

**UNDERGRADUATE PROGRAM**

*(Issued together with Decision No. /QĐ-ĐHNCT dated / /2025 of  
The Rector of Nam Can Tho University)*

Name of program: **Automotive Engineering Technology**

Level: **University**

Major: Engineering

Code: 7510205

Type of education: Full time

**1. Program description**

**1.1. Introduction to the program**

The Automotive Engineering Technology of training program trains Automotive Engineers Technology who have sufficient knowledge, skills, political qualities, ethics, professional manners and good health to be able to work effectively in fields related to Automotive Engineering Technology.

**1.2. General information about the program**

Name of program in Vietnamese	Công nghệ kỹ thuật ô tô
Name of program in English	Automotive Engineering Technology
Program code	7510205
Degree-granting institution	Nam Can Tho University
Degree	The Degree of Engineering Automotive Engineering Technology
Level	University
The number of required credits	<b>152</b>
Type of education	Full time
Program duration	4 years
Eligible candidates for admission	Object: High school graduates Criteria: According to the enrollment scheme of the University and the current enrollment regulations of the Ministry of Education and Training.

Grading scale	10-point scale or 4-point scale
Graduation requirements	<p>Accumulate sufficient academic credits and complete the required training program with a total of 152 credits;</p> <p>Have a cumulative GPA of at least 5.00 on a 10-point scale (2.0 on a 4-point scale)</p> <ul style="list-style-type: none"> <li>- Meet the institutional graduation requirements for English proficiency and Information Technology skills;</li> <li>- Meet the institutional graduation requirements for English proficiency and Information Technology skills;</li> <li>- Possess valid certificates in National Defense and Security Education, as well as Physical Education.</li> </ul>
Job opportunities	<ul style="list-style-type: none"> <li>- Take on technical and quality management tasks in enterprises specializing in research, design, assembly, and manufacturing of automobiles, engines, tractors, and related machinery.</li> </ul> <p>Work in vehicle registration and inspection agencies; transportation companies; construction equipment operation companies; shipyard and railway repair factories; mechanical installation enterprises. Additionally, automotive mechanical engineers can establish and operate their own specialized businesses.</p> <ul style="list-style-type: none"> <li>- Provide consultancy, design, scientific research, and technology transfer in fields such as automotive engineering, internal combustion engines, tractors, construction machinery, and high-tech agricultural equipment at research institutes, centers, and governmental research agencies, as well as universities and colleges related to automotive mechanics, power machinery, construction mechanization, and high-tech agricultural machinery.</li> </ul>

	- Participate in teaching specialized subjects related to automobiles, engines, and special-purpose construction machinery at universities, colleges, vocational schools, and technical institutions offering related programs.
Postgraduate study options	Graduates are eligible to pursue Master's and Doctoral degrees both domestically and internationally.
Reference program	Domestic training programs are offered by: Ho Chi Minh City University of Technology (HCMUT) Ho Chi Minh City University of Technology and Education (HCMUTE), and Ho Chi Minh City University of Technology (HUTECH).)
Update time	05/2025

### **1.3. Program goals**

#### **1.3.1. General goals**

- Train automotive engineering technicians to apply and adapt to the socio-economic environment; know how to analyze learned knowledge to solve problems encountered in life; understand the objective laws of the movement of objects and phenomena, and have a clear perspective and stance.

- *Equip engineers with solid foundational scientific knowledge, industry-specific fundamental knowledge, specialized expertise, and professional practical skills to effectively resolve scientific and technical challenges in the field of automotive engineering. Foster the ability to work independently, pursue self-directed learning for professional development, and demonstrate creativity. Enable the application of advanced regional and global technologies to contribute to industrialization and modernization efforts*

#### **1.3.2. Specific goals**

- **PO1:** Apply solid general education knowledge, core technical knowledge, and in-depth expertise in the field of Automotive Engineering Technology to propose solutions, perform calculations, and design automotive systems, including: automotive electrical and electronic systems; automotive air conditioning systems; automotive automatic control systems; fuel systems; automotive assembly and

production lines; chassis and suspension systems; automotive mechatronics; electric vehicles, and smart vehicles).

- **PO2:** Utilize advanced professional skills in Automotive Engineering Technology to develop automotive production and assembly processes, as well as propose technological solutions to address environmental pollution and fuel efficiency issues in vehicles. Formulate production, repair, and maintenance plans for automotive systems in factories, enterprises, vehicle inspection stations, and automotive service units; manage projects for engineers and oversee brand management.

- **PO3:** Possess foreign language proficiency and information technology knowledge to utilize technical software; demonstrate communication skills, teamwork, and professional practical skills in Automotive Engineering Technology to organize, manage, and supervise technical activities, and establish service and repair processes; develop plans and assign tasks at automotive service units; apply information technology in automotive design.

- **PO4:** Apply fundamental knowledge of social sciences, political sciences, law, physical education, and security-defense in daily life and work; understand the psychology of employees and customers to address issues in the automotive field; foster a safe working environment

- **PO5:** Demonstrate leadership and entrepreneurial skills to create employment opportunities for oneself and others; possess the ability to guide technical processes, impart knowledge and experience in the specialized field; evaluate work quality; mentor and supervise others in executing assigned tasks; exhibit self-directed career development, draw professional conclusions, and defend personal viewpoints; manage resources, assess, and enhance the efficiency of production activities; conduct scientific research

- **PO6:** Exhibit a passion for the profession, discipline, industrial work ethic, and professional ethics; demonstrate confidence in work; understand societal needs, fulfill social responsibilities effectively; and maintain a commitment to lifelong learning

#### **1.4. Student learning outcomes**

##### **a. Knowledge**

- **SO1:** Analyze specialized knowledge in the field of automotive engineering and specialized vehicles with an application-oriented approach. Analyze the design, modification, and manufacturing of related products

- **SO2:** Possess foundational knowledge in political science, law, national defense, security, and physical education for practical application

- **SO3:** Apply information technology skills to meet the requirements of the industry.

- **SO4:** Utilize specialized knowledge to plan, organize, and supervise activities in the automotive sector; manage brands, projects, production, assembly, repair, and automotive service businesses, as well as related fields.

**b. Skills**

- **SO5:** Analyze technological processes for manufacturing, assembling, inspecting, diagnosing, maintaining, and repairing commonly used vehicles
- **SO6:** Plan a startup, job creation, scientific research, critical analysis, consultation, and vehicle improvement
- **SO7:** Evaluate work quality and team performance
- **SO8:** Effectively communicate technical issues and solutions
- **SO9:** Achieve English as regulated by the Ministry of Education and Training; use digital technologies effectively and safely to present and share issues and solutions in the workplace

**c. Capacity for autonomy and responsibility**

- **SO10:** Exhibit the ability to work independently, collaborate in teams, supervise, manage, coordinate, evaluate, and improve the efficiency of business and service operations in the industry
- **SO11:** Adhere to legal regulations, live and work responsibly, uphold ethical values, self-direct, draw conclusions, and defend viewpoints in the field of automotive engineering technology

**1.5 Teaching and learning methods/strategies and assessment methods**

**1.5.1. Teaching and learning methods/strategies**

The teaching methods are presented in the table below

<b>Methods and form of teaching</b>	<b>Purpose</b>
<b>Presentation</b>	The instructor presents and explains the content of the lecture. The instructor acts as the speaker or presenter. Students listen to the lecture and take notes to absorb the knowledge conveyed by the instructor
<b>Discussion</b>	Students are divided into groups and participate in discussions about an issue raised by the instructor. Unlike the debate method, in the discussion method, learners share a common goal and work together to refine and enhance their perspectives and solutions
<b>Assignment</b>	Students are assigned tasks to be completed based on the content and requirements set by the instructor
<b>Self-study, reading of reference materials</b>	Self-study, expand knowledge, master lesson content, and develop independent learning skills.

**1.5.2. Grading scale, form, assessment criteria, and weight of scores**

<i>No.</i>	<i>Form</i>	<i>%</i>	<i>Assessment criteria</i>	<i>Maximum score</i>
1	<b>Attendance</b>	10	Attend classes fully and punctually (tracking the number of absences or tardiness) Actively participate in classroom activities (answering questions, engaging in group discussions). Maintain a serious learning attitude and comply with classroom rules.	10
2	<b>Individual assignment</b>	15	Submit assignments on time. Assignment content meets requirements (accurate, complete, creative). Present clearly, coherently, and in accordance with regulations (format, length). Demonstrate independence (no copying or plagiarism)	10
3	<b>Progress assessment</b>	15	Assess knowledge and skills based on the content learned during a period. Accuracy and completeness of responses. Ability to analyze and apply knowledge to situational exercises. Adhere to the time limit and regulations of the assessment	10
4	<b>Final exam</b>	60	Cover the entire content of the course. Evaluate the ability to synthesize, analyze, and apply knowledge. Accuracy, logic, and creativity in the work. Present clearly and in the correct structure (especially for essay-based exams)	10

## 2. Program duration: 4 years

## 3. Required total credits

Required total credits: **152** credits (excluding the Physical Education and Defense and security education courses), distributed as follows:

<b>Knowledge</b>	<b>Obligatory knowledge</b>	<b>Elective knowledge</b>	<b>Total</b>
<b>General knowledge</b>	<b>27</b>	<b>2</b>	<b>29</b>

<b>Knowledge</b>	<b>Obligatory knowledge</b>	<b>Elective knowledge</b>	<b>Total</b>
<b>Professional knowledge</b>	<b>101</b>	<b>14</b>	<b>113</b>
<b>Fundamental knowledge</b>	43	4	47
<b>Specialized knowledge</b>	56	10	66
<b>Graduation internship</b>	<b>4</b>	<b>0</b>	<b>4</b>
<b>Graduation thesis/Alternative courses</b>	<b>6</b>	<b>0</b>	<b>6</b>
<b>Total</b>	<b>138</b>	<b>16</b>	<b>152</b>

#### **4. Eligible candidates for admission**

- Graduated from high school or equivalent
- In good health for study and work as prescribed by current regulations

#### **5. Curriculum, graduation requirements**

##### **5.1. Curriculum**

- Implemented in accordance with the Circular Issuing the Regulations on Regular University Training, promulgated under Circular Decision No. 08/2021/TT-BGDĐT dated March 18, 2021, by the Minister of Education and Training
- Applied with a flexible academic system combining credits and course units
- The training process is organized by cohort, academic year, and semester. The program duration is 4 years. Each academic year consists of 3 main semesters, with each main semester having at least 12 weeks of study and 2 weeks of exams

##### **5.2. Graduation requirements**

- At the end of the course, students who meet the following conditions are eligible for graduation and recognized as graduates;
  - Have accumulated enough credits and completed the required courses for the training program;
  - Have a cumulative GPA of at least 5.00 on a 10-point scale (2.0 on a 4-point scale)
  - Have English proficiency at Level 4 according to the CEFR framework (B2) or equivalent;
  - Possess IT skills as regulated by the Ministry of Information and Communications;
  - Hold certificates in National Defense and Security Education; Physical Education; Soft Skills, and Professional Skills;
  - At the time of graduation review, students must not be under criminal investigation or disciplinary suspension.)

## 6. Program structure

### 6.1. General knowledge

No.	Course code	Course name	Number of credits	Theory	Practice	Category
<b>A</b>	<b><i>Political theory</i></b>					
1.	0101000889	Marxist-Leninist philosophy	3	3	0	
2.	0101000890	Scientific Socialism	2	2	0	
3.	0101000900	Ho Chi Minh's Thought	2	2	0	
4.	0101000869	History of the Communist Party of Vietnam	2	2	0	
5.	0101000641	Political Economics	2	2	0	
<b>B</b>	<b><i>Social Sciences and Humanities</i></b>					
6.	0101000891	General State Law	2	2	0	
<b>C</b>	<b><i>Mathematics - Information Technology - Natural Sciences</i></b>					
7.	0101000896	Basic Informatics	3	2	1	
8.	0101000898	Advanced Mathematics A1	3	3	0	
9.	0101000899	Advanced Mathematics A2	2	2	0	
10.	0101000883	(Probability Theory and Statistics	3	3	0	
11.	0101000902	General Physics - General Physics and Experimental Physics - The Experimental Physics	3	2	1	
<b>D</b>	<b><i>Physical education</i></b>					
12.	0101000872	Physical Education	3	0	3	
<b>E</b>	<b><i>National Defense Education</i></b>					
13.	0101000871	Security Education	8			
<b><i>Elective General Education Course</i></b>						
14.	0101001141	Environment and Human	2	2	0	
15.	0101001080	Economics and Business Management	2	2	0	
16.	0101001581	Product Development	2	2	0	



<b>No.</b>	<b>Course code</b>	<b>Course name</b>	<b>Number of credits</b>	<b>Theory</b>	<b>Practice</b>	<b>Category</b>
		Project Management				

*(\*) Prerequisite courses, not included in the cumulative GPA calculation)*

## 6.2. Professional knowledge

No.	Course code	Course name	Number of credits	Theory	Practice	Category
<b><i>Fundamental knowledge</i></b>						
17.	0101000351	Scientific Research Methodology	2	2	0	
18.	0101000026	Theoretical Mechanics	3	3	0	
19.	0101000132	Strength of Materials	3	2	1	
20.	0101000077	Technical Drawing	3	2	1	
21.	0101001082	Tolerance - Measurement Techniques	2	2	0	
22.	0101001081	Mechanical Materials	2	1	1	
23.	0101001083	Principles of Machines	2	2	0	
24.	0101001332	Machine Components – Project	2	1	1	
25.	0101001088	Fluid Mechanics	2	2	0	
26.	0101001087	Electrical Engineering - Electronics - Electrical Engineering and Electronics	3	3	0	
27.	0101000287	Thermal Engineering	2	2	0	
28.	0101001089	Microcontrolle	2	2	0	
29.	0101001094	Occupational Safety	1	1	0	
30.	0101000793	Brand Management	3	3	0	
31.	0101001084	Introduction to Automotive Engineering	3	2	1	
32.	0101001335	Digital Transformation	2	2	0	
33.	0101001336	Artificial Intelligence (AI) Applications	2	2	0	
34.	0101001337	Python/Matlab Programming	2	2	0	
35.	0101001338	Entrepreneurship and Innovation	2	2	0	
<b><i>Elective course of basic knowledge</i></b>						
36.	0101001333	Computer Applications in Design Automotive	2	2	0	

No.	Course code	Course name	Number of credits	Theory	Practice	Category
37.	0101001466	Mechatronics	2	2	0	
38.	0101001333	Applied Pneumatic and Hydraulic Transmission	2	2	0	
39.	0101001102	Quality Management in Manufacturing	2	2	0	
<b>Specialized knowledge</b>						
40.	0101001103	Specialized English for Automotive Engineering	3	3	0	
41.	0101001104	Principles of Internal Combustion Engines	3	3	0	
42.	0101001106	Automotive Electronics	3	3	0	
43.	0101001113	Automotive Theory	3	3	0	
44.	0101001107	Design and Computation of Automobiles	3	3	0	
45.	0101001115	Electric Engine System and Engine Control	3	3	0	
46.	0101001139	Electric and Automatic Control Systems in Automobiles	3	3	0	
47.	0101001119	Automotive Inspection Techniques	1	1	0	
48.	0101001124	Specialized Automotive Engineering	2	2	0	
49.	0101001464	Technical Diagnosis and Maintenance - Car Repair	2	2	0	
50.	0101001125	Automobile Production and Assembly Technology	3	3	0	
51.	0101001863	Project management for engineers	3	3	0	
52.	0101001339	Automobile Painting Repair Techniques	1	1	0	
<b>Elective theoretical specialized module</b>						
53.	0101001522	Advanced Automotive Fuels and Engine Applications	2	2	0	

No.	Course code	Course name	Number of credits	Theory	Practice	Category
54.	0101001117	Lubricating oil-based fuel	2	2	0	
55.	0101001127	Air conditioning systems and amenities in automobiles	2	2	0	
56.	0101001126	Automotive and Engine Testing	2	2	0	
Mandatory specialized practical module						
57.	0101001359	Mechanical Workshop Practice (Milling, Welding, Machining...)	3	0	3	
58.	0101001105	Internal Combustion Engine – Practicum	4	0	4	
59.	0101001335	Automotive Practicum	4	0	4	
60.	0101001091	Electric System and Automatic Control on Automobiles – Practicum	4	0	4	
61.	0101001086	Automotive Electrical and Automatic Control System – Practicum	3	0	3	
62.	0101001138	Automobile Inspection Techniques – Practicum	1	0	1	
63.	0101001865	Automobile Painting Repair Techniques – Practicum	3	0	3	
Elective specialized practical module						
64.	0101001338	Automotive air conditioning system – internship	2	0	2	
65.	0101001135	Automatic transmission - practical training	2	0	2	
66.	0101001582	Practical Training and Testing of Diesel Fuel System	2	0	2	
67.	0101001337	Automotive and Engine Testing – Practicum	2	0	2	
68.	0101001465	Technical Diagnosis and Maintenance -	2	0	2	

No.	Course code	Course name	Number of credits	Theory	Practice	Category
		Car Repair Practicum				
<b>Graduation internship</b>						
69.	0101001140	Graduation Internship	4	0	4	
<b>Graduation thesis/Alternative courses</b>						
70.	0101001132	Graduation Project	6	0	6	
<b>Alternative courses</b>						
71.	0101001129	Special Topic 1: Electric and Smart Cars	3	3	0	
72.	0101001131	Special Topic 2: New Generation Combustion Engines	3	3	0	

## 7. Tentative teaching plan

### 7.1. (Semester 1

No.	Course name	Number of credits	Total periods	Class periods		Category
				Theory	Practice	
1	Marxist-Leninist Philosophy	3	45	3	0	
2	Advanced Mathematics A1	3	45	3	0	
3	General Physics	2	30	2	0	
4	General Experimental Physics	1	30	0	1	
5	Introduction to Automotive Engineering Technology	3	45	3	0	
6	Defense and security education*	8				
	<b>Total</b>	<b>12</b>	<b>195</b>	<b>11</b>	<b>1</b>	

### 7.2. Semester 2

No.	Course name	Number of credits	Total periods	Class periods		Category
				Theory	Practice	
1	Entrepreneurship and Innovation	2	30	2	0	
2	Physical education 1*	1				
3	Political Economy	2	30	2	0	
4	Advanced Mathematics A2	2	30	2	0	

<i>No.</i>	<i>Course name</i>	<i>Number of credits</i>	<i>Total periods</i>	<i>Class periods</i>		<i>Category</i>
				<i>Theory</i>	<i>Practice</i>	
5	Thermal Engineering)	2	30	2	0	
	<b>Total</b>	<b>8</b>	<b>120</b>	<b>8</b>	<b>0</b>	

### 7.3. Semester 3

<i>No.</i>	<i>Course name</i>	<i>Number of credits</i>	<i>Total periods</i>	<i>Class periods</i>		<i>Category</i>
				<i>Theory</i>	<i>Practice</i>	
1	Basic information	3	60	2	1	
2	Theory Mechanics	3	45	3	0	
3	Descriptive Geometry -Engineering Drawing	3	45	2	1	
4	Physical education 2*	1				
5	Digital Transformation	2	30	2	0	
6	Artificial Intelligence (AI) Applications	2	30	2	0	
	<b>Total</b>	<b>13</b>	<b>210</b>	<b>11</b>	<b>2</b>	

### 7.4. Semester 4

<i>No.</i>	<i>Course name</i>	<i>Number of credits</i>	<i>Total periods</i>	<i>Class periods</i>		<i>Category</i>
				<i>Theory</i>	<i>Practice</i>	
1	Ho Chi Minh's Ideology	2	30	2	0	
2	General Law	2	30	2	0	
3	Tolerances and measuring technique	2	30	2	0	
4	Strength of materials	3	60	2	1	
5	Mechanical handywork practice	3	90	0	3	
6	Internal Combustion Engine Principles	3	45	3	0	
	<b>Total</b>	<b>15</b>	<b>315</b>	<b>11</b>	<b>4</b>	

### 7.5. Semester 5)

<i>No.</i>	<i>Course name</i>	<i>Number of credits</i>	<i>Total periods</i>	<i>Class periods</i>		<i>Category</i>
				<i>Theory</i>	<i>Practice</i>	
1	History of Vietnamese Party	3	45	3	0	
2	Probability and Statistics	3	45	3	0	
3	Vehicle Body & Paint Repair Technology	2	30	2	0	
4	Mechanical materials	2	45	1	1	

<i>No.</i>	<i>Course name</i>	<i>Number of credits</i>	<i>Total periods</i>	<i>Class periods</i>		<i>Category</i>
				<i>Theory</i>	<i>Practice</i>	
5	Generic knowledge (choose 1 of 3 courses)	2	30	2	0	
6	Physical education 3*	1				
7	Python/Matlab Programming	2	30	2	0	
	<b>Total</b>	<b>14</b>	<b>225</b>	<b>13</b>	<b>1</b>	

### 7.6. Semester 6

<i>No.</i>	<i>Course name</i>	<i>Number of credits</i>	<i>Total periods</i>	<i>Class periods</i>		<i>Category</i>
				<i>Theory</i>	<i>Practice</i>	
1	Practice of Vehicle Body & Paint Repair Technology)	3	90	0	3	
2	Mechanism Principle	2	30	2	0	
3	Mechanism Detail Projects	2	45	1	1	
4	Automotive Mechatronics	3	45	3	0	
5	Practice of Internal Combustion Engines	4	120	0	4	
	<b>Total</b>	<b>14</b>	<b>330</b>	<b>6</b>	<b>8</b>	

### 7.7. Semester 7

<i>No.</i>	<i>Course name</i>	<i>Number of credits</i>	<i>Total periods</i>	<i>Class periods</i>		<i>Category</i>
				<i>Theory</i>	<i>Practice</i>	
1	Science Socialism	1	15	1	0	
2	Electrical and Electronics Engineering	3	45	3	0	
3	Theory of Vehicles	3	45	3	0	
4	Practice of Automotive Chassis Systems	4	120	0	4	
5	Engine Electrical and Engine Control System	3	45	3	0	
	<b>Total</b>	<b>14</b>	<b>270</b>	<b>10</b>	<b>4</b>	

### 7.8. Semester 8

<i>No.</i>	<i>Course name</i>	<i>Number of credits</i>	<i>Total periods</i>	<i>Class periods</i>		<i>Category</i>
				<i>Theory</i>	<i>Practice</i>	
1	Practice of Engine Electrical and Engine Control System	4	120	0	4	
2	Scientific research methodology	2	30	2	0	
3	Fluid Mechanics	2	30	2	0	
4	Application Microprocessors	2	30	2	0	
5	Vehicle Design and Calculation	3	45	3	0	
	<b>Total</b>	<b>13</b>	<b>255</b>	<b>9</b>	<b>4</b>	



### 7.9. Semester 9

No.	Course name	Number of credits	Total periods	Class periods		Category
				Theory	Practice	
1	Automotive Body Electrical and Automatic Control Systems	3	45	3	0	
2	Practice of Automotive Body Electrical and Automatic Control Systems	3	90	0	3	
3	Automotive Diagnostic and Repair Technology	2	30	2	0	
4	Intermediate courses (choose 2 out of 4 courses)	4	60	4	0	
	<b>Total</b>	<b>12</b>	<b>225</b>	<b>9</b>	<b>3</b>	

### 7.10. Semester 10

No.	Course name	Number of credits	Total periods	Class periods		Category
				Theory	Practice	
1	Brand Management	3	45	3	0	
2	Internship Courses (choose 1 of 5 courses)	2	60	0	2	
3	Automotive Assembly and Manufacturing Technology	3	45	3	0	
4	Specialized Automotive Engineering	2	30	2	0	
5	Automobile Verification Testing Technology	1	15	1	0	
	<b>Total</b>	<b>11</b>	<b>195</b>	<b>9</b>	<b>2</b>	

### 7.11. Semester 11

No.	Course name	Number of credits	Total periods	Class periods		Category
				Theory	Practice	
1	Practice of Automobile Verification Testing Technology	1	30	0	1	
2	Elective course in the specialized knowledge block (Theoretical course, choose 2 out of 4 courses)	4	60	4	0	

No.	Course name	Number of credits	Total periods	Class periods		Category
				Theory	Practice	
3	Elective course in the specialized knowledge block (Practical course, choose 2 out of 5 courses)	4	120	0	4	
4	English for Automotive Engineering	3	45	3	0	
5	Occupational Safety Engineering	1	15	1	0	
	<b>Total</b>	<b>13</b>	<b>270</b>	<b>10</b>	<b>3</b>	

### 7.12. Semester12

No.	Course name	Number of credits	Total periods	Class periods		Category
				Theory	Practice	
1	Project Management for Engineers	3	45	3	0	
3	Graduation Internship	4	120	0	4	
4	Graduation Thesis or Replacement courses for Thesis	6	180	0	6	
4.1	Seminar 1: Electric and Smart Vehicle	3	45	3	0	
4.2	Seminar 2: New Generation Internal Combustion Engine	3	45	3	0	
	<b>Total</b>	<b>13</b>		<b>3</b>	<b>10</b>	

(\*) If students do not meet the requirements to complete their graduation thesis, they will take alternative courses

## 8. Guidelines for Program Implementation

### 8.1 Faculties and departments

- The Department of Academic Management is responsible for reviewing and leading the preparation of detailed syllabi for all courses in the foundational, major, and specialized areas according to the credit load of the program. It provides the list of textbooks, lecture notes, and reference materials for all courses to the university library and keeps them at the department office. At the beginning of each semester, it coordinates with other units within the university to implement the training plan according to the set schedule

- Assign faculty members with a master's degree or higher (in the related field or specialization) to teach theoretical courses, and provide detailed course outlines to instructors to ensure adherence to the university's teaching plan

- The academic advising team must thoroughly understand the entire credit-based curriculum to guide students in registering for courses.

## **8.2 Lecturers**

- When faculty members are assigned to teach one or more courses, they must thoroughly study the detailed course outline to prepare the lessons and appropriate teaching materials and tools.

- Faculty members must fully prepare lecture materials, textbooks, and learning resources to provide to students for preparation before class

- Organize seminars, with a focus on group study and guiding students in writing essays and projects. Instructors should determine teaching methods such as delivering lectures, guiding discussions, solving problems in class, in the lab, and in practical sessions, as well as guiding students in writing reports.

- Pay attention to the development of students' self-learning and research skills throughout the teaching and practicum process.

- Focus on the logical flow of knowledge delivery and reception, specify prerequisite courses for compulsory subjects, and prepare instructors to meet the requirements of teaching elective courses.

## **8.3. Students**

Students must consult with their academic advisor to select appropriate course modules that align with their study progress. It is essential to pre-study lesson materials before attending classes to facilitate comprehension of lectures. Full attendance in class sessions is required to receive instructors' guidance on lecture content. Students must demonstrate self-discipline in independent study and research, while actively participating in group learning activities and attending all scheduled seminars.

Proactively and diligently utilize online resources and the university library to support independent study, research, and the completion of the final thesis. Strictly adhere to examination, assessment, and evaluation regulations.

Regularly engage in extracurricular activities, including student organizations and cultural, sports, or artistic events, to develop communication skills and gain a deeper understanding of society and interpersonal dynamics.

## **8.4 Facilities and equipment for teaching, practice, and internships**

Theory classrooms with traditional equipment, supplemented with teaching aids (projectors

Computer labs equipped with software for basic computer training, graphic application, design application, and simulation of processes. The lab also covers basic subjects such as physics, general chemistry, measurement techniques, mechanical processing practicum, etc

Practical workshops equipped with visual training and simulation tools: Hydraulic experiment equipment; Internal combustion engine systems; Automotive chassis systems – tractors; Powertrain and steering systems; Automotive electrical systems – tractors; Automotive interior-exterior equipment – tractors; ...

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