MINISTRY OF EDUCATION AND TRAINING
QUY NHON UNIVERSITY

UNDERGRADUATE PROGRAM

Level of education:	**Undergraduate**
Major:	**Civil Engineering**
Specicality:	**Civil and Industrial Construction**
Code:	**7580201**
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 together with Decision No. 2094/QĐ-ĐHQN dated July 22, 2025 of the Rector of Quy Nhon University)

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1. PROGRAM OBJECTIVES (POs)

1.1. *General objectives*

The Civil Engineering program is designed to educate civil engineers with sound political qualities, professional ethics, and good health; strong professional competence and practical occupational skills; and a solid grounding in the fundamentals of civil engineering for the design, construction, and management of construction projects. The program also aims to equip graduates with the ability to analyze, synthesize, and solve professional problems in the construction field, adapt to working environments, pursue self-directed learning, and develop digital competence in order to meet labor market demands.

1.2. *Specific objectives*

The Civil Engineering program is intended to achieve the following objectives:

1) PO1: Possess fundamental knowledge of natural and social sciences, political science, and law.
2) PO2: Possess practical knowledge and foundational theoretical knowledge in the field of civil engineering.
3) PO3: Demonstrate critical thinking and the ability to analyze, synthesize, and evaluate scientific data; possess the capacity for self-directed learning, innovation, entrepreneurial thinking, and digital competence.
4) PO4: Demonstrate professional ethics, professional responsibility, and a sense of community service.

2. EMPLOYMENT OPPORTUNITIES AND FURTHER STUDY PROSPECTS

Graduates of the Civil Engineering program may pursue employment in the following positions:

- Working as structural consultants and designers at organizations operating in the field of civil and industrial construction, both domestically and internationally.

- Undertaking technical and quality management positions at enterprises engaged in the production, construction, and installation of civil and industrial works.

- Working at state management agencies related to the construction sector.

- Serving as research and teaching staff at research institutes and educational institutions in the field of construction.

- Starting up and managing their own companies in the construction sector.

- Having opportunities to pursue further study and research at the master's and doctoral levels in the same or related disciplines, both domestically and internationally.

3. LEARNING OUTCOMES

The program is designed to ensure that graduates of the Civil Engineering program achieve the following learning outcomes:

STT	Program Learning Outcomes (PLOs)	Performance Indicators (PIs)
1	PLO1: Understand the Party's guidelines and policies, the State's policies and laws, and apply fundamental scientific knowledge to solve professional problems.	PI 1.1: Acquire basic knowledge of politics, understanding of law and national defense-security, and physical fitness to perform work effectively.
		PI 1.2: Apply knowledge of natural sciences to solve professional problems.
2	PLO2: Apply professional knowledge to perform calculations and develop construction drawings.	PI 2.1: Apply professional knowledge to read and develop construction drawings.
		PI 2.2: Apply professional knowledge and comply with current standards in structural design calculations.
3	PLO3: Apply technical solutions and safe construction methods to organize construction implementation.	PI 3.1: Calculate and propose construction methods that ensure technical and aesthetic requirements for civil and industrial construction works.
		PI 3.2: Calculate construction investment costs and prepare plans for construction organization.
4	PLO4: Apply communication skills and teamwork skills in professional activities.	PI 4.1: Develop team activity plans to achieve the set objectives.
		PI 4.2: Participate in and contribute to team activities, while developing innovative thinking and entrepreneurial capacity.
5	PLO5: Apply digital competence in construction activities and in learning and research.	PI 5.1: Apply specialized software to support design, supervision, construction, and project operation management.
		PI 5.2: Apply digital tools to plan, organize, and manage work, meeting the requirements of digital transformation in the construction sector.
6	PLO6: Analyze and evaluate experimental results of technical issues related to construction materials and structures.	PI 6.1: Analyze experimental results to support the design and construction of building works.
		PI 6.2: Evaluate experimental results to propose appropriate design, renovation, and repair solutions.
7	PLO7: Demonstrate the ability for self-learning, while upholding professional ethics and	PI 7.1: Demonstrate the ability for self-learning and updating professional knowledge to meet occupational requirements.
		PI 7.2: Comply with the principles of professional ethics and

	responsibility.	demonstrate a sense of responsibility at work.

4. PROGRAM DURATION AND TOTAL CREDITS

4.1. Program Duration: 4.5 years

4.2. Total credits: 150 Credits (excluding the required non-credit courses in Physical Education and National Defense and Security Education)

Program structure	Credits
General Knowledge	**24**
Professional Knowledge	**126**
- Fundamental knowledge	46
- Specialized knowledge	50
- Supplementary Knowledge/Internship	22
- Graduation thesis, Alternative courses	8
Total	**150**

5. ADMISSION REQUIREMENTS

The entry requirements comply with the current admissions regulations of Quy Nhon University.

6. TRAINING METHOD, GRADUATION REQUIREMENTS

6.1. Training Method: Credit-based training system.

6.2. Graduation Requirements:

- Professional requirements:

+ Achieve the learning outcomes of the program;

+ Accumulate all required courses and the prescribed program workload;

+ Obtain a cumulative grade point average of 2.00 or above (on a 4.0 scale) for the entire course of study;

- Physical Education, National Defense and Security Education: Complete the Physical Education courses and obtain the certificate in National Defense and Security Education;

- Foreign language requirement: Achieve level B1 in accordance with Quy University regulations;

- Information technology requirement: Attain the basic level of information technology application in accordance with the University's regulations.

7. TEACHING METHODS AND LEARNING ASSESSMENT

7.1. Teaching Methods

- Preparation of lecturers

Lecturers teaching in the Civil Engineering program need to be equipped with different teaching experiences:

- Clearly understand the type of class they are teaching (theoretical class, practical class, laboratory class, compulsory course, elective course, course project, or graduation project);
- Clearly understand the teaching mode (interdisciplinary teaching, integrated teaching);
- Clearly understand their students (first-year, second-year, third-year, fourth-year, or final-year students);
- Clearly understand learning-related policies;
- Carefully prepare textbooks, lectures, exercise books, detailed course syllabi, presentation slides, visual teaching aids, teaching schedules, and teaching plans.

- Teaching and learning methods *[direct / indirect / experiential / interactive / self-directed learning]*

Depending on the teaching strategy of each course, the corresponding teaching methods may be as follows:

1. Direct teaching: Most theoretical courses are taught through presentation, lecturing, question-and-answer activities, prompting questions, assigning homework to students, and assessing students' self-study ability through exercises and discussions. The corresponding teaching methods are as follows:
   - ✓ Lecturing
   - ✓ Prompting questions
   - ✓ Discussion
2. Indirect teaching: Some courses are taught indirectly without clear intervention from lecturers, such as course projects and graduation projects. The corresponding teaching methods are as follows:
   - ✓ Open-ended questions
   - ✓ Idea development
   - ✓ Case study
   - ✓ Problem solving
3. Experiential learning: The courses in the program are designed for experiential learning, such as practical and laboratory courses conducted in the University's laboratories; Civil Engineering Internship and graduation internship at enterprises; course design projects and graduation design projects. The corresponding teaching methods are as follows:
   - ✓ Models
   - ✓ Internship / field practice
   - ✓ Experiment
   - ✓ Design

4. Interactive teaching: This is applied in some courses of the program. Students do group assignments, group presentations, experiments, group practice, enterprise internships, field visits, and graduation projects. The corresponding teaching methods are as follows:
   - ✓ Discussion
   - ✓ Problem solving
   - ✓ Group learning
   - ✓ Interaction and feedback
5. Independent learning: Experimental and design activities in course projects and graduation projects, presentation of course projects and graduation projects, homework, writing laboratory reports, presenting experiments, and independent study. The corresponding teaching methods are as follows:
   - ✓ Individual task assignment
   - ✓ Research project / project work
   - ✓ Computer-based instruction
   - ✓ Reflection

7.2. Learning Assessment

In accordance with the current undergraduate training regulations of Quy Nhon University.

8. PROGRAM CONTENT

No	Course Code	Course Name	Semeste	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practise	Tests						
I. General Knowledge 24 Credits (excluding the required non-credit courses in Physical Education and National Defense and Security Education)													
I.1. Political Science and Law (13 Credits)													
1	1130299	Philosophy of Marx – Lenin	2	3	40		10			95		DPESM	
2	1130049	Fundamental of Law	2	2	27		6			62		DPESM	
3	1130300	Political Economy of Marx – Lenin	3	2	27		6			62	1130299	DPESM	
4	1130301	Scientific Socialism	4	2	27		6			62	1130300	DPESM	
5	1130302	History of the Communist Party of Vietnam	5	2	27		6			62	1130091	DPESM	
6	1130091	Ho Chi Minh's Ideology	6	2	27		6			62	1130302	DPESM	
I.2. Physical Education and National Defense–Security Education (12 Credits) *Physical Education: Choose one of the two following courses:*													
7	1120172	Physical Education 1 (Football 1)	1	1	4			26		15		DPE	Condition
8	1120173	Physical Education 2 (Football 2)	2	1	4			26		15	1120172	DPE	Condition

No	Course Code	Course Name	Semeste	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practise	Tests						
9	1120174	Physical Education 3 (Football 3)	3	1	4			26		15	1120173	DPE	Condition
10	1120175	Physical Education 1 (Volleyball 1)	1	1	4			26		15		DPE	Condition
11	1120176	Physical Education 2 (Volleyball 2)	2	1	4			26		15	1120175	DPE	Condition
12	1120177	Physical Education 3 (Volleyball 3)	3	1	4			26		15	1120176	DPE	Condition
13	1120178	Physical Education 1 (Basketball 1)	1	1	4			26		15		DPE	Condition
14	1120179	Physical Education 2 (Basketball 2)	2	1	4			26		15	1120178	DPE	Condition
15	1120180	Physical Education 3 (Basketball 3)	3	1	4			26		15	1120179	DPE	Condition
16	1120181	Physical Education 1 (Badminton 1)	1	1	4			26		15		DPE	Condition
17	1120182	Physical Education 2 (Badminton 2)	2	1	4			26		15	1120181	DPE	Condition
18	1120183	Physical Education 3 (Badminton 3)	3	1	4			26		15	1120182	DPE	Condition
19	1120184	Physical Education 1 (Vietnamese traditional martial arts 1)	1	1	4			26		15		DPE	Condition
20	1120185	Physical Education 2 (Vietnamese traditional martial arts 2)	2	1	4			26		15	1120184	DPE	Condition
21	1120186	Physical Education 3 (Vietnamese traditional martial arts 3)	3	1	4			26		15	1120185	DPE	Condition
22	1120187	Physical Education 1 (Taekwondo martial arts 1)	1	1	4			26		15		DPE	Condition
23	1120188	Physical Education 2 (Taekwondo martial arts 2)	2	1	4			26		15	1120187	DPE	Condition
24	1120189	Physical Education 3 (Taekwondo martial arts 3)	3	1	4			26		15	1120188	DPE	Condition
25	1120190	Physical Education 1 (Taekwondo martial arts 1)	1	1	4			26		15		DPE	Condition
26	1120191	Physical Education 2 (Karatedo martial arts 2)	2	1	4			26		15	1120190	DPE	Condition
27	1120192	Physical Education 3 (Karatedo martial arts 3)	3	1	4			26		15	1120191	DPE	Condition
28	1120239	Physical Education 1 (Pickleball 1)	1	1	4			26		15		DPE	Condition
29	1120240	Physical Education 2 (Pickleball 2)	2	1	4			26		15	1120239	DPE	Condition
30	1120241	Physical Education 3 (Pickleball 3)	3	1	4			26		15	1120240	DPE	Condition
31	1120168	National Defense–Security Education 1	4	3	37		16			92		CNDSE	Condition

No	Course Code	Course Name	Semeste	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practise	Tests						
32	1120169	National Defense–Security Education 2	4	2	22		16			57		CNDSE	Condition
33	1120170	National Defense–Security Education 3	4	2	14			32		49		CNDSE	Condition
34	1120171	National Defense–Security Education 4	4	2	18			56		21		CNDSE	Condition
I.3. Foreign languages (7 Credits)													
35	1090061	English 1	1	3	37	8				100		DFL	
36	1090166	English 2	2	4	52	8				135	1090061	DFL	
I.4. Social Sciences (4 Credits)													
37	2030003	Communication Skills	1	2	18		4	20		53		DSSH	
38	1150422	Entrepreneurship	6	2	20	5	10			60	1130049	DFBA	
II. Professional Knowledge (126 Credits)													
II.1. Fundamental Knowledge (53 Credits)													
39	1010354	Linear Algebra	1	3	30	15				100		DMS	
40	1010476	Calculus	1	3	30	15				100		DMS	
41	1010129	Probability and Statistics	3	2	27	3				65	1010354	DMS	
42	1010098	Numerical methods	2	2	24	6				65	1010476 1010354	DMS	
43	2020001	Physics	1	3	39	6				100		DNS	
44	2020687	Physics Laboratory	1	1				30		15		DNS	
45	1160714	Basic Informatics for Construction	2	3	24	6		30		85		DET	
46	1160464	Introduction to Civil Engineering	1	1	14		2			29		DET	
47	1160376	English for Civil Engineering	5	2	30					65	1090166	DET	
48	1160626	Construction Electrical Technology	8	2	25	5				65	2020001 1160352	DET	
49	1160330	Descriptive Geometry and Engineering Drawing	1	3	30	15				100		DET	
50	1160434	AutoCAD - Practice	2	1				30		15	1160330	DET	
51	1160399	Civil Engineering Drawings	3	1	10	5				30	1160330	DET	
52	1160364	Practicing Civil Engineering Drawings	3	1				30		15	1160434 1160330	DET	
53	1160285	Water Supply and Sewerage	8	2	24	6				65	1160352 1160434	DET	
54	1160226	Surveying	4	2	18	12				65		DET	
55	1160467	Surveying Practice	4	1				30		15		DET	
56	1160398	Construction Materials	4	2	21	9				65	1160360	DET	
57	1160465	Theory Mechanics	2	2	18	12				65	1010476 2020001	DET	
58	1160360	Strength of Materials 1	3	3	27	18				100	1160465	DET	
59	1160075	Strength of Materials 2	4	2	18	12				65	1160360	DET	

No	Course Code	Course Name	Semeste	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practise	Tests						
60	1160542	Structural Analysis 1	4	2	18	12				65	1160360	DET	
61	1160543	Structural Analysis 2	5	2	18	12				65	1160542	DET	
62	1160224	Geological Engineering	3	2	18	12				65		DET	
63	1160835	Geological engineering practice	3	1				30		15		DET	
64	1160466	Soil Mechanics	4	2	25	5				65	1160224 1160360	DET	
65	1160240	Construction Material and Strength of Materials Labs	5	1				30		15	1160398 1160360	DET	
66	1160241	Soil Testing	5	1				30		15	1160466	DET	
II.2. Specialized knowledge (57 Credits)													
II.2.1. Compulsory courses (49 Credits)													
67	1160352	Architecture Principle	3	3	35	10				100	1160434 1160399 1160364	DET	
68	1160286	Structural Architecture	4	2	25	5				65	1160352 1160434 1160399 1160364	DET	
69	1160468	Reinforced Concrete Structures	5	4	45	15				135	1160360 1160398	DET	
70	1160469	Reinforced Concrete Building Structures	6	3	27	18			BTL	105	1160468	DET	
71	1160436	Structural testing and inspection – theory	8	1	13	2				30	1160240 1160468 1160471	DET	
72	1160439	Structural Testing and Inspection – Practice	8	1				30		15	1160240 1160468 1160471	DET	
73	1160086	Foundation Engineering	6	3	33	12				100	1160466 1160468	DET	
74	1160470	Reinforced Concrete Tall Buildings	8	2	18	12				65	1160469	DET	
75	1160717	BIM applications in architecture	3	1	15					30	1160330 1160434 1160399 1160364	DET	
76	1160718	BIM practice in architecture	3	1				30		15	1160330 1160434 1160399 1160364	DET	
77	1160719	Structural Analysis Software Application	5	1	8	7				30	1160542 1160398	DET	
78	1160836	Practice of Structural Analysis Software Application	5	1				30		15	1160542 1160398	DET	

No	Course Code	Course Name	Semeste	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practise	Tests						
79	1160721	BIM Applications in Structural Engineering	6	1	10	5				30	1160717 1160718 1160468 1160729 1160719 1160720	DET	
80	1160722	BIM Practice in Structural Engineering	6	1				30		15	1160717 1160718 1160468 1160729 1160719 1160720	DET	
81	1160723	BIM Application in Construction	7	1	15					30	1160717 1160718 1160721 1160722	DET	
82	1160724	BIM Practice in Construction	7	1				30		15	1160717 1160718 1160721 1160722	DET	
83	1160471	Steel Structures	6	2	22	8				65	1160360 1160075	DET	
84	1160472	Steel Building Structures	7	2	20	10				65	1160471	DET	
85	1160725	Construction Technology 1	6	3	30	15				100	1160468	DET	
86	1160243	Construction Technology 2	7	2	24	6				65	1160725	DET	
87	1160726	Construction Methods and Management	8	3	20	10			30	85	1160725	DET	
88	1160437	Cost estimating for construction	7	1	11	4				30	1160725	DET	
89	1160438	Practicing Cost estimating for construction	7	1				30		15	1160725	DET	
90	1160727	Construction practice	5	1				30		15	1160398 1160468	DET	
91	1160728	Architectural Design Project	4	1					ĐA		1160352 1160286 1160434 1160399 1160364	DET	
92	1160729	Reinforced concrete structural design project	5	1					ĐA		1160398 1160542 1160286 1160075	DET	
93	1160730	Reinforced Concrete Building Structural Design Project	6	1					ĐA		1160398 1160542 1160286 1160075 1160468	DET	
94	1160731	Foundation Design Project	6	1					ĐA		1160466 1160241	DET	
95	1160732	Steel Structure Design Project	7	1					ĐA		1160471	DET	
96	1160733	Construction Technology	7	1					ĐA		1160725	DET	

No	Course Code	Course Name	Semeste	Number of credits	Class duration			Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practise	Tests						
		Project											
97	1160246	Construction Methods and Management Project	8	1					ĐA		1160733 1160437	DET	
II.2.2. Optional courses (8/24 Credits)													
98	1160333	Prestressed Concrete	7	2	20	10				65	1160472 1160468	DET	
99	1160481	Special Reinforced Concrete Structures	7	2	20	10				65	1160472 1160468	DET	
100	1160484	Specialized topic on Composite steel – Concrete structures	7	2	20	10				65	1160471	DET	
101	1160110	Construction on soft soil	7	2	25	5				65	1160086	DET	
102	1160442	Foundation of High-Rise Buildings	7	2	20	10				65	1160086	DET	
103	1160483	Maintenance, Repair and Renovation of Structure	7	2	20	10				65	1160469 1160086	DET	
104	1160737	Construction Law and Economics	8	2	20	10				65	1160468	DET	
105	1160736	BIM manager	8	2	15	5		30		45	1160717 1160718 1160721 1160722	DET	
106	1160734	Artificial Intelligence Applications in Construction	8	2	10	5		30		50	1160714 1160286 1160725	DET	
107	1160738	Construction Subjects and Safety on Construction	8	2	20	10				65	1160243	DET	
108	1160100	Project management for construction	8	2	20	10				65		DET	
109	1160735	Engineering systems in buildings	8	2	24	6				65		DET	
II.3. Internship (8 Credits)													
110	1160739	Introductory civil engineering internship	3	2					TT	5	1160352	DET	
111	1160740	Civil engineering internship	7	2					TT	5	1160725 1160468	DET	
112	1160741	Graduation Internship	9	4					TT	15	1160739 1160740	DET	
II.4. Graduation thesis (8 Credits)													
113	1160544	Thesis	9	8					ĐATN	35	1160728 1160729 1160730 1160731 1160733 1160246	DET	

9. TENTATIVE TEACHING PLAN

Semester 1

No	Course Code	Course Name	Semester	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
1	2030003	Communication Skills	2	18		4	20		53		DSSH	
2	1160464	Introduction to Civil Engineering	1	14		2			29		DET	
3	1010354	Linear Algebra	3	30	15				100		DMS	
4	1010476	Calculus	3	30	15				100		DMS	
5	2020001	Physics	3	39	6				100		DMS	
6	2020687	Physics Experiment	1				30		15		DNS	
7	1090061	English 1	3	37	8				100		FLD	
8	1160330	Descriptive Geometry and Engineering Drawing	3	30	15				100		DET	
Choose 1 of the 8 following courses:												
9	1120172	*Physical Education 1 (Football 1)*	1	4			26		15		DPE	Condition
10	1120175	*Physical Education 1 (Volleyball 1)*	1	4			26		15		DPE	Condition
11	1120178	*Physical Education 1 (Basketball 1)*	1	4			26		15		DPE	Condition
12	1120181	*Physical Education 1 (Badminton 1)*	1	4			26		15		DPE	Condition
13	1120184	*Physical Education 1 (Vietnamese traditional martial arts 1)*	1	4			26		15		DPE	Condition
14	1120187	*Physical Education 1 (Taekwondo martial arts 1)*	1	4			26		15		DPE	Condition
15	1120190	*Physical Education 1 (Taekwondo martial arts 1)*	1	4			26		15		DPE	Condition
16	1120239	*Physical Education 1 (Pickleball 1)*	1	4			26		15		DPE	Condition
		Total:	**19**									

Semester 2

No	Course Code	Course Name	Semester	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						

No	Course Code	Course Name	Semester	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
1	1130299	Philosophy of Marx – Lenin	3	40		10			95		DPTLSM	
2	1130049	Fundamental of Law	2	27		6			62		DPESM	
3	1090166	English 2	4	52	8				135	1090061	FLD	
4	1160714	Basic Informatics for Construction	3	24	6		30		85		DET	
5	1160465	Theory Mechanics	2	18	12				65	1010476 2020001	DET	
6	1010098	Numerical methods	2	24	6				65	1010476 1010354	DMS	
7	1160434	AutoCAD - Practice	1				30		15	1160330	DET	
Choose 1 of the 8 following courses:												
14	1120173	*Physical Education 2 (Football 2)*	1	4			26		15	1120172	DPE	Condition
15	1120176	*Physical Education 2 (Volleyball 2)*	1	4			26		15	1120175	DPE	Condition
16	1120179	*Physical Education 2 (Basketball 2)*	1	4			26		15	1120178	DPE	Condition
17	1120182	*Physical Education 2 (Badminton 2)*	1	4			26		15	1120181	DPE	Condition
18	1120185	*Physical Education 2 (Vietnamese traditional martial arts 2)*	1	4			26		15	1120184	DPE	Condition
19	1120188	*Physical Education 2 (Taekwondo martial arts 2)*	1	4			26		15	1120187	DPE	Condition
20	1120191	*Physical Education 2 (Karatedo martial arts 2)*	1	4			26		15	1120190	DPE	Condition
21	1120240	*Physical Education 2 (Pickleball 2)*	1	4			26		15	1120239	DPE	Condition
		Total:	**17**									

Semester 3

No	Course Code	Course Name	Semester	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						

No	Course Code	Course Name	Semester	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
1	1130300	Political Economy of Marx – Lenin	2	27		6			62	1130299	DPTLSM	
2	1010129	Probability and Statistics	2	27	3				65	1010354	DMS	
3	1160224	Geological Engineering	2	18	12				65		DET	
4	1160835	Geological engineering practice	1				30		15		DET	
5	1160360	Strength of Materials 1	3	27	18				100	1160465	DET	
6	1160717	BIM applications in architecture	1	15					30	1160330 1160434 1160399 1160364	DET	
7	1160718	BIM practice in architecture	1				30		15	1160330 1160434 1160399 1160364	DET	
8	1160352	Architecture Principle	3	35	10				100	1160434 1160399 1160364	DET	
9	1160399	Civil Engineering Drawings	1	10	5				30	1160330	DET	
10	1160364	Practicing Civil Engineering Drawings	1				30		15	1160434 1160330	DET	
11	1160739	Introductory civil engineering internship	2					TT	5	1160352	DET	
Choose 1 of the 8 following courses:												
12	1120174	*Physical Education 3 (Football 3)*	1	4			26		15	1120173	DPE	Condition
13	1120177	*Physical Education 3 (Volleyball 3)*	1	4			26		15	1120176	DPE	Condition
14	1120180	*Physical Education 3 (Basketball 3)*	1	4			26		15	1120179	DPE	Condition
15	1120183	*Physical Education 3 (Badminton 3)*	1	4			26		15	1120182	DPE	Condition
16	1120186	*Physical Education 3 (Vietnamese traditional martial arts 3)*	1	4			26		15	1120185	DPE	Condition
17	1120189	*Physical Education 3 (Taekwondo martial arts 3)*	1	4			26		15	1120188	DPE	Condition

No	Course Code	Course Name	Semester	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
18	1120192	*Physical Education 3 (Karatedo martial arts 3)*	1	4			26		15	1120191	DPE	Condition
19	1120241	*Physical Education 3 (Pickleball 3)*	1	4			26		15	1120240	DPE	Condition
Total:			**19**									

Semester 4

No	Course Code	Course Name	Semester	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
1	1130301	Scientific Socialism	2	27		6			62	1130300	DPTLSM	
2	1160398	Construction Materials	2	21	9				65	1160360	DET	
3	1160075	Strength of Materials 2	2	18	12				65	1160360	DET	
4	1160542	Structural Analysis 1	2	18	12				65	1160360	DET	
5	1160226	Surveying	2	18	12				65		DET	
6	1160467	Surveying Practice	1				30		15		DET	
7	1160466	Soil Mechanics	2	25	5				65	1160224 1160360	DET	
8	1160286	Structural Architecture	2	25	5				65	1160352 1160434 1160399 1160364	DET	
9	1160728	Architectural Design Project	1					ĐA		1160352 1160286 1160434 1160399 1160364	DET	
10	1120168	National Defense–Security Education 1	3	37		16			92		CNDSE	Condition
11	1120169	National Defense–Security Education 2	2	22		16			57		CNDSE	Condition
12	1120170	National Defense–Security Education 3	2	14			32		49		CNDSE	Condition
13	1120171	National Defense–Security Education 4	2	18			56		21		CNDSE	Condition
Total:			**16**									

Semester 5

No	Course Code	Course Name	Semester	Number of credits			Class duration	Experimental / Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
1	1130302	History of the Communist Party of Vietnam	2	27		6			62	1130091	DPESM	
2	1160376	English for Civil Engineering	2	30					65	1090166	DET	
3	1160241	Soil Testing	1				30		15	1160466	DET	
4	1160468	Reinforced Concrete Structures	4	45	15	0	0		135	1160360 1160398	DET	
5	1160729	Reinforced concrete structural design project	1					ĐA	0	1160398 1160542 1160286 1160075	DET	
6	1160240	Construction Material and Strength of Materials Labs	1				30		15	1160398 1160360	DET	
7	1160543	Structural Analysis 2	2	18	12				65	1160542	DET	
8	1160719	Structural Analysis Software Application	1	8	7				30	1160542 1160398	DET	
9	1160836	Practice of Structural Analysis Software Application	1				30		15	1160542 1160398	DET	
10	1160727	Construction practice	1				30		15	1160398 1160468	DET	
Total:			**16**									

Semester 6

No	Course Code	Course Name	Semester	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
1	1130091	Ho Chi Minh's Ideology	2	27		6			62	1130302	DPESM	
2	1150422	Entrepreneurship	2	20	5	10			60	1130049	DFBA	
3	1160469	Reinforced Concrete Building Structures	3	27	18			BTL	105	1160468	DET	
4	1160471	Steel Structures	2	22	8				65	1160360 1160075	DET	
5	1160086	Foundation Engineering	3	33	12				100	1160466 1160468	DET	

No	Course Code	Course Name	Semeste	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
6	1160725	Construction Technology 1	3	30	15				100	1160468	DET	
7	1160721	BIM Applications in Structural Engineering	1	10	5				30	1160717 1160718 1160468 1160729 1160719 1160720	DET	
8	1160722	BIM Practice in Structural Engineering	1				30		15	1160717 1160718 1160468 1160729 1160719 1160720	DET	
9	1160730	Reinforced Concrete Building Structural Design Project	1					ĐA	0	1160398 1160542 1160286 1160075 1160468	DET	
10	1160731	Foundation Design Project	1					ĐA	0	1160466 1160241	DET	
		Total:	**19**									

Semester 7

No	Course Code	Course Name	Semeste	Number of credits			Class duration	Experimental / Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
Compulsory courses			**12**									
1	1160472	Steel Building Structures	2	20	10				65	1160471	DET	
2	1160243	Construction Technology 2	2	24	6				65	1160725	DET	
3	1160723	BIM Application in Construction	1	15					30	1160717 1160718 1160721 1160722	DET	
4	1160724	BIM Practice in Construction	1				30		15	1160717 1160718 1160721 1160722	DET	
5	1160740	Civil engineering internship	2					TT	5	1160725 1160468	DET	
6	1160437	Cost estimating for construction	1	11	4				30	1160725	DET	
7	1160438	Practicing Cost estimating for construction	1				30		15	1160725	DET	
8	1160732	Steel Structure Design Project	1					ĐA	0	1160471	DET	

No	Course Code	Course Name	Semeste	Number of credits			Class duration	Experimental / Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
9	1160733	Construction Technology Project	1					ĐA	0	1160725	DET	
Choose 2 of the 6 following courses:			**4**									
1	1160333	Prestressed Concrete	2	20	10				65	1160472 1160468	DET	
2	1160110	Construction on soft soil	2	25	5				65	1160086	DET	
3	1160481	Special Reinforced Concrete Structures	2	20	10				65	1160472 1160468	DET	
4	1160442	Foundation of High-Rise Buildings	2	20	10				65	1160086	DET	
5	1160484	Specialized topic on Composite steel – Concrete structures	2	20	10				65	1160471	DET	
6	1160483	Maintenance, Repair and Renovation of Structure	2	20	10				65	1160469 1160086	DET	
Total:			**16**									

Semester 8

No	Course Code	Course Name	Semeste	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
Compulsory courses			**12**									
1	1160436	Structural testing and inspection – theory	1	13	2				30	1160240 1160468 1160471	DET	
2	1160439	Structural Testing and Inspection – Practice	1				30		15	1160240 1160468 1160471	DET	
3	1160470	Reinforced Concrete Tall Buildings	2	18	12				65	1160469	DET	
4	1160285	Water Supply and Sewerage	2	24	6				65	1160352 1160434	DET	
5	1160626	Construction Electrical Technology	2	25	5				65	2020001 1160352	DET	
6	1160726	Construction Methods and Management	3	20	10			30	85	1160725	DET	
7	1160246	Construction Methods and Management Project	1					ĐA	0	1160733 1160437	DET	

No	Course Code	Course Name	Semeste	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
Choose 2 of the 6 following courses:			**4**									
1	1160737	Construction Law and Economics	2	20	10				65	1160468	DET	
2	1160735	Engineering systems in buildings	2	24	6				65		DET	
3	1160734	Artificial Intelligence Applications in Construction	2	10	5		30		50	1160714 1160286 1160725	DET	
4	1160100	Project management for construction	2	20	10				65		DET	
5	1160738	Construction Subjects and Safety on Construction	2	20	10				65	1160243	DET	
6	1160736	BIM manager	2	15	5		30		45	1160717 1160718 1160721 1160722	DET	
Total:			**16**									

Semester 9

No	Course Code	Course Name	Semeste	Number of credits			Class duration	Experimental/ Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty
				Theory	Practise	Tests						
1	1160741	Graduation Internship	4					TT	15	1160739 1160740	DET	
2	1160544	Thesis	8					ĐATN	35	1160728 1160729 1160730 1160731 1160733 1160246	DET	
Total:			**12**									

10. GUIDELINES FOR PROGRAM IMPLEMENTATION

- This training program is applied from the 2025 admission cohort for students majoring in Civil Engineering.

- The training process is based on the designed curriculum, training objectives and target learners, human resource requirements, and specific training requirements. For elective courses, depending on the actual development trends and social demands, the Faculty shall advise students on selecting appropriate courses.

- The Dean of the Faculty is responsible for organizing and guiding the principles for developing detailed course syllabi in order to ensure that the objectives, contents, and requirements are met, while also satisfying the needs of learners and society.

- The training program is reviewed and updated at least once every 5 years to meet the development of the Civil Engineering discipline and to be consistent with socio-economic development needs.

Gia Lai, July 22, 2025

RECTOR

Assoc. Prof. Dr. Doan Duc Tung