School of Computer Science and Engineering
International University
Vietnam National University, Ho Chi Minh City

Student Handbook

2024 – 2025

This handbook contains all administrative and practical processes operated exclusively at the School of Computer Science and Engineering. Students need to be aware of them in order to study and participate in all school activities effectively.

The programs and services provided in this handbook are applied from September 2024. For our academic policies herein are subject to review and evaluation, the School of Computer Science and Engineering reserves the right to make changes at any time.

School of Computer Science and Engineering

International University

Vietnam National University, Ho Chi Minh City

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I. Introduction

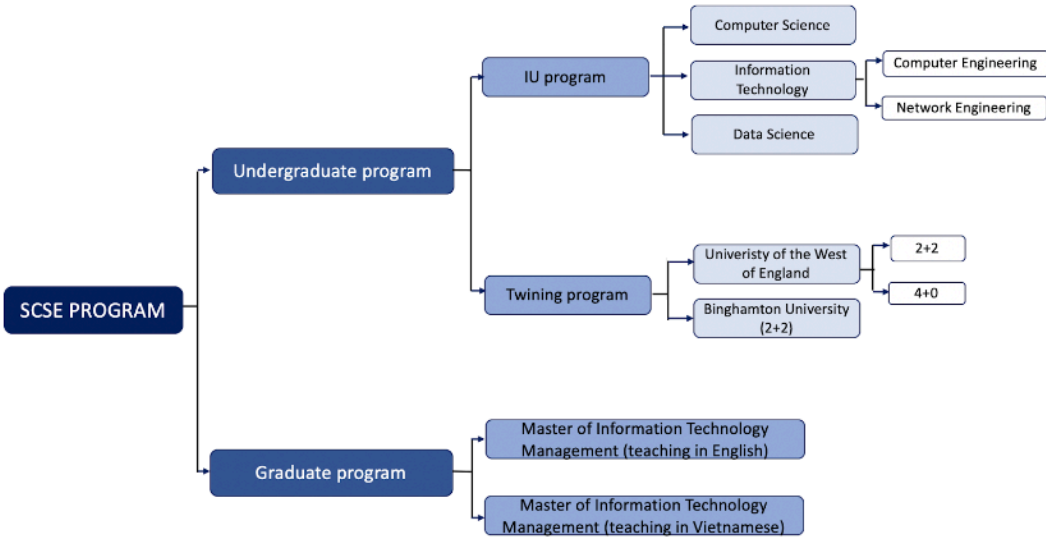
The document will describe an overview of the undergraduate program in the School of Computer Science and Engineering (SCSE) at International University, Vietnam National University in Ho Chi Minh City (HCMIU). It includes mission, course list, curriculum roadmap & description, course description, and twinning programs, job opportunities, educational objectives, program outcomes.

The SCSE is one of the four schools built in the first days at the HCMIU. The faculty of our School are graduated from the famous Universities all over the world (see at https://it.hcmiu.edu.vn/faculty/).

At present, we have the programs both in undergraduate and graduate, includes the following programs:

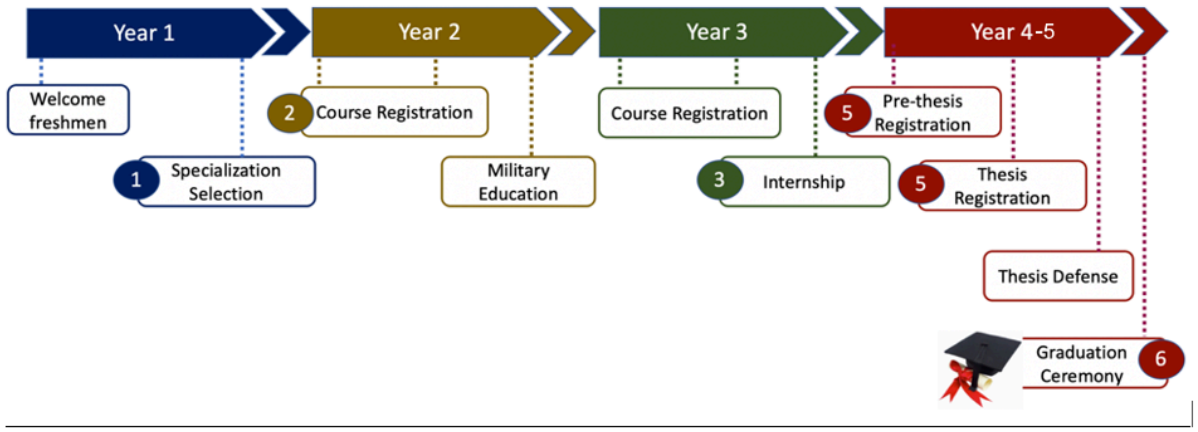
- Bachelor of Engineer in Information Technology
- Bachelor of Science in Computer Science
- Bachelor of Science in Data Science
- Master's degree in Information Technology Management
- Master's degree in Information Technology.

These programs are also articulated by several prestigious overseas universities, such as the University of the West of England (UWE) in the UK, and Binghamton University (BU) in the USA.



Graduates are equipped with firm IT fundamentals and practiced with modern technologies. They will have strong professional skills and solid knowledge in Information Technology, abilities to use English effectively in international working environments, excellent teamwork and communication skills. Lectures are taught by highly qualified professors and lecturers. English textbooks are published by worldwide publishers and they are currently used by several top universities. Faculty members use advanced teaching methods that combine theoretical lectures and laboratory practices with the support of modern facilities. Students apply knowledge to solve problems in a modern, well-equipped, and energetic learning environment.

II. Academic Calendar



- **Welcome Freshmen** is an orientation event that will help new students to explore the campus, meet new people and connect to resources. By enjoying large-scale and small-group activities, you can get to know IU and SCSE, explore IU cultures,... - all planned to help you transition to campus.
- **A specialization**(*) is a focused major of study. IT students will register for the specialization at the end of the first year.
- **Course Registration(*)**: From the second year, students have to register for courses to study in the semester. We highly recommend you follow the program curriculum. Be careful with your selection because it may affect your plan as well as the final achievement of your degree.
- **Military Education**: In the summer semester of the second year, usually in August, students will take a one-month military education. The military education will be organized at the Center for National Defense and Security Training - Vietnam National University Ho Chi Minh City.
- **Internship(*)**: The program aims to develop practical skills, career-specific techniques, and industry involvement. Internship duration varies 150 academic hours for Bachelor of Science students and 350 academic hours for Engineering students. Internships can be undertaken in the summer or main semester, either full-time or part-time.
- **Pre-thesis and Thesis(*):** Students will register for a thesis in the final year which is a piece of research and writing on a narrow topic. The student works with a supervisor to get his/her guidance and support throughout the course of the research.
- **Graduation Ceremony**: Each year, there are two graduation assessments, usually in May and August. And the graduation ceremony will be held in November.

(*): More information will be mentioned in part "Academic Procedure"

III. Survival Tips

Get to know your campus

It is really helpful to walk around International University and National University Campus to get to know your way around. There are many free - and yet very useful resources that you can use to support your study and student life: IU Library, The central library, IU canteens and cafeterias, self-study rooms/corners, IU Clinic...Besides, you definitely want to know all the interesting places and beautiful scenes for your romantic life afterward. Just take your time to make an adventure!

Keep in touch with your advisor

Every entering student at the School of Computer Science is assigned an academic advisor, who is willing to help you with school procedures, study strategy, career orientation...and even your life matters. In case your advisor doesn't know the answer to one of your questions, they probably know where to find that answer. Your job is to establish a good relationship with your advisor so that you can draw on that wealth of knowledge and experience.

Ask for help when you need it

This is true in all aspects of your life. If you're having trouble keeping up with your studies, talk to your academic advisor or lecturers. If you don't speak out about it, things will only become worse as more deadlines loom.

Similarly, if your stress arises from financial problems, it's really important for you to reach out and get some help. At International University, we have flexible policies and support to help students who are in trouble.

If you need advice in your life matters, you can talk to your friends, your advisor, or anyone in the school that you think can help you out. Just don't keep silent and bear it yourself.

Use your free time wisely

Depending on your registered courses, you may only be required to attend school for a few days per week. Even while you'll have more time for work, seeing friends, playing games, and sleep-in, you'll still need to schedule study time (even outside of peak exam periods) and relax. If you have a free period between classes, take advantage of it by participating in club activities. or improving your English (Don't forget about the English requirements for graduation). Have a free day during the week? Why not organize a part-time job or join a practical project to get experience?

Befriend with your schoolmates

Make an attempt to get to know your classmates: If you're taking one of International University's "popular" classes, you'll likely run into a few familiar faces. Making new acquaintances is one of the finest parts of starting university, whether you're surrounded by friends or on your own. You never know, you may make a lifelong buddy. Don't be scared to strike up a conversation in class or arrange a catch-up session after a lecture.

Join at least one club

You should join at least one club during your time in university. You can choose academic clubs such as SCSE research groups, Youth Union, or other clubs at IU such as Team of Office of Student Affairs (TOSA), Social Work Team, English Club (IEC), Student Recruitment Campaign, IU Art Teams, and so on. By joining clubs you can improve your technical skills (for academic clubs), soft skills, make new friends, and so on. However, you should consider carefully, don't let group membership affect your studies

Improve your study habits

The study habits you've developed in high school may not work as well in university. You can, however, build on those habits to make your study habits more disciplined—because you will need to! You will have more responsibility in university, but you will also have more independence. Nowadays, it's very simple to find online courses that will help you improve both your major skills and your soft skills (some of them are free or have special sales for students). Taking an online course also eliminates the need to commute to class, which means less time spent on the bus and more time spent studying in your preferred location: your bedroom, study, the café across the street, or even the gym. Don't be afraid to enroll in these courses to broaden your horizons.

IV. Academic Resource

Academic Advisor

Academic Advising at IU is offered to support your academic progress toward earning your bachelor's degree. Your academic advisor will help guide your educational decisions such as specialization registration, study strategy, career goals, course registration, and also your personal matters. Students will be required to meet their assigned academic advisors at least once a semester prior to registering for the next semester. Students should contact their academic advisors when needed, join the group (maybe on social networks) that your advisor created.

IU Library

Established in 2003, IU Library has become an integral part of the University for supporting vibrant learning, teaching, and research culture. The Library consists of 2 floors, with more than 1,000 square meters, modern equipment, and an automated library management system.

The strength of the IU Library is in its collection. The printed collection, which includes textbooks and monographs, has evolved over a decade and thus provides students with a great variety of resources. Library users can also access well-known academic databases such as InfoTrac, Springer Link, Taylor & Francis, ProQuest, IEEE, ACS, and Wiley. Besides, every IU-affiliated user is eligible to access IUL institutional repository - an online Thesis Database.

IU Canteen and Cafeteria

The canteen at IU, spanning 1,600m² on the ground floor, continues to be a hub for students, faculty, and staff to enjoy meals and refreshments during break times. The canteen offers a variety of options, with stalls serving traditional Vietnamese dishes from BigU, Cơm Việt, and Bánh Việt, maintaining a taste of local cuisine. These choices cater to the diverse tastes of the IU community, ensuring that there is something for everyone.

In addition to these food stalls, The Coffee Story has moved to the ground floor canteen, offering a selection of milk tea, coffee, and pastries, making it more accessible for students looking for a quick beverage or snack. For those who prefer a separate spot for drinks, The Zero, located next to the IU canteen, remains an option, providing a variety of beverages. These convenient options enhance the overall dining experience, providing comfortable spaces for students and staff to relax and enjoy their breaks.

SCSE Students Research Room

Located at LA1.611, SCSE Student Research Room provides the open working space for all the research groups of SCSE. Students are provided with a modern projector, whiteboard, and equipment cabinet. Besides, they are free to store their research tools such as 3D printers, sensors, cameras...(even their favorite coffee maker and fridge).

SCSE Laboratories

There are five main labs in the School of Computer Science and Engineering, and one lab in the Institute for Environment and Resources, all equipped with modern computers and teaching devices: LA1.604 - Data Science, LA1.605 - Operating Systems, LA1.606 - Networking, LA1.607 - Software Engineering, LA1.608 - Database Systems, and The Central Interdisciplinary Laboratory in Electronics and Information Technology for 'AI and Cooperation Robots'. These labs facilitate practice sessions not only for students in the SCSE but also for those in other departments and schools of HCMIU. Additionally, some of the university's major events (such as the IU Gaming Tour, IU TopCoder, research seminars, and Youth Union activities) are also hosted in these labs.

V. Academic Requirements to Earn a Bachelor's Degree

General Graduation Requirements

- Had accumulated the required credits of courses including a thesis.
- Earned a total GPA ≥ 50/100 points and without any course had a grade < 50/100
- The total time of study for the SCSE program is ≤ 6 years
- Passed English proficiency with scores of TOEFL iBT ≥ 61 or IELTS ≥ 5.5
- Fulfilled Military training requirement
- Participated in all 3 civil activities:
    - Entrance political session
    - Midterm political session
    - Exit political session

Curriculum

When a student is first admitted to a program at IU, he/she is required to indicate his/her level of English proficiency. Students can show proof of an English proficiency exam taken no later than 2 years or take an English placement test administered by IU (Note: this requirement is not applied to students who graduated from a high school whose educational program is in English). Depending on the obtained scores student is placed into two main groups:

- AE1 group: Students take Advanced English course 1 and courses of the SCSE program in their 1st semester.
- Intensive English (IE) group: Student takes Intensive English courses first.

Some notions you need to know:

- **Prerequisite**: If course A is the prerequisite course of course B, you need to *take and pass* course A before registering for course B.
- **Co-requisite**: If the relationship between course A and course B is a co-requisite, you should *take two courses at the same time*.
- **Previous**: If course A is the previous course of course B, you need to take course A before registering for course B. In this case, *passing course A is not required*.
- **Elective:** An elective course is a course that students can choose from a number of optional courses in the curriculum.
- **Free-elective**: A free elective course is a course where students can choose any courses provided in any IU program.

The following tables show the typical roadmaps for students in the AE1 group.

Computer Science

Sub. ID	Year 1. Sem 1	Credits	Sub. ID	Year 1. Sem 2	Credits
MA001IU	Calculus 1	4	PH013IU	Physics 3	3
EN008IU	Listening AE1	2	PH016IU	Physics 3 laboratory	1
EN007IU	Writing AE1	2	EN012IU	Speaking AE2	2
IT064IU	Introduction to Computing	3	EN011IU	Writing AE2	2
IT116IU	C/C++ Programming	4	IT069IU	Object-Oriented Programming	4
PT001IU	Physics 1	2	IT153IU	Discrete Mathematics	3
			IT091IU	Computer Networks	4
Total		**17**	**Total**		**19**

Sub. ID	Year 2. Sem 1	Credits	Sub. ID	Year 2. Sem 2	Credits
MA003IU	Calculus 2	4	PT001IU	Physical Training 1	3
IT154IU	Linear Algebra	3	IT089IU	Computer Architecture	4
IT013IU	Algorithms and Data Structures	4	IT090IU	Object-Oriented Analysis and Design	4
IT079IU	Principles of Database Management	4	IT093IU	Web Application Development	4
PH015IU	Philosophy Marx -Lenin	3		Elective 1	4
PE016IU	Marxist – Leninist Political Economy	2			
Total		**20**	**Total**		**19**

Sub. ID	Year 3. Sem 1	Credits	Sub. ID	Year 3. Sem 2	Credits
PT002IU	Physical Training 2	3	IT076IU	Software Engineering	4
MA026IU	Probability, Statistic & Random Process	3	IT159IU	Artificial Intelligence	4
PE017IU	Scientific Socialism	2	PE021IU	General law	3
IT092IU	Principles of Programming Languages	4		Free elective	3
	Elective 2	4	PE018IU	History of Vietnamese Communist Party	2
	Elective 3	4	IT120IU	Entrepreneurship	3
Total		**20**	**Total**		**19**

Sub. ID	Year 3. Sem 3	Credits
IT082IU	Internship	3

Sub. ID	**Year 4. Sem 1**	**Credits**	**Sub. ID**	**Year 4. Sem 2**	**Credits**
IT017IU	Operating Systems	4	IT058IU	Thesis	10
PE019IU	Ho Chi Minh's Thoughts	2			
IT083IU	Special Study of the Field	3			
Total		**9**	**Total**		**10**

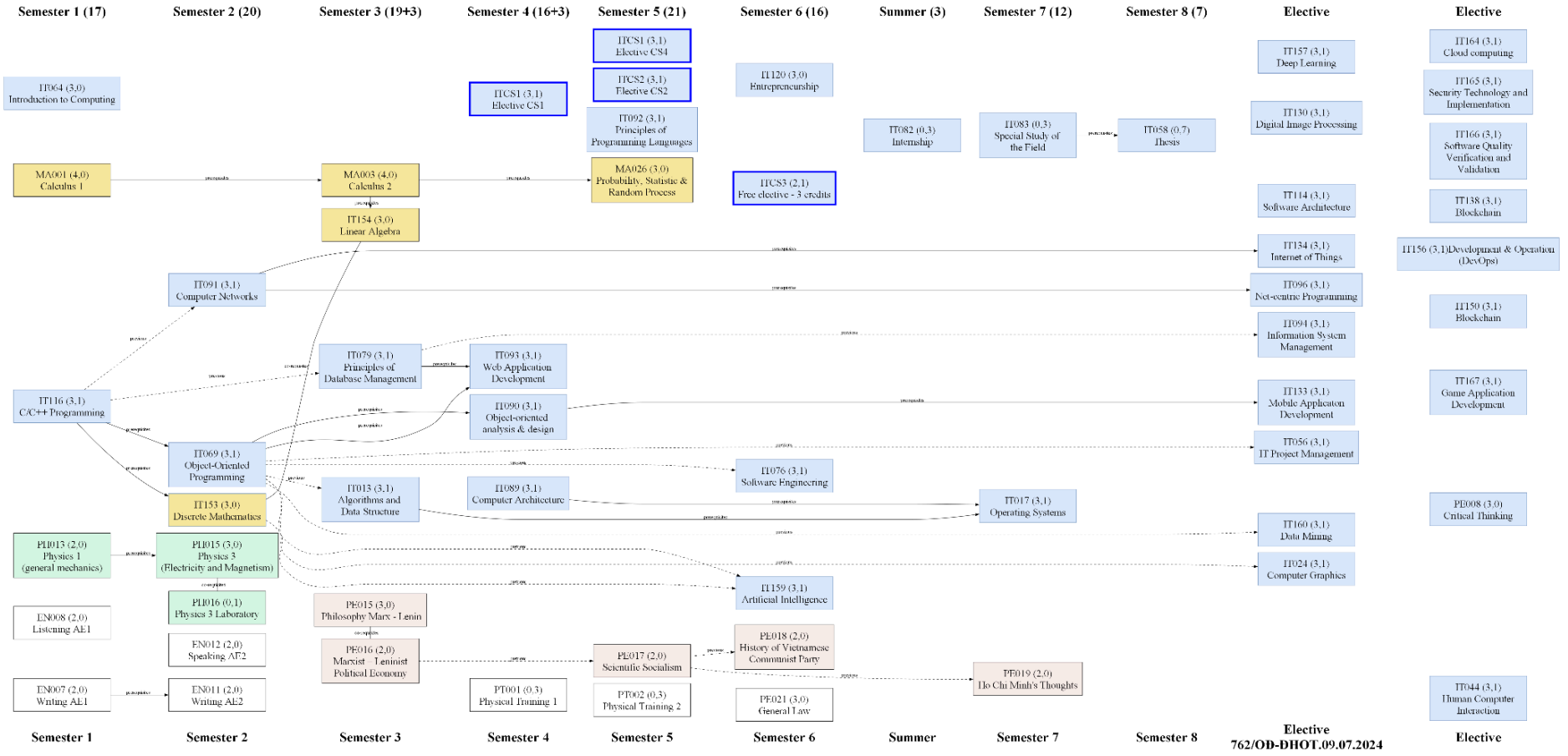
Total number of credits: 136 credits

Electives:

Sub.ID	**Course**	**Credits**	**Sub.ID2**	**Course2**	**Credits 2**
IT130IU	Digital Image Processing	4	IT096IU	Net-centric Programming	4
IT094IU	Information System Management	4	IT164IU	Cloud computing	4
IT056IU	IT Project Management	4	IT165IU	Security Technology and Implementation	4
IT044IU	Human Computer Interaction	4	IT166IU	Software Quality Verification and Validation	4
IT133IU	Mobile Application Development	4	IT167IU	Game Application Development	4
IT134IU	Internet of Things	4	IT150IU	Blockchain	4

PE008IU	Critical Thinking	3	IT156IU	Development & Operation (DevOps)	4
IT024IU	Computer Graphics	4	IT138IU	Data Science and Visualization	4
IT157IU	Deep Learning	4	IT114IU	Software Architecture	4
IT160IU	Data Mining	4			

Curriculum - Computer Science - K24 - 08.2024



Major Courses

General Courses

A → B (prerequisites): Take B after passing A

A ⇢ B (previous): Take B after A but passing A is not required

A — B (co-requisites): Take A before or at the same time with B

Course ID → IT150IU (3,1) ← (Theory credits, lab credits)

Course name → Blockchain

Information Technology

Computer Engineering

Sub. ID	Year 1. Sem 1	Credits	Sub. ID	Year 1. Sem 2	Credits
EN007IU	Writing AE1	2	EN011IU	Writing AE2	2
EN008IU	Listening AE1	2	EN012IU	Speaking AE2	2
IT064IU	Introduction to Computing	3	IT067IU	Digital Logic Design	3
IT116IU	C/C++ Programming	4	IT069IU	Object-Oriented Programming	4
MA001IU	Calculus 1	4	IT099IU	Digital Logic Design Laboratory	1
PT001IU	Physical Training 1	3	IT153IU	Discrete Mathematics	3
			PH013IU	Physics 1	2
Total		**18**			**17**

Sub. ID	Year 2. Sem 1	Credits	Sub. ID	Year 2. Sem 2	Credits
IT013IU	Algorithms and Data Structures	4	IT074IU	Electronic Devices	3
IT068IU	Principle of Electrical Engineering I	3	IT089IU	Computer Architecture	4
IT098IU	Principle of Electrical Engineering I Laboratory	1	IT091IU	Computer Networks	4
IT154IU	Linear algebra	3	IT101IU	Electronic Devices Laboratory	1
MA003IU	Calculus 2	4	MA026IU	Probability, Statistic & Random Process	3
PE015IU	Philosophy Marx - Lenin	3	PE017IU	Scientific Socialism	2
PE016IU	Marxist – Leninist Political Economy	2			
Total		**20**			**17**

Sub. ID	Year 3. Sem 1	Credits	Sub. ID	Year 3. Sem 2	Credits
IT017IU	Operating Systems	4		Elective 1	4
IT079IU	Principles of Database Management	4	IT105IU	Digital System Design	3
IT128IU	Micro-processing Systems	3	IT106IU	Digital System Design Laboratory	1
IT129IU	Micro-processing Systems Laboratory	1	IT115IU	Embedded Systems	3
PH015IU	Physics 3	3	IT127IU	Embedded Systems Laboratory	1
PT002IU	Physical Training 2	3	PE018IU	History of Vietnamese Communist Party	2
PH016IU	Physics 3 Laboratory	1	PE019IU	Ho Chi Minh's Thoughts	2

Total		**19**	**Total**		**16**

Sub. ID	Year 3. Sem 3	Credits
IT174IU	Internship for engineers	7

Sub. ID	Year 4. Sem 1	Credits	Sub. ID	Year 4. Sem 2	Credits
	Elective 2	4	IT083IU	Special Study of the Field	3
IT103IU	Digital Signal Processing	4	IT120IU	Entrepreneurship	3
IT110IU	Concepts in VLSI Design	3	IT134IU	Internet of Things	4
IT126IU	Concepts in VLSI Design Lab.	1	PE020IU	Engineering Ethics and Professional Skills	3
IT159IU	Artificial Intelligent	4			
Total		**16**			**13**

Sub. ID	Year 5. Sem 1	Credits
IT058IU	Thesis	10
PE021IU	General Law	3
Total		**13**

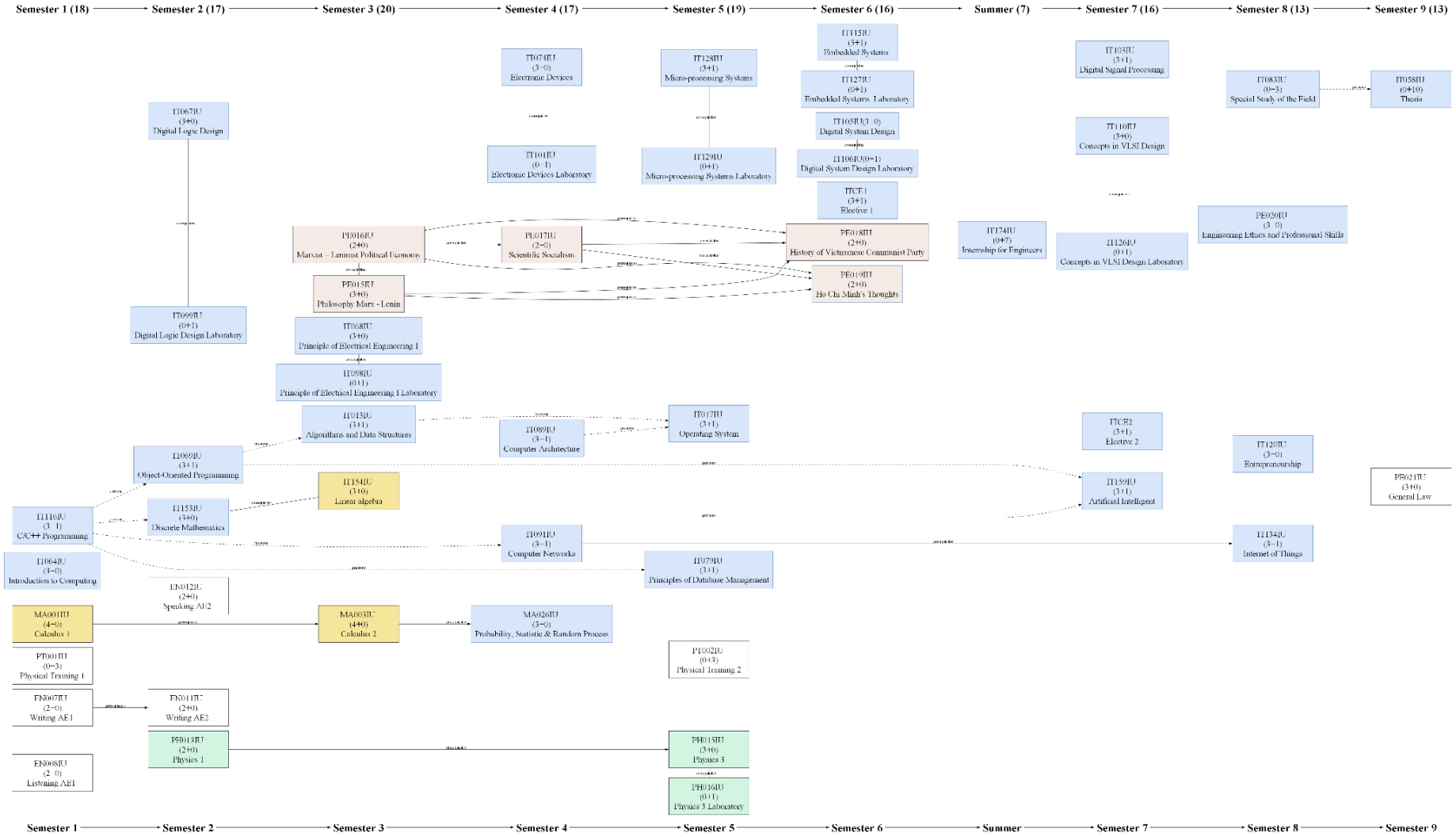
Total number of credits: 156 credits

Electives

Sub.ID	Course Name	Credits	Sub.ID	Course Name	Credits
IT163IU	Optimization and Applications	4	IT165IU	Security Technology and Implementation	4
IT024IU	Computer Graphics	4	IT160IU	Data Mining	4
IT131IU	Theoretical Models in Computing	4	IT133IU	Mobile Application Development	4
IT056IU	IT Project Management	4	IT138IU	Data Science and Visualization	4
IT076IU	Software Engineering	4	IT139IU	Scalable and Distributed Computing	4
IT090IU	Object-Oriented Analysis and Design	4	IT140IU	Fundamental Concepts of Data Security	4
IT092IU	Principles of Programming Languages	4	IT166IU	Software Quality Verification and Validation	4

IT093IU	Web Application Development	4	IT144IU	Business Process Analysis	4
IT094IU	Information System Management	4	IT145IU	Decision Support Systems	4
IT096IU	Net-Centric Programming	4	IT147IU	Mobile Cloud Computing	4
IT114IU	Software Architecture	4	IT150IU	Blockchain	4
IT117IU	System and Network Security	4	IT156IU	Development & Operation (DevOps)	4
IT167IU	Game Application Development	4	IT157IU	Deep Learning	4
IT125IU	System and Network Administration	4	IT158IU	UI Design and Evaluation	4
PE008IU	Critical Thinking	3		Free Elective	4

Curriculum - Computer Engineering - KS - 08.2024



Major Courses

General Courses

A → prerequisites → B: Take B after passing A

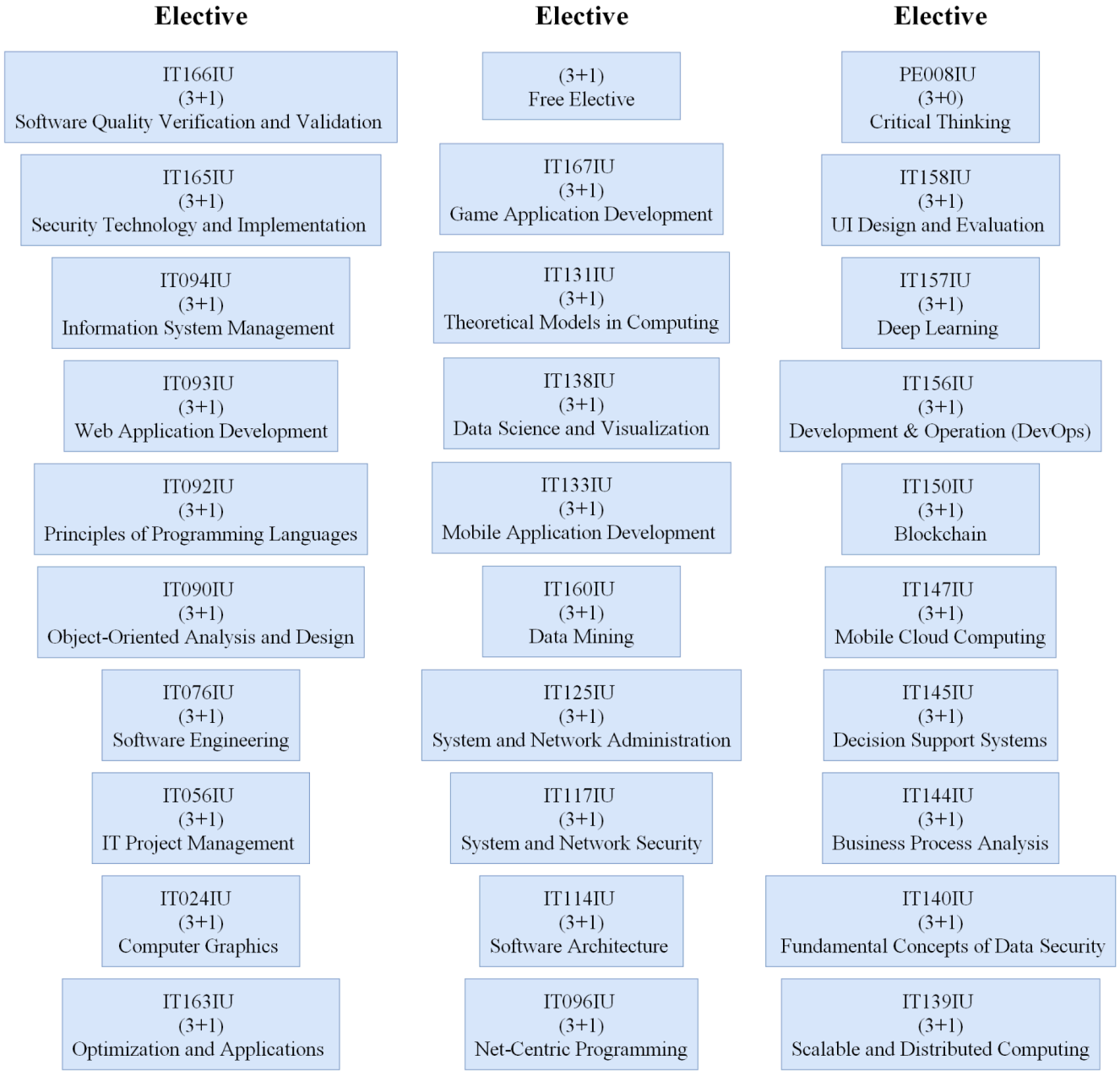
A → previous → B: Take B after A but passing A is not required

A — co-requisites — B: Take A before or at the same time with B

Course ID → IT150IU (3,1) ← (Theory credits, lab credits)

Course name → Blockchain

Curriculum - Computer Engineering - KS - 08.2024



Networking Engineering

Sub. ID	Year 1. Sem 1	Credits	Sub. ID	Year 1. Sem 2	Credits
EN007IU	Writing AE1	2	EN011IU	Writing AE2	2
EN008IU	Listening AE1	2	EN012IU	Speaking AE2	2
IT064IU	Introduction to Computing	3	IT067IU	Digital Logic Design	3
IT116IU	C/C++ Programming	4	IT069IU	Object-Oriented Programming	4
MA001IU	Calculus 1	4	IT099IU / EE054IU	Digital Logic Design Lab	1
PT001IU	Physical Training 1	3	IT153IU	Discrete Mathematics	3
			PH013IU	Physics 1	2
Total		**18**			**17**

Sub. ID	Year 2. Sem 1	Credits	Sub. ID	Year 2. Sem 2	Credits
IT013IU	Algorithms and Data Structures	4	IT089IU	Computer Architecture	4
IT079IU	Principles of Database Management	4	IT091IU	Computer Networks	4
IT154IU	Linear algebra	3	IT093IU	Web Application Development	4
MA003IU	Calculus 2	4	MA026IU	Probability, Statistic & Random Process	3
PE015IU	Philosophy Marx - Lenin	3	PE017IU	Scientific Socialism	2
PE016IU	Marxist – Leninist Political Economy	2			
Total		**20**			**17**

Sub. ID	Year 3. Sem 1	Credits	Sub. ID	Year 3 Sem 2	Credits
IT017IU	Operating System	4		Elective 1	4
IT096IU	Net-Centric Programming	4	IT094IU	Information System Management	4
IT125IU	System & Network Administration	4	IT117IU	System and Network Security	4
PH015IU	Physics 3	3	PE018IU	History of Vietnamese Communist Party	2
PT002IU	Physical Training 2	3	PE019IU	Ho Chi Minh's Thoughts	2
PH016IU	Physics 3 Laboratory	1			
Total		**19**			**16**

Sub. ID	Year 3. Sem 3	Credits
IT174IU	Internship for engineers	7

Sub. ID	Year 4. Sem 1	Credits	Sub. ID	Year 4. Sem 2	Credits
	Elective 2	4		Elective 3	4
IT120IU	Entrepreneurship	3	IT083IU	Special Study of the Field	3
IT139IU	Scalable and Distributed Computing	4	IT134IU	Internet of Things	4
IT159IU	Artificial Intelligent	4	PE020IU	Engineering Ethics and Professional Skills	3
Total		**15**			**14**

Sub. ID	Year 5. Sem 1	Credits
IT058IU	Thesis	10
PE021IU	General Law	3
Total		**13**

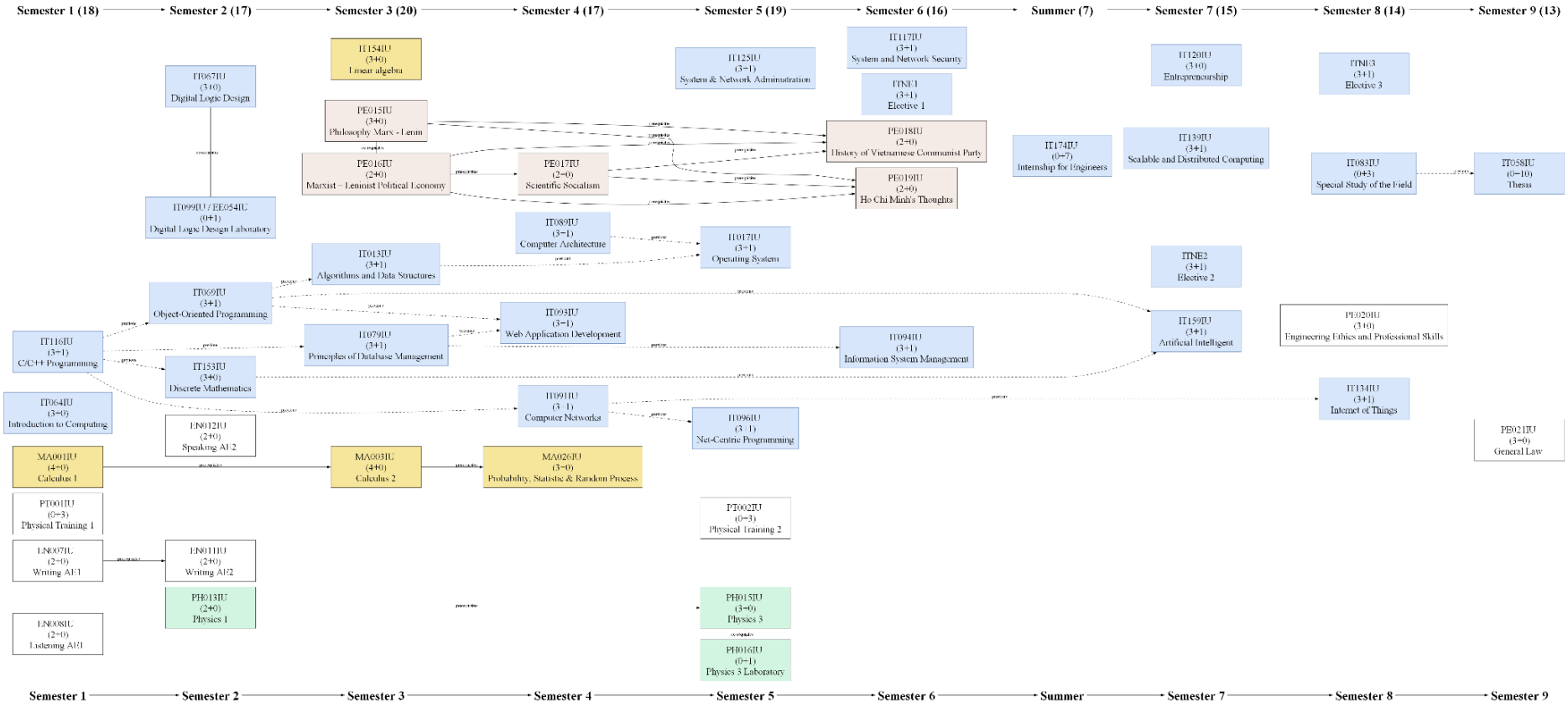
Total number of credits: 156 credits

Electives

Sub.ID	Course Name	Credits	Sub.ID	Course Name	Credits
IT163IU	Optimization and Applications	4	IT127IU	Embedded Systems Laboratory	1
IT024IU	Computer Graphics	4	IT128IU	Micro-processing Systems	3
IT131IU	Theoretical Models in Computing	4	IT129IU	Micro-processing Systems Laboratory	1
IT056IU	IT Project Management	4	IT130IU	Digital Image Processing	4
IT068IU	Principles of Electrical Engineering I	3	IT160IU	Data Mining	4
IT074IU	Electronics Devices	3	IT133IU	Mobile Application Development	4
IT076IU	Software Engineering	4	IT138IU	Data Science and Data Visualization	4
IT090IU	Object-Oriented Analysis and Design	4	IT140IU	Fundamental Concepts of Data Security	4
IT092IU	Principles of Programming Languages	4	PE008IU	Critical Thinking	3
IT098IU	Principles of Electrical Engineering I Laboratory	1	IT144IU	Business Process Analysis	4

IT101IU	Electronics Devices Laboratory	1	IT145IU	Decision Support Systems	4
IT103IU	Digital Signal Processing	4	IT164IU	Cloud Computing	4
IT105IU	Digital System Design	3	IT150IU	Blockchain	4
IT106IU	Digital System Design Laboratory	1	IT156IU	Development & Operation (DevOps)	4
IT110IU	Concepts in VLSI Design	3	IT157IU	Deep Learning	4
IT126IU	Concepts in VLSI Design Laboratory	1	IT158IU	UI Design and Evaluation	4
IT115IU	Embedded Systems	3	IT166IU	Software Quality Verification and Validation	4
IT114IU	Software Architecture	4	IT167IU	Game Application Development	4
	Free elective	4			

Curriculum - Network Engineering - KS - 08.2024



Major Courses

General Courses

A → B: prerequisites — Take B after passing A

A → B: previous — Take B after A but passing A is not required

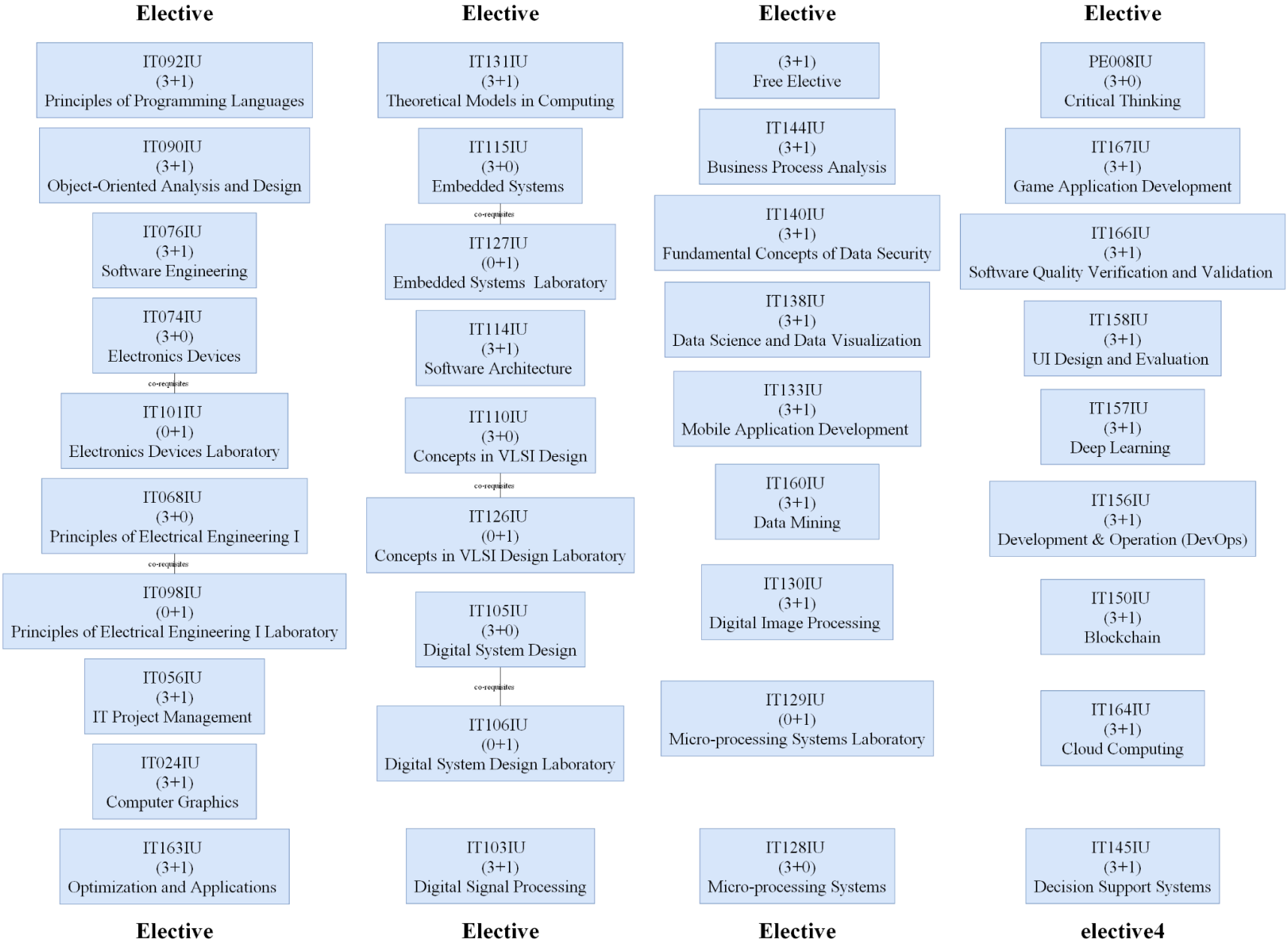
A — B: co-requisites — Take A before or at the same time with B

Course ID → IT150IU (3,1)

Course name → Blockchain

(Theory credits, lab credits)

Curriculum - Network Engineering - KS - 08.2024



Data Science

Sub. ID	Year 1. Sem 1	Credits	Sub. ID	Year 1. Sem 2	Credits
MA001IU	Calculus 1	4	MA026IU	Probability, Statistic & Random Process	3
EN007IU	Writing AE1	3	IT154IU	Linear Algebra	3
EN008IU	Listening AE1	3	EN011IU	Writing AE2	2
IT135IU	Introduction to Data Science	2	EN012IU	Speaking AE2	2
IT149IU	Fundamentals of Programming	3	PE015IU	Philosophy Marx - Lenin	3
			IT069IU	Object-Oriented Programming	4
Total		**15**			**17**

Sub. ID	Year 2. Sem 1	Credits	Sub. ID	Year 2. Sem 2	Credits
PE016IU	Marxist-Lenin Political Economy	2	PE017IU	Scientific Socialism	2
IT151IU	Statistical Methods	3	PE021IU	General law	3
IT013IU	Algorithms and Data Structures	4	IT159IU	Artificial Intelligence	4
IT079IU	Principles of Database Management	4	IT171IU	Statistical Learning	4
IT140IU	Fundamental Concepts of Data Security	4	IT136IU	Regression Analysis	4
			PT001IU	Physical Training 1	3
Total		**17**			**20**

Sub. ID	Year 3. Sem 1	Credits	Sub. ID	Year 3. Sem 2	Credits
PE018IU	History of Vietnamese Communist Party	2	PE019IU	Ho Chi Minh's Thoughts	2
IT138IU	Data Science and Data Visualization	4	IT172IU	Machine Learning	4
IT160IU	Data Mining	4	IT157IU	Deep Learning	4
IT139IU	Scalable and Distributed Computing	4		Elective	4
IT137IU	Data Analysis	4		Elective	4
Total		18			18

Sub. ID	Year 4. Sem 1	Credits	Sub. ID	Year 4. Sem 2	Credits
IT083IU	Special Study of the Field	3	IT082IU	Internship	3
IT173IU	Big Data Analytics	4	IT058IU	Thesis	10

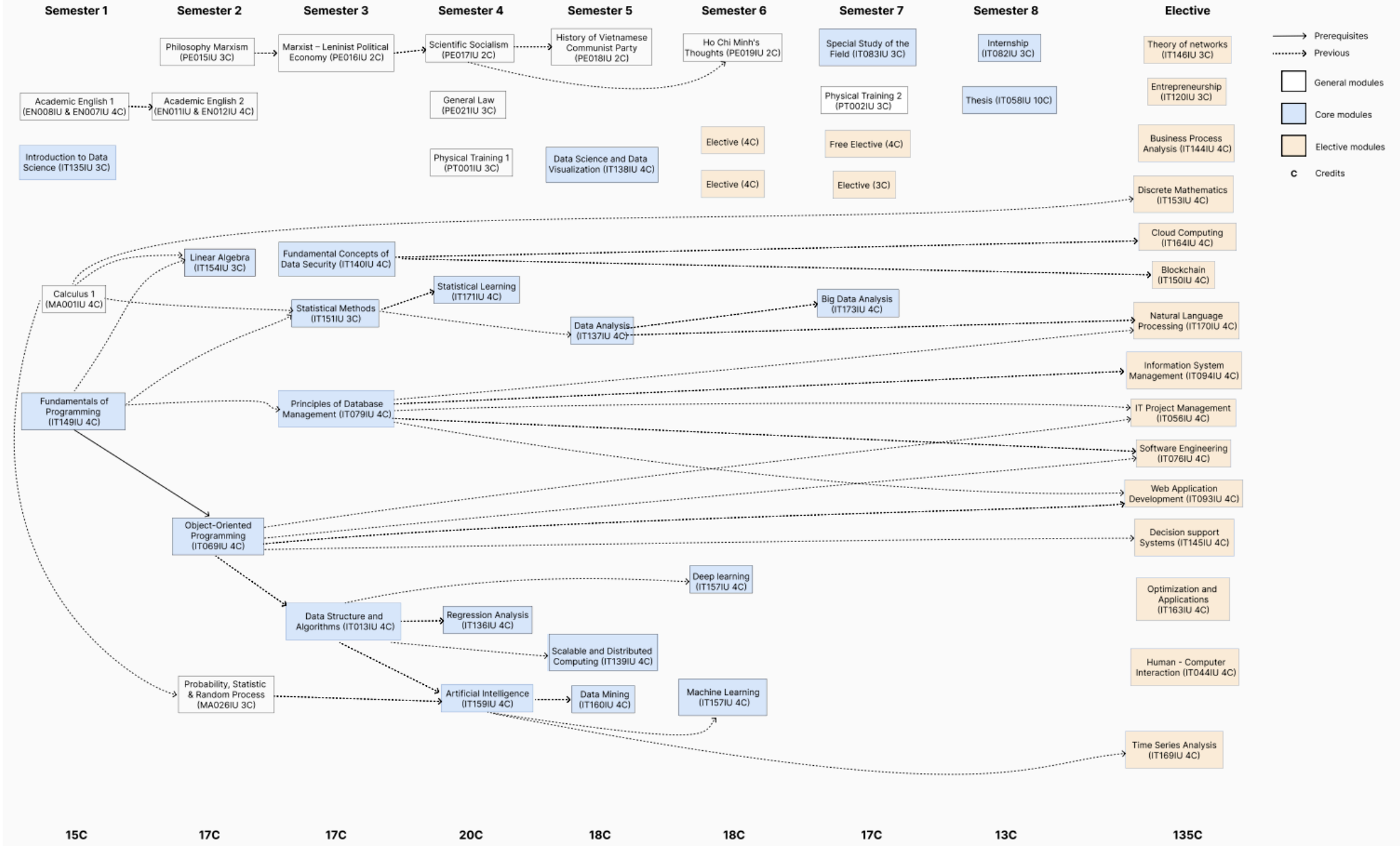
	Elective	3/4			
	Free Elective	3/4			
PT002IU	Physical Training 2	3			
Total		**17**			**13**

Total number of credits: 135 credits

Electives

Sub. ID	Elective	Credits	Sub. ID	Elective	Credits
IT144IU	Business Process Analysis	4	IT150IU	Blockchain	4
IT145IU	Decision Support Systems	4	IT093IU	Web Application Development	4
IT169IU	Time Series Analysis	4	IT120IU	Entrepreneurship	3
IT146IU	Theory of Networks	4	IT163IU	Optimization and Applications	4
IT056IU	IT Project Management	4	IT076IU	Software Engineering	4
IT094IU	Information System Management	3	IT153IU	Discrete Mathematics	3
IT164IU	Cloud Computing	4	IT170IU	Natural Language Processing	4
IT044IU	Human-Computer Interaction	4			

Curriculum - Data Science - AE1



Degree Awards

At the graduation, depending on the accumulated GPA, a student may receive the following awards:

- Gold medal: Excellent grade. Note: Only one student/year obtains this award
- Silver medal: Very Good grade. Note: Only one student/year obtains this award
- Women Technical Award: for female students with a GPA of 80. There is no limitation on the number of the recipients

Level	Grade Point Average (GPA)		
	On 100 points	Letter grades	On 4 points
Excellent	$90 \leq GPA \leq 100$	A+	4.0
Very good	$80 \leq GPA < 90$	A	3.5
Good	$70 \leq GPA < 80$	B+	3.0
Average Good	$60 \leq GPA < 70$	B	2.5
Ordinary	$50 \leq GPA < 60$	C	2.0

Notes: To earn the grade level "Excellent" or "Very Good", a student must not only obtain the required GPA as indicated above but also must satisfy the following conditions; otherwise he/she will be downgraded to one level lower:

- The total time until graduation is not higher than the regular requirement (4 years).
- If a student re-took the same courses more than once, the total credits of these courses must not be higher than 5% of the total of the regular requirements.
- During the study time, the student must not receive an academic punishment of Warning or higher from IU.

VI. Student Research

Besides the studying activities at the SCSE, students are encouraged to join in the student research groups depending on their abilities and hobbies. The research fields at our School are various, not limited and subdivided into the following research groups:

Computer Vision and Image Processing (CVIP)

The Computer Vision and Image Processing Laboratory was established in 2012 and has been directed by Dr. Ha Viet Uyen Synh. Our group mainly focuses on developing algorithms to replicate the abilities of human vision by electronically perceiving and understanding images or video. In general, we analyze and process high-dimensional data from the real world in order to produce numerical or symbolic information, e.g., in the form of decisions. Our work aims to release vision-based solutions for surveillance systems using static cameras. Specific topics we are interested in and researching currently are Computer and Machine Vision, Image Processing, Motion Estimation, Optical Flow, Occlusion Detection, Applications of Machine Learning and Deep Learning in these topics.

Besides research activities, our lab has kept organizing and training a group of self-motivated students who are big fans of algorithmic programming. Our purpose is to create a prestigious academic environment for students who aim to solve challenging problems in the National Olympiad in Informatics for Vietnamese Students and the International Collegiate Programming Contest (ICPC). More importantly, our vision is to encourage students to learn, research scientific problems, and empower teamwork in collaborative and integrated environments.

More information can be reached at: https://hcmiu-cvip.github.io/

Audio and Image Processing in System (AIPS)

We are interested in these fields such as: Audio and Image Processing; Tracking, Monitoring; Objects Recognition and Classification. Coming with our AIPS group, Machine Learning and Deep Learning are applied to build these reality systems of Speech Recognition, Object Tracking, Recognition and Classification.

Contact:

- Assoc. Prof. Huynh Kha Tu (hktu@hcmiu.edu.vn)
- Dr. Ly Tu Nga (ltnga@hcmiu.edu.vn)

Computer Graphics & Intelligent Systems (CGIS)

Computer Graphics, Medical image processing, Virtual Reality (VR) & Augmented Reality (AR) Applications and Machine Learning are trends in research fields nowadays. These research topics are led by Assoc. Prof. Nguyen Van Sinh and partners, both in Vietnam Universities and Universities abroad.

Contact:

- Assoc. Prof. Nguyen Van Sinh (nvsinh@hcmiu.edu.vn)
- Msc. Tran Khai Minh (tkminh@hcmiu.edu.vn)
- More information at https://it.hcmiu.edu.vn/user/nvsinh/ and https://ord.hcmiu.edu.vn/homepage/view/nctb?duration=3-2024

AIoT Lab VN

AIoT Lab VN is at the forefront of research and innovation, focusing on the integration of Artificial Intelligence (AI) and the Internet of Things (IoT), a field known as AIoT. AI refers to the development of computer systems that can perform tasks requiring human intelligence, such as learning, reasoning, and problem-solving. IoT, on the other hand, involves the network of interconnected devices that communicate and exchange data, enabling smarter and more efficient systems.

By combining AI and IoT, AIoT emerges as a powerful synergy, where AI enhances the capabilities of IoT devices, making them more intelligent and autonomous. This fusion opens up new possibilities for automation, predictive analytics, and personalized services across various industries, including healthcare, agriculture, smart cities, and manufacturing.

AIoT Lab VN is dedicated to exploring this cutting-edge field, leading research and development efforts that harness the potential of AIoT to create innovative solutions. Our lab not only focuses on academic excellence but also on practical applications that have a tangible impact on society. By 2030, we aspire to be the leading lab in Vietnam, driving technological advancements, fostering collaborations with global leaders, and contributing to the sustainable development of our community and the nation.

We always welcome excellent students to join our lab—if you want to be a part of our team, please feel free to contact us.

Contact: Assoc. Prof. Huynh Kha Tu (hktu@hcmiu.edu.vn), Dr. Le Duy Tan (ldtan@hcmiu.edu.vn) , or info@aiotlab.vn
Fanpage: https://www.facebook.com/aiotlab.vn
Website: https://aiotlab.vn/

Information Security

SCSE Information Security Lab is the place for students who are interested in computer and network security. In this lab, students work, learn, and research together on a host of security domains like web security, network security, software security, reverse engineering, social engineering, cryptography, etc. Every year, students have the chance to participate in many security competitions in the form of CTF (Capture the flag games) in order to hone their skills and gain more experience. Join this lab, students will gain knowledge and experience to prepare themself for future industrial work. Students from all majors (CS, IT, DS) are welcome to join the lab.

Contact: Dr. Le Hai Duong (lhduong@gmail.com / lhduong@hcmiu.edu.vn)

Multisensory Interaction Design & Intelligent Systems Lab (MIDIS Lab)

The Multisensory Interaction Design & Intelligent Systems Lab (MIDIS Lab) is a dynamic environment for people passionate about multisensory interaction design, intelligent systems, and human-computer interaction. In this lab, students work with experienced researchers to explore and research interdisciplinary domains, such as artificial intelligence, data mining, machine learning, deep learning, the Internet of Things (IoT), and user experience (UX) design. The lab provides opportunities for hands-on experience through innovative projects involving designing intelligent systems and creating interactive experiences, allowing students to develop practical skills in design and technology. Each year, students are encouraged to participate in research competitions, Eureka, and conferences to showcase their projects and gain valuable industry insights. By joining this lab, students will build a strong foundation in interaction design and intelligent systems, preparing them for successful careers in industry and academia. Students from all majors (CS, IT, DS) are welcome to join the lab.

Contact:

- Assoc. Prof. Nguyen Thi Thuy Loan (nttloan@hcmiu.edu.vn)
- Dr. Nguyen Thi Thanh Sang (nttsang@hcmiu.edu.vn)
- Dr. Ly Tu Nga (ltnga@hcmiu.edu.vn)
- Dr. Vi Chi Thanh (vcthanh@hcmiu.edu.vn)

Software Engineering and Empirical Data Science (SEEDS)

This lab includes two clubs: Software Engineering and Empirical Data Science.

Software Engineering (SE) Club is a club for software engineering and technology enthusiasts.

New technologies like DevOps, Blockchain, and recently MLOps evolve rapidly. It is exciting and challenging at the same time; no single developer can work alone and master them. We need to work together.

Therefore, the goal of the Software Engineering club is to provide a place, a discussion forum for students to learn and practice different software engineering technologies by solving practical problems.

Members of the club could join different competitions each year like Hackaton and Startup contests or could join projects to build useful softwares for our school and our society.

Besides, the Empirical Data Science (EDS) Club is a joint club guiding students on the skills of data analysis and data mining along with statistical methods and modern machine learning methods, such as deep learning, sequence mining, etc.

Data science solutions: Recommender systems, Search engines, Data mining, etc.

By joining the lab of SEEDS, students can learn the skills of research and developing software applications in interesting fields.

Contact:

- SE: Dr. Tran Thanh Tung (tttung@hcmiu.edu.vn)
- EDS: Dr. Nguyen Thi Thanh Sang (nttsang@hcmiu.edu.vn)

Website: https://it.hcmiu.edu.vn/seeds-lab/

VII. Academic Procedures

Scholarship

Entrance Scholarship

Students who received the entrance scholarship will keep their scholarships for the next semester if they meet the requirements scholarship:

- No course is failed in the semester (includes physical training courses and military courses)
- Semester GPA ≥ 70

Encouragement Scholarship

Each semester, top students with the highest GPA will receive a scholarship from the IU.

The minimum requirements are:

- Register at least 12 credits/semester (fall and spring semester) and 6 credits (summer semester)
- Complete the Academic English 1 (AE1).
- No course is failed in that semester (includes physical training courses and military courses)
- Semester GPA ≥ 70

Number and Value of scholarship:

- Spring and Fall semester: 40 scholarships with the value is 600 USD/ scholarship
- Summer semester: 20 scholarships with the value is 300 USD/ scholarship

Specialization Selection

After **completing the first year** of the program, students in the **Information Technology program** are allowed to choose their specializations. Specialization is the research area that students are interested in and wish to continue with for the final thesis. School of Computer Science and Engineering currently offers two specializations:

- Network Engineering
- Computer Engineering

Once specialization is chosen, students have to take the required courses for each specialization, relevant elective courses, and final thesis

Contact: Academic Advisor

Course Registration

From the *second year*, students have to do the course registration in which you select the courses in the curriculum that are suitable for you.

- **Process**
  - *Preparation*
    - The registration time is informed by the Office of Academic Affairs (via Edusoftweb) and the School of Computer Science and Engineering.
    - Make your own decision on the course selection.
  - *In registration time*
    - Course registration can be completed online by using the university link https://hcmiu.edu.vn/edusoftweb/ (username and password will be created by the university)
    - In the fall and spring semesters, students have to register from a *minimum of 14 credits* (standard) to a *maximum of 24 credits* in one semester, except for the final semester (in the 4th year). In the summer semester, the maximum number of credits is 12.
    - The subject registration must be approved by the academic advisors.
  - *In the add/drop week: The first week* of the semester is the add/drop week. Students can add new courses or drop courses during this time.
- **Contact:** Academic supervisors and secretaries

Internship

Students will choose to register for an internship, particularly for engineering students, before the academic year when they aim to apply for their thesis. The internship program is designed to:

- Develop skills in the application of theory to practical work situations;
- Develop skills and techniques directly applicable to their careers;
- Provide students the opportunity to get involved with industry before graduation.

Internship duration is based on the program of study:

- For the Bachelor of Science program: 150 academic hours.
- For the Engineering program: 350 academic hours.

Note: 1 academic hour is equivalent to 50 minutes.

Students can register for an internship either in the summer or during the main semester, with the option to work full-time or part-time.

Contact: Academic advisors.

English Certificate for Graduation

IELTS	TOEFL iBT	TOEIC	Cambridge Exam	BEC	BULATS
5.5	61	600 (Listening+Reading) 270 (Speaking +Writing)	First FCE	Business Vantage	

Pre-thesis and Thesis

- Pre-thesis: Students at final year can register for the pre-thesis
- Thesis: Any student who wants to register for the thesis must meet the following conditions:
  - Accumulate successfully at least 90% of the total credits:
    - Data Science: 107 credits
    - Computer Science: 108 credits
    - Information Technology:
      - Network Engineering: 126 credits
      - Computer Engineering: 126 credits
  - English Certificate
- **Contact:** Supervisor

Request for the Grade Appeal

In the case that students want to review the examination score, student send the request to ***the Office of Undergraduate Academic Affairs***

Request for the I-grade

- **Process**
  - In the case that students are unable to take the ***final examination***, students can contact the Office of Undergraduate Academic Affairs to request the I-grade.
  - After completing the procedure, students can retake the exam in the next semester.
- **Contact:** the Office of Undergraduate Academic Affairs

Student Email and Blackboard

- **Student email**: International University collaborates with Microsoft to provide students with free email service. Please visit http://mail.office365.com and log in using the following credentials:

  Email address: <Student ID.student.hcmiu.edu.vn>

  Password: <Provided by Center of Information Services>

We highly recommend you use this email account when contacting our university.

- **Blackboard**: Students will use Blackboard during your study (https://blackboard.hcmiu.edu.vn) :

  User name: <Student ID>

  Password :<Provided by Center of Information Services>

- If you have any problems related to the email or Blackboard, please send the request to ***the Center for Information Services*** via the link:

  https://cis.hcmiu.edu.vn/gui-yeu-cau

Request for the Transcript

Depend on the purpose of the transcript, there are two procedures:

- In case you need the transcript to apply for a part-time job, internship position, or scholarship...the transcript must be signed by the University. You can get this kind of transcript by contacting the **Office of *Undergraduate* Academic Affair.**

- If you only need the transcript for your parents, unofficial references, keeping track of your study. You may ask the secretary at the school office (or just view your transcript on EdusoftWeb).

Request for Temporary Leave/Leave and Continuing Study

- **Temporary leave and leave**
  - Students get the form at the Office of the Undergraduate Academic Affairs
  - Students fill the form and submit it at the School of Computer Science and Engineering
  - After getting the acceptance from School of Computer Science and Engineering, students receive the form and submit it to the Office of the Undergraduate Academic Affairs
  - **Contact:** The Office of Undergraduate Academic Affairs and secretaries

❖ **Continuing study:** When students want to continue study after temporary leave, students contact the ***secretary*** for making the request

Academic Probation

Any student who encounters one of the following issues will be taken into consideration for academic matters:

- Insufficient credits as required by the specialization in one semester
- The cumulative GPA < 35
- Two consecutive cumulative GPAs < 50

The decision of admonishment will be informed to the students. Those students must contact the ***secretary.***

Academic Suspension

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

- The time limit for the study is overdue
- Drop out of university more than one semester without the approval of IU
- Have been admonished more than 2 times
- Not register for any course for each semester
- Have not paid the tuition fees on time

The decision of admonishment will be informed to the students. Those students must contact the ***secretary***.

Request for the Military Service Exemption/ Personal Income Tax Deduction

❖ Process:

- Students visit the link: https://it.hcmiu.edu.vn / Tìm hiểu/ Mẫu giấy chứng nhận sinh viên, and follow the instruction.
  - *Note: Please choose the Vietnamese language when visiting this link to get the form.*

❖ After one week, you can get your form at the department office (A1.610).

❖ During the online learning, your form will be sent to your email (pdf file).

- *Contact*: Secretaries

VIII. Career and job opportunities

Career Services

IU Job Hub

Homepage: https://iujobhub.com/

IU Job Hub specialized in job searching on the Internet tallying with International University students. We would like to create a connection among current students, alumni, and enterprises. The students can search for job vacancies through the Job Hub. The employers can become known to the best students by posting a vacancy on IU Job Hub. We will provide the professional tool to search for your ideal job according to various categories.

Enterprise Activities

We have built up extensive relationships with enterprises through a variety of enterprise activities organized within the year. In this long-term program, we would like to introduce the working culture of different enterprises, various recruiting programs of well-known companies, many external scholarships for IU students, and field trips.

IU Job Fair

With the aim of introducing various career opportunities to the entire IU population, the big event "IU Job Fair" is organized annually in the middle of the year with participants from 20 enterprises and hundreds of job vacancies. This is a great chance for students to scan job vacancies and find the ideal job on a festive day. On the other hand, the enterprises have a good opportunity to choose some of the best students in our university.

Job Opportunities

Bachelors of Computer Science can participate in analysis, design, and development of software and information systems in professional software companies such as DXC, FSOFT, IBM, TMA Solutions, TPS Solutions, Robert Bosch, Microsoft...or government agencies, research institutes, science and technology institutes.

Bachelors of Networking Engineering can design and administer computer networks and information systems in enterprises, banks, domestic and foreign securities centers such as HSBC, BIDV, Viettel... Bachelors of Computer Engineering are capable of participating in activities in companies specialized in the field of microprocessors, microcontrollers, IC design, embedded software, automatic control devices and robots such as Intel, Renesas, Viettel, FPT...

Bachelors of Data Science can work in the analysis, design, and development of intelligent data mining software for businesses, government agencies, research institutes, or software development companies. such as DXC, FSOFT, IBM, TMA Solutions, TPS Solutions, Robert Bosch, Microsoft...or operating in different fields related to data analysis, mining, and processing.

Master Program

The IU's Master of Information Technology Management (MITM) degree is a program designed primarily for working professionals who seek a hands-on, laboratory-based program to broaden and deepen their knowledge of new and emerging information technologies, the application and integration of these technologies, and the administrative practices used in the effective management of these technologies. Delivered in English and designed on credit basis, the program's curriculum reflects the latest trend in postgraduate IT education. The program combines lectures, case studies, team projects, and research studies while training materials are selected among the latest textbooks used at leading IT schools in the world.

Designed on credit basis, the MITM program of International University takes approximately one and a half-year. The program provides students with advanced knowledge on information technology and information systems, and management skills of these disciplines. There are two methods of study: Coursework and Research.

More information can be reached at:
https://it.hcmiu.edu.vn/master-of-engineering-in-information-technology-management/

IX. Important contact information

Academic Advisors (For intake 2024)

- IU PROGRAM:
  - Computer Science: Dr. Le Thi Ngoc Hanh (ltnhanh@hcmiu.edu.vn)
  - Information Technology: Dr. Ho Long Van (hlvan@hcmiu.edu.vn)
  - Data Science: Msc. Thai Trung Tin (tttin@hcmiu.edu.vn)
- TWINNING PROGRAM:
  Dr. Nguyen Trung Ky(ntky@hcmiu.edu.vn)

Offices

School of Computer Science and Engineering Room: A1.610 Telephone: (028) 37244270 ext. 3232 Email: cse@student.hcmiu.edu.vn Website: https://it.hcmiu.edu.vn Facebook: https://www.facebook.com/groups/HCMIU.CSE	**Office of Academic Affairs** Room: O2.708 Telephone: (028) 37244270 ext: 3777, 3229 Website: https://ouaa.hcmiu.edu.vn
CSE-Youth Student Unions Room: A1.612 Email: ityouthunion@iuyouth.edu.vn Facebook: https://www.facebook.com/cseiu.info	**Office of Financial and Planning** Room: O2.701 Telephone: (028) 37244270 ext: 3420, 3311
Office of Student Affairs Room: O1. 105 Telephone: (028) 37244270 ext. 3334, 3826 Website: http://oss.hcmiu.edu.vn	**Office of Graduate Affairs** Room: O2.609 Telephone: (028) 37244270 ext: 3120
Center for Information Services Room: O1.312 Telephone: (028) 37244270 ext. 3366, 3367, 3377 Website: https://cis.hcmiu.edu.vn	**University Clinic** Room: A2.310
IU Library Telephone: (028) 37244270 ext. 3241 Website: https://library.hcmiu.edu.vn/	**IU Canteen** Telephone: (028) 37244270 ext. 3250, 3251 Website: https://canteen.hcmiu.edu.vn