

MINISTRY OF EDUCATION AND TRAINING
QUY NHON UNIVERSITY

UNDERGRADUATE PROGRAM

Level : **Undergraduate**
Major : **Informatics Teacher Education**
Program Code: **7140210**
Mode of study: **Full-time**

UNDERGRADUATE PROGRAM

(Issued in conjunction with Decision No.: 2094/QĐ-DHQN dated July , 22th, 2025

by the Rector of Quy Nhon University)

Level : **Undergraduate**
 Major : **Informatics Teacher Education**
 Program Code : **7140210**
 Mode of study : **Full-time**

1. PROGRAM OBJECTIVES (POs)

1.1. General Objectives

The Bachelor's program in Informatics Teacher Education aims to train graduates who possess good political qualities, ethics, and health; master fundamental sciences and educational sciences; have the skills to apply professional knowledge and pedagogical skills to solve problems in education, teaching informatics, and scientific research; have the ability to apply artificial intelligence in teaching and personalizing student learning; have the capacity for lifelong learning and quick adaptation to general education reforms; demonstrate professional responsibility and a sense of community service, meeting professional standards for teachers, socio-economic development requirements, national defense and security, and international integration.

1.2. Specific objectives

Graduates of the Informatics Teacher Education program are able to:

+ **PO1:** Demonstrate professional competence in education, teaching Informatics, and scientific research to meet the requirements of general education reform and international integration.

+ **PO2:** Demonstrate capacity for autonomous learning, critical thinking, digital competence, the ability to apply artificial intelligence in teaching, communication, and collaboration to adapt to the changing educational environment.

+ **PO3:** Exhibit professional ethics, teacher responsibility, a positive attitude, and community engagement.

2. JOB OPPORTUNITIES AND PROFESSIONAL DEVELOPMENT

Graduates of the Bachelor's program in Informatics Teacher Education are qualified to pursue a variety of career paths, including:

+ Teaching Informatics at general education schools (Primary, Secondary, High school), continuing education centers, vocational secondary schools, universities, colleges, and vocational institutions.

+ Working as researchers in universities and research institutes in the fields of Information Technology and educational sciences.

+ Capable of utilizing information technology to work in administrative organizations, enterprises, and educational and training institutions.

+ Taking on specific positions: programmer, program and data designer, database administrator, software tester for companies in the Information Technology or education sectors.

+ Pursuing postgraduate studies at the master's and doctoral levels locally and internationally in majors related to Information Technology, Informatics Teaching Methodology, and Educational Management.

3. LEARNING OUTCOMES

The program is designed to ensure that graduates of the Informatics Teacher Education program achieve the following learning outcomes:

Program Learning Outcomes (PLOs)	Performance Indicators (PIs)
PLO 1: Apply general education knowledge, foundational disciplinary knowledge, and sectoral knowledge to perform professional tasks.	PI 1.1: Identify general education knowledge, foundational disciplinary knowledge, and sectoral knowledge required to perform professional tasks.
	PI 1.2: Apply general education knowledge, foundational disciplinary knowledge, and sectoral knowledge to perform professional tasks.
PLO 2: Apply disciplinary knowledge and supplementary knowledge to develop educational plans and lesson plans for Informatics in schools.	PI 2.1: Identify disciplinary knowledge and supplementary knowledge to develop educational plans and lesson plans for Informatics.
	PI 2.2: Apply disciplinary knowledge and supplementary knowledge to develop educational plans and lesson plans for Informatics.
PLO 3: Apply disciplinary knowledge and supplementary knowledge to organize educational activities and Informatics teaching activities in schools.	PI 3.1: Synthesize disciplinary knowledge and supplementary knowledge to organize educational activities and Informatics teaching activities.
	PI 3.2: Control the process of organizing educational activities and Informatics teaching activities.

Program Learning Outcomes (PLOs)	Performance Indicators (PIs)
PLO 4: Apply disciplinary knowledge and supplementary knowledge to perform learner assessment and evaluation.	PI 4.1: Identify assessment methods and formats aligned with the competency- and character-based development orientation of learners.
	PI 4.2: Utilize assessment methods and formats aligned with the competency- and character-based development orientation of learners.
	PI 4.3: Assess students' learning processes and outcomes based on criteria aligned with competency and character development.
PLO 5: Apply relevant interdisciplinary knowledge and pedagogical communication skills in academic study and professional practice.	PI 5.1: Identify relevant interdisciplinary knowledge, communication skills, and pedagogical communication skills of teachers in schools.
	PI 5.2: Apply relevant interdisciplinary knowledge and pedagogical communication skills to enhance instructional effectiveness and foster collaborative relationships among the school, family, and society.
PLO 6: Conduct scientific research and apply critical thinking.	PI 6.1: Conduct scientific research to contribute to enhancing the effectiveness of learning and professional practice.
	PI 6.2: Apply critical thinking to foster learners' holistic development.
PLO 7: Apply disciplinary knowledge, programming skills, digital technologies, and artificial intelligence to address professional and pedagogical issues.	PI 7.1: Apply disciplinary knowledge and programming skills to exploit and utilize information technology applications, digital devices, and artificial intelligence in professional activities, teaching, and management.
	PI 7.2: Apply disciplinary knowledge and programming skills to develop computer-based applications and utilize modern technological solutions, models, and applications for professional development.

Program Learning Outcomes (PLOs)	Performance Indicators (PIs)
PLO 8: Demonstrate autonomy in learning and research, personal responsibility, and effective collaboration in academic and professional environments.	PI 8.1: Demonstrate autonomy in learning and research, along with personal responsibility, to proactively acquire knowledge, develop independent thinking, and construct effective learning strategies.
	PI 8.2: Demonstrate effective collaboration to enhance learning quality, support learners' holistic development, and contribute to the development of an educational environment that reflects the institution's distinctive culture.
PLO 9: Demonstrate professional ethics, teacher responsibility, and community engagement in contributing to holistic human development.	PI 9.1: Identify key issues related to teachers' professional ethics, professional responsibility, and community engagement.
	PI 9.2: Demonstrate professional ethics, professional responsibility, and active community engagement in order to guide learners' character formation, cultivate a positive learning environment, and contribute to holistic human development.

4. PROGRAM DURATION AND TOTAL ACADEMIC WORKLOAD

4.1. Program Duration: **04 years**

4.2. Total academic workload: **138 credits** (excluding 03 credits of Physical Education and 09 credits of National Defense and Security Education)

Program structure	Credits
General Education Knowledge	24
Professional Knowledge	114
- Fundamental knowledge	33
- Disciplinary Knowledge	41
- Supplementary Knowledge	34
- Bachelor thesis, Alternative courses	6
Total	138

5. ADMISSION REQUIREMENTS

Applicants wishing to apply for admission to the Informatics Teacher Education program must satisfy the following requirements:

- a. Have graduated from a Vietnamese upper secondary school (high school) or hold a foreign high school diploma recognized as equivalent.
- b. Hold an intermediate diploma in the same field of study and have fulfilled the required high school cultural knowledge volume in accordance with legal regulations.
- c. Meet health requirements for studying according to current regulations.
- d. Satisfy the admission threshold and other requirements for teacher education programs as specified in the *Regulations on University Admission and Admission to College Programs in Early Childhood Education* issued by the Ministry of Education and Training, as well as the *University Admission Regulations* of Quy Nhon University.

6. MODE OF STUDY AND GRADUATION REQUIREMENTS

6.1. Mode of study: Credit-based system

6.2. Graduation Requirements:

- *Academic Requirements:* Accumulate sufficient courses and total credits prescribed in the curriculum; obtain a minimum cumulative grade point average (CGPA) of 2.00 on a 4.0 scale and achieve all learning outcomes specified in the Informatics Teacher Education program.

- *Physical Education and National Defense and Security Education:* Complete all required Physical Education courses and obtain the National Defense and Security Education Certificate in accordance with regulations.

- *Foreign Language Requirement:* Meet the foreign language proficiency requirement in accordance with the current regulations of Quy Nhon University.

- *Conduct and Ethical Requirements:* At the time of graduation consideration, students must not be subject to criminal prosecution and must not be under disciplinary action at the level of suspension from study.

7. TEACHING METHODS AND LEARNING ASSESSMENT

7.1. Teaching methods

No.	Teaching Strategies	Teaching Methods
1	Direct Instruction: Direct instruction is a teaching process in which the instructor directly delivers information and fundamental knowledge to learners. In this approach, the teacher plays a central role in controlling, guiding, and organizing instructional activities. Through presentation, explanation, and detailed guidance, the teacher helps learners access, acquire, and clearly understand the lesson content.	- Lecture/Presentation - Explanation and Illustration - Question–Answer Interaction - Problem-posing - Simulation - Demonstration

No.	Teaching Strategies	Teaching Methods
	This teaching strategy is effective for providing systematic knowledge and introducing new skills, thereby establishing a solid foundation for learners to apply such knowledge to professional practice and develop practical competencies.	
2	Indirect Instruction: Indirect instruction is a teaching strategy in which learners are provided with opportunities to explore and construct knowledge through learning activities without relying entirely on the lecturer's direct transmission of information. In this strategy, the lecturer acts as a facilitator who organizes, guides, and supports the learning process. Learners are encouraged to actively engage, apply critical thinking skills, and develop their ability to analyze and solve problems. This strategy helps learners enhance their capacity for self-directed learning and independent inquiry, while also fostering a stronger sense of responsibility and autonomy.	- Case-based learning - Problem-based learning - Guiding questions - Online teaching - Assignments - Discussion - Debate - Project-based learning
3	Experiential Learning: Experiential learning consists of four stages: concrete experience, in which learners participate in practical activities such as group discussions, experimental practice, or fieldwork; reflective observation, during which learners reflect on and analyze the results, behaviors, and emotions arising from their experiences; abstract conceptualization, in which learners formulate concepts or theoretical insights based on their reflections; and active experimentation, where learners apply the acquired knowledge to new situations to test and refine their understanding. This approach develops knowledge, skills, and enhances learners' attitudes.	- Experiential learning - Internship - Fieldwork - Simulation - Practice - Discussion - Project-based learning
4	Interactive Teaching: Interactive teaching is a teaching strategy in which learners not only receive knowledge from the instructor but also actively	- Interactive lectures - Group work - Discussions

No.	Teaching Strategies	Teaching Methods
	participate in discussions, dialogue, and collaborative activities with their peers and the instructor. The instructor organizes and facilitates the learning process, creating opportunities for interaction and continuous feedback. This approach helps develop communication, collaboration, critical thinking, and problem-solving skills, while also enhancing learners' confidence and proactive engagement.	- Debates - Practice - Internships - Fieldwork - Project-based learning
5	Self-directed Learning: Self-directed learning is a learning strategy in which learners guide and regulate their own learning process, setting objectives, constructing plans, and monitoring their progress with minimal support from the instructor. Learners actively seek resources and carry out tasks through assignments, projects, or problems suggested by the instructor. This strategy helps develop learners' capacity for independent learning, research, as well as their autonomy, personal responsibility, and independent problem-solving skills.	- Online learning - Homework assignments - Self-directed learning - Practice - Internships - Fieldwork - Project-based learning

7.2. Learning Assessment

The assessment of learning complies with the current undergraduate training regulations of Quy Nhon University.

7.2.1. Course evaluation and Grading

Assessment and Grading of Courses			
1. For theoretical courses or courses combining theory and practice	The overall course grade (hereinafter referred to as the course grade) consists of two components: the continuous assessment score and the final examination score.	Continuous assessment score: Accounts for 30%, 40%, or 50% of the total course grade.	The assessment methods, assessment formats, and the weighting of each component score are specified in the detailed course syllabus for each course.
		Final examination score: Accounts for 70%, 60%, or 50% of the total course grade.	

Assessment and Grading of Courses		
2. For courses consisting solely of laboratory or practical work	The arithmetic mean of the scores for all practical assignments during the semester, rounded to one decimal place, is taken as the grade for the practical course.	
3. For specialized courses such as internships, field practice, course projects, and course theses.	The department responsible for the course proposes the course assessment method, and the Rector makes the final decision.	
4. Assessment of the Graduation Project and Graduation Thesis	- The assessment of the graduation project and graduation thesis is conducted by an evaluation committee established by decision of the Rector. - The committee consists of three members: a Chair, a reviewer, and a secretary (the supervisor is not a member of the committee). The committee organizes the defense and evaluates the graduation project or graduation thesis when all members are present.	- The grade for the graduation thesis or graduation project is calculated as the average of the component scores given by the supervisor and the members of the evaluation committee $([\text{Supervisor's score} + \text{Scores from the three committee members}] / 4)$. - Each component score is graded on a 10-point scale, recorded to one decimal place. The final grade for the graduation thesis or graduation project is also calculated on a 10-point scale, rounded to one decimal place, and then converted into a letter grade according to the prescribed grading scale.

Grading Scale used

Assessment Grading Scale	The 10-point grading scale, ranging from 0 to 10 (with one decimal place), is used to assess and record the continuous assessment score, the final examination score, and the overall course grade.
	The letter grading scale is used to classify course results in an alternative form corresponding to the course grade on the 10-point grading scale.
	The 4-point grading scale is used to calculate the semester Grade Point Average (GPA) and the cumulative Grade Point Average (CGPA), and to evaluate students' academic performance after each semester or study period, as well as for graduation classification.

Conversion Rules Between Grading Scales

10-point Scale	Letter Grade	4-point Scale	Result
9 - 10	A+	4	Pass
8 - 8,9	A	3,5	
7 - 7,9	B+	3	
6 - 6,9	B	2,5	
5 - 5,9	C	2	
4 - 4,9	D	1,5	
0 - 3,9	F	0	Fail

7.2.2. Assessment Methods

Assessment Methods	
Observation Method	This method evaluates students' attendance and learning attitudes, including their learning awareness, independence, and creativity. It involves monitoring class attendance, students' preparation for lessons, participation in discussions, and contributions to classroom learning activities.

Assessment Methods	
Assignment Assessment	This method evaluates the extent to which students complete the assignments given by the instructor related to the lesson during and after class. These assignments may be completed individually or in groups and are graded based on previously announced criteria.
Presentation Assessment	Students are required to work individually or in groups and present their results to other students. This activity not only evaluates the extent to which students have achieved specialized knowledge but also assesses the development of skills such as communication, negotiation, and teamwork.
Written Assessment Methods	Written assessment methods include essay-type tests and objective multiple-choice tests, or a combination of both.
Practical Assessment	Students are assessed based on criteria such as the correctness of procedures and operations performed, the outcomes obtained, and the quality of the practical report.
Oral Assessment	Students are assessed through interviews and direct question-and-answer interactions. This method is used in certain courses to evaluate students' overall competence, including both subject knowledge and skills such as communication and presentation.
Group Work Assessment	This method is used when implementing group-based learning activities to assess students' teamwork skills.
Essay / Term Paper Assessment	Students are assessed through writing a report on a topic related to a course or a practical issue, with the aim of drawing conclusions, providing comments, and proposing solutions for implementing or improving the identified issue. The assessment of the essay/term paper includes evaluation of its structure, content, conclusions, and presentation format.
Assessment of Learning Project Products	Based on the products developed by students, the instructor evaluates the level of development, creativity, and effectiveness of the completed product. The criteria and standards for evaluating the product are diverse. Product assessment is conducted based on the specific context of real-world situations.

Assessment Methods – PLOs Alignment Matrix

Assessment Methods	Program Learning Outcomes (PLOs)								
	1	2	3	4	5	6	7	8	9
Observation Method			X	X	X	X		X	X
Assignment Assessment	X	X	X	X	X	X	X	X	X
Presentation Assessment	X		X		X	X		X	X
Written Assessment Methods	X	X	X	X	X	X	X	X	X
Practical Assessment	X	X	X	X	X	X	X	X	X
Oral Assessment	X	X	X	X	X	X	X	X	X
Group Work Assessment					X		X	X	X
Essay / Term Paper Assessment	X	X	X	X		X	X	X	X
Learning Project Product Assessment	X	X	X		X	X	X	X	

8. PROGRAM CONTENT

No.	Course codes	Course	Semester	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge	Note
					Theory	Exercise	Discussion	Experiment, Practice	Others				
I. General Education Knowledge				24									
1.1. Political Science and Law				13									
1	1130299	Marxist-Leninist Philosophy	1	3	40		10			95		Political Science, Law and State Management	
2	1130300	Marxist-Leninist Political Economy	2	2	27		6			62	1130299	Political Science, Law and State Management	
3	1130049	Introduction to Law	1	2	27		6			62		Political Science, Law and State Management	
4	1130301	Scientific Socialism	3	2	27		6			62	1130300	Political Science, Law and State Management	
5	1130302	History of the Communist Party of Vietnam	4	2	27		6			62	1130301	Political Science, Law and State Management	
6	1130091	Ho Chi Minh thought	5	2	27		6			62	1130302	Political Science, Law and State Management	
1.2. Physical Education and National Defense–Security Education				12									
Physical Education: Choose 1 of the following 8 courses				3									
7	1120172	Physical Education 1 (Football 1)	1	1	4			26		21		Physical Education	
8	1120173	Physical Education 2 (Football 2)	2	1	4			26		21	1120172	Physical Education	
9	1120174	Physical Education 3 (Football 3)	3	1	4			26		21	1120173	Physical Education	
10	1120175	Physical Education 1 (Volleyball 1)	1	1	4			26		21		Physical Education	
11	1120176	Physical Education 2 (Volleyball 2)	2	1	4			26		21	1120175	Physical Education	
12	1120177	Physical Education 3 (Volleyball 3)	3	1	4			26		21	1120176	Physical Education	
13	1120178	Physical Education 1 (Basketball 1)	1	1	4			26		21		Physical Education	
14	1120179	Physical Education 2 (Basketball 2)	2	1	4			26		21	1120178	Physical Education	
15	1120180	Physical Education 3 (Basketball 3)	3	1	4			26		21	1120179	Physical Education	
16	1120181	Physical Education 1 (Badminton 1)	1	1	4			26		21		Physical Education	
17	1120182	Physical Education 2 (Badminton 2)	2	1	4			26		21	1120181	Physical Education	
18	1120183	Physical Education 3 (Badminton 3)	3	1	4			26		21	1120182	Physical Education	

[illegible]

No.	Course codes	Course	Semester	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge	Note
					Theory	Exercise	Discussion	Experiment, Practice	Others				
37	2010156	Pedagogical Communication	4	2	20			20		55	2030410	Education	
38	2010171	Experiential and Career-Oriented Activities in Schools	5	2	20			20		55	2030410	Education	
II. Professional Education Knowledge				114									
II.1. Fundamental knowledge and Disciplinary Knowledge				33									
39	2010168	Fundamentals of Informatics	1	3	30			30		85		Education	
40	1100086	Psychology	2	3	30	10	10			95	1130299	Social Sciences and Humanities	
41	2030410	Pedagogics	3	4	36	20		8		131	1100086	Social Sciences and Humanities	
42	2010170	Mathematical Analysis	1	3	30	15				100		Education	
43	2010169	Linear Algebra	1	2	20	10				65		Education	
44	1010483	Probability and statistics	2	2	22	8				65		Mathematics and Statistics	
45	1050075	Discrete Mathematics	2	3	35	10				100		Informatics Technology	
46	1050074	Mathematical Logic	1	2	25	5				65		Informatics Technology	
47	2010162	Basic Programming	2	4	35	10		30		120	2010168	Education	
48	1050124	Computer Practice	1	1				30		15		Informatics Technology	
49	1050121	Data Structures and Algorithms	3	3	30	5		20		90	2010162	Informatics Technology	
50	1050040	Introduction to Database	4	3	35	10				100	1050252	Informatics Technology	
II.2. Major and Specialization Knowledge (if any)				43									
II.2.1. Major Knowledge				41									
II.2.1a. Compulsory Courses				36									
51	1050024	Object Oriented Programming	3	3	30			30		85	2010162	Education	
52	1050122	Design and Analysis Algorithms	4	3	35	10				100	2010168	Informatics Technology	
53	1050417	Introduction to Computer Networks	2	2	20			20		55	2010168	Informatics Technology	
54	1050252	Database Management System	3	3	30			30		85	2010168	Informatics Technology	
55	1050254	Computer Architecture	5	2	25			10		60	1050124	Informatics Technology	
56	1050049	Information System Design Analysis	5	3	30	10		10		95	1050040 1050024	Informatics Technology	
57	1050427	Network Administrator	6	2	20			20		55	1050417	Informatics Technology	
58	1050428	Artificial Intelligence	6	3	35	5		10		95		Informatics Technology	
59	2010172	Computer Ethics	7	2	30					65	2010168	Education	
60	1050429	Software Engineering	6	3	39			12		94	2010162	Informatics Technology	
61	1050430	Web Programming	5	3	30			30		85	2010162 1050252	Informatics Technology	

[illegible]

No.	Course codes	Course	Semester	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge	Note
					Theory	Exercise	Discussion	Experiment, Practice	Others				
82	2010181	Developing Students' Competencies in Teaching Informatics	7	2	25			10		60		Education	
83	2010182	Teaching Thematic Learning Modules in Informatics	7	2	25			10		60		Education	
84	1050030	History of Computer Science	7	2	25		10			60		Education	
85	1150422	Start up	7	2	20	5	10			60	1130049	Finance, Banking and Business Administration	
II.3.2. Professional Internship				7									
86	1050067	Teaching Practicum 1	7	1					TT		2010178 2010179 2010180	Education	
87	1050068	Teaching Practicum 2	8	5					TT		1050067	Education	
88	2010183	Face-Finding Trip	4	1					TT			Education	
II.4. Graduation Thesis, Alternative Courses				6									
89	2010025	Graduation Thesis	8	6					KL			Education	
Alternative Courses				6									
90	2010184	Applying the Modern Information Technology in Teaching Informatics	8	2	20		20			55		Education	
91	2010185	STEM Education in Teaching Informatics	8	2	25		10			60		Education	
<i>Choose 1 of the following 4 courses:</i>													
92	1050435	Design and Implementation of School Network Systems	8	2	20			20		55	1050417	Informatics Technology	
93	1050260	Advanced Database	8	2	20			20		55	1050252	Informatics Technology	
Total				138									

9. TENTATIVE TEACHING PLAN

Semester I

No.	Course code	Course	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge
				Theory	Exercise	Discussion	Experiment, Practice	Others			
1	1130299	Marxist-Leninist Philosophy	3	40		10			95		Political Science, Law

No.	Course code	Course	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge
				Theory	Exercise	Discussion	Experiment, Practice	Others			
											and State Management
2	1130049	Introduction to Law	2	27		6			62		Political Science, Law and State Management
3	1090061	English 1	3	30	15				90		Foreign Languages
4	2010168	Fundamentals of Informatics	3	30			30		85		Education
5	2010169	Linear Algebra	2	20	10				65		Education
6	2010170	Mathematical Analysis	3	30	15				100		Education
7	1050074	Mathematical Logic	2	25	5				65		Informatics Technology
8	1050124	Computer Practice	1				30		15		Informatics Technology
Physical Education: Choose 1 of the following 8 courses			1								
9	1120172	Physical Education 1 (Football 1)	1	4			26		21		Physical Education
10	1120175	Physical Education 1 (Volleyball 1)	1	4			26		21		Physical Education
11	1120178	Physical Education 1 (Basketball 1)	1	4			26		21		Physical Education
12	1120181	Physical Education 1 (Badminton 1)	1	4			26		21		Physical Education
13	1120184	Physical Education 1 (Vietnamese Traditional Matial Arts 1)	1	4			26		21		Physical Education
14	1120187	Physical Education 1 (Taekwondo Matial Arts 1)	1	4			26		21		Physical Education
15	1120190	Physical Education 1 (Karatedo Matial Arts 1)	1	4			26		21		Physical Education
16	1120239	Physical Education 1 (Pickleball 1)	1	4			26		21		Physical Education
Total (excluding Physical Education courses)			19								

Semester II

No.	Course code	Course name	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge of the course
				Theory	Exercise	Discussion	Experiment, Practice	Others			
1	1130300	Marxist-Leninist Political Economy	2	27		6			62	1130299	Political Science, Law and State Management
2	1090166	English 2	4	40	20				135	1090061	Foreign Languages
3	1010483	Probability and Statistics	2	22	8				65		Mathematics and Statistics
4	1100086	Psychology	3	30	10	10			95	1130299	Social Sciences and Humanities
5	2010162	Basic Programming	4	35	10		30		120	2010168	Education
6	1050075	Discrete Mathematics	3	35	10				100		Informatics Technology
7	1050417	Introduction to Computer Networks	2	20			20		55	2010168	Informatics Technology
Physical Education: Choose 1 of the following 8 courses			1								
8	1120173	Physical Education 2 (Football 2)	1	4			26		21		Physical Education
9	1120176	Physical Education 2 (Volleyball 1)	1	4			26		21		Physical Education
10	1120179	Physical Education 2 (Basketball 2)	1	4			26		21		Physical Education
11	1120182	Physical Education 2 (Badminton 2)	1	4			26		21		Physical Education
12	1120185	Physical Education 2 (Vietnamese Traditional Matial Arts 2)	1	4			26		21		Physical Education
13	1120188	Physical Education 2 (Taekwondo Matial Arts 2)	1	4			26		21		Physical Education
14	1120191	Physical Education 2 (Karatedo Matial Arts 2)	1	4			26		21		Physical Education
15	1120240	Physical Education 2 (Pickleball 2)	1	4			26		21		Physical Education
Total (excluding Physical Education courses)			20								

Semester III

No.	Course code	Course name	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge of the course
				Theory	Exercise	Discussion	Experiment, Practice	Others			
1	1130301	Scientific Socialism	2	27		6			62	1130300	Political Science, Law and State Management
2	2030410	Pedagogics	4	36	20		8		131	1100086	Social Sciences and Humanities
3	1050126	English for Information Technology	2	20	5	10			60	1090166	Informatics Technology
4	1050024	Object Oriented Programming	3	30			30		85	2010162	Education
5	1050125	Computer Lab Management	1				30		15	1050124 2010168	Informatics Technology
6	1050121	Data Structures and Algorithms	3	30	5		20		90	2010162	Informatics Technology
7	1050252	Database Management System	3	30			30		85	2010168	Informatics Technology
Physical Education: Choose 1 of the following 8 courses			1								
8	1120174	Physical Education 3 (Football 3)	1	4			26		21		Physical Education
9	1120177	Physical Education 3 (Volleyball 3)	1	4			26		21		Physical Education
10	1120180	Physical Education 3 (Basketball 3)	1	4			26		21		Physical Education
11	1120183	Physical Education 3 (Badminton 3)	1	4			26		21		Physical Education
12	1120186	Physical Education 3 (Vietnamese Traditional Matial Arts 3)	1	4			26		21		Physical Education
13	1120189	Physical Education 3 (Taekwondo Matial Arts 3)	1	4			26		21		Physical Education
14	1120192	Physical Education 3 (Karatedo Matial Arts 3)	1	4			26		21		Physical Education
15	1120241	Physical Education 3 (Pickleball 3)	1	4			26		21		Physical Education
Total (excluding Physical Education courses)			18								

Semester IV

No.	Course code	Course name	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge of the course
				Theory	Exercise	Discussion	Experiment, Practice	Others			
1	1130302	History of the Communist Party of Vietnam	2	27		6			62	1060101	Political Science, Law and State Management
2	2010156	Pedagogical Communication	2	20			20		55	2030410	Education
3	1050040	Introduction to Database	3	35	10				100	1050252	Informatics Technology
4	1050191	Applying Information Technology in Teaching Informatics	2	20			20		55		Education
5	2010178	Theory and Teaching Methods of Informatics	3	35			20		90	2030410	Education
6	1050122	Design and Analysis Algorithms	3	35	10				100	2010168	Informatics Technology
7	2010174	Python Programming	3	30			30		85	2010162	Education
8	2010183	Face-Finding Trip	1					TT			Education
Total			19								

Semester V

No.	Course code	Course name	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge of the course
				Theory	Exercise	Discussion	Experiment, Practice	Others			
1	1130091	Ho Chi Minh thought	2	27		6			62	1130302	Political Science, Law and State Management
2	2010171	Experiential and Career-Oriented Activities in Schools	2	20			20		55	2030410	Education
3	2010177	E - Learning in teaching Informatics	3	15			60		70		Education
4	2010179	Planning teaching	3	30			30		85	2010168 2010178	Education

No.	Course code	Course name	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge of the course
				Theory	Exercise	Discussion	Experiment, Practice	Others			
		Informatics									
5	1050254	Computer Architecture	2	25			10		60	1050124	Informatics Technology
6	1050049	Information System Design Analysis	3	30	10		10		95	1050040 1050024	Informatics Technology
7	1050430	Web Programming	3	30			30		85	2010162 1050252	Informatics Technology
National Defense and Security Education			1								
8	1120168	National Defense and Security Education 1	3	37		8			82		Center for National Defense and Security Education
9	1120169	National Defense and Security Education 2	2	22		8			52		Center for National Defense and Security Education
10	1120170	National Defense and Security Education 3	2	14			16		44		Center for National Defense and Security Education
11	1120171	National Defense and Security Education 4	2	4			56		36		Center for National Defense and Security Education
Total (excluding National Defense and Security Education courses)			18								

Semester VI

No.	Course code	Course name	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge of the course
				Theory	Exercise	Discussion	Experiment, Practice	Others			
1	2010180	Organizing teaching Informatics	3	18			54		73	2010168 2010178 2010179	Education

No.	Course code	Course name	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge of the course
				Theory	Exercise	Discussion	Experiment, Practice	Others			
2	1050130	Training of teaching method 1	2				60		35	2010178	Education
3	2010176	Applied Pedagogical Scientific Research	2	20			20		55	2010178 2030410	Education
4	1050427	Network Administrator	2	20			20		55	1050417	Informatics Technology
5	1050428	Artificial Intelligence	3	35	5		10		95		Informatics Technology
6	1050429	Software Engineering	3	39			12		94	2010162	Informatics Technology
7	1050431	Robotics Programming	2	20			20		55	2010162 1050024	Informatics Technology
Total			17								

Semester VII

No.	Course code	Course name	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge of the course
				Theory	Exercise	Discussion	Experiment, Practice	Others			
1	2010175	Assessment in teaching Informatics	2	20			20		55	2010178	Education
2	2010024	Training of teaching method 2	2				60		35	1050130	Education
3	1050067	Teaching Practicum 1	1					TT		2010178 2010179 2010180	Education
4	2010172	Computer Ethics	2	30					65	2010168	Education
5	2010173	Artificial Intelligence Programming	2	20			20		55		Education
<i>Choose 1 of the following 4 courses</i>			2								
6	2010181	Developing Students' Competencies in Teaching Informatics	2	25			10		60		Education

No.	Course code	Course name	Number of credits	In-class hours					Self-study hours	Prerequisite Course Code	Department in charge of the course
				Theory	Exercise	Discussion	Experiment, Practice	Others			
2	2010025	Graduation Thesis	6					KL			Education
<i>Alternative Courses</i>											
3	2010184	Applying the Modern Information Technology in Teaching Informatics	2	20		20			55		Education
4	2010185	STEM Education in Teaching Informatics	2	25		10			60		Education
<i>Choose 1 of the following 2 courses</i>											
5	1050435	Design and Implementation of School Network Systems	2	20			20		55	1050417	Informatics Technology
6	1050260	Advanced Database	2	20			20		55	1050252	Informatics Technology
Total			11								

10. GUIDELINES FOR THE IMPLEMENTATION OF THE PROGRAM

This training program is applied from the 2025 admission cohort for students majoring in Informatics Teacher Education.

The training process is implemented based on a curriculum that has been designed in accordance with the training objectives, learner characteristics, workforce requirements, and the specific demands of the discipline. For elective courses, depending on actual conditions, development trends, and social needs, the Department will provide guidance to help students select appropriate courses.

The Head of the Department is responsible for organizing and guiding the principles for developing detailed course syllabi to ensure that the objectives, content, and requirements are met, while also responding to the needs of learners and society.

The training program is regularly reviewed, evaluated, and updated. The results of these reviews and evaluations are used to improve and enhance the quality of training. The comprehensive review cycle of the training program is conducted at least once every five years.

Gia Lai,

2025

**DEAN OF THE
DEPARTMENT**

**HEAD OF THE TRAINING
DEPARTMENT**

**BY THE DELEGATION OF
THE RECTOR
VICE – RECTOR**

Dr. Nguyen Le Tuan

Dr. Le Xuan Vinh

Dr. Đinh Anh Tuan