

MINISTRY OF EDUCATION AND TRAINING
QUY NHON UNIVERSITY

PROGRAM

Level of education: **Undergraduate**
Major: **Automotive Engineering Technology**
Speciality (if any): **1. Automotive Engineering Technology**
2. Electric Vehicles (EVs)
Code: **7510205**
Type of education: **Full-time**

Gia Lai, 2025

PROGRAM

*(Issued together with Decision No.... /QĐ-ĐHQN dated ..., 2025
of the Rector of Quy Nhon University)*

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Major: **Automotive Engineering Technology**
Speciality (if any): **1. Automotive Engineering Technology**
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Type of education: **Full-time**

1. PROGRAM OBJECTIVES (POs)

1.1. General objectives

To train engineers in Automotive Engineering Technology who possess political and ethical qualities; comprehensive professional knowledge, professional practical skills, critical thinking, management capacity, and the ability to work independently or in teams; and creativity to solve problems in the field of automotive engineering technology; possess self-learning abilities; good health; professional responsibility, a sense of community service, and the capability to apply advanced technologies to meet socio-economic development needs, ensure national defense and security, and integrate internationally.

1.2. Specific objectives

The training objectives for the Automotive Engineering Technology engineering program are:

- + PO1: Ability to apply trained knowledge and skills to solve automotive engineering technology problems.
- + PO2: Possession of critical thinking, management, leadership, cooperation, and human resource training abilities in the automotive field..
- + PO3: Capacity for lifelong learning, innovation, entrepreneurial thinking, digital competence, adaptation to changing work environments, and respect for differences.
- + PO4: Possession of ethics, professional responsibility, and a sense of community service.

2. EMPLOYMENT OPPORTUNITIES AND FURTHER STUDY PROSPECTS

Graduates of the Automotive Engineering Technology program can:

- Work in R&D, design, and production engineering at automotive assembly plants, automotive component manufacturing facilities, engine plants, and various mechanical factories.
- Work in service consulting, warranty, maintenance, repair, and sales at business companies and showrooms for automobiles and power machinery.

- Work as research specialists at research agencies or technical specialists at traffic and automotive management agencies related to automotive technology and engines.
- Work as managers or technical specialists at automotive registration stations and road vehicle inspection agencies.
- Work as lecturers in automotive engineering technology and engines at colleges, vocational schools, and universities with automotive or mechanical power majors.
- Become owners of private automotive service businesses or garages.
- Continue to pursue Master's and Doctoral degrees in automotive engineering domestically or abroad.

3. LEARNING OUTCOMES

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

PLO1	Apply basic knowledge of social and natural sciences to perceive and act correctly in life, study, and research.	PI 1.1: Apply basic knowledge of social sciences to achieve correct perception and actions in life, study, and research.
		PI 1.2: Apply basic knowledge of natural sciences to model, design, calculate, analyze, and solve technical problems.
PLO2	Apply fundamental and specialized knowledge to solve practical interdisciplinary technical problems in the field of engines and automobiles.	PI 2.1: Apply fundamental and specialized knowledge to explain the operating principles of automotive systems.
		PI 2.2: Apply fundamental and specialized knowledge to solve basic problems in the automotive field.
		PI 2.3: Apply fundamental and specialized knowledge to provide appropriate technical solutions within economic and technical contexts.
PLO3	Analyze, evaluate, and develop effective technical solutions for automotive systems, ensuring safety, energy efficiency, and environmental protection.	PI 3.1: Analyze and compare automotive parts, mechanisms, and systems according to various conditions and standards.
		PI 3.2: Evaluate automotive systems regarding technology, safety, energy consumption, and environmental impact.
		PI 3.3: Develop technical solutions to improve performance, optimize systems, ensure safety, and minimize the environmental impact of automotive systems
PLO4	Apply technical methods, tools, digital technology, and modern software to design automotive systems and processes.	PI 4.1: Design automotive processes and systems.
		PI 4.2: Establish calculation models and analyze data using specialized software.
		PI 4.3: Calculate, simulate, and test automotive parts and systems under different conditions.
PLO5	Perform disassembly, measurement, maintenance, and diagnosis of functional systems	PI 5.1: Identify technical issues in automobiles.
		PI 5.2: Execute disassembly and measurement procedures for automotive systems.

	on engines and automobiles safely and correctly.	PI 5.3: Execute maintenance and repair procedures for automotive systems.
PLO6	Demonstrate teamwork, critical thinking, and effective communication skills to achieve common goals.	PI 6.1: Develop and organize plans to complete assigned tasks in group activities.
		PI 6.2: Present technical descriptions and reports through the use of written and spoken language.
		PI 6.3: Possess critical thinking and problem-solving skills.
PLO7	Demonstrate understanding of professional ethical responsibility and academic integrity; have a sense of lifelong learning and professional development.	PI 7.1: Demonstrate understanding of professional ethical responsibility and academic integrity.
		PI 7.2: Develop plans for professional career development.

4. PROGRAM DURATION AND TOTAL CREDITS

4.1. **Program Duration:** 4,5 years

4.2. **Total credits:** 150 credits (excluding 03 Physical Education credits and 09 National Defense - Security Education credits)

4.2.1. Automotive Engineering Technology

Program structure	Credits
General Knowledge	24
Professional Knowledge	126
Fundamental knowledge	48
- Specialized knowledge (if any)	41
- Internship	29
- Graduation thesis, Alternative courses	8
Total	150

4.2.1. Electric Vehicle Engineering

Program structure	Số tín chỉ
Program structure	24
Professional Knowledge	126
- Fundamental knowledge	44
- Specialized knowledge (if any)	43
- Internship	31
- Graduation thesis, Alternative courses	8
Total	150

5. ADMISSION REQUIREMENTS

Admission requirements follow the current Admission Regulations of Quy Nhon University.

6. TRAINING METHOD, GRADUATION REQUIREMENTS

6.1. *Training Method:*

Credit-based education system.

6.2. **Graduation Requirements:**

- Academic requirements:
 - + Accumulate a sufficient number of modules and the total volume of the Training Program;
 - + Achieve a cumulative grade point average (GPA) of 2.00 or higher for the entire course;
- Achieve the Program Learning Outcomes (PLOs);
- **Physical Education (PE) and National Defense - Security Education:** Complete all PE modules and possess a certificate in National Defense and Security Education;
- **Foreign Language Proficiency:** Meet the foreign language requirements according to the University's current regulations;
- **IT Proficiency:** Meet the IT proficiency requirements according to the University's current regulations.

7. TEACHING METHODS AND LEARNING ASSESSMENT

7.1. *Teaching Methods*

Depending on the teaching strategy of each module, the corresponding teaching methods are as follows:

- **Direct Teaching:** Most theoretical subjects are taught using methods such as presentations, lectures, Q&A, guided questioning, assigning homework, and evaluating students' self-learning abilities through exercises and discussions. Specific methods include:

- Lecturing
- Guiding questions
- Discussion

- **Indirect Teaching:** Some modules involve indirect teaching with minimal direct intervention from lecturers, such as internships and graduation projects. Specific methods include:

- Open-ended questioning
- Idea generation
- Case studies
- Problem-solving

7.2. **Learning Assessment**

Assessments are conducted according to the current undergraduate training regulations of Quy Nhon University.

8. PROGRAM CONTENT

8.1. Automotive Engineering Technology Specialization

No	Course Code	Course Name	Semester	Number of credits	Class duration			Experimental/ Practical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
					Theory	Practise	Tests						
I. General Education Knowledge Block				24									
I.1. Political Science and Law				13									
1	1130299	Maxist - Leninnist philosophy	2	3	40		10			85		DPESM	
2	1130049	General law	2	2	27		6			57		DPESM	
3	1130300	Marxist – Leninist Political Economy	3	2	27		6			57	1130299	DPESM	
4	1130301	Science socialism	4	2	27		6			57	1130300	DPESM	
5	1130302	History of Vietnamese Communist Party	5	2	27		6			57	1130301	DPESM	
6	1130091	Ho Chi Minh thought	6	2	27		6			57	1130302	DPESM	
I.2. Physical Education and National Defense–Security Education				12									
I.2.1. National Defense and Security Education				9									
7	1120168	National Defense and Security Policy of Communist Party of VietNam	4	3	37		16			82		CNDSE	
8	1120169	National Defense and Security Works	4	2	22		16			52		CNDSE	
9	1120170	General Military	4	2	14			32		44		CNDSE	
10	1120171	Infrantry Combat Techniques and Tactics	4	2	4			56		36		CNDSE	
I.2.2. Physical Education: Choose one of the following seven Physical Education courses:				3									
11	1120172	Physical Education 1 (Football 1)	1	1	4			26		21		DPE	
12	1120173	Physical Education 2 (Football 2)	2	1	4			26		21	1120172	DPE	
13	1120174	Physical Education 3 (Football 3)	3	1	4			26		21	1120173	DPE	

37	2030003	Communication Skills	1	2	20	5		10		60		DSSH	
38	1150422	START UP	6	2	20	5	10			60	1130049	DFBA	
II. Professional Education Knowledge Block					126								
II.1. Fundamental Knowledge of the Discipline and the Field					48								
39	1160490	Basis informatics	2	3	30			30		90		DET	
40	1010354	Linear Algebra	3	3	30	15				90		DMS	
41	1010052	Mathematical Analysis 1	1	3	34	11				90		DMS	
42	1010059	Mathematical Analysis 2	2	3	36	9				90	1010052	DMS	
43	2020466	Fuel Chemistry	4	2	28		4			60		DNS	
44	1020162	General Physics 1	1	2	28		4			58		DNS	
45	1020163	General Physics 2	2	2	24	4	4			58	1020162	DNS	
46	1020164	Physics Experiment	3	1				30		15	1020163	DNS	
47	1160114	Engineering mathematics	6	2	22	8				60		DET	
48	1160744	Technical drawing	1	2	25	5				60		DET	
49	2040042	Tolerances and measuring technique	3	2	25	5				60	1160744	DET	
50	2040002	Safety technology and environmental	1	2	25	5				60		DET	
51	2040043	Mechanical transmission design project	2	2	20	10				60	1010052	DET	
52	2040044	Strength of material	3	2	20	10				60	2040043	DET	
53	2040045	The principle of machine detail	3	4	45	15				120	2040043	DET	
54	2040046	Basic electrical and electronic engineering	3	3	45					60		DET	
55	1160743	Applied Fluid Mechanics	5	3	40	5				90	1020162	DET	
56	2040048	Thermal engineering	4	2	25	5				60	1020162	DET	
57	1160657	Microcontroller	4	2	30					60	2040046	DET	
58	2040026	New energy in the automotive	8	2	30					60	1160783	DET	
59	1160782	Mechanical transmission design project	4	1					ĐA	30	2040045	DET	
II. 2. Major and Specialization Knowledge					41								
II.2.1. Required Courses (31 Credits)					31								
60	1090385	English for the Automobile Industry	7	2	22	6	4			60	1090166	DFL	
61	2040049	Introduction to Automotive Technology	1	2	26	4				60		DET	

62	1160783	Automotive Engine Technique	4	4	55	5				120	2040045	DET	
63	2040010	Vehicle Theory	6	3	40	5				90		DET	
64	1160784	Automotive Electrical and Electronic System	5	3	40	5				90	2040046	DET	
65	1160785	Vehicle Mechanics	8	3	40	5				90	1160788 2040011	DET	
66	2040011	Automotive Automatic Control System	7	2	30					60	1160784	DET	
67	1160786	Material technology	4	2	30					60	2040043	DET	
68	2040023	Automobile Production and Assembly Process	8	2	26	4				60	1160788	DET	
69	2040013	Diagnostic techniques and automotive maintenance	7	2	25	5				60	1160784 1160787	DET	
70	1160787	Vehicle Mechanics	5	3	40	5				90	2040045 1160783	DET	
71	1160788	Automotive Design	7	2	26	4				60	2040010 1160787	DET	
72	1160789	Vehicle Design Project	8	1					DA	30	1160787	DET	
II.2.2 Elective Courses (5/15 Courses – 10/30 Credits)				10									
73	1140265	Fundamentals of economics	5	2	24	6				60		DEA	
74	1140199	Principles of Logistic	5	2	30					60		DEA	
75	2040014	Automotive service management	8	2	26	4				60	2040013	DET	
76	1150545	Industrial production management	7	2	30					60		DEA	
77	2040056	Safety and comfort systems in automobile	8	2	30					60		DET	
78	2040022	Inspection and Tested for Vehicle	8	2	26	4				60	2040013 1160788	DET	
79	2040033	Cars and environmental pollution	7	2	25	5				60	1160783	DET	
80	2040030	Special Purposed Vehicles	7	2	26	4				60	1160787 1160783	DET	
81	2040035	Automobiles Architects Design	7	2	26	4				60	1160787 2040010	DET	
82	1160681	Applications of AI in robots	6	2	25			10		60		DET	
83	1160568	Embedded Systems	6	2	22			16		60		DET	
84	1160525	Mechatronics	6	2	30					60		DET	

85	2040079	Practice of electric vehicle simulation	8	2				60		60		DET	
86	1160791	Practice of Electric - Hybrid Vehicle	8	2				60		60		DET	
87	2040074	Practice in Automotive Safety Design and Simulation	8	2				60		60	2040044	DET	
II.3 Internship, Practical Training, and Field Practice				29									
88	1160793	Base Electric - Electronics Practice	4	1				30		30		DET	
89	1160658	Microcontroller practice	4	1				30		30		DET	
90	1160769	Design practice on computer	3	2				60		60	1160744	DET	
91	2040063	Practical Automotive Design and Simulation on Computer	7	3				90		90	1160783 1160787	DET	
92	2040067	Mechanical practice	4	2				60		60	2040042	DET	
93	1160808	Mechanical Practice of Automotive Engines	5	3				90		90		DET	
94	1160795	Practice automobile structure.	7	3				90		90	1160787	DET	
95	1160796	Practice in Automotive Engine Electrical Systems	6	2				60		60		DET	
96	1160797	Practice of Body Electrical Systems	6	2				60		60		DET	
97	1160798	Automotive Diagnostic Techniques Practice	8	2				60		60		DET	
98	1160799	Automotive Practicum	1	1				45	TT	30		DET	
99	1160800	Automotive Engineering Internship	8	2				90	TT	60	1160789	DET	
100	2040037	Graduation Internship	9	5				225	TT	150		DET	
II.4. Graduation Thesis				8									
101	2040038	Graduation thesis	9	8				360	ĐA	240		DET	

8.2. Electric Vehicle Specialization

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

								Practical					
								1					
I. General Education				24									
I.1. Political Science and Law				13									
1	1130299	Maxist - Leninist philosophy	2	3	40		10			85		DPESM	
2	1130049	General law	2	2	27		6			57		DPESM	
3	1130300	Marxist – Leninist Political Economy	3	2	27		6			57	1130299	DPESM	
4	1130301	Science socialism	4	2	27		6			57	1130300	DPESM	
5	1130302	History of Vietnamese Communist Party	5	2	27		6			57	1130301	DPESM	
6	1130091	Ho Chi Minh thought	6	2	27		6			57	1130302	DPESM	
I.2. Physical Education and National Defense and Security Education				12									
I.2.1. National Defense and Security Education				9									
7	1120168	National Defense and Security Policy of Communist Party of VietNam	4	3	37		16			82		CNDSE	
8	1120169	National Defense and Security Works	4	2	22		16			52		CNDSE	
9	1120170	General Military	4	2	14			32		44		CNDSE	
10	1120171	Infrantry Combat Techniques and Tactics	4	2	4			56		36		CNDSE	
I.2.2. Physical Education: Students choose one of the following seven groups				3									
11	1120172	Physical Education 1 (Football 1)	1	1	4			26		21		DPE	
12	1120173	Physical Education 2 (Football 2)	2	1	4			26		21	1120172	DPE	
13	1120174	Physical Education 3 (Football 3)	3	1	4			26		21	1120173	DPE	
14	1120175	Physical Education 1 (Volleyball 1)	1	1	4			26		21		DPE	
15	1120176	Physical Education 2 (Volleyball 2)	2	1	4			26		21	1120175	DPE	
16	1120177	Physical Education 3 (Volleyball 3)	3	1	4			26		21	1120176	DPE	
17	1120178	Physical Education (Basketball 1)	1	1	4			26		21		DPE	
18	1120179	Physical Education 2 (Basketball 2)	2	1	4			26		21	1120178	DPE	
19	1120180	Physical Education 3 (Basketball 3)	3	1	4			26		21	1120179	DPE	
20	1120181	Physical Education 1 (Badminton 1)	1	1	4			26		21		DPE	
21	1120182	Physical Education 2 (Badminton 2)	2	1	4			26		21	1120181	DPE	

22	1120183	Physical Education 3 (Badminton3)	3	1	4			26		21	1120182	DPE	
23	1120184	Vietnamese Traditional Matial Arts 1	1	1	4			26		21		DPE	
24	1120185	Vietnamese Traditional Matial Arts 2	2	1	4			26		21	1120184	DPE	
25	1120186	Vietnamese Traditional Matial Arts 3	3	1	4			26		21	1120185	DPE	
26	1120187	Physical Education 1 (Taekwondo Matial Arts 1)	1	1	4			26		21		DPE	
27	1120188	Physical Education 2 (Taekwondo Matial Arts 2)	2	1	4			26		21	1120187	DPE	
28	1120189	Physical Education 3 (Taekwondo Matial Arts 3)	3	1	4			26		21	1120188	DPE	
29	1120190	Physical Education 1 (Karatedo Matial Arts 1)	1	1	4			26		21		DPE	
30	1120191	Physical Education 2(Karatedo Matial Arts 2)	2	1	4			26		21	1120190	DPE	
31	1120192	Physical Education 3 (Karatedo Matial Arts 3)	3	1	4			26		21	1120191	DPE	
32	1120239	Physical Education (Pickleball 1)	1	1	4			26		21		DPE	
33	1120240	Physical Education 2 (Pickleball 2)	2	1	4			26		21	1120239	DPE	
34	1120241	Physical Education 3 (Pickleball 3)	3	1	4			26		21	1120240	DPE	
I.3. Foreign Language				7									
35	1090061	English 1	1	3	37	8				90		DFL	
36	1090166	English 2	2	4	52	8				120	1090061	DFL	
I.4. Social Sciences.				4									
37	2030003	Communication Skills	1	2	20	5		10		60		DSSH	
38	1150422	START UP	6	2	20	5	10			60	1130049	DFBA	
II. Professional Education				126									
II.1. Fundamental Knowledge of the Discipline and the Field				44									
39	1160490	Basis informatics	2	3	30			30		90		DET	

40	1010354	Linear Algebra	3	3	30	15				90		DMS	
41	1010052	Mathematical Analysis 1	1	3	34	11				90		DMS	
42	1010059	Mathematical Analysis 2	2	3	36	9				90	1010052	DMS	
43	1020162	General Physics 1	1	2	28		4			58		DNS	
44	1020163	General Physics 2	2	2	24	4	4			58	1020162	DNS	
45	1020164	Physics Experiment	3	1				30		15	1020163	DNS	
46	1160114	Engineering mathematics	6	2	22	8				60		DET	
47	2040002	Safety technology and environmental	1	2	30					60		DET	
48	1160744	Technical drawing	1	2	25	5				60		DET	
49	2040045	The principle of machine detail	3	4	45	15				120	2040043	DET	
50	1160743	Applied Fluid Mechanics	4	3	40	5				90	1020162	DET	
51	2040043	Mechanical transmission design project	2	2	20	10				60	1010052	DET	
52	2040044	Strength of material	3	2	20	10				60	2040043	DET	
53	1160631	Electrical and electronic engineering	3	2	35	10				90		DET	
54	1160786	Material technology	4	2	30					60		DET	
55	2040026	New energy in the automotive	8	2	30					60	1160783	DET	
56	1160634	Automatic Control Theory	5	2	30					60		DET	
57	1160657	Microcontroller	4	2	30					60		DET	
II.2. Major and Specialization Knowledge					43								
II.2.1. Required Courses (34 Credits)					34								
58	1090385	English for the Automobile Industry	7	2	22	6	4			60	1090166	DFL	
59	2040049	Introduction to Automotive Technology	1	2	26	4				60		DET	
60	1160807	Automotive Engine	4	3	40	5				60	2040045	DET	
61	1160787	Vehicle Mechanics	5	3	40	5				90	2040045	DET	
62	1160787	Automotive Design	7	2	26	4				60	2040010 1160787	DET	
63	2040010	Vehicle Theory	6	3	40	5				90		DET	
64	1160784	Automotive Electrical and Electronic System	5	3	40	5				90	1160631	DET	
65	2040011	Automotive Automatic Control System	8	2	26	4				60	1160784	DET	
66	1160632	Electrical Machine	4	2	20	10				60	1020163 1160631	DET	
67	1160633	Power electronics	4	3	40	5				90		DET	

68	1160636	Electrical Drives	5	2	22	8				60		DET	
69	1160802	Energy supply systems for electric and hybrid electric vehicles	6	2	30					60	1160633	DET	
70	1160785	Vehicle Mechanics	7	3	40	5				90		DET	
71	2040073	Diagnostic and Repair Techniques for Electric Vehicles	7	2	30					60		DET	
II.2.2. Elective Courses (5/16 Courses – 9/29 Credits)				9									
72	1160804	Automotive mechatronics system project	8	1					ĐA	30	1160790	DET	
73	1160789	Vehicle Design Project	8	1					ĐA	30	1160787	DET	
74	1160806	Electric Vehicle Engineering Project	8	1					ĐA	30	2040010 1160785	DET	
75	1140265	Fundamentals of economics	5	2	30					60		DEA	
76	1150545	Industrial production management	5	2	30					60		DEA	
77	1140199	Principles of Logistics	5	2	30					60		DEA	
78	2040056	Safety and comfort systems in automobile	8	2	30					60		DET	
79	2040022	Inspection and Tested for Vehicle	8	2	26	4				60	2040013 1160788	DET	
80	2040033	Cars and environmental pollution	8	2	25	5				60	1160783	DET	
81	2040035	Automobiles Architects Design	7	2	26	4				60	1160787 2040010	DET	
82	2040014	Automotive service management	8	2	26	4				60	2040013	DET	
83	2040030	Special Purposed Vehicles	8	2	26	4				60	1160787 1160783	DET	
84	1050387	Application Programming	7	2	15			30		60		DIT	
85	1160568	Embedded Systems	6	2	22			16		60		DET	
86	1160681	Applications of AI in robots	7	2	25			10		60		DET	
87	2040074	Practice in Automotive Safety Design and Simulation	7	2				60		60	2040044	DET	
II.3. Internship, Practical Training, and Field Practice				31									
88	1160658	Microcontroller practice	4	1				30		30		DET	
89	1160793	Base Electric - Electronics Practice	4	1				30		30		DET	
90	1160769	Design practice on computer	3	2				60		60	1160744	DET	

91	2040063	Practical Automotive Design and Simulation on Computer	7	3				90		90	1160783 1160787	DET	
92	1160770	Mechanical practice	3	2				60		60	2040042	DET	
93	1160803	Practice automobile structure	7	2				60		60	1160787	DET	
94	1160801	Automotive Engine Practice	5	2				60		60		DET	
95	1160796	Practice in Automotive Engine Electrical Systems	6	2				60		60		DET	
96	1160797	Practice of Body Electrical Systems	6	2				60		60		DET	
97	1160791	Practice of Electric - Hybrid Vehicle	8	2				60		60		DET	
98	2040079	Practice of electric vehicle simulation	7	2				60		60		DET	
99	1160798	Automotive Diagnostic Techniques Practice	8	2				60		60	2040013	DET	
100	1160799	Automotive Practicum	1	1				45	TT	30		DET	
101	1160800	Automotive Engineering Internship	8	2				90	TT	60	1160789	DET	
102	2040037	Graduation Internship	9	5				225	TT	150		DET	
II.4. Graduation Thesis				8									
103	2040038	Graduation thesis	9	8				360	ĐA	240		DET	

9. TENTATIVE TEACHING PLAN

9.1. Automotive Engineering Technology Major

SEMESTER 1

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theor y	Practis e	Test s						
1	2040049	Introduction to Automotive Technology	2	26	4			60		DET		
2	1090061	English 1	3	37	8			90		DFL		
3	2040002	Safety technology and environmental	2	25	5			60		DET		
4	2030003	Communication Skills	2	20	5		10	60		DSSH		
5	1010052	Mathematical Analysis 1	3	30	15			90		DMS		
6	1020162	General Physics 1	2	28		4		58		DNS		
7	1160799	Automotive Practicum	1					30	TT	DET		
8	1160744	Technical drawing	2	25	5			60		DET		
Choose one of the following seven Physical Education courses:												
1	1120172	Physical Education 1 (Football 1)	1	4			26	21		DEP		
2	1120175	Physical Education 1 (Volleyball 1)	1	4			26	21		DEP		
3	1120178	Physical Education (Basketball 1)	1	4			26	21		DEP		
4	1120181	Physical Education 1 (Badminton 1)	1	4			26	21		DEP		
5	1120184	Vietnamese Traditional Matial Arts 1	1	4			26	21		DEP		
6	1120187	Physical Education 1 (Taekwondo Matial Arts 1)	1	4			26	21		DEP		

7	1120190	Physical Education 1 (Karatedo Matial Arts 1)	1	4			26		21		DEP
8	1120239	Physical Education (Pickleball 1)	1	4			26		21		DEP
Total			17								

SEMESTER 2

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1130299	Maxist - Leninnist philosophy	3	40	40		10		85		DPESM	
2	1130049	General law	2	27	27		6		57		DPESM	
3	2040043	Mechanical transmission design project	2	20	20	10			60	1010052	DET	
4	1090166	English 2	4	52	8				120	1090061	DFL	
5	1010059	Mathematical Analysis 2	3	36	36	9			90	1010052	DMS	
6	1020163	General Physics 2	2	24	24	4	4		58	1020162	DET	
7	1160490	Basis informatics	3	30			30		90		DET	
Choose one of the following seven Physical Education courses:												
1	1120173	Physical Education 2 (Football 2)	1	4			26		21	1120172	DPE	
2	1120176	Physical Education 2 (Volleyball 2)	1	4			26		21	1120175	DPE	
3	1120179	Physical Education 2 (Basketball 2)	1	4			26		21	1120178	DPE	
4	1120182	Physical Education 2 (Badminton 2)	1	4			26		21	1120181	DPE	
5	1120185	Vietnamese Traditional Matial Arts 2	1	4			26		21	1120184	DPE	

6	1120188	Physical Education 2 (Taekwondo Matial Arts 2)	1	4			26		21	1120187	DPE	
7	1120191	Physical Education 2(Karatedo Matial Arts 2)	1	4			26		21	1120190	DPE	
8	1120240	Physical Education 2 (Pickleball 2)	1	4			26		21	1120239	DPE	
Total			19									

SEMESTER 3

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1130300	Marxist – Leninist Political Economy	2	27		6		57	1130299	DPESM		
2	1160742	Design practice on computer	2				60	60	1160744	DET		
3	1010354	Linear Algebra	3	30	15			60		DMS		
4	2040042	Tolerances and measuring technique	2	25	5			60	1160744	DET		
5	2040044	Strength of material	2	20	10			60		DET		
6	2040045	The principle of machine detail	4	45	15			120	2040043	DET		
7	2040046	Basic electrical and electronic engineering	3	45				60		DET		
8	1020164	Physics Experiment	1				30	15	2022464	DNS		
Choose one of the following seven Physical Education courses:												
1	1120174	Physical Education 3 (Football 3)	1	4			26	21	1120173	DPE		
2	1120177	Physical Education 3 (Volleyball 3)	1	4			26	21	1120176	DPE		
3	1120180	Physical Education 3 (Basketball 3)	1	4			26	21	1120179	DPE		
4	1120183	Physical Education 3	1	4			26	21	1120182	DPE		

		(Badminton3)										
5	1120186	Vietnamese Traditional Matial Arts 3	1	4			26		21	1120185	DPE	
6	1120189	Physical Education 3 (Taekwondo Matial Arts 3)	1	4			26		21	1120188	DPE	
7	1120192	Physical Education 3 (Karatedo Matial Arts 3)	1	4			26		21	1120191	DPE	
8	1120241	Physical Education 3 (Pickleball 3)	1	4			26		21	1120240	DPE	
Total			19									

SEMESTER 4

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1130301	Science socialism	2	27		6		57	1130300	DPESM		
2	2040048	Thermal engineering	2	25	5			60	1020162	DET		
3	2040047	Fuel Chemistry	2	28		4		60		DNS		
4	1160786	Meterial technology	2	45				90	2040043	DET		
5	1160793	Base Electric - Electronics Practice	1				30	30		DET		
6	1160657	Microcontroller	2	30				60		DET		
7	1160770	Mechanical practice	2				60	60	2040042	DET		
8	1160658	Microcontroller practice	1				30	30		DET		
9	1160782	Mechanical transmission design project	1					ĐA	30	2040045	DET	
10	1160783	Automotive Engine Technique	4	55	5			120	2040045	DET		
11	1120168	National Defense and Security Policy of Communist Party of	3	37		16		82		CNDSE		

SEMESTER 6

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1130091	Ho Chi Minh thought	2	27		6			57	1130302	DPESM	
2	1150422	START UP	2	20	5	10			60	1130049	DFBA	
3	1160114	(Engineering mathematics)	2	22	8				60		DET	
4	2040010	Vehicle Theory	3	40	5				90		DET	
5	1160796	Practice in Automotive Engine Electrical Systems	2				60		60		DET	
6	1160797	Practice of Body Electrical Systems	2				60		60		DET	
Elective 2 (Students choose 1 of the following 4 courses)			2									
1	1160525	Mechatronics	2	30					60		DET	
2	1160568	Embedded Systems	2	22			16		60		DET	
3	1160681	Applications of AI in robots	2	25			10		60		DET	
4	2040074	Practice in Automotive Safety Design and Simulation	2				60		60	2040044	DET	
Total			17									

SEMESTER 7

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1090385	English for the Automobile Industry	2	22	6	4			60	1090166	DFL	
2	2040013	Diagnostic techniques and automotive maintenance	2	25	5				60	1160784 1160787	DET	

courses)											
1	2040056	Safety and comfort systems in automobile	2	30					60		DET
2	2040022	Inspection and Tested for Vehicle	2	26	4				60	2040013 1160788	DET
3	2040014	Automotive service management	2	26	4				60	2040013	DET
Elective 5 (Students choose 1 of the following 2 courses)			2								
1	2040079	Practice of electric vehicle simulation	2				60		60		DET
2	1160791	Practice of Electric - Hybrid Vehicle	2				60		60		DET
Total			16								

SEMESTER 9

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	2040037	Graduation Internship	5					TT	150		DET	
2	2040038	Graduation thesis	8					ĐA	240		DET	
Total			13									

9.2. Electric Vehicle Engineering Specialization

SEMESTER 1

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1090061	English 1	3	37	8			90			DFL	

1	1090166	English 2	4	52	8				120	1090061	DFL	
2	1130299	Maxist - Leninnist philosophy	3	40		10			85		DPESM	
3	1130049	General law	2	27		6			57		DPESM	
4	1010059	Mathematical Analysis 2	3	36	9				90	1010052	DMS	
5	1020163	General Physics 2	2	24	4	4			58	1020162	DNS	
6	2040043	Mechanical transmission design project	2							1010052	DET	
7	1160490	Basis informatics	3	30			30		90		DET	
Choose one of the following seven Physical Education courses:												
1	1120173	Physical Education 2 (Football 2)	1	4			26		21	1120172	DPE	
2	1120176	Physical Education 2 (Volleyball 2)	1	4			26		21	1120175	DPE	
3	1120179	Physical Education 2 (Basketball 2)	1	4			26		21	1120178	DPE	
4	1120182	Physical Education 2 (Badminton 2)	1	4			26		21	1120181	DPE	
5	1120185	Vietnamese Traditional Matial Arts 2	1	4			26		21	1120184	DPE	
6	1120188	Physical Education 2 (Taekwondo Matial Arts 2)	1	4			26		21	1120187	DPE	
7	1120191	Physical Education 2(Karatedo Matial Arts 2)	1	4			26		21	1120190	DPE	
8	1120240	Physical Education 2 (Pickleball 2)	1	4			26		21	1120239	DPE	
Total			19									

SEMESTER 3

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1130300	Marxist – Leninist Political Economy	2	27		6			57	1130299	DPESM	
2	1010354	Linear Algebra	3	30	15				90		DMS	
3	1020164	Physics Experiment	1				30		15	2022464	DNS	
4	2040070	Strength of material	2	35	10				90		DET	
5	1160631	Electrical and electronic engineering	2	30					60		DET	
6	1160770	Mechanical practice	2				60		60	2040042	DET	
7	1160769	Design practice on computer	2				60		60	1160744	DET	
8	2040045	The principle of machine detail	4	45	15				90	2040043	DET	
Choose one of the following seven Physical Education courses:												
1	1120174	Physical Education 3 (Football 3)	1	4			26		21	1120173	DPE	
2	1120177	Physical Education 3 (Volleyball 3)	1	4			26		21	1120176	DPE	
3	1120180	Physical Education 3 (Basketball 3)	1	4			26		21	1120179	DPE	
4	1120183	Physical Education 3 (Badminton3)	1	4			26		21	1120182	DPE	
5	1120186	Vietnamese Traditional Matial Arts 3	1	4			26		21	1120185	DPE	
6	1120189	Physical Education 3 (Taekwondo Matial Arts 3)	1	4			26		21	1120188	DPE	
7	1120192	Physical Education 3 (Karatedo Matial Arts 3)	1	4			26		21	1120191	DPE	
8	1120241	Physical Education 3 (Pickleball 3)	1	4			26		21	1120240	DPE	

Total	18										
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SEMESTER 4

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1130301	Science socialism	2	27		6		57	1130300	DPESM		
2	1160743	Applied Fluid Mechanics	3	40	5			90	1020162	DET		
3	1160807	Automotive Engine	3	40	5			60	2040045	DET		
4	1160786	Meterial technology	2							DET		
5	1160657	Microcontroller	2	30				60		DET		
6	1160784	Base Electric - Electronics Practice	1				30	30		DET		
7	1160658	Microcontroller practice	1				30	30		DET		
8	1160632	Electrical Machine	2	20	10			60	1020163 1160631	DET		
9	1160633	Power electronics	3	40	5			90		DET		
10	1120168	National Defense and Security Policy of Communist Party of VietNam	3	37		16		82		CNDSE		
11	1120169	National Defense and Security Works	2	22		8		52		CNDSE		
12	1120170	General Military	2	14			16	44		CNDSE		
13	1120171	Infrantry Combat Techniques and Tactics	2	4			56	64		CNDSE		
Total			19									

SEMESTER 5

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1130302	History of Vietnamese Communist Party	2	27		6			57	1130301	DPESM	
2	2040010	Vehicle Mechanics	3	40	5				90	2040045	DET	
3	1160784	Automotive Electrical and Electronic System	3	40	5				90	1160631	DET	
4	1160636	Electrical Drives	2	22	8				60	2040046	DET	
5	1160634	Automatic Control Theory	2	30					60		DET	
6	1160801	Automotive Engine Practice	2				90		90		DET	
Elective 1 (Students choose 1 out of the following 3 courses)			2									
1	1140265	Fundamentals of economics	2	30					60		DEA	
2	1140199	Principles of logistics	2	30					60		DEA	
3	1150545	Industrial production management	2	30					60		DEA	
Total			16									

SEMESTER 6

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1130091	Ho Chi Minh thought	2	27		6			57	1130302	DPESM	
2	1150422	START UP	2	20	5	10				1130049	DSSH	
3	1160114	Engineering mathematics	2	22	8				60		DET	
4	1160802	Energy supply systems for electric and hybrid electric vehicles	2	30					60	1160633	DET	
5	1160796	Practice in Automotive Engine Electrical Systems	2				60		60		DET	

6	1160797	Practice of Body Electrical Systems	2				60		60		DET
7	2040010	Vehicle Theory	3	40	5				90		DET
Total			15								

SEMESTER 7

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1090385	English for the Automobile Industry	2	22	6	4			60	1090166	DFL	
2	1160787	Automotive Design	2	26	4					2040010 1160787	DET	
3	2040063	Practice in Automotive Safety Design and Simulation	3				90		90	1160783 1160787	DET	
4	1160785	Vehicle Mechanics	3	40	5				90		DET	
5	2040073	Diagnostic and Repair Techniques for Electric Vehicles	2	15	15				60		DET	
6	1160803	Practice automobile structure.	2				60		60	1160787	DET	
7	2040079	Practice of electric vehicle simulation	2				60		60		DET	
Elective 2 (Students choose 1 out of the following 4 courses)			2									
1	1050387	Application Programming	2	15			30		60		DET	
2	1160568	Embedded Systems	2	22			16		60		DET	
3	1160681	Applications of AI in robots	2	25			10		60		DET	
4	2040074	Practical Automotive Design and Simulation on Computer	2				60		60	2040044	DET	
Total			18									

SEMESTER 8

No	Course Code	Course Name	Number of credits	Class duration			No	Course Code	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	1160791	Practice of Electric - Hybrid Vehicle	2				60	60	1090166	DFL		
2	1160798	Automotive Diagnostic Techniques Practice	2				60	60		DET		
3	2040011	Automotive Automatic Control System	2	30				60		DET		
4	1160800	AUTOMOTIVE ENGINEERING INTERSHIP	2					60	1160789	DET		
5	2040026	New energy in the automotive	2	25	5			30	1160783	DET		
Elective 3 (Students choose 1 out of the following 3 courses)			1									
1	1160804	Automotive mechatronics system project	1					30	1160790	DET		
2	1160789	Vehicle Design Project	1					30	1160787	DET		
3	1160806	Electric Vehicle Engineering Project	1					30	2040010 1160785	DET		
Elective 3 (Students choose 1 out of the following 3 courses)			2							DET		
1	2040033	Cars and environmental pollution	2	25	5			60	1160783	DET		
2	2040030	Special Purposed Vehicles	2	26	4			60	1160787 1160783	DET		
3	2040035	Automobiles Architects Design	2	26	4			60	1160787 2040010	DET		
Elective 5 (Students choose 1 out of the following 3 courses)			2									
1	2040056	Safety and comfort systems in automobile	2	30				60		DET		
2	2040022	Inspection and Tested for	2	26	4			60	2040013	DET		

		Vehicle								1160788		
3	2040014	Automotive service management	2	26	4				60	2040013	DET	
Total			16									

SEMESTER 9

No	Course Code	Course Name	Number of credits	Class duration			Experimental Pratical	Others	Self-study time	Prerequisite Course Code	Managing Faculty	Note
				Theory	Practise	Tests						
1	2040037	Graduation Internship	5					TT	150		DET	
2	2040038	Graduation thesis	8					ĐA	240		DET	
Total			13									

Note: Codes for learning components (knowledge blocks):

1. General Education
2. Fundamental Knowledge of the Field
3. Fundamental Knowledge of the Discipline
4. Major / Specialization Knowledge
5. Practical Training – Internship – Field Practice
6. Graduation Thesis (Capstone Project)

11. GUIDELINES FOR IMPLEMENTING THE TRAINING PROGRAM

- This training program applies to students majoring in Automotive Engineering Technology starting from the 2025 intake.
- The training process is based on the designed curriculum, training objectives, target audience, human resource requirements, and specific training regulations. For elective modules, the Department will advise students on selecting appropriate courses based on actual development trends and social needs.
- The Dean is responsible for organizing and guiding the principles for developing detailed course syllabi to ensure that objectives, content, and requirements are met, while satisfying the needs of both learners and society.
- The training program is reviewed and updated at least once every five years to keep pace with the development of the Automotive Engineering Technology industry and to align with socio-economic development needs./.

Gia Lai, July 22, 2025

DEAN OF FACULTY

**HEAD OF TRAINING
OFFICE**

**BY THE DELEGATION OF
THE RECTOR
VICE-RECTOR**

Dr. Tran Thanh Thai

Dr. Le Xuan Vinh

Dr. Dinh Anh Tuan