MINISTRY OF EDUCATION AND TRAINING

QUY NHON UNIVERSITY

UNDERGRADUATE PROGRAM

Level of education:	**Bachelor's Degree**
Major:	**Software Engineering**
Specicality:	**Software Engineering**
Major code:	**7480103**
Type of education:	**Full-time**

Gia Lai, 2025

MINISTRY OF EDUCATION AND TRAINING
QUY NHON UNIVERSITY

SOCIALIST REPUBLIC OF VIET NAM
Independence - Freedom - Happiness

UNDERGRADUATE PROGRAM

(Issued in conjunction with Decision No. 2094/QĐ-ĐHQN dated July 22, 2025 by the Rector of Quy Nhon University)

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Major:	**Software Engineering**
Specicality:	**Software Engineering**
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1. PROGRAM OBJECTIVES (POs)

1.1. General objectives

The Software Engineering program aims to cultivate high-quality human resources characterized by political integrity and professional ethics. Graduates shall possess a robust foundation in computer science and software engineering, enabling them to design, construct, implement, manage, and maintain medium-to-large-scale software systems.

Upon graduation, students shall be capable of:

- Operating effectively within modern software technology environments at domestic and international enterprises.
- Engaging in research and development or pursuing advanced academic degrees in Information Technology and Software Engineering.
- Adapting rapidly to technological shifts through self-study, independent research, and innovation.
- Meeting the demands of the labor market and society during the era of digital transformation and the Fourth Industrial Revolution (Industry 4.0).

1.2. Specific objectives

The program provides learners with:

1) PO1: The ability to apply specialized knowledge to design, develop, implement, and maintain high-quality software systems that meet technical, user, and market requirements.
2) PO2: Professionalism in technology organizations, businesses, or academic and research environments, serving as software engineers, project managers, software architects, testers, or system analysts.

3) PO3: Competencies in innovation, digital skills, entrepreneurial mindset, and lifelong self-learning.
4) PO4: Professional ethics, responsibility, and a sense of community service.
5) PO5: Critical and creative thinking skills to analyze, propose, and implement innovative technological solutions for practical problems.

2. EMPLOYMENT OPPORTUNITIES AND FURTHER STUDY PROSPECTS

Upon completion of the program, graduates are qualified to assume the following professional roles and pursue advanced academic pathways:

Professional career trajectories

- Information technology and digital transformation enterprises: Graduates may serve as Software Developers/Engineers, Quality Assurance (QA) Engineers, DevOps Engineers, Embedded Software Engineers, System Integration Engineers, Business Analysts (BA), Software Architects, Information Security Specialists, and Software Project Managers.
- Public sector, financial institutions, and conglomerates: Opportunities include roles as IT Specialists, Internal Application Developers, and Consultants for enterprise management solutions (e.g., ERP, CRM).
- Global and multinational environments: Qualifications extend to roles within international organizations, including global operations, offshore development, software outsourcing, and remote positions for international firms.
- Technological entrepreneurship (Startups): Graduates possess the capacity to co-found ventures, develop proprietary software products, or serve as Technical Leads within innovative startup ecosystems.

Advanced academic and professional development

- Postgraduate education: Eligibility for Master's and Doctoral programs in specializations such as Computer Science, Software Engineering, Artificial Intelligence, Big Data, Information Security, and Technology & Innovation Management.
- Research and specialized training: Engagement in international academic partnerships, research fellowships, or intensive training programs at domestic and foreign institutions, as well as the attainment of advanced professional certifications.

3. PROGRAM DURATION AND TOTAL CREDITS

3.1 Program duration: 4.5 years

3.2 Total credits: 150 credits (*excluding Physical Education and National Defense - Security Education*)

No.	Knowledge block	Credits	
		Compulsory	**Elective**
1	***General knowledge***	***24***	***0***
1.1	Political Science and Law	13	0
1.2	Foreign Languages	7	0
1.3	Social Sciences / Mathematics, Natural Sciences - Environment, Management Science	4	0
2	***Professional knowledge***	***111***	***15***
2.1	Fundamental knowledge	55	0
2.2	Specialized knowledge	35	15
2.3	Supplementary knowledge	5	0
2.4	Internship	8	0
2.5	Graduation project	8	0
	Total:	**135**	**15**
		150	

4. ADMISSION REQUIREMENTS

Applicants must have graduated from high school or possess an equivalent qualification in accordance with current admission regulations. Candidates should demonstrate a profound interest in their chosen field, maintain good health, and exhibit strong political integrity, ethical character, and a high sense of social responsibility. Furthermore, applicants are expected to have a solid command of high school knowledge, the capacity for independent work, creative thinking, and scientific research aptitude. Adaptability to the evolving technological landscape and global digital transformation is also a fundamental requirement.

5. TRAINING METHOD, GRADUATION REQUIREMENTS

5.1 Training method: Full-time

5.2 Graduation requirements:

- *Academic qualifications*: Candidates must successfully accumulate the required number of modules and the total workload as specified in the educational program. A minimum cumulative Grade Point Average (GPA) of 2.00 for the entire course of study is mandatory.
- *Program learning outcomes*: Candidates must satisfy all defined Program Learning Outcomes (PLOs).
- *Certifications and proficiency*: Candidates must possess valid certificates in Physical Education and National Defense - Security Education. Additionally,

they must meet the foreign language proficiency standards as prescribed by the University's regulations.

6. TEACHING METHODS AND LEARNING ASSESSMENT

6.1. Teaching methods

The pedagogical approaches employed in the Software Engineering program encompass a diverse range of teaching and learning activities. These methods are designed not only to equip students with core professional expertise and social knowledge but also to develop the capacity to apply this knowledge within collaborative environments. Consequently, students cultivate essential interpersonal skills such as communication, negotiation, and teamwork. Specifically:

– *Direct Instruction:*

Direct instruction is a pedagogical methodology in which information is conveyed directly to learners through instructor presentations and student observation. This approach is typically applied in traditional classroom settings and achieves optimal effectiveness when instructors need to impart foundational concepts or demonstrate new skills. The primary teaching methods include: Lectures and Guest Lectures.

– *Indirect Instruction:*

Indirect instruction is a learner-centered approach that facilitates the learning process without overt instructional activities by the educator. In this process, the instructor does not directly transmit the lesson content; instead, learners are encouraged to participate actively, employing critical thinking skills to resolve complex problems. The primary teaching methods include: Case-Based Learning, Problem-Based Learning, and Inquiry-Based Learning.

– *Experiential Learning:*

Experiential learning is a methodology where learners acquire knowledge and skills through practical experience, field observation, and sensory perception—essentially "learning by doing." The primary teaching methods include: Experiential Learning activities, Internships, Field Trips, Simulations, and Practical Exercises.

– *Interactive Instruction:*

Interactive instruction involves a combination of classroom activities where the instructor poses problems or open-ended questions, requiring learners to engage in discussion and debate. In the role of a facilitator, the instructor supports students step-by-step in problem-solving to achieve learning objectives. Learners may acquire knowledge from peers or instructors to develop social skills, critical thinking, communication, and negotiation skills in decision-making. The primary teaching methods include: Interactive Lectures, e-Learning, and Group Exercises.

– *Self-Directed Study:*

Self-directed study refers to all learning activities conducted by individual learners with minimal to no direct supervision from an instructor. This process enables learners to navigate their own learning paths based on personal experience, demonstrating autonomy in managing academic activities through assignments, projects, or problems suggested by the instructor. The primary strategies in this category include: Work Assignments and Self-Directed Learning.

6.2. Learning assessment

*** Grading scale:**

A 10-point scale is applied to all forms of assessment within the modules.

*** Assessment formats, criteria, and weighting:**

a) Theoretical modules:

– Assessment Formats: Written examinations (essays), oral examinations, practical tests, and term papers/projects.

– Assessment Criteria: Evaluations are conducted based on the official marking schemes and answer keys of the examination papers.

– Weighting: Scoring weights are determined as proposed in the detailed course syllabus, with the final examination accounting for a minimum of 50%. (Common weighting configurations in the educational program include Midterm-Final ratios of 30%-70%, 40%-60%, and 50%-50%).

b) Practical modules:

Students are required to attend all laboratory and practical sessions. The final grade for practical modules is the arithmetic mean of all practical exercise scores during the semester, rounded to one decimal place.

c) Course projects, introductory internships, and graduation internships:

The final evaluation consists of 50% formative assessment (process grade) and 50% oral examination.

d) Graduation thesis:

The assessment is conducted in accordance with the Undergraduate Training Regulations issued under Decision No. 1487/QĐ-ĐHQN dated July 1, 2021, by Quy Nhon University.

*** Assessment methods:**

The assessment framework utilized in the Software Engineering program is categorized into two primary types: Formative Assessment and Summative Assessment.

7. PROGRAM CONTENT

No.	Course Code	Course Name	Semester	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practice	Discussion						
I. General Knowledge				**24**									
Compulsory													
I.1. Political Science and Law				**13**									
1	1130299	Marxist-Leninist Philosophy	1	3	40		10			85		FPLM	
2	1130300	Marxist-Leninist Political Economy	2	2	27		6			57		FPLM	
3	1130301	Scientific Socialism	3	2	27		6			57		FPLM	
4	1130302	History of the Communist Party of Vietnam	4	2	27		6			57		FPLM	
5	1130091	Ho Chi Minh Ideology	5	2	27		6			57		FPLM	
6	1130049	Fundamentals of Law	2	2	27		6			57		FPLM	
I.2. Physical Education and National Defense - Security Education				**12**									
I.2.1. Physical Education: ***S****elect 1 of the following 7 Physical Education modules.*				3									
7	1120172	Physical Education 2 (Football 2)	1	1	4			26		21		FPE	

No.	Course Code	Course Name	Semester	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practice	Discussion						
8	1120173	Physical Education 3 (Football 3)	2	1	4			26		21	1120172	FPE	
9	1120174	Physical Education 1 (Volleyball 1)	3	1	4			26		21	1120173	FPE	
10	1120175	Physical Education 2 (Volleyball 2)	1	1	4			26		21		FPE	
11	1120176	Physical Education 3 (Volleyball 3)	2	1	4			26		21	1120175	FPE	
12	1120177	Physical Education 1 (Basketball 1)	3	1	4			26		21	1120176	FPE	
13	1120178	Physical Education 2 (Basketball 2)	1	1	4			26		21		FPE	
14	1120179	Physical Education 3 (Basketball 3)	2	1	4			26		21	1120178	FPE	
15	1120180	Physical Education 1 (Badminton 1)	3	1	4			26		21	1120179	FPE	
16	1120181	Physical Education 2 (Badminton 2)	1	1	4			26		21		FPE	
17	1120182	Physical Education 3 (Badminton 3)	2	1	4			26		21	1120181	FPE	
18	1120183	Physical Education 1 (Vietnamese Traditional Martial Arts 1)	3	1	4			26		21	1120182	FPE	
19	1120184	Physical Education 2 (Vietnamese Traditional Martial Arts 2)	1	1	4			26		21		FPE	
20	1120185	Physical Education 3 (Vietnamese Traditional Martial Arts 3)	2	1	4			26		21	1120184	FPE	

No.	Course Code	Course Name	Semester	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practice	Discussion						
21	1120186	Physical Education 1 (Taekwondo 1)	3	1	4			26		21	1120185	FPE	
22	1120187	Physical Education 2 (Taekwondo 2)	1	1	4			26		21		FPE	
23	1120188	Physical Education 3 (Taekwondo 3)	2	1	4			26		21	1120187	FPE	
24	1120189	Physical Education 1 (Karatedo 1)	3	1	4			26		21	1120188	FPE	
25	1120190	Physical Education 2 (Karatedo 2)	1	1	4			26		21		FPE	
26	1120191	Physical Education 3 (Karatedo 3)	2	1	4			26		21	1120190	FPE	
27	1120192	Physical Education 2 (Football 2)	3	1	4			26		21	1120191	FPE	
I.2.2. National Defense - Security Education				9									
28	1120168	National Defense and Security Education 1	2	3	37		8			82		NDSE Center	
29	1120169	National Defense and Security Education 2	2	2	22		8			52		NDSE Center	
30	1120170	National Defense and Security Education 3	2	2	14			16		44		NDSE Center	
31	1120171	National Defense and Security Education 4	2	2	4			56		64		NDSE Center	

No.	Course Code	Course Name	Semester	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practice	Discussion						
I.3. Foreign Languages				**7**									
32	1090061	English 1	1	3	30	15				90		FFL	
33	1090166	English 2	2	4	40	20				120	1090061	FFL	
I.4. Social Sciences				**4**									
34	1150422	Entrepreneurship	5	2						0		FBA	
35	2030003	Communication Skills	2	2						0		FSSH	
II. Professional Knowledge				**132**									
II.1. Fundamental Knowledge				**55**									
36	1010245	Calculus	1	3	33	12				90		FMS	
37	1010038	Linear Algebra	1	3	33	12				90		FMS	
38	1010126	Probability and Statistics	5	3	33	12				90	1010245	FMS	
39	1050075	Discrete Mathematics	3	3	33	12				90		FIT	
40	1050021	Computer Architecture	4	3	40	0		10		90		FIT	

No.	Course Code	Course Name	Semester	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practice	Discussion						
41	1050074	Logic for Computer Science	1	2	24	6				60		FIT	
42	1050418	Fundamental Programming	2	3	20	10	0	30		90		FIT	
43	1050192	Introduction to Software Engineering and Career Orientation	1	1	30	0				60		FIT	
44	1050016	Database Management Systems	2	3	20	10		30		80		FIT	
45	1050197	Computer Networks	5	3	30			30		90		FIT	
46	1050003	Data Structures and Algorithms	3	4	40			40		100	1050418	FIT	
47	1050228	Database Fundamentals	3	3	35	10				90		FIT	
48	1050024	Object-Oriented Programming	3	3	20	10		30		90	1050418 1050016	FIT	
49	1050220	Artificial Intelligence	8	3	35	5		10		85		FIT	
50	1050202	Information Systems Analysis and Design	4	3	22	8	10	20				FIT	
51	1050201	Software Engineering	4	3	33	6		12		80		FIT	
52	1050194	Desktop Application Development	4	3	20	10		30		75	1050418 1050016	FIT	
53	1050200	Web Application Development	4	3	30			30		75	1050418	FIT	

No.	Course Code	Course Name	Semester	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practice	Discussion						
											1050016		
54	1050196	Operating Systems	5	3	40			10		90	1050021	FIT	
II.2. Specialized knowledge				**50**									
II.2.1. Compulsory				35									
55	1050264	Software Analysis and Design	5	3	35			20				FIT	
56	1050206	Mobile Application Development	6	3	22	8	0	30				FIT	
57	1050205	Software Quality Assurance	6	3	30	0	0	30			1050418 1050201	FIT	
58	1050216	Software Design Patterns	6	3	30			30			1050024 1050201	FIT	
59	1050419	Object-Oriented Software Development	6	2	20			20			1050024 1050020 1050003 1050016 1050228	FIT	
60	1050265	Big Data Analytics	6	3	30			30			1050016	FIT	
61	1050426	Multi-platform Software Development	7	3	20			50				FIT	

No.	Course Code	Course Name	Semester	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practice	Discussion						
62	1050213	Contemporary Issues in Software Engineering	7	2	20			20				FIT	
63	1050267	Web Technologies	7	3	30			30				FIT	
64	1050420	Service-Oriented Architecture	7	2	15	3		24				FIT	
65	1050222	Machine Learning and Applications	8	3	40			10				FIT	
66	1050423	Practice in Software Engineering Project Development	8	3	15			60			1050003 1050016 1050201 1050024 1050020 1050220	FIT	
67	1050221	Cloud Computing	8	3	30			30			1050418 1050016 1050197 1050200	FIT	
II.2.1. Elective				15						0			
68	1050263	.NET Technologies	5	3	30			30				FIT	
69	1050262	Java Technologies	5	3	30			30			1050024 1050020	FIT	

No.	Course Code	Course Name	Semester	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practice	Discussion						
											1050003 1050016 1050201		
70	1050211	Open Source Software Development	6	3	30			30				FIT	
71	1050207	Software Project Management	6	3	30			30			1050201	FIT	
72	1050167	Game Development	7	3	30			30			1050194	FIT	
73	1050266	Embedded Systems Programming	7	3	30			30			1050024	FIT	
74	1050268	Network Programming	8	3	30			30			1050418	FIT	
75	1050270	Data Mining	8	3	25	5		30				FIT	
76	1050271	Information System Security and Safety	8	3	30		10	20				FIT	
77	1050269	Artificial Intelligence Programming	8	3	30			30				FIT	
78	1050424	Software Security Engineering	8	3								FIT	
II.3. Supplementary Knowledge				**13**									
II.3.1. Professional Training				**5**									
79	1050124	Computer Practice	1	1				30		15		FIT	

No.	Course Code	Course Name	Semester	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practice	Discussion						
80	1050277	English for Information Technology	3	2	20	5	10			55	1090166	FIT	
81	1050136	Teamwork Practice	5	2							1050016 1050228 1050194 1050020	FIT	
II.3.2. Internships				**8**									
82	1050421	Introductory Internship	4	2					Internship		1050192	FIT	
83	1050422	Graduation Internship	9	6					Internship		1050003 1050024 1050024 1050194 1050194 1050228 1090277 1050261	FIT	
II.4. Graduation Project				**8**									
84	1050331	Graduation Project	9	8					Project			FIT	
Total:				**150**									

** Note: The list of faculties responsible for course management is described as follows:*

Acronym	Faculty Name
FPLM	Faculty of Political Science-Law and State Management
FPE	Faculty of Physical Education
FBA	Faculty of Finance, Banking, and Business Administration
FSSH	Faculty of Social Sciences and Humanities
FMS	Faculty of Mathematics and Statistics
FIT	Faculty of Information Technology
FFL	Faculty of Foreign Languages
NDSE Center	National Defence and Security Education Center

8. TENTATIVE TEACHING PLAN

No.	Course Code	Course Name	Number of credits	Knowledge block	Course Category			Learning Activities						Enrollment Conditions		Managing Faculty
					Compulsory	Restricted Elective	Free Elective	Theory	Practice	Discussion	Lab	Others	Self-study	Prerequisite	Previous Course	
Semester 1																
1	1090061	English 1	3	1	X			30	15	0	0		90			FFL
2	1130299	Marxist-Leninist Philosophy	3	1	X			40	0	10	0		85			FPLM

No.	Course Code	Course Name	Number of credits	Knowledge block	Course Category			Learning Activities						Enrollment Conditions		Managing Faculty
					Compulsory	Restricted Elective	Free Elective	Theory	Practice	Discussion	Lab	Others	Self-study	Prerequisite	Previous Course	
3	1010038	Linear Algebra	3	2	X			33	12	0	0		90			FMS
4	1010245	Calculus	3	2	X			33	12	0	0		90			FMS
5	1050192	Introduction to Software Engineering and Career Orientation	1	2	X			13	0	4	0		30			FIT
6	1050124	Computer Practice	1	4	X			0	0	0	30		30			FIT
7	1050074	Logic for Computer Science	2	2	X			20	10	0	30		90			FIT
Semester 2																
1	1130300	Marxist-Leninist Political Economy	2	1	X			27	0	6	0		57			FPLM
2	1130049	Fundamentals of Law	2	1	X			27	0	6	0		57			FPLM
3	1090166	English 2	4	1	X			40	20	0	0		120		1090061	FFL
4	2030003	Communication Skills	2	1	X			27	0	6	0		57			FSSH
5	1050418	Fundamental Programming	3	2	X			20	10	0	30		90			FIT
6	1050016	Database Management Systems	3	2	X			20	10	0	30		80			FIT

No.	Course Code	Course Name	Number of credits	Knowledge block	Course Category			Learning Activities						Enrollment Conditions		Managing Faculty
					Compulsory	Restricted Elective	Free Elective	Theory	Practice	Discussion	Lab	Others	Self-study	Prerequisite	Previous Course	
Semester 3																
1	1130301	Scientific Socialism	2	1	X			27	0	6	0		57			FPLM
2	1050277	English for Information Technology	2	4	X			20	5	10	0		80		1090166	FIT
3	1050003	Data Structures and Algorithms	4	2	X			22	8	0	30		80		1050418	FIT
4	1050075	Discrete Mathematics	3	2	X			33	12	0	0		90			FIT
5	1050228	Database Fundamentals	3	2	X			30	0	0	30		90			FIT
6	1050024	Object-Oriented Programming	3	2	X			20	10	0	30		80		1050418 1050016	FIT
Semester 4																
1	1130302	History of the Communist Party of Vietnam	2	1	X			27	0	6	0		57			FPLM
2	1050201	Software Engineering	3	2	X			33	6	0	12		84			FIT
3	1050021	Computer Architecture	3	2	X			30	0	0	30		90			FIT
4	1050202	Information Systems Analysis and Design	3	2	X			24	6	0	0		60			FIT

No.	Course Code	Course Name	Number of credits	Knowledge block	Course Category			Learning Activities						Enrollment Conditions		Managing Faculty
					Compulsory	Restricted Elective	Free Elective	Theory	Practice	Discussion	Lab	Others	Self-study	Prerequisite	Previous Course	
5	1050421	Introductory Internship	2	5	X			0	0	0	30	X	10		1050192	FIT
6	1050194	Desktop Application Development	3	2	X			20	10	0	30		75		1050418 1050016	FIT
7	1050020	Web Application Development	3	2	X			30	0	0	30		75		1050418 1050016	FIT
Semester 5																
1	1130091	Ho Chi Minh Ideology	2	1	X			27	0	6	0		57			FPLM
2	1150422	Entrepreneurship	2	4	X			20	10	0	0		60			FBA
3	1050037	Operating System Principles	3	2	X			40	0	0	10		90			FIT
4	1050197	Computer Networks	3	2	X			35	10	0	0		90			FIT
5	1010126	Probability and Statistics	3	2	X			33	12	0	0		90		1010245	FMS
6	1050136	Teamwork Practice	2	4	X			0	0	0	60		75		1050016 1050228 1050194 1050020	FIT
Select 1 of the 2 following courses (3 credits)																

No.	Course Code	Course Name	Number of credits	Knowledge block	Course Category			Learning Activities						Enrollment Conditions		Managing Faculty
					Compulsory	Restricted Elective	Free Elective	Theory	Practice	Discussion	Lab	Others	Self-study	Prerequisite	Previous Course	
7	1050262	Java Technologies	3	3		X		30	0	0	30		75		1050024 1050020 1050003 1050016 1050201	FIT
8	1050263	.NET Technologies	3	3		X		30	0	0	30		75			FIT
Semester 6																
1	1050216	Software Design Patterns	3	3	X			30	10	10	30		75		1050024 1050201	FIT
2	1050205	Software Quality Assurance	3	3	X			35	0	0	20		80		1050418 1050201	FIT
3	1050206	Mobile Application Development	3	3	X			30	0	0	30		75			FIT
4	1050419	Object-Oriented Software Development	2	3	x			15	0	0	30		75		1050024 1050020 1050003 1050016 1050228	FIT
5	1050265	Big Data Analytics	3	3	X			30	0	0	30		75		1050016	FIT
Select 1 of the 2 following courses (3 credits)																

No.	Course Code	Course Name	Number of credits	Knowledge block	Course Category			Learning Activities						Enrollment Conditions		Managing Faculty
					Compulsory	Restricted Elective	Free Elective	Theory	Practice	Discussion	Lab	Others	Self-study	Prerequisite	Previous Course	
6	1050207	Software Project Management	3	3		X		30	0	0	30		75		1050201	FIT
7	1050211	Open Source Software Development	3	3		X		30	0	0	30		75			FIT
Semester 7																
1	1050267	Web Technologies	3	3	X			30	100	5	30		75			FIT
2	1050213	Contemporary Issues in Software Engineering	2	3	X			20	0	0	30		50			FIT
3	1050420	Service-Oriented Architecture	2	3	X			15	3	0	24		80			FIT
4	1050220	Artificial Intelligence	3	3	X			35	0	0	0		90			FIT
5	1050426	Multi-platform Software Development	3	3	X			20	0	0	50		75			FIT
Select 1 of the 2 following courses (3 credits)																
6	1050167	Game Development	3	3		X		30	0	0	30				1050194	FIT
7	1050266	Embedded Systems Programming	3	3		X		30	0	0	30				1050024	FIT
Semester 8																

No.	Course Code	Course Name	Number of credits	Knowledge block	Course Category			Learning Activities						Enrollment Conditions		Managing Faculty
					Compulsory	Restricted Elective	Free Elective	Theory	Practice	Discussion	Lab	Others	Self-study	Prerequisite	Previous Course	
1	1050221	Cloud Computing	3	3	X			30	0	0	30		90		1050418 1050016 1050197 1050200	FIT
2	1050222	Machine Learning and Applications	3	3	X			40	0	0	10		85			FIT
3	1050423	Practice in Software Engineering Project Development	2	3	X			0	0	0	60		75		1050003 1050016 1050201 1050024 1050020 1050220	FIT
4	1050424	Software Security Engineering	3	3		X		15	0	0	60		75			FIT
Select 2 of the 4 following courses																
5	1050270	Data Mining	3	3		X		35	0	0	20		80			FIT
6	1050268	Network Programming	3	3		X		30	0	0	30		75		1050418	FIT
7	1050271	Information System Security and Safety	3	3		X		30	0	10	20		90			FIT
8	1050269	Intelligent Software Development	3	3		X		30	0	0	30		75			FIT

No.	Course Code	Course Name	Number of credits	Knowledge block	Course Category			Learning Activities						Enrollment Conditions		Managing Faculty
					Compulsory	Restricted Elective	Free Elective	Theory	Practice	Discussion	Lab	Others	Self-study	Prerequisite	Previous Course	
Semester 9																
1	1050422	Graduation Internship	6	5		x						X			1050003 1050024 1050024 1050194 1050194 1050228	FIT
2	1050331	Graduation Project	8	5		X						X				FIT
		Total	**150**													

***** *Notes: Classification of academic components (knowledge blocks) is described as follows:*

Category	Knowledge block
1	General knowledge
2	Fundamental knowledge
3	Specialized knowledge
4	Supplementary knowledge
5	Graduation (Graduation Internship / Graduation Project)

9. GUIDELINES FOR PROGRAM IMPLEMENTATION

- This educational program is applicable to students enrolled in the Software Engineering major starting from the 2025 intake.
- The training process is governed by the prescribed curriculum design, educational objectives, target learners, human resource requirements, and specific pedagogical standards. Regarding elective modules, the Faculty shall provide academic consultancy to assist students in selecting appropriate courses, contingent upon contemporary developmental trends and societal demands.
- The Dean of the Faculty is responsible for the organization and oversight of the development of detailed course syllabi. This ensures that all educational objectives, core content, and academic requirements are fulfilled, while simultaneously addressing the needs of both learners and society.
- The educational program shall undergo formal review and updates at least once every five years to ensure alignment with the advancements in the field of Software Engineering and to remain consistent with socio-economic development requirements./.

Gia Lai, July 22, 2025

RECTOR

Assoc. Prof. Dr. Doan Duc Tung