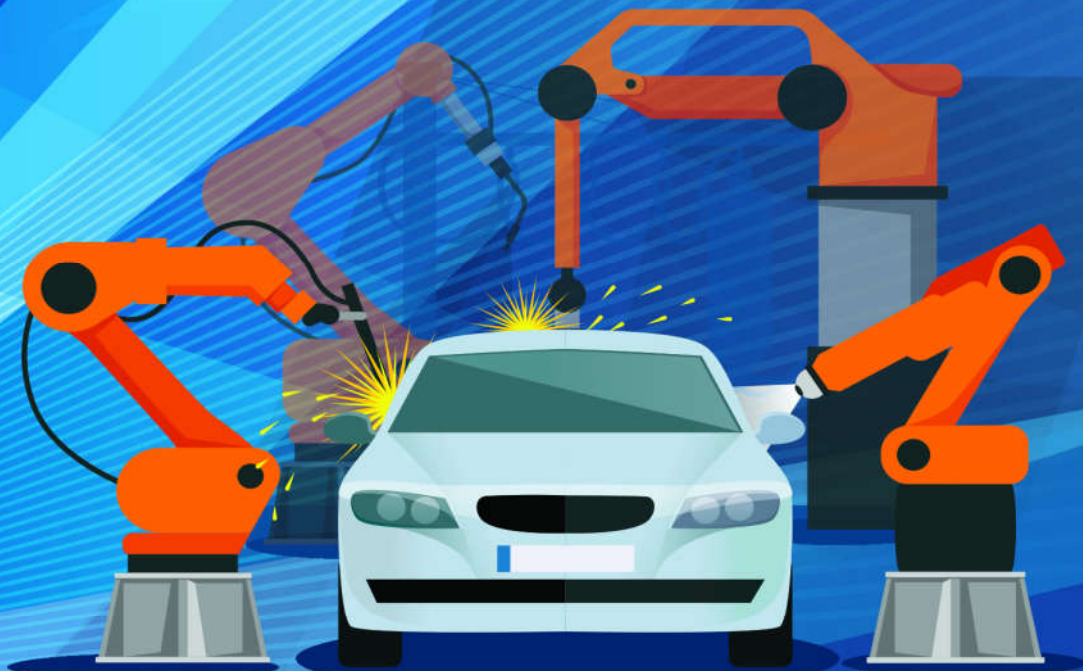




INDUSTRIAL UNIVERSITY OF HO CHI MINH CITY  
FACULTY OF AUTOMOTIVE ENGINEERING TECHNOLOGY

# PROGRAMME SPECIFICATION

AUTOMOTIVE ENGINEERING TECHNOLOGY



Ho Chi Minh City, July 2018

# TABLE OF CONTENTS

<b>I. PROGRAMME DESCRIPTION .....</b>	<b>1</b>
1. Faculty Introduction.....	1
2. General Information of the Programme .....	2
3. University Educational Philosophy .....	2
4. Faculty Mission .....	2
5. Programme Education Objectives (PEOs).....	2
6. Programme Expected Learning Outcomes (ELOs) .....	3
7. Job and Post-graduate Study Opportunities .....	4
8. Admission Criteria, Training Process and Graduation Conditions .....	4
9. Relationship between outcomes-courses-teaching methods-assessment activities .....	5
10. Teaching, Learning and Assessment Activities.....	10
11. Rubric for graduation thesis and internship .....	14
<b>II. CURRICULUM DESCRIPTION.....</b>	<b>19</b>
1. Curriculum Structure .....	19
2. Programme curriculum framework.....	20
3. Curriculum Roadmap.....	23
4. Mapping Courses-Expected Learning Outcomes.....	25
5. Courses outline .....	27
<b>III. BUSINESS COOPERATION ACTIVITIES .....</b>	<b>33</b>
<b>IV. ENTERPRISES OF FAET ALUMNI .....</b>	<b>34</b>
1. Toyota An Suong.....	35
2. Vietnam Automobile Training Center-VATC .....	35
<b>V. IMPLEMENTATION GUIDE .....</b>	<b>36</b>
1. For training units.....	36
2. For lecturers.....	36
3. For students .....	36
<b>VI. USEFULL CONTACT INFORMATION .....</b>	<b>37</b>
1. Lecturers.....	37
2. Support staffs.....	38

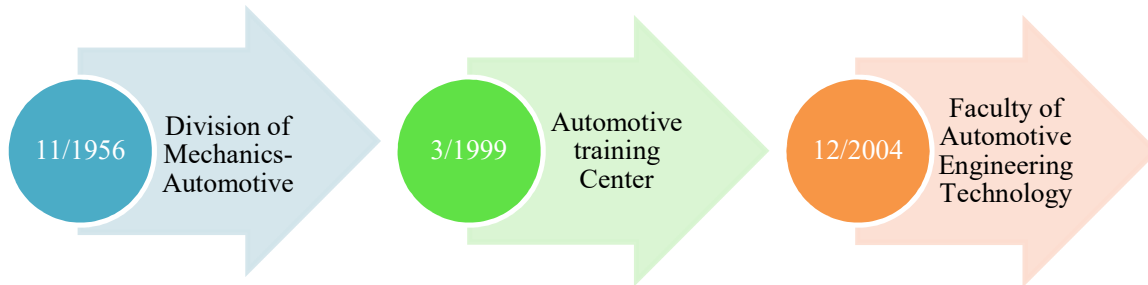
# I. PROGRAMME DESCRIPTION



## 1. Faculty Introduction

Faculty of Automotive Engineering Technology was established from the early days of establishment in 1956. The department is the pioneer of discipline, quality of education, scientific research which innovate teaching method constantly, take interest in the quality of academic staffs, equipment and machinery to satisfy students' knowledge and skills after graduating.

The historical establishment and development of the Faculty of Automotive Engineering Technology (FAET) through the periods:



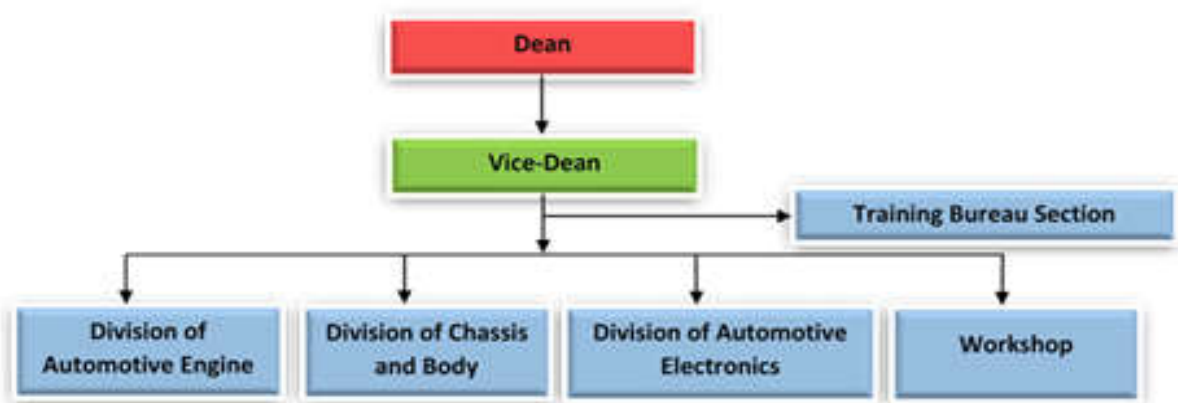
Faculty of Automotive Engineering Technology is responsible for training and researching science in Automobile Technology, including automobile engines, automobile chassis, electric and electronic automobile. The total staffs have good specialized knowledge and professional skills with the spirit of dynamic, enthusiastic, devoted to the profession. Action criteria of Faculty of Automotive Engineering Technology are “Innovation- Dynamic- Integration”.

At present, the FAET has 38 staff members, including 10 PhDs, 2 doctoral candidates, 19 masters, 2 master candidates and 5 support staffs. The FAET organizational structure includes 01 Dean, 01 vice-Dean, 03 Heads of Division, 01 Head of Workshop. The work positions of the executive board, Head of Division and academic staff are clearly defined.



Dean of Faculty Vice - Dean of Faculty

The organizational structure of the faculty is described in the following diagram



## 2. General Information of the Programme

Title	Information
Programme title:	Automotive Engineering Technology
Programme code:	7510205
Name of the final award	Bachelor of Engineer in Automotive Engineering Technology
Awarding institution	Industrial University of Ho Chi Minh City
Model of study:	Full time
Accumulated credits	146 Credits
Study duration	6 years (4 years on time and 2 years extra)
Language used:	Vietnamese
English degree requirement:	Minimum TOEIC 450
Website:	<a href="http://faet.iuh.edu.vn">faet.iuh.edu.vn</a>
Lastest update:	July, 2018

## 3. University Educational Philosophy

Statement of the educational philosophy of IUH: "Quality, Sustainable Development, International Integration."

Can be found at <http://www.hui.edu.vn/en/vision-mission-objectives-s14.html>

## 4. Faculty Mission

Providing high-quality human resources with high professional and practical skills regarding automotive engineering, enhancing collaboration, scientific research, and technology transfer with partners in the same field.

Can be found at <http://faet.iuh.edu.vn/en/overview/>

## 5. Programme Education Objectives (PEOs)

After graduation 3 to 5 years, the AET programme graduates are able to:

No.	Programme Education Objectives (PEOs)
1	Apply knowledge and technical skills which have been taught in the AET programme for solving automotive engineering technology problems.
2	Manage, lead and train human resources in the automotive engineering field.
3	Engage life-long learning and adapt to the ever-changing environment, respect the differences.
4	Comply with the Vietnam government's policies, law, having responsibilities and professional ethics.

Can be found at <http://faet.iuh.edu.vn/en/objectives-expected-learning-outcomes-of-faculty-of-automotive-engineering-technology-2018/>

## 6. Programme Expected Learning Outcomes (ELOs)

The programme was designed to guarantee graduates achieve the following expected learning outcomes:

No.	<b>Programme Expected Learning Outcomes (ELOs)</b> <i>At the graduation time, students of the AET programme are able to</i>
<b>a</b>	Apply basic knowledge of mathematics, science and technology in the field of automotive engineering technology.
<b>b</b>	Apply knowledge of economics, society and service management to solve problems in automotive enterprise.
<b>c</b>	Apply specialized knowledge to reasoning problems in the automotive field.
<b>d</b>	Utilize specialized skills and tools to solve automotive problems.
<b>e</b>	Design systems and structures based on applying knowledge about automotive systems.
<b>f</b>	Communicate effectively in the field of automotive engineering technology via verbal form, written form and technical documents.
<b>g</b>	Maintain self-study skills effectively.
<b>h</b>	Perform independently and teamwork.
<b>i</b>	Demonstrate commitment to professional quality.
<b>j</b>	Enhance safety standards and industrial style.

Can be found at <http://faet.iuh.edu.vn/en/objectives-expected-learning-outcomes-of-faculty-of-automotive-engineering-technology-2018/>

Mapping Programme Education Objectives-Expected Learning Outcomes:

PEOs	ELOs									
	a	b	c	d	e	f	g	h	i	j
1	X		X	X	X					
2		X				X		X		
3	X	X			X	X	X	X		
4									X	X



## 7. Job and Post-graduate Study Opportunities

After graduation from FAET, students can:

Participate in managing work, operating and working directly in technical positions, service, sale, customer service at manufacturing and assembling automotive companies, sale, and maintenance service in the automotive field.

Work in research departments, inspection centers, technical inspection divisions of vehicle and powerful machine, technical areas, investment promotion center at departments, boards, commissions, related to the automotive engineering field.

Train the professional/technical skills in the automotive field for institutions and companies.

Can be found at <http://faet.iuh.edu.vn/en/overview/>



## 8. Admission Criteria, Training Process and Graduation Conditions

### a. Admission Criteria

The admission criteria of IUH are also determined based on the regulations of the Ministry of Education and Training. Candidates throughout the country who have graduated from high school with the results: subjects in the registered subjects have scores greater than 1.0 and the total score is not lower than the admission score regulated by the University have a right to register into AET programme. The admission of AET programme is based on subject groups of A00 (Mathematics, Physics, Chemistry), A01 (Mathematics, Physics, English), C01 (Literature, Mathematics, Physics) and D90 (Mathematics, Natural Sciences, English). Number of student intake target in 2018 is 170 students

The admission policy of the FAET is also based on the admission regulations of IUH to ensure a number of students and improve the quality of students' inputs. The annual enrollment of the FAET is determined by the IUH based on the number of academic staff and the actual social needs.

More information about the updated admission criteria of the programme can be found at <http://www.iuh.edu.vn/tuyensinh/>

### b. Training Process

The training process and graduation requirements are based on the regulations of MOET and IUH on the credit training with the following supplementary contents:

- The yearly training plan is designed with 3 Semester per year. Duration for 2 main semesters is 16 weeks and the summer semester is 7 weeks.
- During the four-year studying, AET students have to complete 146 credits to graduate. The study load is distributed evenly in 8 semesters. Each semester, students can select and register courses suitable to their personal schedule as long as the study load required for each semester is 12 credits as the minimum and a maximum of 30 credits.

### c. Graduation Conditions

Students of Automotive Engineering Technology who meet all the following conditions shall be considered for graduation:

- At the time of graduation, students are not examined for penal liability, or disciplined at the suspension for study;
- Accumulating enough courses in the educational programme;
- The cumulative grade point average the entire programme/course is 2.00 or higher;
- Having the military education and physical education certificates.
- Having a certificate of TOEIC 450 or higher (or equivalent foreign language certificates as stipulated by the Ministry of Education and Training in the foreign language competence) for full-time undergraduate students.
- Having the basic information technology certificate.

The university's qualification process of graduation includes:

- + Step 1: Students who are eligible to graduate apply to graduation to the Faculty of Automotive Engineering Technology (FAET).
- + Step 2: The Faculty Secretary checks students' graduation eligibility, resolves any issues on student's applications, and proposes the graduation list.
- + Step 3: The Academic Administration Office (AAO) gathers and verifies graduation lists, and submits them to the Graduation Council for decision.

## 9. Relationship between outcomes-courses-teaching methods-assessment activities

No.	Expected Learning Outcomes	Courses	Teaching and learning activities	Assessment activities	Assessment tools
a	Apply basic knowledge of mathematics, science and technology in the field of automotive engineering technology	- 01.C1 - 02.C2 - 03.EMS - 03.TE - 03.EG2-NS - 03.EG3-FT1 - 04.EEE - 04.EG4-FK1 - 04.EG5-FK2 - 05.EG7-FT2 - 06.TV - 06.SCICE	- Lectures - Group discussion - Think-pair-share - Flipped classroom - Work assignment	- Multiple choice tests - Essays - Presentations - Practice tests - Written reports - Projects	- Marking Scheme - Rubrics

		<ul style="list-style-type: none"> <li>- 07.ASC</li> <li>- 07.PHS</li> <li>- 07.EG13-M CAE2</li> <li>- 08.GT</li> </ul>			
<b>b</b>	Apply knowledge of economics, society and service management to solve problems in automotive enterprise	<ul style="list-style-type: none"> <li>- 01.FPM-L</li> <li>- 01.GL</li> <li>- 02.RLVCP</li> <li>- 02.EG1-EK</li> <li>- 03.HI</li> <li>- 04.PICE</li> <li>- 04.EG6-SK</li> <li>- 05.PACMS</li> <li>- 06.EG10-SE</li> <li>- 07.PAEES</li> <li>- 07.EG13-M CAE2</li> <li>- 08.I</li> </ul>	<ul style="list-style-type: none"> <li>- Lectures</li> <li>- Group discussion</li> <li>- Think-pair-share</li> <li>- Flipped classroom</li> <li>- Work Assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple choice tests</li> <li>- Essays</li> <li>- Presentations</li> <li>- Practice tests</li> <li>- Written report</li> <li>- Projects</li> </ul>	<ul style="list-style-type: none"> <li>- Marking Scheme</li> <li>- Rubrics</li> </ul>
<b>c</b>	Apply specialized knowledge to reasoning problems in the automotive field.	<ul style="list-style-type: none"> <li>- 02.ABCS</li> <li>- 03.TE</li> <li>- 03.ICES</li> <li>- 04.EEE</li> <li>- 04.EG4-FK1</li> <li>- 04.EG5-FK2</li> <li>- 05.MMT</li> <li>- 05.ICEP</li> <li>- 05.EG7-FT2</li> <li>- 05.EG8-L1</li> <li>- 06.AES</li> <li>- 06.TV</li> <li>- 06.SCICE</li> <li>- 06.EG9-L2</li> <li>- 06.EG10-SE</li> <li>- 07.ASC</li> <li>- 07.EG11-ISV</li> </ul>	<ul style="list-style-type: none"> <li>- Lectures</li> <li>- Group discussion</li> <li>- Think-pair-share</li> <li>- Flipped classroom</li> <li>- Work Assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple choice tests</li> <li>- Essays</li> <li>- Presentations</li> <li>- Practice tests</li> <li>- Written report</li> <li>- Projects</li> </ul>	<ul style="list-style-type: none"> <li>- Marking Scheme</li> <li>- Rubrics</li> </ul>



		<ul style="list-style-type: none"> <li>- 07.EG12-M CAE1</li> <li>- 07.EG13-M CAE2</li> <li>- 08.I</li> <li>- 08.GT</li> </ul>			
<b>d</b>	Utilize specialized skills and tools to solve automotive problems	<ul style="list-style-type: none"> <li>- 03.EG2-NS</li> <li>- 03.EG3-FT1</li> <li>- 04.PICE</li> <li>- 04.PAPS</li> <li>- 04.EG4-FK1</li> <li>- 05.PACMS</li> <li>- 05.PDE</li> <li>- 05.EG8-L1</li> <li>- 06.PABES</li> <li>- 06.EG9-L2</li> <li>- 07.PAEES</li> <li>- 07.PAACS</li> <li>- 07.EG11-ISV</li> <li>- 07.EG13-M CAE2</li> <li>- 08.I</li> </ul>	<ul style="list-style-type: none"> <li>- Practice</li> <li>- Field trip</li> <li>- Internship</li> <li>- Project based learning</li> <li>- Work Assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple choice tests</li> <li>- Essays</li> <li>- Presentations</li> <li>- Practice tests</li> <li>- Written report</li> <li>- Projects</li> </ul>	<ul style="list-style-type: none"> <li>- Marking Scheme</li> <li>- Rubrics</li> </ul>
<b>e</b>	Design systems and structures based on applying knowledge about automotive systems	<ul style="list-style-type: none"> <li>- 03.EMS</li> <li>- 04.SM</li> <li>- 04.CAED</li> <li>- 04.EG4-FK1</li> <li>- 04.EG5-FK2</li> <li>- 05.ME</li> <li>- 05.EG7-FT2</li> <li>- 05.EG8-L1</li> <li>- 06.SCICE</li> <li>- 06.EG9-L2</li> <li>- 07.ASC</li> <li>- 07.EG12-M CAE1</li> <li>- 07.EG13-M CAE2</li> </ul>	<ul style="list-style-type: none"> <li>- Course project</li> <li>- Science research</li> <li>- Project based learning</li> <li>- Graduation project</li> <li>- Academic competitions</li> <li>- Problem based learning</li> <li>- Project based learning</li> <li>-Work Assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple choice tests</li> <li>- Essays</li> <li>- Presentations</li> <li>- Practice tests</li> <li>- Written report</li> <li>- Projects</li> </ul>	<ul style="list-style-type: none"> <li>- Marking Scheme</li> <li>- Rubrics</li> </ul>

		- 08.GT			
<b>f</b>	Communicate effectively in the field of automotive engineering technology via verbal form, written form and technical documents	<ul style="list-style-type: none"> <li>- 01.IAT</li> <li>- 02.ABCS</li> <li>- 03.ED</li> <li>- 04.CAED</li> <li>- 05.RM</li> <li>- 06.AES</li> <li>- 06.SCICE</li> <li>- 06.EG10-SE</li> <li>- 07.EG11- ISV</li> <li>- 07.EG12-M CAE1</li> <li>- 08.I</li> <li>- 08.GT</li> <li>- 08.IC</li> </ul>	<ul style="list-style-type: none"> <li>- lectures</li> <li>- Team work,</li> <li>- Project based learning</li> <li>- Writing reports</li> <li>- Work Assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple choice tests</li> <li>- Essays</li> <li>- Presentations</li> <li>- Practice tests</li> <li>- Written report</li> <li>- Projects</li> </ul>	<ul style="list-style-type: none"> <li>- Marking Scheme</li> <li>- Rubrics</li> </ul>
<b>g</b>	Maintain self-study skills effectively.	<ul style="list-style-type: none"> <li>- 01.IAT</li> <li>- 02.EG1-EK</li> <li>- 03.ICES</li> <li>- 03.EG2-NS</li> <li>- 03.EG3-FT1</li> <li>- 05.RM</li> <li>- 06.TV</li> <li>- 06.SCICE</li> <li>- 06.EG9-L2</li> <li>- 06.EG10-SE</li> <li>- 07.ASC</li> <li>- 07.EG11- ISV</li> <li>- 07.EG12-M CAE1</li> <li>- 08.GT</li> </ul>	<ul style="list-style-type: none"> <li>- Flipped classroom</li> <li>- Course project</li> <li>- Science research</li> <li>- Project based learning</li> <li>- Graduation project</li> <li>- Academic competitions</li> <li>- Problem based learning</li> <li>- Project based learning</li> <li>- Work Assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple choice tests</li> <li>- Essays</li> <li>- Presentations</li> <li>- Practice tests</li> <li>- Written report</li> <li>- Projects</li> </ul>	<ul style="list-style-type: none"> <li>- Marking Scheme</li> <li>- Rubrics</li> </ul>
<b>h</b>	Perform independently and teamwork	<ul style="list-style-type: none"> <li>- 01.IAT</li> <li>- 02.TS</li> <li>- 01.EG1-EK</li> <li>- 04.PAPS</li> </ul>	<ul style="list-style-type: none"> <li>- Flipped classroom</li> <li>- Team work</li> <li>- Practice</li> <li>- Course project</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple choice tests</li> <li>- Essays</li> <li>- Presentations</li> <li>- Practice tests</li> </ul>	<ul style="list-style-type: none"> <li>- Marking Scheme</li> <li>- Rubrics</li> </ul>

		<ul style="list-style-type: none"> <li>- 04.EG6-SK</li> <li>- 05.RM</li> <li>- 05.ICEP</li> <li>- 05.PDE</li> <li>- 06.PABES</li> <li>- 06.EG10-SE</li> <li>- 07.PAEES</li> <li>- 07.EG11-ISV</li> <li>- 07.EG12-MCAE1</li> <li>- 08.I</li> </ul>	<ul style="list-style-type: none"> <li>- Academic competitions</li> <li>- Problem based learning</li> <li>- Project based learning</li> <li>- Work assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Written report</li> <li>- Projects</li> </ul>	
<b>i</b>	Demonstrate commitment to professional quality	<ul style="list-style-type: none"> <li>- 01.NDES1</li> <li>- 02.NDES2</li> <li>- 02EG1-EK</li> <li>- 03.HI</li> <li>- 04.EG6-SK</li> <li>- 05.PACMS</li> <li>- 05.EG8-L1</li> <li>- 06.TV</li> <li>- 06.EG9-L2</li> <li>- 08.I</li> <li>- 08.GT</li> </ul>	<ul style="list-style-type: none"> <li>- Internship</li> <li>- Laboratory activities</li> <li>- Graduation project</li> <li>- Work assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple choice tests</li> <li>- Essays</li> <li>- Presentations</li> <li>- Practice tests</li> <li>- Written report</li> <li>- Projects</li> </ul>	<ul style="list-style-type: none"> <li>- Marking Scheme</li> <li>- Rubrics</li> </ul>
<b>j</b>	Enhance safety standards and industrial style	<ul style="list-style-type: none"> <li>- 01.IAT</li> <li>- 04.PICE</li> <li>- 04.PAPS</li> <li>- 04.EG5-FK2</li> <li>- 05.PDE</li> <li>- 05.EG7-FT2</li> <li>- 05.EG8-L1</li> <li>- 06.PABES</li> <li>- 07.PAEES</li> <li>- 07.PAACS</li> <li>- 08.I</li> </ul>	<ul style="list-style-type: none"> <li>- Field trip</li> <li>- Internship,</li> <li>- Laboratory activities</li> <li>- Work assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple choice tests</li> <li>- Essays</li> <li>- Presentations</li> <li>- Practice tests</li> <li>- Written report</li> <li>- Projects</li> </ul>	<ul style="list-style-type: none"> <li>- Marking Scheme</li> <li>- Rubrics</li> </ul>

## 10. Teaching, learning and Assessment activities

### a. Teaching and learning activities

Teaching and learning activities of academic staffs and students are always improved to improve the quality. Teaching staffs apply new teaching methods such as lectures, group discussion, think-pair-share, flipped classroom, work assignment, practice, field trip, project-based learning, problem-based learning, ...

- **Lectures:** One-way instruction from facilitator to students. “Download” information relating to knowledge.
- **Group discussion:** Students talk to each other to generate ideas and opinions of the topic.
- **Think-pair-share:** In think-pair-share strategy, the academic staff acts as a facilitator and poses a question or a problem to the students. Students are given sufficient time to think and gather their thoughts, after which the teacher asks them to pair themselves and share their thoughts with each other.
- **Flipped classroom:** A flipped classroom is an instructional strategy and a type of blended learning that reverses the traditional learning environment by delivering instructional content, often online, outside of the classroom. Students watch online lectures, collaborate in online discussions, or carry out research at home while engaging in concepts in the classroom with the teaching staff.
- **Work Assignment:** Students complete work assigned by academic staff away from class in an allocated time.
- **Practice:** Students practice a topic or skill repeatedly, usually on his own.
- **Field trip:** A field trip is a journey by a group of students to a place away from their normal learning environment.

### b. Assessment activities

There are many different types of assessment activities:

- **Multiple choice tests:** They include multiple choice true-false and matching types, of which multiple choice is the most commonly used. A multiple choice test item usually consists of a statement, called the stem, and several alternative statements one of which is the correct answer and the others are known as distractors.
- **Essay:** Essays require students to select, organize and integrate materials on a given topic. They also test writing skills and the ability

- **Project based learning:** Students learn about a subject by working for an extended period of time to investigate and respond to a complex question, challenge, or problem.
- **Problem based learning:** Students learn about a subject through the experience of solving an open-ended problem found in trigger material.
- **Internship:** They are typically undertaken by students and graduates looking to gain relevant skills and experience in a particular field.
- **Course Project:** An individual project is required for all students in the course. Projects can be done by you as an individual, or in teams of students.
- **Science research:** Students research on learning topics to submit a report
- **Team work:** Co-operation between those who are working on a task.
- **Graduation project:** Graduation project will be a meaningful experience which provides a student with the opportunity for in-depth learning about a self-selected topic.
- **Academic competitions:** Students participate in the national or international academy competitions.

to develop an argument and use evidence to support it. Essays may be written under timed exam conditions or set as research assignments.

- **Presentations:** Presentations are usually made orally to a class on a prepared topic and may include the use of presentation aids such as PowerPoint or handouts. This assessment may be undertaken individually or as a group. Presentations may take different forms such as role plays, facilitating group activities or

seminars, conference presentations, debating, presenting a product, question and answer time, and formal speeches.

- **Practice tests:** Practical tests may involve performance tests in the classroom on specific tasks or may involve the assessment of skills and abilities (particularly professional skills) in the classroom.

- **Written report:** The report is a common way of presenting information and recommendations or conclusions related to a specific purpose.

Reports are written based on gathering and analyzing information using a discipline-specific methodology and format. They can be used to assess laboratory experiments, fieldwork or case studies.

- **Projects:** Projects are an extended piece of work involving inquiry based activities. Projects may be small or large, undertaken by individuals or in groups and have outcomes such as a report, design, art work, wiki, a poster or working product.

### c. Pictures of teaching and learning activities

Teaching and learning activities of lectures and students are always improved to improve the quality



*Student groups are discussing together during theory lessons*



*The students are participating in active teaching methods*



*Seminar and Practice workshop*





*Students are practicing automotive design computer applications and in extracurricular car care activities*



*Some of products made by FAET's students*

The FAET also frequently create conditions for students taking professional skills competitions in the country and had many students achieve high award.



*The students participated in the competition to design the car to save energy by SHELL and Honda held*



*Souvenir flag in competition to design the car to save energy*

In addition to teaching and learning, lectures and students of the FAET regularly participate in the movement of exercises and sports and many years of high award in the whole school sports festival.



*Students of the FAET participated in sports events of IUH*



## 11. Rubric for graduation thesis and internship

### a. Graduation thesis

Evaluation criteria	Evaluation methods	Weak 1	Average 2	Good 3	Very good 4
Apply specialized knowledge in the automotive technology field.	Graduation thesis grading	Students present theoretical basis unrelated to the topic.	Students present a theoretical basis to implement the topic in a way that is consistent with the objectives and research tasks.	Students present a theoretical basis to implement the topic in a way that is consistent with the research objectives and tasks. The theoretical basis is directly related to the research topic.	Students present a theoretical basis to implement the topic in a way that is consistent with the research objectives and tasks. The theoretical basis is directly related to the research topic. Full theoretical basis, strict logic.
Apply specialized knowledge to explain the working principles of automotive systems.	Report grading in front of the committee	Students cannot explain the working principle of the system.	Students explain the working principle of the system, but it is unclear.	Students explain the system's working principle clearly.	Students explain the system's working principle accurately and confidently.
Apply specialized knowledge to calculate, evaluate problems in the automotive field.	Graduation thesis grading	Students do not calculate and evaluate the system in the topic.	Students are able to calculate the systems in the topic.	Students calculate and evaluate the systems in the topic but are incomplete.	Students calculate and evaluate correctly the systems in the topic.
Calculate to testing the system and structure on cars.	Report grading in front of the committee	Students do not test correctly new system in their research	Students test correctly 50% of the system in their research	Students test correctly from 50-70% of the system in their research	Students test correctly over 70% of all system in their research

Design systems and structures by using software.	Report grading in front of the committee	Do not use or use unsuitable designing and calculating software	Use suitable designing and calculating software	Use suitable designing and calculating software and give the exact results	Use suitable designing and calculating software and give the exact results and new findings
Present the technical report in the form of text.	Graduation thesis grading	The report is presented incorrectly according to the prescribed layout or unclear and incorrect graphs and tables.	The report is presented completely according to the prescribed layout.  Graphs and tables are clear and accurate.	Present a complete and clear layout.  Graphs and tables are clear and accurate.  The format of the graduation report is in accordance with regulations.	Present a complete and clear layout.  Graphs and tables are clear and accurate.  The format of the graduation report is in accordance with regulations.  The spelling style is not flawless
Present the technical report by oral.	Report grading in front of the committee	The presentation content is sketchy, the presentation has not attracted the attention of participants.	The presentation has a clear layout, but the presentation attracted the attention of more than 50% of the participants.	Presentation content has a clear layout, presentation files using multimedia are reasonable, the presentation attracted more attention than 80% of participants reported.	The presentation content has a clear layout, the presentation file uses multimedia appropriately, the presentation has attracted more attention than 80% of participants reported and created a lively debate atmosphere.
Find out and use specialized references.	Process grading	Students do not cite references in the graduation report	Students read and cite more than 2 valuable references with the content described in the topic.	Students read and cite more than 5 valuable references with the content described in the topic.	Students read and cite more than 10 valuable references with the content described in the topic.  References are not redundant.

					References are not redundant.	
Students can demonstrate problem-solving skills.	Determine the problem to be solved	Scoring process records	Students do not determine the problem to be solved	Students identify issues that need to be resolved but have not come into a clear focus.	Students determine the problem to be addressed in the clear focus	Students determine the problem to be addressed in the clear and appropriate context
	Design implementation plan		Students do not plan to implement.	Students identify the problem in detail and formulate the plan but need adjustment.	Students identify detailed problems and create feasible plans.	Students identify detailed problems and set up the implementation plan and assign work clearly.
	Implement and evaluate results		Students perform less than 50% of the workload in the plan.	Students perform 50-65% of the workload in the plan.	Students perform 65-80% of the workload in the plan.	Students perform 80% of the workload in the plan.
Organize group work activities.	Attend group discussions.	Process grading	Students are absent and late from 2 or more than 4 times.	Students are absent and late for 1 session or 3-4 times.	Students participate in full discussion but have 1-2 times late.	Students participate in discussions fully and on time.
	Contribute comments		Students do not contribute ideas.	Students contribute but not yet positive.	Students often actively contribute ideas.	Students often actively contribute ideas and comments are recorded.
	Completed the work assigned by the team		Students do not complete the task assigned by the group or more than 5	Students complete tasks assigned by the group but are delayed 3-4 times.	Students complete tasks assigned by the group but 1-2 times late.	Students complete well and on time work assigned by the team.



			times late.			
Demonstrate commitment to professional ethics.		Report grading in front of the committee	Student 's dishonesty in research.	Students do not copy the results of others.	Students do not copy the results of others. Students have full reference citation.	Students do not copy the results of others. Students have full reference citation. Students faithfully present research results.

## b. Internship

### - Rubric for the instructor

Evaluation criteria	Evaluation form	Suggested evaluation	Weak (1)	Average (2)	Good (3)	Very good (4)
Explain the procedures in the automotive service sector at the internship enterprises.	Scoring report	Add more comments on the enterprise in the guidelines for writing reports of students	Do not explain the steps of the procedure of service management at the enterprise	Explain the steps of the procedure of service management at the enterprise	Explain the steps of the procedure of service management at the enterprise and describe by illustrations	Explain the steps of the procedure of service management at the enterprise and describe by illustrations according to the process
Apply the social-economic knowledge in order to solve problems in enterprises.	Scoring report	Point out the strengths and weaknesses of the enterprise	Do not explain the organizational structure and operational fields at the enterprise	Explain the organizational structure and operational fields at the enterprise	Point out limitations in the problem-solving process at the enterprise	Propose 1 solution to solve problems at the enterprise
Apply the specialized knowledge of the automotive field to complete the assigned	Scoring report	Score the internship report-through the presentation of repair, maintenance, design, service, ... procedures that	Do not present the repair / maintenance / design / service procedure involved in	Present the repair / maintenance / design / service procedure involved in	Explain the repair / maintenance / design / service procedure	Point out differences between actual repair / maintenance / design / service

works at the enterprises.		students participate in enterprise	the enterprise	the enterprise	involved in the enterprise	procedure with the learned knowledge
Present the technical report in text form.	Scoring report	1. The format of explanatory notes is in accordance with regulations. 2. The layout presented in the explanation is clear 3. Pictures and tables are clear and accurate 4. The spelling style is not flawless	Do not meet 1 of the four criteria	Achieve 2 of 4 criteria	Achieve 3 of 4 criteria	Achieve 4 criteria
Build a plan in order to accomplish the assigned tasks.	Scoring report	After 1 week of starting the internship, students need to discuss with the enterprise about the content and plan of the internship, to meet and to send it to the instructor for approval.	Do not have an internship plan and internship diary at the enterprise (1)	Have an internship plan and internship diary at the enterprise (1)		
Ensure commitment about doing progress in time	Scoring report	Report according to the registered plan with the instructor (students will have at least 2 times to meet and report to teachers during the internship time)	Submit a report lately for no reason	Submit a report lately twice for a reason	Submit a report lately once for a reason	Submit the report on schedule

**- Rubric for the supervisor**

<b>Evaluation criteria</b>	<b>Suggested evaluation</b>	<b>Weak (1)</b>	<b>Average (2)</b>	<b>Good (3)</b>	<b>Very good (4)</b>
Identify the automotive technical issues in the enterprises.	Actively participate in the work at the enterprise	Identify correctly less than 50% of technical issues during the internship at the enterprise.	Identify correctly from 50 - 65% of technical issues during the internship at the enterprise.	Identify correctly from 66 - 80% of technical issues during the internship at the enterprise.	Identify correctly over 80% of technical issues during the internship at the enterprise.
Carry out assigned tasks in automotive enterprises.	Degree of assigned works completion in the enterprise	Complete works below 50%	Complete works from 50 - 65%	Complete works from 66 - 80%	Complete works over 80%
Resolve the damages in the car by using	Skills of using the computer, the searching	Unable to use the software / device in the	Able to use the software / device to work	Able to use the software / device to work	Able to use the software / device to work after

some searching software and specialized equipment.	software and specialized equipment for work at the enterprise.	assigned works at the enterprise	after instructing on 3 times	after instructing on 2-3 times	instructing on 1 time
Participate in group work activities at the enterprise.	Actively cooperate with employees in the enterprise	Do not join sufficiently in the team works	join sufficiently in the team works	Participate, exchange but not actively support team members to complete the works	Actively participate, exchange, support team members to complete the works
Apply safety standards in the working environment of the automotive industry.	Comply with regulations on occupational safety at the enterprise	Be reminded more than 2 times about labor safety regulations at the enterprise	Be reminded 2 times about labor safety regulations at the enterprise	Be reminded 1 time about labor safety regulations at the enterprise	Comply with regulations on labor safety at the enterprise and not be reminded
Comply to time regulations.	Comply with regulations on working time at the enterprise	Be reminded more than 2 times about time regulations at the enterprise	Be reminded 2 times about time regulations at the enterprise	Be reminded 1 time about time regulations at the enterprise	Comply with regulations on time at the enterprise, not be reminded

## II. CURRICULUM DESCRIPTION



### 1. Curriculum Structure

No.	Cluster		Credits
1	General Knowledge Block	Required	38
		Elective	9
2	Fundamental Knowledge Block	Required	33
		Elective	12
3	Specialized Knowledge and Skills Block	Required	40
		Elective	14
Total			146

## 2. Programme curriculum framework

No.	Course Code	Courses Name	Credits		
			Total	Theory	Practice
1. General Knowledge Block			47	34	13
Required			38	28	10
1	2112007	Fundamental Principles of Marxism - Leninsm	5	5	0
2	2112008	Revolutionary Lines of the Vietnam communist party	3	3	0
3	2112005	Hochiminh Ideology	2	2	0
4	2131472	General Laws	2	2	0
5	2113431	Calculus 1	2	1	1
6	2113432	Calculus 2	2	1	1
7	2132001	Teamwork Skills	2	1	1
8	2113433	Research Methodology	2	1	1
9	2120405	Physical Education 1	2	0	2
10	2120406	Physical Education 2	2	0	2
11	2120501	National Defence Education and Security 1	4	4	0
12	2120502	National Defence Education and Security 2	4	2	2
13	2111250	English 1	3	3	0
14	2111300	English 2	3	3	0
Elective			9	6	3
Group 1			3	2	1
1	2107483	Fundamentals of Management	3	2	1
2	2107510	Business Management	3	2	1
3	2127481	Fundamental Accounting	3	2	1
4	2123800	Environment and Human	3	2	1
5	2107492	Business Communications	3	2	1
6	2132002	Planning Skills	3	2	1
Group 2			3	2	1
1	2113434	Applied Mathematics	3	2	1
2	2113435	Numerical Methods	3	2	1
3	2113436	Complex Functions and Laplace Transforms	3	2	1
4	2113437	General Physics	3	2	1
5	2113438	Logics	3	2	1
Group 6			3	2	1
1	2110585	General Psychology	3	2	1
2	2113439	Sociology	3	2	1
3	2111491	Introduction to Vietnamese Culture	3	2	1
4	2111492	Vietnamese Language in Use	3	2	1
5	2112011	Music - Music Theory and Guitar Basics	3	1	2
6	2106529	Fine Art	3	1	2
2. Fundamental Knowledge Block			45	39	6
Required			33	29	4
1	2116424	Introduction to Automotive Technology	2	1	1
2	2116406	Internal Combustion Engines Principles	3	3	0

3	2116801	Internal Combustion Engine Structures	2	2	0
4	2103491	Workshop practice: Bench-Work + Welding	2	2	0
5	2103526	Engineering Drawings	3	3	0
6	2103492	Mechanical Elements	3	3	0
7	2103404	Engineering mechanics-Statics	2	2	0
8	2103437	Strength of Materials	3	3	0
9	2103414	Pneumatic and Hydraulic Systems	3	2	1
10	2103527	Computer Applications in Engineering Design	2	0	2
11	2114480	Electric and Electronic Engineering	3	3	0
12	2118401	Thermodynamics engineering	3	3	0
13	2103528	Mechanisms and Machine Theory	2	2	0
<b>Elective</b>			<b>12</b>	<b>10</b>	<b>2</b>
<b>Group 3</b>			<b>3</b>	<b>2</b>	<b>1</b>
1	2103417	Mechanical Metrology and Tolerance	3	2	1
2	2101463	C Programming Language	3	2	1
3	2103415	Manufacturing Automation	3	2	1
4	2103480	Control Engineering	3	3	0
<b>Group 4</b>			<b>3</b>	<b>3</b>	<b>0</b>
1	2113500	Engineering Physics	3	2	1
2	2103475	Computer Aided Mechanical Design	3	0	3
3	2103432	Engineering Vibrations	3	3	0
4	2118409	Fluid Mechanics	3	3	0
<b>Group 5</b>			<b>3</b>	<b>2</b>	<b>1</b>
1	2102434	Digital Engineering	3	2	1
2	2103433	Numerical Method in Mechanical Engineering	3	2	1
3	2103416	Mechanical Materials and Mechanical Properties Lab	3	2	1
4	2118455	Computational Fluid Dynamics	3	3	0
<b>Group 7</b>			<b>3</b>	<b>3</b>	<b>0</b>
1	2118424	Operation and Maintenance of Heat and Refrigeration systems	3	3	0
2	2102435	Microprocessors Engineering	3	2	1
3	2103405	Engineering Mechanics-Dynamics	3	3	0
4	2103538	Mechatronic Systems	3	3	0
<b>3. Specialized Knowledge and Skills Block</b>			<b>54</b>	<b>19</b>	<b>35</b>
<b>Required</b>			<b>40</b>	<b>12</b>	<b>28</b>
1	2116807	Automotive Electrical Systems	3	3	0
2	2116407	Theory of Vehicle	3	3	0
3	2116811	Structural Calculations of the Internal Combustion Engines	2	2	0
4	2116812	Automotive Structure Calculation	2	2	0
5	2116804	Automotive Body and Chassis Structure	2	2	0
6	2116802	Practice of the Internal Combustion Engine	3	0	3
7	2116803	Practice of Diesel Engine	2	0	2
8	2116808	Practice of Automotive Engine Electrical Systems	4	0	4
9	2116809	Practical of Automotive Body Electrical Systems	2	0	2
10	2116805	Practice of Automotive Powertrans System	3	0	3



11	2116806	Practical of Automotive Control and Motion System	2	0	2
12	2116810	Practical of Automotive air Conditioning Systems	2	0	2
13	2116429	Internship	5	0	5
14	2116430	Graduation Thesis	5	0	5
<b>Elective</b>			<b>14</b>	<b>7</b>	<b>7</b>
<b>Group 8</b>			<b>3</b>	<b>0</b>	<b>3</b>
1	2116817	Driving Techniques Practice	3	0	3
2	2116818	Practice of Motorbike	3	0	3
3	2116819	Computer Application in Design and Safety Simulation of Automotive	3	1	2
<b>Group 9</b>			<b>3</b>	<b>1</b>	<b>2</b>
1	2116814	Practice of Vehicle Body Repair and Paint	3	0	3
2	2116815	Aerodynamics of Vehicle	3	1	2
3	2116816	Computer Applications in Engine Design and Simulation	3	1	2
<b>Group 10</b>			<b>2</b>	<b>2</b>	<b>0</b>
1	2116813	Renewable Energy on Automobile	2	2	0
2	2116423	Automotive Service Manager	2	2	0
3	2118451	Refrigeration Engineering	2	2	0
<b>Group 11</b>			<b>2</b>	<b>2</b>	<b>0</b>
1	2116820	Automotive Testing Method	2	2	0
2	2116421	Technology of Specialized Vehicles	2	2	0
3	2116823	Automotive Technology: Diagnostic, Repair and Inspection	2	2	0
<b>Group 12</b>			<b>2</b>	<b>2</b>	<b>0</b>
1	2116422	Automobile and Environment	2	2	0
2	2116824	Automotive Maintaining Technology	2	2	0
3	2103490	Applications of CAE in Mechanical Design	2	2	0
<b>Group 13</b>			<b>2</b>	<b>0</b>	<b>2</b>
1	2118461	Special Subject in Ventilating and Air Conditioning Systems Design	2	0	2
2	2116825	Practice of Automotive Electronic Engineering	2	0	2
3	2103496	Industrial Production Management	2	2	0

Total required credits per semester

No.	Semester	Credits		Total
		Required	Elective	
1	Semester 1	17	0	17
2	Semester 2	18	3	21
3	Semester 3	17	6	23
4	Semester 4	14	9	23
5	Semester 5	14	6	20
6	Semester 6	10	5	15
7	Semester 7	11	6	17
8	Semester 8	10	0	10
<b>Total</b>		<b>111</b>	<b>35</b>	<b>146</b>

### 3. Curriculum Roadmap

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
Fundamental Principles of Marxism - Leninism (01.FPM L)	Revolutionary Lines of the Vietnam communist party (02.RLVCP)	Hochiminh Ideology (03.HI)	Computer Applications in Engineering Design (04.CAED)	Research Methodology (05.RM)	Practice of Automotive Body Electrical Systems (06.PABES)	Pneumatic and Hydraulic Systems (07.PHS)	Internship (08.I)
Calculus 1 (01.C1)	Calculus 2 (02.C2)	Engineering Drawings (03.ED)	Strength of Materials (04.SM)	Mechanism and Machine Theory (05.MMT)	Structural Calculations of the Internal Combustion Engines (06.SCICE)	Practice of Automotive Engine Electrical Systems (07.PAEES)	Graduation Thesis (08.GT)
National Defence Education and Security 1 (01.NDES1)	National Defence Education and Security 2 (02.NDES2)	Engineering mechanics - Statics (03.EMS)	Practice of the Internal Combustion Engine (04.PICE)	Mechanical Elements (05.ME)	Automotive Electrical Systems (06.AES)	Practice of Automotive Air Conditioning Systems (07.PAACs)	TOEIC 450 Certification (08.T450C)
Physical Education 1 (01.PE1)	Physical Education 2 (02.PE2)	Internal Combustion Engine Structures (03.ICES)	Electric and Electronic Engineering (04.EEE)	Internal Combustion Engines Principles (05.ICEP)	Theory of Vehicle (06.TV)	Automotive Structure Calculation (07.ASC)	Informatic Certification (08.IC)
Introduction to Automotive Technology (01.IAT)	Teamwork Skills (02.TS)	Thermodynamics engineering (03.TE)	Practice of Automotive Powertrans System (04.PAPS)	Practice of Diesel Engine (05.PDE)			
General Laws (01.GL)	Automotive Body and Chassis Structure (02.ABCS)	Workshop practice: Bench-Work + Welding (03.APBW+W)		Practice of Automotive Control and Motion System (05.PACMS)			
	English 1 (02.E1)	English 2 (03.E2)	Elective – Group 4 Fundamental knowledge 1 (04.EG4-FK1)	Elective – Group 7 Fundamental Technology 2 (05.EG7-FT2)	Elective – Group 9 Laboratory 2 (06.EG9-L2)	Elective – Group 11 Inspection - Specialized Vehicles (07.EG11-ISV)	
	Elective - Group 1 Economic Knowledge (02.EG1-EK)	Elective – Group 2 Natural Science (03.EG2-NS)	Elective – Group 5 Fundamental knowledge 2 (04.EG5-FK2)	Elective – Group 8 Laboratory 1 (05.EG8-L1)	Elective – Group 10 Services – Energy (06.EG10-SE)	Elective – Group 12 Maintenance – CAE1 (07.EG12-M CAE1)	
		Elective – Group 3 Fundamental Technology 1 (03.EG3-FT1)	Elective – Group 6 Social Knowledge (04.EG-SK)			Elective – Group 13 Maintenance – CAE2 (07.EG-M CAE2)	

**Table: Describes the course in the Elective Group**

No.	Elective Group	
1	<b>Elective - Group 1</b> (Economic Knowledge)	Fundamentals of Management, Business Management, Fundamental Accounting, Environment and Human, Business Communications, Planning Skills.
2	<b>Elective - Group 2</b> (Natural Science)	Applied Mathematics, Numerical Methods, Complex Functions and Laplace Transforms, General Physics, Logics.
3	<b>Elective - Group 3</b> (Fundamental Technology 1)	Mechanical Metrology and Tolerance, C Programming Language, Manufacturing Automation, Control Engineering.
4	<b>Elective - Group 4</b> (Fundamental knowledge 1)	Engineering Physics, Computer Aided Mechanical Design, Engineering Vibrations, Fluid Mechanics.
5	<b>Elective - Group 5</b> (Fundamental knowledge 2)	Digital Engineering, Numerical Method in Mechanical Engineering, Mechanical Materials and Mechanical Properties Lab, Computational Fluid Dynamics.
6	<b>Elective - Group 6</b> (Social Knowledge)	General Psychology, Sociology, Introduction to Vietnamese Culture, Vietnamese Language in Use, Music - Music Theory and Guitar Basics, Fine Art.
7	<b>Elective - Group 7</b> (Fundamental Technology 2)	Operation and Maintenance of Heat and Refrigeration systems, Microprocessors Engineering, Engineering Mechanics-Dynamics, Mechatronic Systems.
8	<b>Elective - Group 8</b> (Laboratory 1)	Driving Techniques Practice, The Practice of Motorbike, Computer Application in Design and Safety Simulation of Automotive.
9	<b>Elective - Group 9</b> (Laboratory 2)	Practice of Vehicle Body Repair and Paint, Aerodynamics of Vehicle, Computer Applications in Engine Design and Simulation.
10	<b>Elective - Group 10</b> (Services – Energy)	Renewable Energy on Automobile, Automotive Service Manager, Refrigeration Engineering
11	<b>Elective - Group 11</b> (Inspection - Specialized Vehicles)	Automotive Testing Method, Technology of Specialized Vehicles, Automotive Technology: Diagnostic, Repair and Inspection.
12	<b>Elective - Group 12</b> (Maintenance – CAE1)	Automobile and Environment, Automotive Maintaining Technology, Applications of CAE in Mechanical Design.
13	<b>Elective - Group 13</b> (Maintenance – CAE2)	Special Subject in Ventilating and Air Conditioning Systems Design, The Practice of Automotive Electronic Engineering.

#### 4. Mapping Courses-Expected Learning Outcomes

No.	Courses Name	Expected Learning Outcomes									
Semester 1		a	b	c	d	e	f	g	h	i	j
	<b>Required</b>										
1	Fundamental Principles of Marxism - Leninism		X								
2	Calculus 1	X									
3	National Defense Education and Security 1									X	
4	Physical Education 1									X	
5	Introduction to Automotive Technology						X	X	X		X
6	General Laws		X							X	
Semester 2		a	b	c	d	e	f	g	h	i	j
	<b>Required</b>										
1	Revolutionary Lines of the Vietnam communist party		X							X	
2	Calculus 2	X									
3	National Defense Education and Security 2									X	
4	Physical Education 2									X	
5	Teamwork Skills								X		
6	Automotive Body and Chassis Structure			X			X				
7	English 1							X			
	<b>Elective Group 1: Economic Knowledge</b>		X				X		X	X	X
Semester 3		a	b	c	d	e	f	g	h	i	j
	<b>Required</b>										
1	Hochiminh Ideology		X							X	
2	Engineering Drawings						X				
3	Engineering mechanics-Statics	X				X					
4	Workshop practice: Bench-Work + Welding									X	
5	Thermodynamics engineering	X		X							
6	Internal Combustion Engine Structures			X				X			

7	English 2							X			
	Elective Group 2: Natural Science	X						X			
	Elective Group 3: Fundamental Technology 1	X			X						
Semester 4		a	b	c	d	e	f	g	h	i	j
	Required										
1	Strength of Materials					X					
2	Electric and Electronic Engineering	X		X							
3	Computer Applications in Engineering Design					X	X				
4	Practice of the Internal Combustion Engine				X				X		X
5	Practice of Automobile Powertrains System		X		X				X		X
	Elective Group 4: Fundamental knowledge 1	X		X	X	X					
	Elective Group 5: Fundamental knowledge 2	X		X		X					X
	Elective Group 6: Social Knowledge		X				X		X	X	
Semester 5		a	b	c	d	e	f	g	h	i	j
	Required										
1	Research Methodology							X	X		
2	Mechanisms and Machine Theory			X							
3	Mechanical Elements					X					
4	Internal Combustion Engines Principles			X					X		
5	Practice of Automobile Motion – Control System				X				X	X	
6	Practice of Diesel Engine		X		X				X		X
	Elective Group 7: Fundamental Technology 2	X		X		X					X
	Elective Group 8: Laboratory 1			X	X	X	X			X	X
Semester 6		a	b	c	d	e	f	g	h	i	j
	Required										
1	Automotive Electrical Systems			X			X				
2	Theory of Vehicle	X		X				X		X	
3	Structural Calculations of the Internal Combustion Engines			X		X		X			



4	Practice of Automotive Body Electrical Systems		X		X				X		X
	<b>Elective Group 9:</b> Laboratory 2			X	X	X	X	X		X	X
	<b>Elective Group 10:</b> Services - Energy	X	X	X			X	X			
<b>Semester 7</b>		<b>a</b>	<b>b</b>	<b>c</b>	<b>d</b>	<b>e</b>	<b>f</b>	<b>g</b>	<b>h</b>	<b>i</b>	<b>j</b>
	<b>Required</b>										
1	Automotive Structure Calculation	X		X		X		X			
2	Practice of Automotive Engine Electrical Systems				X				X		X
3	Practice of Automotive air Conditioning Systems				X						X
4	Pneumatic and Hydraulic Systems	X									
	<b>Elective Group 11:</b> Inspection-Specialized Vehicle			X	X	X	X	X	X		
	<b>Elective Group 12:</b> Maintenance–CAE1			X		X	X	X		X	
	<b>Elective Group 13:</b> Management–CAE2	X	X	X	X	X					
<b>Semester 8</b>		<b>a</b>	<b>b</b>	<b>c</b>	<b>d</b>	<b>e</b>	<b>f</b>	<b>g</b>	<b>h</b>	<b>i</b>	<b>j</b>
	<b>Required</b>										
1	Internship		X	X	X		X		X	X	X
2	Graduation Thesis	X		X		X	X	X	X	X	



Introduced



Reinforced



Emphasized

English and Information Technology (IT) certificate required for graduation: TOIEC certificate with at least 450 scores, Fundamental applied IT certificate

## 5. Courses outline

**Fundamental principles of Marxism - Leninism (5 credits hours):** The worldview and philosophical methodology of Marxism - Leninism; The economic doctrine of Marxism-Leninism on the method of capitalist production; Marxism - Leninism on the theory of scientific socialism.

**Revolutionary lines of the Vietnam communist party (3 credits hours):** The founding of the Communist Party of Vietnam; The Party's first political platform; the Party's revolutionary lines from the people's democratic revolution to the socialist revolutionary socialism.

**Ho Chi Minh Ideology (2 credits hours):** The introduction of the basis, the process of formation, development of Ho Chi Minh's ideology and the core contents of Ho Chi Minh's ideology on issues: Ethnicity, national liberation revolution, socialism, Vietnam Communist Party, solidarity, State, culture, morality and building new people.

**General Laws (2 credits hours):** The State and law, simultaneously a connection with the State and law of the Socialist Republic of Vietnam.

**Calculus 1 (2 credits hours):** Basic knowledge of analysis of one-variable, two-variable and numerical sequence. Knowledge acquired for specialized knowledge.

**Calculus 2 (2 credits hours):** Basic knowledge of linear algebra: matrix, determinant, linear equation system. Knowledge of space vector  $\mathbb{R}^n$ .

**Teamwork skills (2 credits hours):** Basic knowledge of teamwork such as group concept, benefits and limitations of teamwork; principles of teamwork; theoretical models of teamwork skills. Practice on teamwork skills to help students apply these skills to study and work in a multicultural environment.

**Research Methodology (2 credits hours):** Basic concepts, processes and methods commonly used in scientific research. Basic academic and research skills such as academic reading and writing skills, critical thinking skills, problem detection and solving skills, data collection and processing skills.

**Physical education 1 (2 credits hours):** Knowledge of Athletics; Principles and methods of practicing Athletics in particular, sport practicing in general.

**Physical education 2 (2 credits hours):** Choose one of the sports: football, volleyball, basketball.

**National Defense Education and Security 1 (4 credits hours):** Military lines of the Communist Party of Vietnam. Defense and security work.

**National Defense Education and Security 2 (4 credits hours):** Knowledge of Military science and technology. Practical skills, techniques, military tactics for the platoon, short-gun using techniques, grenade using techniques and some commonly used weapons of infantry, ready to participate in the strategic task of building and defending the *Socialist Republic of Vietnam*.

**English 1 (3 credits hours):** Review basic grammar sections. New knowledge of exam questions, exam contents, skills for TOEIC test at the basic level.

**English 2 (3 credits hours):** Improve and complete basic grammar sections. New knowledge of exam questions, exam contents, skills for TOEIC test at the intermediate level.

**Applied Mathematics (3 credits hours):** Knowledge of modeling and solving method of linear planning problem by single-method and

transport problem. Knowledge of applied statistics.

**Numerical Methods (3 credits hours):** Solving skills for approximate equations and equation systems, the approximation of integrals as well as differential equations. Methods of processing measurement data by linear regression functions and nonlinear functions.

**Complex Functions and Laplace Transforms (3 credits hours):** Concept of complex variable functions, complex function integrals, series and surplus. Laplace transform and its application.

**General Physics (3 credits hours):** Presenting concepts, general laws on mechanical point, thermodynamic and molecular dynamics theory, thermodynamic principles. Presenting general concepts, laws of static electric fields, static magnetic fields, conductors, constant current, electromagnetic induction, electromagnetic field theory.

**Logics (3 credits hours):** Knowledge of the rules and basic forms of thinking to train and improve critical thinking skills for learners. Recognize the right, wrong things, sophistication in arguments.

**Fundamentals of Management (3 credits hours):** General knowledge of administrators and management decisions. Knowledge of issues related to the business environment of enterprises. Background knowledge of the administrative functions that an administrator needs to perform when operating a business.

**Business Management (3 credits hours):** Basic knowledge of quality management activities and basic production planning in enterprises, the main functions of governance activities in enterprises. Knowledge of enterprise culture and business environment.

**Fundamental Accounting (3 credits hours):** Knowledge of concepts, roles, principles, accounting methods, basic types of tax, production costs, product prices and business results. Methods for analyzing information on costs, volumes, profits and some basic criteria on the financial situation report.

**Environment and Human (3 credits hours):** Introduce concepts, roles and basic elements in the environment, environmental components, modern global environmental issues, human activities and its impact on the environment. Introduce international and national directions,

strategies and programmes in environmental protection for sustainable development.

**Business Communications (3 credits hours):** Knowledge and basic communication skills in a dynamic and globalized business environment. Emphasize tools and practicality to improve practical skills in daily communication, arts of business, persuasion and negotiation in daily life.

**Planning skills (3 credits hours):** Basic knowledge about: planning methods, critical thinking skills, time management and work scheduling; methods of analyzing and evaluating the results of the plan implementation.

**Psychology (3 credits hours):** Objects, tasks and roles of psychology; nature, phenomena and psychological research methods. The formation and development of psychology, cognitive problems.

**Sociology (3 credits hours):** Basic knowledge of sociology, including the history of sociology formation and development; objects and functions of sociology; sociological concepts and categories; some theoretical views on sociology; sociological research methods. Identify, evaluate and resolve positively and scientifically social issues raised in life; contribute to forming correct and stable political attitude; sense of discipline; sense of responsibility, healthy soul, pure.

**Introduction to Vietnamese Culture (3 credits hours):** Basic concepts of culture and cultural characteristics. Understand cultural components: Cognitive culture and community organizing culture; cultural behavior communication with the natural and social environment.

**Vietnamese Language in Use (3 credits hours):** Basic knowledge about Vietnamese characteristics and structure in writing and speaking. Ability to use the right words, correct sentences, and to present coherently a text.

**Music - Music Theory and Guitar Basics (3 credits hours):** Basic knowledge of music

**Fine Art (2 credits hours):** Knowledge of basic principles of layout, principles of color.

**Introduction to Automotive Technology (2 credits hours):** Designed to help students begin to familiarize themselves with the specialized knowledge and become a successful engineer at Ho Chi Minh City University of Industry.

**Internal Combustion Engines Principles (3 credits hours):** Knowledge of the ideal working cycle and the actual working cycle of the engine, the theory of combustion process. Classification, origin and properties of fuels used for internal combustion engines. Characteristic parameters for the working processes of internal combustion engines and influencing factors in the working process. Economic and technical criteria, fuel systems of gasoline and diesel engines.

**Internal Combustion Engine Structures (2 credits hours):** General knowledge of internal combustion engines such as terms; types of internal combustion engines; the working principles of the engine; structure, structure of details and systems in the engine. Knowledge to analyze and evaluate engine damage during operation.

**Workshop practice: Bench-Work + Welding (2 credits hours):** Basic knowledge of hand arc welding such as: Using welding machine, methods of causing arc, maintaining arc, steps for welding welds without beveled edge, welding rod moving straight, horizontal oscillation. Cold techniques such as filing, drilling, thread making and safety techniques during welding and cooling practice.

**Engineering Drawings (3 credits hours):** Basic knowledge to read and create technical drawings.

**Mechanical Elements (3 credits hours):** Lace thread calculation, Gear transmission calculation, Belt transmission calculation, Chain transmission calculation, Shaft design calculation.

**Engineering Mechanics-Statics (2 credits hours):** Basic knowledge of the discipline, ability to solve mechanical problems in practice. Train teamwork skills, self-study, presentation and working style, ...

**Strength of Materials (3 credits hours):** Knowledge of external forces, internal forces, cross-sectional methods and stress. Knowledge of calculation and testing of details' durability.

**Pneumatic and Hydraulic Systems (3 credits hours):** Knowledge and skills in designing, installing and operating pneumatic-hydraulic transmission systems.

**Computer Applications in Engineering Design (2 credits hours):** Background knowledge of computer applications in the mechanical design

process. Knowledge of CAD software to produce mechanical engineering drawings.

**Electric and Electronic Engineering (3 credits hours):** Basic knowledge of electrical circuits, Basic knowledge of electric machines, Mechatronics knowledge.

**Thermodynamics engineering (3 credits hours):** Knowledge of technical thermodynamics such as state parameters, basic thermodynamic processes, energy transformation between machining and heat energy, thermodynamic cycles.

**Mechanisms and Machine Theory (2 credits hours):** Basic knowledge of the structural principles, working principles of mechanical transmission systems. Analysis of structure, kinetics, dynamics of machine structure; machine structure design in accordance with the kinetic and dynamic conditions in practice.

**Mechanical Metrology and Tolerance (3 credits hours):** Basic knowledge of engineering tolerances, concepts of limit deviation, size tolerance and engineering fit of smooth cylindrical surfaces and other common surfaces. Proficient use of mechanical measuring tools and proficiency in searching documents on tolerance standards.

**C Programming Language (3 credits hours):** General knowledge of programming language and programming method; basic components in programming language C; branching structure, repeating structures; programming with functions, arrays, strings, pointers and files; basic data types and structured data.

**Manufacturing Automation (3 credits hours):** Basic concept of production, production process, mechanization, automation of production process ... Introduction of flexible production systems FMS, CIM integrated production system. Introduction of basic equipment in the automated system.

**Control Engineering (3 credits hours):** The basic concept of control system with response; Mathematical model of the system, Analyze the system on time domain and on frequency domain; Investigate the stability of the system; Design control system with phase delay compensation, PID controller; Analyze, design and simulate control systems with the help of computers.

**Digital Engineering (3 credits hours):** Knowledge of analyzing, designing combinational logic circuits, sequential logic for applications.

**Numerical Method in Mechanical Engineering (3 credits hours):** Introduction of applied numerical methods in engineering. Solve questions on structural mechanics, fluid mechanics and equilibrium and movement of structure and machinery.

**Mechanical Materials and Mechanical Properties Lab (3 credits hours):** Knowledge of crystal and mechanical structure, disability, chemical degradation mechanism, plastic and mechanical deformation; alloys and phase diagrams; heat treatment of materials; steel and cast iron; non-ferrous metal materials; special materials; heat treatment technology and other groups of materials.

**Computational Fluid Dynamics (3 credits hours):** Basic knowledge of using numerical methods combined with computer simulation technology to solve questions. Proficient use of CFD simulation software, Ansys, ... to solve specialized questions.

**Engineering Physics (3 credits hours):** Basic concepts and laws of kinetics and dynamics, capacity, mechanical energy, momentum, kinetic energy, potential energy and the law of conservation of energy, conservation of kinetic energy and momentum conservation; basic concepts and principles of ideal fluid and real fluid. Master use of basic measuring tools; calculation of error and drawing experimental graphs.

**Computer Aided Mechanical Design (3 credits hours):** Use specialized Autodesk Inventor software in designing and assembling details, then export to design drawings. Check the results of calculus analysis on the software, model specific products after calculation.

**Engineering Vibrations (3 credits hours):** Knowledge of fundamentals of setting up the oscillator equation, analysis of the basic components of the oscillation system. Methods of building, calculating and solving oscillation equations of one-freedom-degree, two-freedom-degree and multiple-freedom-degree systems.

**Fluid Mechanics (3 credits hours):** Knowledge of fluid mechanics such as hydrostatics, fluid dynamics. Calculate questions on energy loss in



the pipeline system, in pump, fan, turbine systems.

**Operation and Maintenance of Heat and Refrigeration systems (3 credits hours):**

Knowledge of technical operation, maintenance, repairing and installation of heating and cooling systems. Analyze and evaluate common problems in operation work and propose troubleshooting solutions.

**Microprocessors Engineering (3 credits hours):**

Analyze and design microcontroller family of 8 bit Pic 16f8xx for applications. Write communication control programme and control peripherals for application systems.

**Engineering Mechanics-Dynamics (3 credits hours):**

Calculate the velocity of the flat structure, mass inertia torque of the basic shapes of the jigsaw. D'Alambert principle, principle of energy / momentum conservation to calculate the velocity and acceleration of a flat structure.

**Mechatronic Systems (3 credits hours):**

Knowledge of mechatronic systems including types of sensors, methods for designing electronic circuits to process signals from sensors, actuators and control circuit. Knowledge of control system.

**Automotive Electrical Systems (3 credits hours):**

Knowledge related to electrical systems, including electric vehicle body, electric motor, electric control car. Train and improve thinking ability, compare and analyze the properties of automotive electrical systems. Skills in finding and processing information.

**Theory of Vehicle (3 credits hours):**

Knowledge of vehicle dynamic stability, control, smooth features and fuel economy; interactive relationship between vehicles and roads. Skills in analysis and calculation.

**Structural Calculations of the Internal Combustion Engines (2 credits hours):**

Kinetic knowledge, structural dynamics; Balance internal combustion engine. Durable calculation of detail clusters; Calculation of gas distribution, lubrication, cooling and fuel systems.

**Automotive Structure Calculation (2 credits hours):**

Knowledge of structural layout, structural features, kinetics and dynamics of the system; methodologies for design, calculation and durability testing of chassis systems. Skills in design, calculation and durability testing.

**Automotive Body and Chassis Structure (2 credits hours):**

Knowledge of structural theory and operation principles of vehicle frame systems such as clutch, transmission, propeller shaft, differentials, suspension, steering, brakes, tires.

**Renewable Energy on Automobile (2 credits hours):**

Knowledge of new fuels, Knowledge of new energy, Knowledge about hybrid vehicles.

**Automotive Service Manager (2 credits hours):**

Basic knowledge of car service. Standards of personnel, organizational structure and operation process of an automobile agent.

**Refrigeration Engineering (2 credits hours):**

Knowledge of characteristics, properties and application scope of refrigerant types. Operation principles and cycle calculation methods. Teamwork skills, self-study, presentation and working style.

**Practice of the Internal Combustion Engine (3 credits hours):**

Skills in assembling, examining, repairing and analyzing phenomena, causes of damage of internal combustion engines.

**Practice of Diesel Engine (2 credits hours):**

Knowledge of Diesel engine, focusing on fuel systems. Skills in calibration, operation and diagnosis of damage on Diesel engine.

**Practice of Automotive Engine Electrical Systems (4 credits hours):**

Skills to practice assembling details, structures and systems. Using equipment and devices to diagnose, check and repair damaged electric motor systems. Knowledge, electrical safety skills as well as career attitudes.

**Practical of Automotive Body Electrical Systems (2 credits hours):**

Knowledge of examining, diagnosing and repairing vehicle body electrical systems. Teamwork skills and ability to complete assigned tasks.

**Practice of Automotive Powertrains System (3 credits hours):**

Knowledge of vehicle powertrain system. Skills in diagnosing, examining and repairing damages related to automobile powertrain system.

**Practice of Automotive Control and Motion System (2 credits hours):**

Knowledge of vehicle motion control systems. Skills in examining, diagnosing damage, repairing vehicle motion control systems such as suspension system, steering system, brake system, tires and rim.



**Practice of Automotive air Conditioning Systems (2 credits hours):** Knowledge, skills and methods of disassembly and inspection, maintenance and repair of air conditioning systems on cars.

**Internship (5 credits hours):** Access to practical work at the enterprise, strengthen knowledge and skills in the working environment; Orientate right career after graduation.

**Graduation Thesis (5 credits hours):** Systematize knowledge and skills, apply them in graduation thesis in a scientific and creative way. Train and improve critical thinking ability, pose and solve problems independently and creatively.

**Practice of Vehicle Body Repair and Paint (3 credits hours):** Knowledge of vehicle frame, welding, and body repair methods and techniques. Processes and methods of surface preparation, color mixing and paint spraying.

**Aerodynamics of Vehicle (3 credits hours):** Knowledge of automotive aerodynamics; Apply software to simulate automotive aerodynamic characteristics.

**Computer Applications in Engine Design and Simulation (3 credits hours):** Basic knowledge of specialized software for designing and simulating details and systems in engines. Knowledge of technical design standards, assembly of parts, calculation of durability of engine details for use in specialized software.

**Automotive Technology: Diagnostic, Repair and Inspection (2 credits hours):** General knowledge of processes and standards for motor vehicle testing in Vietnam. Knowledge of diagnostics to examine and repair automobile systems.

**Automobile and Environment (2 credits hours):** Knowledge of harms, formation mechanisms, factors affecting the formation and concentration of pollutants; Technical measures to reduce pollution levels in exhaust gas of **Applications of CAE in Mechanical Design (2 credits hours):** Background knowledge of applications of CAE system in mechanical design. Knowledge to use CAE software for design, technical analysis and optimization of mechanical products.

**Driving Techniques Practice (3 credits hours):** Skills in general automobile checking, general knowledge of functions of key components in the cockpit and driving theory, vehicle control psychology. Skills to implement basic driving techniques, driving on different types of roads, and technically correct manipulation

**Practice of Motorbike (3 credits hours):** Knowledge of structure and operation principles of each system on motorcycles. Skills for damage diagnosis, methods of repairing head rigs, clutches, car gears, fuel systems, starting, ignition and electric body systems.

**Computer Application in Design and Safety Simulation of Automotive (3 credits hours):** Knowledge of basic simulation design in automotive field related to automotive structure safety. Apply HYPERWORKS, LS-DYNA technical software to calculate automotive safety simulation, durability for structure, optimize automotive structure.

**Automotive Testing Method (2 credits hours):** Knowledge of structure and operation principle of some devices used in testing. Methods of testing motor and vehicles, optimizing automotive structure.

**Technology of Specialized Vehicles (2 credits hours):** Basic knowledge of specialized car systems. Apply specialized knowledge to effectively exploit and use specialized vehicles.

internal combustion engines. Skills in searching specialized documents, working independently, working in team and practicing a sense of environmental protection.

**Automotive Maintaining Technology (2 credits hours):** Knowledge of the effects that change the technical state of cars during the use. Knowledge of technical maintenance, steps to design maintenance process, current maintenance and repair technology.

**Special Subject in Ventilating and Air Conditioning Systems Design (2 credits hours):** Knowledge of ventilation systems as well as air conditioning systems. Calculate, design a specific ventilation and air conditioning system in practice.

**Practice of Automotive Electronic Engineering (2 credits hours):** Basic knowledge of electronic components, design and assembly of some basic applied electronic circuits.

**Industrial Production Management (2 credits hours):** Basic knowledge of industrial production systems in enterprises, product demand forecasting, material planning, cost calculation and inventory management control. Independent thinking skills, skills in making a moderate production, teamwork and group management skills, self-study and information-updating.

### III. BUSINESS COOPERATION ACTIVITIES



The FAET regularly connect, cooperate with enterprises as the Thaco, Toyota, Honda, Isuzu, Mercedes-Benz, Hyundai, Ford... in order to improve the quality of training and make the transfer of technology and scientific research. For example:

**Truong Hai Auto Corporation**

Head office: THACO Office of Commercial and Service Office, No. 10 Mai Chi Tho, District 2, Ho Chi Minh City  
Tel: (028)39.977.824/25/26  
Fax: (028)39.977.742  
Website: [www.thacogroup.vn](http://www.thacogroup.vn)



**Toyota Motor Vietnam Co., Ltd**

Head office: Phuc Thang Ward, Phuc Yen City, Vinh Phuc Province  
Tel: (0211) 3 868100/112  
Fax: (0211) 3 868117  
Website: <http://www.toyotavn.com.vn/>



**Honda Vietnam Co., Ltd**

Head office: Phuc Thang Ward, Phuc Yen Town, Vinh Phuc Province  
Tel: 84-211-3868888  
Fax, 84-211-3868910  
Website: <https://honda.com.vn/>



**Isuzu Vietnam Co., Ltd**

Head office: 695 Quang Trung, Ward 8, Go Vap District, Ho Chi Minh City, Vietnam  
Tel: (84-8)3 895 9203  
Fax: (84-8)3 895 9204  
Website: <https://isuzu-vietnam.com/>



**Mercedes-Benz Vietnam Co., Ltd**

Head office: 693 Quang Trung, Ward 8, Go Vap District, Ho Chi Minh City, Vietnam  
 Tel: +84 - 28 - 35889 - 111  
 Fax: +84 - 28 - 35890 - 199  
 Website: <https://www.mercedes-benz.com.vn>



# Mercedes-Benz

**Ford Vietnam Co., Ltd**

Head office: Tu Minh Ward, Hai Duong City, Hai Duong Province  
 Tel: 0220-3899901  
 Fax:  
 Website: <https://www.ford.com.vn>

**AP Saigon PETRO Joint Stock Company**

Head office: Floor 1. 6B Ton Duc Thang, Ben Nghe Ward, District 1, Ho Chi Minh City  
 Tel: (84.8) 3822 4848 / 6272 0324  
 Fax: (84.8) 3824 3959  
 Website: <https://apsaigonpetro.com/>

**Uratek Co., Ltd**

Head office: 5th Floor, CNC Building, No. 8-10 Nguyen Ba Tuyen, Ward 12, Tan Binh District, Ho Chi Minh City  
 Tel: 0902346780  
 Fax:  
 Website: <http://uratek.vn/>



## IV. ENTERPRISES OF FAET ALUMNI



Every year, the FAET organizes the workshop with enterprises and enterprise of FAET alumni for the purpose of exchanging and cooperating.



## 1. Toyota An Suong

Address: 382 National Road 22, Ward Trung My Tay, District 12, Ho Chi Minh City

Tell: (028) 371 99999

Fax: (028) 371 77777

Website: <http://toyotaansuong.org/>

Established in 2009 at the gateway to the West of Ho Chi Minh City by alumni of FAET, Toyota An Suong (TAS) is proud to be the official dealer of Toyota Vietnam operate under the model 3S (Sales-Sales; Service-providing warranty service, repair, maintenance, professional quality Toyota; Spare parts-offers auto parts Toyota genuine).



*With modern Toyota An Suong always try to satisfy the customers*

## 2. Vietnam Automotive Training Center-VATC

Address: 616/65/29 Road, Le Duc Tho, Ward 15, Go Vap, Ho Chi Minh

Tell: 0866.88.22.88

Website: <http://autotraining.edu.vn/>



*Expert Nguyen Thanh Dam-Manager*

VATC was founded in November the year 2014 is based on the idea to create a desired & training center training automotive repair "to be made" by alumni of FAET. With full facilities along with a team of coaches have many years in the study of Vietnam's leading automotive engineering. VATC proud is a reliable address for all students across all regions can learn and dig deep knowledge experimentally, to further develop the automotive repair industry Vietnam to a new height.



*VATC The leading center for vocational training in repairing electric cars in Ho Chi Minh City*



## V. IMPLEMENTATION GUIDE



When implementing the training programmes need attention to some problems such as the following:

### 1. For training units

Must research the framework programme to implement properly the content requirements of the programme.

Assign academic staff in charge of each module and provide the detailed programme for them to ensure the stability of the teaching plan.

Prepared team of academic advisors, require academic advisors to fully understand the whole credit-based curriculum education to guide students to register for the course.

Prepare full syllabuses, references, facilities, to ensure good implementation of the programme.

Need to pay attention to the logic of communicating and acquiring knowledge sections, defining the prerequisites of compulsory modules and preparing lecturers to meet the teaching requirements of elective modules

### 2. For teaching staffs

When academic staffs are assigned to teach one or more units need to carefully study the content of each syllabus to prepare lessons and appropriate teaching aids.

Academic staffs must fully prepare the curriculum and learning materials to provide students a week to prepare before class.

Organizing seminars for students, focusing on organizing group study and guiding essay students, projects and lecturers definite methods of transmission; lecture in class, guide discussion, solve problems in class, at the workshop, in the lab and guide students to write harvests.

### 2. For students

Must consult with the counsel of academic advising to choose the course to suit the progress.

Must research the study programme before grade up to class to easily absorb the lecture.

Make sure adequate time to class to listen to the instructor's lecturer

Self-awareness in self-learning and self-research, and actively participate in the group study, attending full seminars.

Actively exploit resources on the network and in the school's library to serve self-learning, self-research and thesis work.

Strictly implement the regulation on examination, inspection and evaluation.



## VI. USEFUL CONTACT INFORMATION



### 1. Academic staffs

Contact information of FAET's Academic staffs:

MSc. Nguyen Chi Hung – Dean  
Email: [Nguyenchihung@iuh.edu.vn](mailto:Nguyenchihung@iuh.edu.vn)  
Tel: 0903995166

PhD. Dang Tien Phuc – Head of Body and Chassis Division  
Email: [Dangtienphuc@iuh.edu.vn](mailto:Dangtienphuc@iuh.edu.vn)  
Tel: 0905297192

PhD. Tran Trong Nhan – Lecturer  
Email: [Trantrongnhan@iuh.edu.vn](mailto:Trantrongnhan@iuh.edu.vn)  
Tel: 0902951588

PhD. Le Ngoc Tran – Lecturer  
Email: [Lengoctran@iuh.edu.vn](mailto:Lengoctran@iuh.edu.vn)  
Tel: 0909853456

PhD. Do Van Nang – Lecturer  
Email: [Dovannang@iuh.edu.vn](mailto:Dovannang@iuh.edu.vn)  
Tel: 0935230708

MSc. Tran Cong Hung – Lecturer  
Email: [Tranconghung@iuh.edu.vn](mailto:Tranconghung@iuh.edu.vn)  
Tel: 0918158793

MSc. Vo Lam Kim Thanh – Lecturer  
Email: [Volamkimthanh@iuh.edu.vn](mailto:Volamkimthanh@iuh.edu.vn)  
Tel: 0975001247

MSc. Dang Van Anh – Lecturer  
Email: [Dangvananh@iuh.edu.vn](mailto:Dangvananh@iuh.edu.vn)  
Tel: 0936360463

MSc. Tran Van Nguyen – Lecturer  
Email: [Tranvannguyen@iuh.edu.vn](mailto:Tranvannguyen@iuh.edu.vn)  
Tel: 0919247266

MSc. Bui Chi Thanh – Lecturer  
Email: [Buichithanh@iuh.edu.vn](mailto:Buichithanh@iuh.edu.vn)  
Tel: 0909660490

MSc. Le Thanh Quang – Lecturer  
Email: [Lethanhquang@iuh.edu.vn](mailto:Lethanhquang@iuh.edu.vn)  
Tel: 0945321895

PhD. Nguyen Thanh Tam – Vice of Dean  
Email: [Nguyenthantam@iuh.edu.vn](mailto:Nguyenthantam@iuh.edu.vn)  
Tel: 0909301810

MSc. Nguyen Xuan Ngoc – Lecturer  
Email: [Nguyenxuanngoc@iuh.edu.vn](mailto:Nguyenxuanngoc@iuh.edu.vn)  
Tel: 0908408664

MSc. Tran Anh Son – Lecturer  
Email: [Trananhson@iuh.edu.vn](mailto:Trananhson@iuh.edu.vn)  
Tel: 0986675855

MSc. Ho Anh Cuong – Lecturer  
Email: [Hoanhcuong@iuh.edu.vn](mailto:Hoanhcuong@iuh.edu.vn)  
Tel: 0973415786

MSc. Nguyen Khoi Nguyen – Lecturer  
Email: [Nguyenkhoinguyen@iuh.edu.vn](mailto:Nguyenkhoinguyen@iuh.edu.vn)  
Tel: 0977041993

PhD. Nguyen Van Sy – Head of Electronics Division  
Email: [Nguyenvansy@iuh.edu.vn](mailto:Nguyenvansy@iuh.edu.vn)  
Tel: 0905297192

PhD. Dang Hoang Minh – Lecturer  
Email: [Danghoangminh@iuh.edu.vn](mailto:Danghoangminh@iuh.edu.vn)  
Tel: 0938258697

MSc. Nguyen N H Trang – Lecturer  
Email: [Nguyenngochuyentrang@iuh.edu.vn](mailto:Nguyenngochuyentrang@iuh.edu.vn)  
Tel: 0984179366

MSc. Phan Van Nhut – Lecturer  
Email: [Phanvannhut@iuh.edu.vn](mailto:Phanvannhut@iuh.edu.vn)  
Tel: 0913111949

MSc. Nguyen Doan Duong – Lecturer  
Email: [Nguyendoanduong@iuh.edu.vn](mailto:Nguyendoanduong@iuh.edu.vn)  
Tel: 0919048369

MSc. Nguyen Quoc Sy – Head of Engine Division  
Email: [Nguyenquocsy@iuh.edu.vn](mailto:Nguyenquocsy@iuh.edu.vn)  
Tel: 0989990837

PhD. Vo Tan Chau – Lecturer  
Email: [votanchau@iuh.edu.vn](mailto:votanchau@iuh.edu.vn)  
Tel: 0938634705

PhD. Nguyen Anh Khoa – Lecturer  
Email: [Nguyenanhkhoa@iuh.edu.vn](mailto:Nguyenanhkhoa@iuh.edu.vn)  
Tel: 0902596703

PhD. Le Thanh Danh – Lecturer  
Email: [Lethanh danh@iuh.edu.vn](mailto:Lethanh danh@iuh.edu.vn)  
Tel: 0931997048

MSc. Ho Trong Du – Lecturer  
Email: [Hotrongdu@iuh.edu.vn](mailto:Hotrongdu@iuh.edu.vn)  
Tel: 0906473341

MSc. Pham Quang Du – Lecturer  
Email: [Phamquangdu@iuh.edu.vn](mailto:Phamquangdu@iuh.edu.vn)  
Tel: 0902351788

MSc. Ha Thanh Liem – Lecturer  
Email: [Hathanhliem@iuh.edu.vn](mailto:Hathanhliem@iuh.edu.vn)  
Tel: 0908722833

MSc. Le Minh Dao – Lecturer  
Email: [Leminhdao@iuh.edu.vn](mailto:Leminhdao@iuh.edu.vn)  
Tel: 0986642628

MSc. Pham Son Tung – Lecturer  
Email: [Phamsontung@iuh.edu.vn](mailto:Phamsontung@iuh.edu.vn)  
Tel: 0383252311

MSc. Do Si Hai – Lecturer  
Email: [Dosihai@iuh.edu.vn](mailto:Dosihai@iuh.edu.vn)  
Tel: 0977291287

MSc. Nguyen Ngoc Diep – Lecturer  
Email: [Nguyenngocdiep@iuh.edu.vn](mailto:Nguyenngocdiep@iuh.edu.vn)  
Tel: 0918359173

## 2. Support staffs:

Contact information of Support staff's FAET:

Tran Thi Kim Phuong  
Email: [Tranthikimphuong@iuh.edu.vn](mailto:Tranthikimphuong@iuh.edu.vn)  
Tel: 0919314049

Dam Quoc Tuan  
Email: [Damquoctuan@iuh.edu.vn](mailto:Damquoctuan@iuh.edu.vn)  
Tel: 0363478520

Dinh Thi Thu Ha  
Email: [Dinhthithuha@iuh.edu.vn](mailto:Dinhthithuha@iuh.edu.vn)  
Tel: 0915597046

Nguyen Bao Loc  
Email: [Nguyenbaoloc@iuh.edu.vn](mailto:Nguyenbaoloc@iuh.edu.vn)  
Tel: 0988432455

Hoang Ngoc Duong  
Email: [Hoangngocduong@iuh.edu.vn](mailto:Hoangngocduong@iuh.edu.vn)  
Tel: 0948467373

### References:

<http://www.hui.edu.vn/en>

<http://www.hui.edu.vn/en/faculties-institutes-fi25/faculty-of-automobile-technology-a1176.html>

<http://www.faet.iuh.edu.vn/en>

