tạo)	3	EE534	Advanced Machine Learning and Artificial Intelligence (Máy học và trí tuệ nhân tạo nâng cao)	3
11	EE128IU	Internet of Things (IoT) (Internet Vạn vật)	3	EE535	Advanced Internet of Things (IoT) (Internet Vạn vật nâng cao)	3
12	EE119IU	Telecommunication Networks (Mạng viễn thông)	3	EE528	Advanced Telecommunications Networks (Mạng viễn thông nâng cao)	3
13	EE075IU	Theory of Automatic Control (Lý thuyết điều khiển tự động)	3	EE596	Advanced Theory of Automatic Control (Lý thuyết điều khiển tự động nâng cao)	3
Total			39		Total	39

The students in the **Control Engineering and Automation** undergraduate program can register the bridging courses as below:

No.	Undegraduate Program			Master Program		
	Course ID	Course Name	No. Credits	Course ID	Course Name	No. Credits
1	EEAC004IU	PC Based Control and SCADA System (Hệ thống SCADA và điều khiển dựa vào máy tính)	3	EE597	Advanced PC Based Control and SCADA System (Hệ thống điều khiển giám sát và thu thập dữ liệu kết nối máy tính nâng cao)	3
2	EEAC014IU	Neural Network and Fuzzy Logics (Mạng nơ ron và logic mờ)	3	EE591	Neural Network and Fuzzy Control (Mạng nơ ron và điều khiển mờ)	3
3	EE092IU	Digital Signal Processing (Xử lý tín hiệu số)	3	EE561	Advanced Digital Signal Processing (Xử lý tín hiệu số nâng cao)	3
4	EE104IU	Embedded Real-time Systems (Hệ thống nhúng thời gian thực)	3	EE565	Digital and Embedded System Design (Kỹ thuật số và thiết kế hệ thống nhúng)	3
5	EE103IU	Image Processing and Computer Vision (Xử lý ảnh và thị giác máy tính)	3	EE569	Digital Processing of Speech and Image Signal (Xử lý số tín hiệu tiếng nói và ảnh)	3
6	EEAC018IU	Advanced Control Engineering (Điều khiển hệ thống nâng cao)	3	EE592	Optimal Control (Điều khiển tối ưu)	3
7	EEAC019IU	System Diagnostic (Chẩn đoán và phát hiện lỗi hệ thống)	3	EE594	Fault Diagnostic and System Identification (Chẩn đoán lỗi và nhận dạng hệ thống)	3
8	EE133IU	Emerging Engineering Technologies (Công nghệ mới)	3	EE595	Applied Control Engineering (Kỹ thuật điều khiển ứng dụng)	3

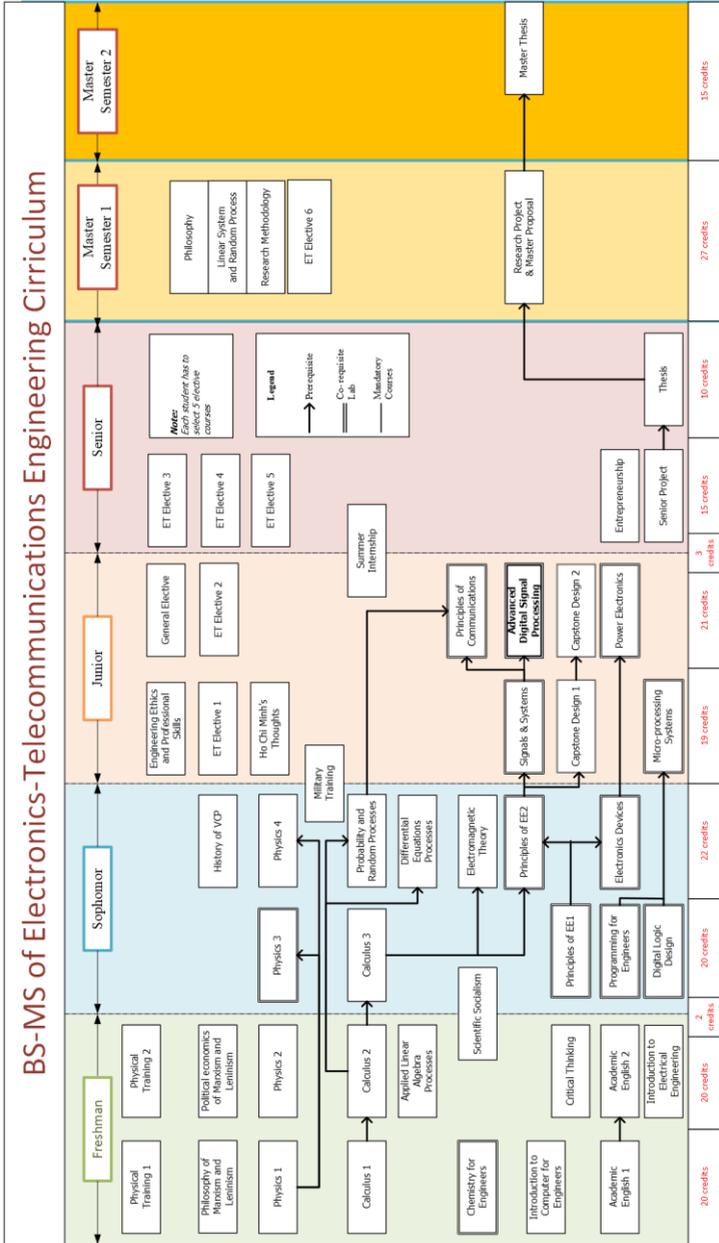
9	EEAC008 IU	Sensors and Instrumentation (Cảm biến và thiết bị đo)	3	EE580	Instrumentation and Sensors (Thiết bị và cảm biến)	3
10	EE127IU	Machine Learning and Artificial Intelligence (Máy học và trí tuệ nhân tạo)	3	EE534	Advanced Machine Learning and Artificial Intelligence (Máy học và trí tuệ nhân tạo nâng cao)	3
11	EEAC015 IU	Robotics (Robot)	3	EE536	Advanced Robotics (Robot nâng cao)	3
12	EEAC017 IU	Digital Control (Điều khiển số)	3	EE596	Advanced Theory of Automatic Control (Lý thuyết điều khiển tự động nâng cao)	3
Total			36	Total		36

2.3. Curriculum Map: BS-MS program

The curriculum map of bridging program is described in semester-by-semester plan of course distribution to ensure the opportunity of the bridging students who can fully accomplish the bachelor degree in first 4 years and the master degree in the following year (4+1). The courses are well-organized to fulfill the knowledge and regulations of the SEE and the IU. The study of the bridging courses is taken place in the evening at the building in the downtown area (at **234 Pasteur, District 3, Ho Chi Minh City**).

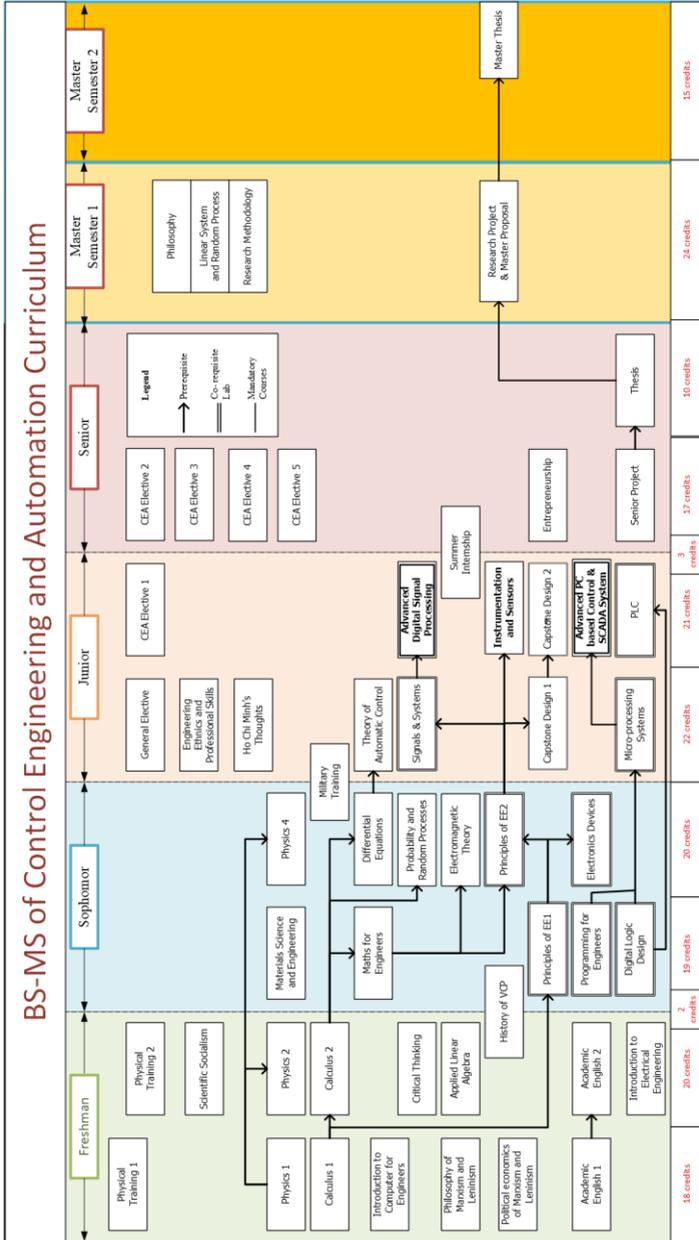
The curriculum maps include the undergraduate programs (ET and CEA) bridged to Master of Electronics Engineering (MEE) in the fifth year.

BS-MS of Electronics-Telecommunications Engineering Curriculum



**Bachelor of Electronics and Telecommunications Engineering
Master of Electronics Engineering**

Freshman Year (1 st year)					
Semester 1			Semester 2		
MA001IU	Calculus 1	4	MA003IU	Calculus 2	4
PH013IU	Physics 1 (Mechanics)	2	MA027IU	Applied Linear Algebra	2
CH011IU	Chemistry for Engineers	3	PH014IU	Physics 2 (Thermodynamics)	2
CH012IU	Chemistry Laboratory	1	PE---	Laws	3
PE015IU	Philosophy of Marxism and Leninism	3	PE016IU	Political economics of Marxism and Leninism	2
EN007IU	Writing AE1	2	EN011IU	Writing AE 2	2
EN008IU	Listening AE1	2	EN012IU	Speaking AE2	2
EE050IU	Intro to Computer for Engineers	3	EE049IU	Introduction to EE	3
PT001IU	Physical Training 1	0	PT002IU	Physical Training 2	0
<i>Total Credits</i>			20	<i>Total Credits</i>	
<i>Summer Semester</i>					
			PE017IU	Scientific socialism	2
					<i>Total Credits</i>
Sophomore Year (2nd year)					
Semester 1			Semester 2		
MA023IU	Calculus 3	4	MA024IU	Differential Equations	4
PH015IU	Physics 3 (Electricity & Magnetism)	3	MA026IU	Probability & Random Process	3
PH016IU	Physics 3 Lab	1	PH012IU	Physics 4 (Optics & Atomics)	2
EE051IU	Principles of EE 1	3	EE010IU	Electromagnetic Theory	3
EE052IU	Principles of EE 1 Lab	1	EE055IU	Principles of EE 2	3
EE053IU	Digital Logic Design	3	EE056IU	Principles of EE 2 Lab	1
EE054IU	Digital Logic Design Lab	1	EE090IU	Electronics Devices	3
EE057IU	Programming for Engineers	3	EE091IU	Electronics Devices Lab	1
EE058IU	Programming for Engineers Lab	1	PE018IU	History of Vietnamese Communist Party	2
<i>Total Credits</i>			20	<i>Total Credits</i>	
<i>Summer Semester</i>					
	Military Training				
Junior Year (3rd year)					
Semester 1			Semester 2		
EE088IU	Signals & Systems	3	EE092IU	Digital Signal Processing	3
EE089IU	Signals & Systems Lab	1	EE093IU	Digital Signal Processing Lab	1
EE083IU	Micro-processing Systems	3	EE068IU	Principles of Com. Systems	3
EE084IU	Micro-processing Systems Lab	1	EE115IU	Principles of Com. Systems Lab	1
EE130IU	Capstone Design 1	2	EE131IU	Capstone Design 2	2
EE---IU	ET Elective Course 01	4	EE---IU	ET Elective Course 02	4
EE---	Engineering Ethics, Professional Skills and Critical Thinking	3	EE079IU	Power Electronics	3
PE019IU	Ho Chi Minh's Thoughts	2	EEAC003IU	Power Electronics Lab	1
				General Elective	3
<i>Total Credits</i>			19	<i>Total Credits</i>	
<i>Summer Semester</i>					
EE112IU	Summer Internship	3			
Senior Year (4th year)					
Semester 1			Semester 2		
EE107IU	Senior Project	2	EE097IU	Thesis	10
EE---IU	ET Elective Course 03	4			
EE---IU	ET Elective Course 04	3			
EE---IU	ET Elective Course 05	3			
EE114IU	Entrepreneurship	3			
<i>Total Credits</i>			15	<i>Total Credits</i>	
Master Year					
Semester 1			Semester 2		
PE505	Philosophy	3	EE605	Thesis	15
EE500	Research Methodology	2			
EE505	Linear System and Random Process	4			
EE---IU	ET Elective Course 06	3			
EE604	Research Project	15			
	Research Proposal				
<i>Total Credits</i>			27	<i>Total Credits</i>	
Total: 194 credits					



**Bachelor of Control Engineering and Automation
Master of Electronics Engineering**

Freshman Year (1 st year)					
Semester 1			Semester 2		
MA001IU	Calculus 1	4	MA003IU	Calculus 2	4
PH013IU	Physics 1 (Mechanics)	2	PH014IU	Physics 2 (Thermodynamics)	2
PE015IU	Philosophy of Marxism and Leninism	3	PE017IU	Scientific socialism	2
EN007IU	Writing AE1	2	EN011IU	Writing AE 2	2
EN008IU	Listening AE1	2	EN012IU	Speaking AE2	2
PT001IU	Physical Training 1	0	MA027IU	Applied Linear Algebra	2
PE016IU	Political economics of Marxism and Leninism	2	EE049IU	Introduction to EE	3
EE050IU	Intro to Computer for Engineers	3	PE---	Laws	3
			PT002IU	Physical Training 2	0
Total Credits			18		
<i>Summer Semester</i>					
PE018IU	History of Vietnamese Communist Party	2			
Total Credits			2		
Sophomore Year (2 nd year)					
Semester 1			Semester 2		
EEAC001IU	Materials Science & Engineering	3	MA026IU	Probability & Random Process	3
EEAC021IU	Mathematics for Engineers	4	MA024IU	Differential Equations	4
EE051IU	Principles of EE 1	3	PH012IU	Physics 4 (Optics & Atomics)	2
EE052IU	Principles of EE 1 Lab	1	EE010IU	Electromagnetic Theory	3
EE053IU	Digital Logic Design	3	EE055IU	Principles of EE 2	3
EE054IU	Digital Logic Design Lab	1	EE056IU	Principles of EE 2 Lab	1
EE057IU	Programming for Engineers	3	EE090IU	Electronics Devices	3
EE058IU	Programming for Engineers Lab	1	EE091IU	Electronics Devices Lab	1
Total Credits			19		
<i>Summer Semester</i>					
	Military Training				
Junior Year (3 rd year)					
Semester 1			Semester 2		
EE088IU	Signals & Systems	3	EE092IU	Digital Signal Processing	3
EE089IU	Signals & Systems Lab	1	EE093IU	Digital Signal Processing Lab	1
EE083IU	Micro-processing Systems	3	EEAC004IU	PC Based Control and SCADA System	3
EE084IU	Micro-processing Systems Lab	1	EEAC005IU	PC Based Control and SCADA System Lab	1
EEAC020IU	Theory of Automatic Control	4	EEAC006IU	Programmable Logic Control	3
EE130IU	Capstone Design 1	2	EEAC007IU	Programmable Logic Control Lab	1
	General Elective	3	EEAC008IU	Sensors and Instrumentation	3
EE---	Engineering Ethics, Professional Skills and Critical Thinking	3	EE131IU	Capstone Design 2	2
PE019IU	Ho Chi Minh's Thoughts	2	EEAC--IU	CEA Elective Course 01	4
Total Credits			22		
<i>Summer Semester</i>					
EE112IU	Summer Internship	3			
Senior Year (4 th year)					
Semester 1			Semester 2		
EE107IU	Senior Project	2	EE097IU	Thesis	10
EEAC--IU	CEA Elective Course 02	3			
EEAC--IU	CEA Elective Course 03	3			
EEAC--IU	CEA Elective Course 04	3			
EEAC--IU	CEA Elective Course 05	3			
EE114IU	Entrepreneurship	3			
Total Credits			17		
Master Year					
Semester 1			Semester 2		
PE505	Philosophy	3	EE605	Thesis	15
EE500	Research Methodology	2			
EE505	Linear System and Random Process	4			
EE604	Research Project	15			
	Research Proposal				
Total Credits			24		
Total: 191 credits					

III. ACADEMIC SUPPORTS

This section is to support students an enjoyable and effective learning experience.

1. Your Academic Advisors

Your Academic advisor will support you throughout your university life. Academic advisor can help you to select courses for the next semester and add /drop a course. The advisor help you to achieve your educational goals and to create your plan of study serving your intellectual interests and career goals. Your advisor can help to make sure you are meeting all of your graduation requirements.

The following assigned academic advisors:

- Dr. Nguyễn Lập Luật (Email: nlluat@hcmiu.edu.vn)
- Dr. Phạm Trung Kiên (Email: ptkien@hcmiu.edu.vn)

2. Student Email

International University collaborates with Microsoft to provide students with free email service. Please visit <http://mail.office365.com> and login using the following credentials:

Username: <Student ID>

Password: <Provided by Center of Information Services>

All students are required to use this email account when contacting our university

3. Course Registration

In every semester, you have to do the course registration in which you select the suitable subjects. Be really careful with your selection because it may affect to your Personal Development plan as well as the final achievement of your degree.

Registration guidelines

- The registration time is informed by SEE.
- The course selection is decided by yourself.
- Course registration can be completed online by using the university link <https://edusoftmaster.hcmiu.edu.vn/> (username and password will be created by the university)
- The subject registration must be approved by the academic advisors
- For exceptional cases, you can address the problems to Dean of SEE for consideration

4. Adjusting Student Timetable

You are responsible for checking the information shown in your timetable including the number of registered courses, tuition fees, etc... If you think that there is an error in

your timetable, please report to the SEE Office. You can do it within three days since the announcement of timetable.

We will revise (through the academic advisors) your documents and give feedback to the problem. Then, we send the necessary documents to the Office of Graduate Academic Affairs (OGAA) for approval.

5. Grading Criteria

CLASSIFICATION	SCALE 0 OF 100	SCALE 0 OF 4	LETTER GRADE
PASSING			
Excellent	$90 \leq \text{GPA} \leq 100$	4.0	A+
Very Good	$80 \leq \text{GPA} < 90$	3.5	A
Good	$70 \leq \text{GPA} < 80$	3.0	B+
Average good	$60 \leq \text{GPA} < 70$	2.5	B
Ordinary	$55 \leq \text{GPA} < 60$	2.0	C
NO PASSING			
Weak	$40 \leq \text{GPA} < 55$	1.5	D+
Very weak	$\text{GPA} < 40$	1.0	D
		0	F

6. Specialization

Students are allowed to choose the specialization with appropriate courses

- RF Design and Antenna
- Internet of Things
- Embedded Systems
- Signal Processing
- Wireless Communications
- Process Control and Automation
- Robotics
- Control applications
- Computer Visions
- Artificial Intelligence

7. Graduation Criteria

Students have to meet all of the following requirements for graduation:

- Fully complete the curriculum (60 credits) with $\text{GPA} \geq 55$
- Obtain the minimum English proficiency: TOEFL iBT score of 46; IELTS score of 5.5 overall; TOEIC (4 skills) score of Listening (400), Reading(385), Speaking(160) and Writing(150); Cambridge Exam (B2 First/ B2 Business Vantage/ Linguaskill.)

8. Academic Dishonesty

The department expects each student to conduct himself/herself in a professional manner. Cheating offenses are reported to the appropriate academic office by the SEE

without hesitation. An engineer is not allowed to have this kind of incident on record. Both the student who gives information and the one who receives it are considered guilty parties. The University policy on academic dishonesty is carefully spelled out in the catalog. Note that copying from, or giving assistance to others, or using forbidden material on any exam or in any required report, is a violation. The recommended sanction is suspension from the University for one or more terms with a notation of academic disciplinary suspension placed on the student's transcript.

9. Academic Suspension

Any student who is in **one of the below cases** will be asked to suspend his/her study temporarily:

- The time limit for study is overdue
- Dropping out university is more than one semester without the approval of the IU
- Students have admonished more than 2 times
- Students have not paid the tuition fees on time

10. Student Organizations

Participation in Student Organizations is not only a nice way for you to practice your soft skills in any circumstances, but also to polish your skills, and expand your network. More information will be covered in your Orientation.

The Youth Union & Student Union of SEE

The EE Youth Union & EE Student Union have always been the connecting bridge between students in the school; provides various practical information to the students such as course registration schedules, scholarships, recruitment, seminars, summer internships, extracurricular activities as well as volunteer activities.

Student Clubs - Societies

IU has dozens student-run clubs, such as: Soft Skills Club, Social Work Team, English Club, IU Buddy, etc. Through student clubs, you are going to have great opportunities to improve your competencies, widen your knowledge and soul. If you are interested in founding or joining a club or society, there are many ways the IU Office of Student Services can help get your ideas to take off. Instructions on creating a new club & running your own event on campus can be found here: <http://iuoss.com/>

E-Tech Club is an official academic club belonging to the Electrical Engineering Youth Union. E-Tech Club is responsible for supporting students through the courses' collective projects and various school-wise academic competitions; help students utilizing their accumulated knowledge during the lecture hours and put into practice.

Fanpage Youth Union:

<https://www.facebook.com/ElectricalEngineeringYouthUnion/>

Fanpage Etechclub:

<https://www.facebook.com/groups/etechclub/>

Email: eeyouthunion@iuyouth.edu.vn

11. SEE Alumni

SEE Alumni keeps alumni in touch with news from SEE and from other alumni. The Alumni Group facilitates networking, social events, reunions, and aims to serve as a connecting bridge between generations of students. It does not matter where you are located or what you are doing, you are still part of our global alumni family and we would love to hear from you.

Please contact any group member through the provided email addresses for more details on job opportunities!