

**Undergraduate Talent Cultivation Programme for Automotive  
Service Engineering**

**(Version: V2024.09)**

**Revision Date: September 2023**

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**Discipline Leader: Professor Zhang Tiezhu**

**Programme Director: Professor Bai Limin**

**I. Basic Information of the Major Automotive Service Engineering**

**College: School of Mechanical and Automotive Industry College: Automotive College**

**Engineering**

**Discipline Category: Engineering**

**Professional**

**Category:**

**Mechanical**

**Engineering**

**Programme Name: Automotive Service Code: 080208**

**Engineering**

**School System: Four years**

**Degree Conferred: Bachelor of Engineering**

**Total Credits of Chinese Rules: 170**

**Total Teaching Hours: 2960**

**ECTS (European Credit Transfer System): 200**

**ECTS Total Hours: 5600**

## II. Training Objectives

This major cultivates talents with socialist core values, good moral cultivation and comprehensive quality, meeting the needs of socialist modernization, all-round development of morality, intelligence, physique, beauty and labor, carrying out the framework of Four-Education and Four-Achievement (four educations: ideological and political education, general education, professional education, innovation and entrepreneurship education; four achievements: adult education, growth education, talent education, success education) learning activities, mastering the basic knowledge of management, economy, law and information related to automobile service engineering, receiving basic training related to automobile service engineering, having the basic ability to solve practical problems in the automobile after-sales market, being able to engage in technical or management work in the fields of automobile technical service, automobile management service, automobile related product planning and other fields related to automobile service engineering, and having the professional quality, theoretical foundation, practical ability and innovative spirit required by automobile service engineering, and being able to engage in the whole process of automobile service engineering in the field of automobile service engineering Hengxing Five-Excellence Traits (five excellent traits: good morality, strong academic ability, proficient theory, diligent practice, internationalization) talents and high-quality applied talents.

### 1. Expected Learning Outcomes

Expected learning outcomes are the standards for professional talent training, the concretization of talent training objectives, the basic basis for the design and arrangement of teaching contents and curriculum systems, and the basis for formulating teaching plans and curriculum standards, organizing teaching, and inspecting and evaluating education quality. According to the talent training objectives of this major, the expected learning outcomes (i.e., expected learning abilities) that graduates of this major should achieve in terms of knowledge, ability and quality are determined as follows.

**(1) Engineering Knowledge:** Ability to apply mathematical, natural scientific, engineering basic and professional knowledge to solve automobile service engineering problems.

Professional knowledge includes Automotive Architecture, Automotive Electrical & Electronic Control Systems, Automotive Theory, Electric Vehicles, Automotive Marketing, Automotive Insurance and Claims, Automotive Appraisal and Evaluation, Management of Automotive Service Enterprises, Automotive Parts Management, etc. These professional knowledge fields are also applicable to subsequent graduation requirements.

Graduates should be able to apply mathematical, natural scientific, engineering foundation and professional knowledge to complex engineering problems and make appropriate expressions. Graduates should be able to establish suitable mathematical or simulation models for complex problems in automotive service engineering systems or processes, and solve or analyze them. Graduates should be able to use engineering principles and professional knowledge to analyze solutions to engineering problems and carry out relevant improvements.

**(2) Problem Analysis:** Ability to identify, express and analyze automobile service engineering problems through literature research by applying the basic principles of mathematics, natural science and engineering science to obtain effective conclusions.

Graduates should be able to identify and judge the key links and parameters of complex engineering problems, be able to put forward multiple solutions to solve problems through literature analysis for selection, and be able to use basic principles to confirm the rationality of solutions.

**(3) Design/Development of Solutions:** Ability to design solutions for automobile service engineering problems, put forward reasonable and feasible service solutions for specific service needs, and reflect innovative consciousness in the service link, considering social, health, safety, legal, cultural and environmental factors.

Graduates should be able to determine the design scheme according to the design requirements, be able to demonstrate the feasibility of the design scheme under the constraints of social, health, safety, legal, cultural and environmental and other real conditions, and be able to optimize the design scheme or technical process, and present the design effect in the form of drawings and design reports, reflecting the innovative consciousness.

**(4) Research:** Ability to conduct research on automotive service engineering problems based on scientific principles and methods, including designing experiments, analyzing and interpreting data, and drawing reasonable and valid conclusions through information synthesis.

Graduates should be able to master the basic principles and methods of natural science experiments and possess fundamental experimental skills, to understand technical standards in the automotive industry, proficiently operate common automotive fault testing equipment and economic performance evaluation indicators, and be capable of designing experiments for complex engineering problems in the automotive service field. Graduates should be able to master the basic principles and methods of fundamental automotive performance experiments, collect, process, and analyze experimental data, draw reasonable and valid conclusions through information synthesis, and prepare reports.

**(5) Using Modern Tools:** Ability to develop, select, and use appropriate technologies, resources, modern engineering tools, and information technology tools for automotive service engineering problems, including modeling and simulation of common issues in automotive mechanical and electronic systems, and understand their limitations.

Graduates should be able to possess the ability to select and use modern engineering tools such as automotive fault testing system software and mechanical design software to appropriately express, model, simulate, and optimize automotive service engineering problems. Graduates should be able to analyze different solutions to automotive service engineering problems and understand the advantages and limitations of various approaches. Graduates should be able to collect information, retrieve literature, and analyze corresponding data to predict, simulate, and optimize automotive service engineering problems.

**(6) Engineering and Sustainable Development:** Ability to conduct reasonable analysis based on background knowledge of automotive service engineering, evaluate the impacts of professional engineering practices and solutions to complex engineering problems on society, health, safety, law, and culture, and understand the responsibilities to be undertaken. Understand and assess the impacts

of professional engineering practices for complex problems in the automotive service industry on environmental and social sustainable development.

Graduates should be able to understand the current status of engineering technology development in the field of automotive service engineering, have systematic comprehensive practical learning experiences in automotive services, and be able to understand and evaluate the impacts of automotive products or automotive service industry projects on humanistic and natural environments. Graduates should be able to understand the social constraints of automotive service engineering practices and solutions, reasonably analyze and evaluate the impacts of automotive service engineering practices and solutions to complex engineering problems on society, health, safety, law, and culture, be familiar with relevant standards and specifications for automotive products or automotive service industry projects, and propose proactive countermeasures for potential adverse impacts. Graduates should be able to correctly recognize the impacts of automotive service engineering practices on environmental and social sustainable development, clarify the responsibilities in implementing such practices and solutions, and actively apply advanced technologies that improve the environment and promote sustainable development in engineering practices.

**(7) Ethics and Professional Norms:** Have the awareness of serving the country and the people through engineering, possess humanities and social sciences literacy and social responsibility, understand and apply Engineering Ethics, abide by Engineering Ethics, norms, and relevant laws in engineering practices, and fulfill responsibilities.

Graduates should establish correct worldviews, outlooks on life, and values, demonstrate good professional ethics and dedication, and have a strong sense of collective honor and teamwork spirit. Graduates should be able to understand the professional nature and responsibilities of automotive service engineering professionals in practices related to automotive service engineering and its related fields, emphasize professional ethics cultivation, comply with professional ethics norms, and fulfill responsibilities.

**(8) Individual and Teamwork:** Assume the roles of an individual member, team member, and leader in multidisciplinary teams.

Graduates should understand the significance of teamwork, have a sense of collaboration, and be able to assume the roles of an individual, team member, and leader in the implementation of practices related to automotive service engineering and its related fields. Graduates should be able to play an appropriate role in multidisciplinary teams according to role requirements, organize and coordinate team members, coordinate relationships with personnel from other disciplines, and jointly solve complex engineering problems in automotive service engineering and related fields.

**(9) Communication:** Ability to effectively communicate with industry peers and the public about complex engineering problems, including writing reports and design documents, making presentations, clearly expressing ideas, or responding to instructions; communicate in cross-cultural contexts, and understand and respect linguistic and cultural differences.

Graduates should be able to effectively communicate with industry peers and the public about complex engineering problems in automotive service engineering and related fields through written or verbal means, clearly present solutions to automotive service engineering problems through reports, design documents, presentations, etc., and answer inquiries. Graduates should possess good proficiency in professional foreign languages for automotive service engineering, understand the international status of automotive service engineering and related fields, have a global perspective, and communicate effectively in cross-cultural contexts.

**(10) Project Management:** Understand and master the management principles and economic decision-making methods involved in automotive service engineering, and apply them in multidisciplinary environments.

Graduates should understand and master the management principles and economic decision-making methods in automotive service engineering. Graduates should be able to apply engineering management principles and economic decision-making methods to aspects such as automotive marketing, used car evaluation, and automotive financial services. Graduates should be able to analyze the main factors affecting automotive service industry projects and propose corresponding countermeasures and solutions.

**(11) Lifelong Learning:** Have the awareness and ability for self-directed learning and lifelong learning, understand the impacts of broad technological changes on engineering and society, adapt to new technological transformations, and possess critical thinking skills.

Graduates should possess the ability to proactively identify and raise questions, have the awareness and need for lifelong learning, master self-learning methods, and have channels to expand knowledge and capabilities. Graduates should be able to engage in self-directed and lifelong learning, grasp the cutting-edge developments and trends in automotive service engineering and related fields, possess strong comprehension in technology, economy, management, law, and information, and have the ability to comprehensively analyze and solve problems.

## 2. Course-Objective Support Matrix

Objective Curriculum System	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11
	Ideological Morality and Rule by Law							√	√		
Outline of Chinese Modern and							√	√			√
Basic Principles of Marxism						√	√			√	√
Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics						√		√	√	√	
Introduction for the study of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era						√	√			√	
Situation and Policy I						√					√
Situation and Policy II						√					√
Situation and Policy III						√					√
Situation and Policy IV						√					√

Objective Curriculum System	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11
	Situation and Policy V						√				
Situation and Policy VI						√					√
Situation and Policy VII						√					√
Situation and Policy VIII						√					√
Advanced Mathematics A I	√	√									
Advanced Mathematics A II	√	√									
Linear Algebra	√	√									
Probability Theory and Mathematical Statistics	√	√									
University Physics I	√	√									
University Physics II	√	√									
College Physics Experiments	√	√									
Digital Intelligent English I					√				√		√
Digital Intelligent English II					√				√		√
Digital Intelligent English III					√				√		√
Digital Intelligent English IV					√				√		√
University Digital Intelligence Quality					√						√
Information Retrieval and Utilization				√	√						√
Military Theory							√	√			
Physical Education I								√			√
Physical Education II								√			√
Physical Education III								√			√
Physical Education IV								√			√
Mental Health Education							√	√	√		
Education on Outstanding							√	√			√

Objective Curriculum System	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11
	Traditional Chinese Culture										
National Security Education							√	√			
Career Planning for College Students							√	√	√		√
Career Guidance for College Students							√	√	√		√
Art Literacy Course							√	√			
Global Competence Curriculum								√	√		
Global Competence Activities								√	√		
Social Sciences Course						√	√				
Natural Sciences Course	√	√				√					
Introduction to Automotive Service Engineering							√	√	√	√	
Engineering Drafting	√		√		√	√	√	√			
Electrotechnics	√	√									
Fundamentals of Engineering Materials and Mechanical	√	√									
Manufacturing	√			√				√			
Engineering Mechanics	√	√	√	√		√					
Mechanical Engineering Design	√	√		√							
Hydraulic and Pneumatic Transmission	√			√		√					√
Automotive Architecture	√	√				√	√				
Automotive Electrical and electronic control system			√			√	√				√
Automotive Marketing	√	√	√					√	√		√
Automotive Theory	√	√	√					√			
Automotive Appraisal and Evaluation		√	√	√					√	√	
Automotive Testing and Fault						√		√	√	√	

Objective Curriculum System	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11
	Diagnosis Technology										
Specialization Tracks( Elective Course Groups)	√	√	√			√					
Professional Enhancement( Elective Course Groups)		√	√			√					
Innovative Design Thinking											
Fundamentals of Entrepreneurship											
Case Analysis of Innovation and Entrepreneurship in Automotive Services		√	√		√			√			√
Innovative Technology of Intelligent Connected Vehicles	√	√	√								
Military Skills Training							√	√	√		
Labor Practice	√						√	√			
3D Modeling Design Practice	√	√			√		√	√		√	√
Civil Engineering CAD Drafting Practicum		√	√		√				√	√	
Vehicle Appraisal and Evaluation Practice	√					√	√			√	
Metalworking Practice		√	√								√
Automotive Marketing Practice					√	√		√	√		
Automotive Service Operations			√		√	√	√		√		
Automotive Fault Diagnosis Practice						√		√	√	√	
Electric Vehicle Three-Electricity Practice	√	√	√	√		√	√				
Automotive Sheet Metal and Painting Practice		√			√					√	

Objective Curriculum System	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11
	Engineering Simulation Practice		√	√			√				√
Automotive Care Practice					√		√			√	
Automotive Service Engineering Production Internship	√	√	√				√	√	√		
Graduation Internship	√	√	√				√	√	√		
Undergraduate Thesis /Design			√		√				√	√	√

### III. Professional Curriculum System and Topological Diagram

#### 1. Curriculum System Diagram

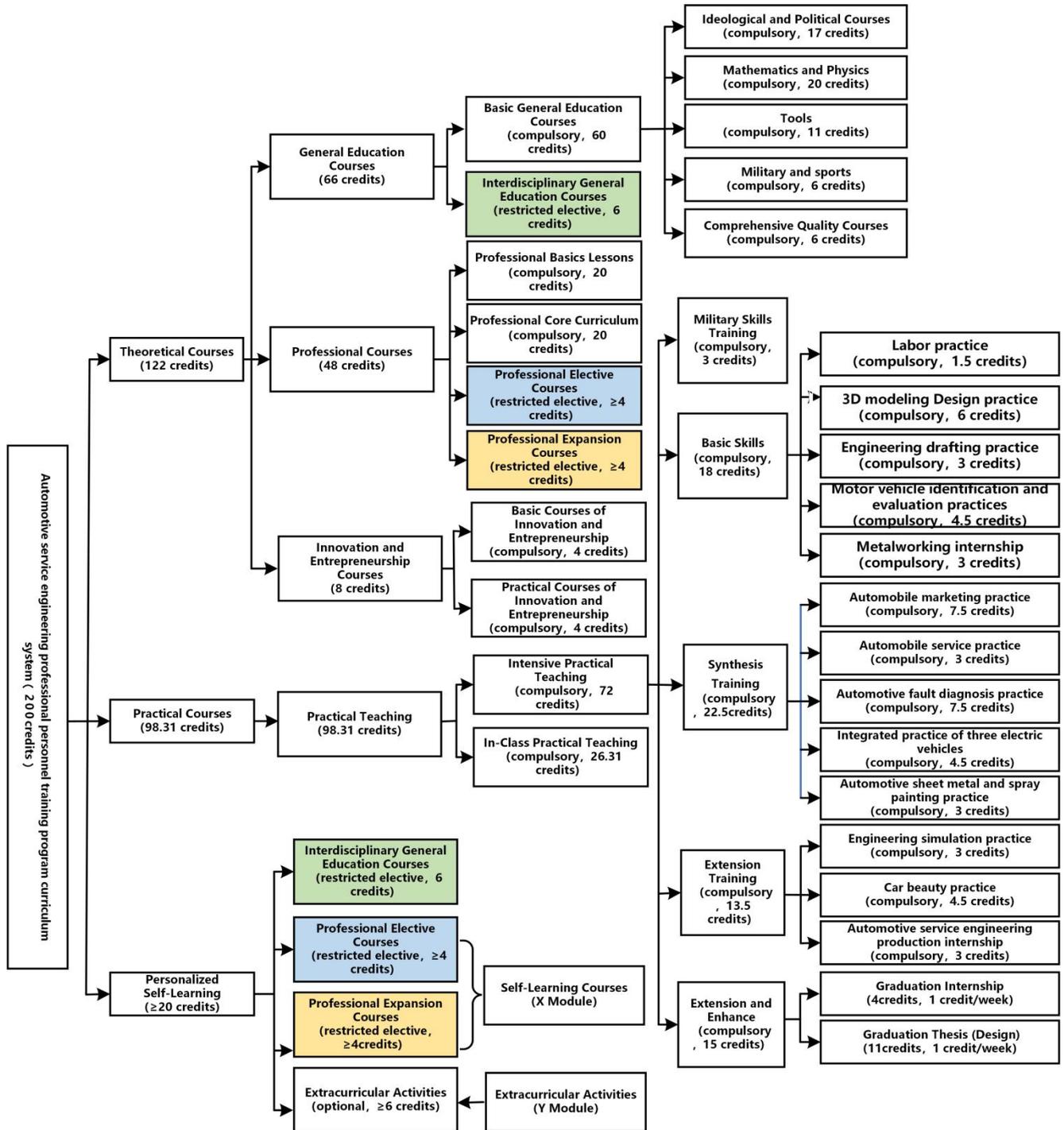
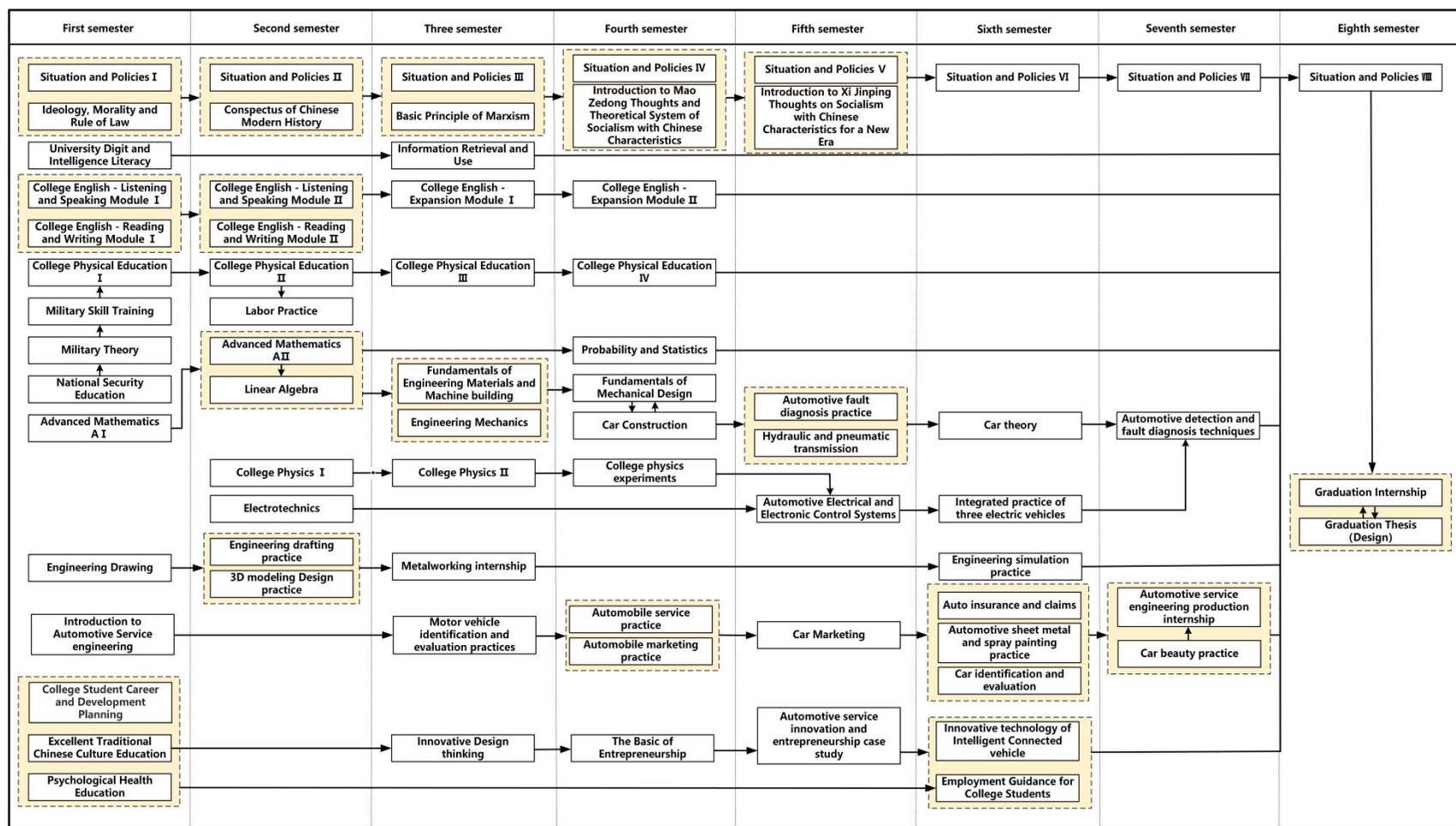


Figure 1 Curriculum System and Credit Composition Diagram of the Automotive Service Engineering

Major

## 2. Curriculum Topology Diagram



\*Professional direction courses and professional elective courses are not included.

Figure 2 Curriculum Topology Diagram of Automotive Service Engineering Major

### 3. Curriculum Balance Rate

**Table 1 Semester-by-Semester Teaching Balance Table for the Automotive Service Engineering**

**Major**

Semester Distribution	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8	Proportion
Compulsory Theory	18.61	15.86	14.86	13.86	8.75	7.5	2.5	0.25	41.10%
Compulsory Practice	7.64	13.89	10.89	15.39	12.5	14.25	8.25	15	48.90%
Recommended Electives	0	0	2	0	4	5	8	1	10.00%
<b>Total</b>	<b>26.25</b>	<b>29.75</b>	<b>27.75</b>	<b>29.25</b>	<b>25.25</b>	<b>26.75</b>	<b>18.75</b>	<b>16.25</b>	<b>100%</b>

### 4. Curriculum Distribution Ratio

**Table 2 Credit and Hour Distribution and Proportion Table for the Automotive Service Engineering**

**Major**

Category	Credits	Proportion of Total Credits	Class Hours	Proportion of Total Class Hours
Basic General Education	60	30.00%	1680	30.00%
Compulsory Professional Education	40	20.00%	1120	20.00%
Innovation and Entrepreneurship Education	8	4.00%	224	4.00%
Personalized Training	20	10.00%	560	10.00%
Intensive Practical Training	72	36.00%	2016	36.00%

Module				
<b>Total</b>	<b>200</b>	<b>100.00%</b>	<b>5600</b>	<b>100.00%</b>

## IV. Professional Basic, Core, Elective and Characteristic Courses

### 1. Professional Basic Courses (7 courses, 20 credits)

Introduction to Automotive Service Engineering (1 credit), Engineering Drawing (2 credits), Fundamentals of Engineering Materials and Mechanical Manufacturing (3 credits), Electrotechnics (4 credits), Engineering Mechanics (4 credits), Basic Mechanical Design (4 credits), Hydraulic and Pneumatic Transmission (2 credits).

### 2. Professional Core Courses (7 courses, 20 credits)

Automotive Architecture (4 credits), Automotive Electrical & Electronic Control Systems (3 credits), Automotive Theory (3 credits), Automotive Testing and Fault Diagnosis Technology (3 credits), Automotive Marketing (3 credits), Automotive Insurance and Claims (2 credits), Vehicle Appraisal and Evaluation (2 credits).

### 3. Professional Elective Courses (4 courses, 8 credits)

Management of Automotive Service Enterprises (2 credits), Automobile Professional English (2 credits), Electrical Technology of New Energy Vehicles (2 credits), Control Technology of New Energy Vehicles (2 credits).

### 4. Professional Characteristic Course (1 course, 3 credits)

**Automotive Testing and Fault Diagnosis Technology (3 credits):** This course uses case data from partner enterprises, covering fault diagnosis and detection of engines, chassis, body, etc. Through learning, students will gain a comprehensive understanding of automotive detection processes and diagnostic skills.

## V. Intensive Practical Teaching Links

### 1. Military Skills Training (1 course, 3 credits)

### 2. Basic Skills (5 courses, 18 credits)

Labor Practice (1.5 credits), 3D Modeling Design Practice (6 credits), Engineering Drawing Practice (3 credits), Vehicle Appraisal and Evaluation Practice (4.5 credits), Metalworking Practice (3 credits).

### **3. Comprehensive Training (4 courses, 22.5 credits)**

Automotive Marketing Practice (7.5 credits), Automotive Service Practice (3 credits), Automotive Fault Diagnosis Practice (7.5 credits), Electric Vehicle Three-Electricity Comprehensive Practice (4.5 credits).

### **4. Extended Training (4 courses, 13.5 credits)**

Automotive Sheet Metal and Painting Practice (3 credits), Engineering Simulation Practice (3 credits), Automotive Care Practice (4.5 credits), Automotive Service Engineering Production Internship (3 credits).

### **5. Extended Enhancement (2 courses, 15 credits)**

Graduation Internship (4 credits), Undergraduate Thesis /Design (11 credits).

## **VI. Professional Graduation and Degree Awarding Conditions**

### **1. Professional Graduation Conditions**

In accordance with the requirements of the *Academic Management Rules of Hengxing University*, students who have completed the course credits specified in the training program with qualified grades, and whose achievement degree of each training objective (i.e., graduation requirements) is at least the qualified level (pass), can obtain the Undergraduate Diploma in Automotive Service Engineering of Hengxing University.

The achievement degree of training objectives for Automotive Service Engineering adopts a grade system, set as five levels: excellent, good, medium, pass, and fail. The corresponding relationship between the grade system and the hundred-mark system is usually: (1) 90-100 points: excellent; (2) 80-89 points: good; (3) 70-79 points: medium; (4) 60-69 points: pass; (5) <60 points: fail.

### **2. Professional Degree Awarding Conditions**

Students who meet the graduation requirements and comply with the requirements of the Implementation Rules for Awarding Bachelor's Degrees of Hengxing University, and are approved by

the University's Degree Committee, can be awarded the Bachelor of Engineering Degree of Qingdao  
Hengxing University of Science and Technolog

## VII. Professional Teaching Implementation Plan

Table 3: Teaching Implementation Plan for the Automotive Service Engineering Major

Course Type	Course Level	Course Module	Course Names	Course Code	Course Nature	Chinese Credits	ECTS	Chinese Class Hours	ECTS Hours	Semester Offered								Evaluation Method	Offering Institution	
										First Academic Year		Second Academic Year		Third Academic Year		Fourth Academic Year				
										1	2	3	4	5	6	7	8			
General Education Courses	Basic general course	Ideological and Political Course	Ideology, Morality and Rule of Law	3000000101	Compulsory	3	3	48	84	√								Examination	School of Marxism	
			Conspectus of Chinese Modern History	3000000102	Compulsory	3	3	48	84		√									Examination
			Basic Principle of Marxism	3000000103	Compulsory	3	3	48	84			√								Examination
			Introduction to MAO Zedong Thought and the theoretical system of socialism with Chinese Characteristics	3000000104	Compulsory	3	3	48	84				√							Examination
			Introduction to Xi Jinping Thoughts on Socialism with Chinese Characteristics for a New Era	3000000147	Compulsory	3	3	48	84					√						Examination
			Situation and Policies I	3000000105	Compulsory	0.25	0.25	8	7	√										Non-written exam
			Situation and Policies II	3000000182	Compulsory	0.25	0.25	8	7		√									Non-written exam
			Situation and Policies III	3000000106	Compulsory	0.25	0.25	8	7			√								Non-written exam
			Situation and Policies IV	3000000183	Compulsory	0.25	0.25	8	7				√							Non-written exam
			Situation and Policies V	3000000107	Compulsory	0.25	0.25	8	7					√						Non-written exam
			Situation and Policies VI	3000000184	Compulsory	0.25	0.25	8	7						√					Non-written exam
			Situation and Policies VII	3000000108	Compulsory	0.25	0.25	8	7							√				Non-written exam
			Situation and Policies VIII	3000000185	Compulsory	0.25	0.25	8	7								√			Non-written exam
	<b>Subtotal 1</b>						<b>17</b>	<b>17</b>	<b>304</b>	<b>476</b>								<b>5 exam-based courses</b>		
	Basic general		Advanced Mathematics A I	3000000160	Compulsory	5	5	80	140	√								Examination		
		Advanced Mathematics A II	3000000161	Compulsory	5	5	80	140		√								Examination		

Course Type	Course Level	Course Module	Course Names	Course Code	Course Nature	Chinese Credits	ECTS	Chinese Class Hours	ECTS Hours	Semester Offered								Evaluation Method	Offering Institution	
										First Academic Year		Second Academic Year		Third Academic Year		Fourth Academic Year				
										1	2	3	4	5	6	7	8			
General Education Courses	course	Mathematical Courses	Linear Algebra	3000000113	Compulsory	2	2	32	56		√							Examination	School of Education	
			Probability and Statistics	3000000114	Compulsory	2	2	32	56				√							Examination
General Education Courses	Basic general course	Mathematical Courses	College Physics I	3000000139	Compulsory	2	2	32	56		√							Examination	School of Education	
			College Physics II	3000000140	Compulsory	2	2	32	56			√						Examination		
			College physics experiments	3000000401	Compulsory	2	2	32	56				√					Non-written exam		
			<b>Subtotal 2</b>				<b>20</b>	<b>20</b>	<b>320</b>	<b>560</b>										<b>6 exam-based courses</b>
			Tools Training Course	Digital Intelligent English I	300000010B	Compulsory	2	2	64	56	√									
		Digital Intelligent English II		300000010C	Compulsory	2	2	64	56		√								Examination	
		Digital Intelligent English III		300000010D	Compulsory	2	2	64	56			√						Examination		
		Digital Intelligent English IV		300000010E	Compulsory	2	2	64	56									Examination		
		University Digit and Intelligence Literacy		3000000186	Compulsory	2	2	32	56	√								Non-written exam	School of Electronic and Computer Engineering	
		Information Retrieval and Use		3000000134	Compulsory	1	1	16	28			√						Non-written exam	Library	
		<b>Subtotal 3</b>				<b>11</b>	<b>11</b>	<b>304</b>	<b>308</b>									<b>4 exam-based courses</b>		
		Military PE Course	Military PE Course	Military Theory	3000000131	Compulsory	2	2	32	56	√								Non-written exam	Student Development Office
				College Physical Education I	3000000192	Compulsory	1	1	36	28	√								Non-written exam	School of Sports Science and
				College Physical Education II	3000000193	Compulsory	1	1	36	28		√							Non-written exam	

Course Type	Course Level	Course Module	Course Names	Course Code	Course Nature	Chinese Credits	ECTS	Chinese Class Hours	ECTS Hours	Semester Offered								Evaluation Method	Offering Institution	
										First Academic Year		Second Academic Year		Third Academic Year		Fourth Academic Year				
										1	2	3	4	5	6	7	8			
		Military PE Course	College Physical Education III	3000000194	Compulsory	1	1	36	28			√						Non-written exam	Physical Education	
			College Physical Education IV	3000000195	Compulsory	1	1	36	28				√							Non-written exam
			<b>Subtotal 4</b>			<b>6</b>	<b>6</b>	<b>176</b>	<b>168</b>											
General Education Courses	Basic general course	Comprehensive Quality Education Course	Psychological Health Education	3000000129	Compulsory	2	2	32	56	√								Non-written exam	School of Education	
			Excellent Traditional Chinese Culture Education	3000000197	Compulsory	1	1	16	28	√									Non-written exam	School of Humanities
			National Security Education	3000000187	Compulsory	1	1	16	28	√									Non-written exam	School of Marxism
			College Student Career and Development Planning	3000000132	Compulsory	1	1	16	28	√									Non-written exam	Business School
			Employment Guidance for College Students	3000000133	Compulsory	1	1	16	28					√					Non-written exam	
						<b>Subtotal 5</b>			<b>6</b>	<b>6</b>	<b>96</b>	<b>168</b>								
	Interdisciplinary Liberal Arts Course	Interdisciplinary Liberal Arts Course	Arts Literacy courses		Restricted Elective	2	2	32	56									Non-written exam	All Academic Units	
			International Literacy programs		Restricted Elective	1	1	16	32									Non-written exam		
			International literacy activities		Restricted Elective	1	1	16	32									Non-written exam		
			Social science courses		Restricted Elective	1	1	16	32									Non-written exam		
			Natural science courses		Restricted Elective	1	1	16	32									Non-written exam		
			<b>Subtotal 6</b>			<b>6</b>	<b>6</b>	<b>96</b>	<b>168</b>											
<b>Sum 1= Subtotal 1+ Subtotal 2+ Subtotal 3+ Subtotal 4+ Subtotal 5+ subtotal 6</b>						<b>66</b>	<b>66</b>	<b>1296</b>	<b>1848</b>											
			Introduction to Automotive Service engineering	3080208225	Compulsory	1	1	16	28	√								Non-written exam		
			Engineering Drawing	3080601204	Compulsory	2	2	32	56	√										Examination

Course Type	Course Level	Course Module	Course Names	Course Code	Course Nature	Chinese Credits	ECTS	Chinese Class Hours	ECTS Hours	Semester Offered								Evaluation Method	Offering Institution		
										First Academic Year		Second Academic Year		Third Academic Year		Fourth Academic Year					
										1	2	3	4	5	6	7	8				
Major Courses	Fundamental Major Courses	Fundamental Major Courses	Electrotechnics	3080201204	Compulsory	4	4	64	112		√							Examination	School of Mechanical&Automotive Engineering		
			Fundamentals of Engineering Materials and Machine building	3080201203	Compulsory	3	3	48	84			√								Examination	
			Engineering Mechanics	3080208215	Compulsory	4	4	64	112			√								Examination	
			Fundamentals of Mechanical Design	3080208202	Compulsory	4	4	64	112				√							Examination	
			Hydraulic and pneumatic transmission	3080201209	Compulsory	2	2	32	56				√							Examination	
	<b>Subtotal 1</b>						<b>20</b>	<b>20</b>	<b>320</b>	<b>560</b>									<b>6 exam-based courses</b>		
	Major Courses	Core Major Courses	Core Major Courses	Car Construction	3080208203	Compulsory	4	4	64	112			√						Examination	School of Mechanical&Automotive Engineering	
				Automotive Electrical and Electronic Control Systems	3080208204	Compulsory	3	3	48	84				√							Examination
				Car Marketing	3080208209	Compulsory	3	3	48	84					√						Examination
				Car theory	3080208207	Compulsory	3	3	48	84						√					Examination
				Auto insurance and claims	3080208212	Compulsory	2	2	32	56							√				Examination
Car identification and evaluation				3080208211	Compulsory	2	2	32	56							√			Examination		
Automotive detection and fault diagnosis techniques				3080208208	Compulsory	3	3	48	84								√				Examination
<b>Subtotal 2</b>						<b>20</b>	<b>20</b>	<b>320</b>	<b>560</b>									<b>7 exam-based courses</b>			
Major Courses	Elective Major Courses	Concentration Courses	Automotive Professional English	3080208206	Restricted Elective	2	2	32	56					√				Non-written exam	School of Mechanical&Automotive Engineering		
			Electric technology for new energy vehicles	3080208218	Restricted Elective	2	2	32	56					√						Non-written exam	
			Automotive service business management	3080208213	Restricted Elective	2	2	32	56							√				Non-written exam	
			New energy vehicle control technology	3080208219	Restricted Elective	2	2	32	56							√				Non-written exam	
			<b>Subtotal 3</b>						<b>≥ 4</b>	<b>≥ 4</b>	<b>≥ 64</b>	<b>≥ 112</b>									

Course Type	Course Level	Course Module	Course Names	Course Code	Course Nature	Chinese Credits	ECTS	Chinese Class Hours	ECTS Hours	Semester Offered								Evaluation Method	Offering Institution		
										First Academic Year		Second Academic Year		Third Academic Year		Fourth Academic Year					
										1	2	3	4	5	6	7	8				
	Major Enhancement Course	Major Enhancement Course	Electric vehicle	3080208210	Restricted Elective	2	2	32	56						√			Non-written exam	School of Mechanical & Automotive Engineering		
			New energy vehicle power battery	3080208216	Restricted Elective	2	2	32	56							√				Non-written exam	
			New energy vehicle drive motor	3080208217	Restricted Elective	2	2	32	56							√				Non-written exam	
			Auto parts management	3080208214	Restricted Elective	2	2	32	56							√				Non-written exam	
			Automotive Engine Principles	3080208205	Restricted Elective	2	2	32	56							√				Non-written exam	
			Automotive Design	3080207202	Restricted Elective	2	2	32	56							√				Non-written exam	
			<b>Subtotal 4</b>						≥ 4	≥ 4	≥ 64	≥ 112									
<b>Sum 2= Subtotal 1+ Subtotal 2+ Subtotal 3+ Subtotal 4</b>						≥ 48	≥ 48	≥ 768	≥ 1344												
Innovation and Entrepreneurship Education Courses	Innovation and Entrepreneurship Education Courses	Fundamental Courses of Innovation and Entrepreneurship	Innovative Design Thinking	3000000305	Compulsory	2	2	32	56			√						Non-written exam	School of Innovation & Entrepreneurship		
			Fundamentals of Entrepreneurship	3000000306	Compulsory	2	2	32	56				√							Non-written exam	
		<b>Subtotal 1</b>						4	4	64	112										
		Hands-on Innovation & Entrepreneurship Program	Automotive service innovation and entrepreneurship case study	3080208303	Compulsory	1	1	16	28					√							Non-written exam
			Innovative technology of Intelligent Connected vehicle	3080208305	Compulsory	3	3	48	84						√						Non-written exam
<b>Subtotal 2</b>						4	4	64	112												
<b>Sum 3= Subtotal 1+ Subtotal 2</b>						8	8	128	224												
		Military Skills Training	3000000196	Compulsory	2	3	32	84	√									Non-written exam	Student Development Office		
		Labor practice	3080208514	Compulsory	1	1.5	16	42		√								Non-written exam			

Course Type	Course Level	Course Module	Course Names	Course Code	Course Nature	Chinese Credits	ECTS	Chinese Class Hours	ECTS Hours	Semester Offered								Evaluation Method	Offering Institution		
										First Academic Year		Second Academic Year		Third Academic Year		Fourth Academic Year					
										1	2	3	4	5	6	7	8				
Intensive Practical Training Module	Intensive Practical Training Module	Basic Skills	3D modeling Design practice	3080201520	Compulsory	4	6	64	168		√							Non-written exam	School of Mechanical&Automotive Engineering		
			Engineering drafting practice	3080201519	Compulsory	2	3	32	84		√									Non-written exam	
			Motor vehicle identification and evaluation practices	3080201516	Compulsory	3	4.5	48	126			√								Non-written exam	
			Metalworking internship	3080201522	Compulsory	2	3	32	84			√								Non-written exam	
		Integrated Training	Automobile marketing practice	3080208517	Compulsory	5	6	80	168				√							Non-written exam	
			Automobile service practice	3080208518	Compulsory	2	3	32	84				√							Non-written exam	
			Automotive fault diagnosis practice	3080208519	Compulsory	5	9	80	252					√						Non-written exam	
			Integrated practice of three electric vehicles	3080207510	Compulsory	3	4.5	48	126						√					Non-written exam	
		Outward Bound Training	Automotive sheet metal and spray painting practice	3080208520	Compulsory	2	3	32	84							√				Non-written exam	
			Engineering simulation practice	3080201530	Compulsory	2	3	32	84							√				Non-written exam	
			Car beauty practice	3080208521	Compulsory	3	4.5	48	126								√			Non-written exam	
			Automotive service engineering production internship	3080208522	Compulsory	2	3	32	84								√			Non-written exam	
		Competency Expansion Program	Graduation Internship	3080208523	Compulsory	2	4	32	112									√		Non-written exam	
			Graduation Thesis (Design)	3080208603	Compulsory	4	11	64	308									√		Non-written exam	
		<b>Sum 4</b>						<b>44</b>	<b>72</b>	<b>704</b>	<b>2016</b>										
					Labor Activities	3000000907	Restricted Elective	1	1.5	16	42										Non-written exam
			Reading of 100 Selected Classics from Chinese and Foreign Literature	3000000901	Restricted Elective	1	1.5	3	8									Non-written exam			
			Freshman Orientation Education	3000000902	Restricted Elective			3	8										Non-written exam		

Course Type	Course Level	Course Module	Course Names	Course Code	Course Nature	Chinese Credits	ECTS	Chinese Class Hours	ECTS Hours	Semester Offered								Evaluation Method	Offering Institution					
										First Academic Year		Second Academic Year		Third Academic Year		Fourth Academic Year								
										1	2	3	4	5	6	7	8							
Co-curricular Activities	Co-curricular Activities	Co-curricular Activities	College Student Associations	3000000904	Restricted Elective	2	3	32	84									Non-written exam	Communist Youth League Committee					
			Sports Activities	3000000905	Restricted Elective					4	10											Non-written exam		
			Aesthetic Education Activities	3000000906	Restricted Elective					3	8												Non-written exam	
			Ideological and Political Development	3000000908	Free Elective																			Non-written exam
			Club and Cultural Activities	3000000909	Free Elective																			Non-written exam
			Volunteer and Public Service	3000000910	Free Elective																			Non-written exam
			Innovation, Entrepreneurship, and Creativity	3000000911	Free Elective																			Non-written exam
			Practical Training, Internship, and Hands-On Activities	3000000912	Free Elective																			Non-written exam
			Skill and Specialty Training	3000000913	Free Elective																			Non-written exam
<b>Sum 5</b>						≥ 4	≥ 6	≥ 64	≥ 168															
<b>Total = Sum 1 + Sum 2 + Sum 3 + Sum 4 + Sum 5</b>						≥ 170	≥ 200	≥ 2960	≥ 5600															

## VIII. Courses Offered to Other Majors (Including Public Elective Courses)

Introduction to Automotive Service Engineering (1 credit), Automotive Insurance and Claims (2 credits)

<b>Revision</b>	Director of Teaching and Research Section Signature	Cheng Xuelian		
	Program Director Signature	Bai Limin	Discipline Leader Signature	Jiang Peigang
<b>Review</b>	Industry Dean Signature	Xia Fuzhi	Dean of Academic Affairs Signature	Xiu Xia
	Executive Dean Signature and Date	Ma Baotong		