

# 车 辆 工 程

## 一、培养目标

本专业的培养目标是:培养具有科学、工程和人文素养,掌握车辆工程学科的基本原理和知识,具备扎实的汽车基础理论、设计、制造、研究和应用能力、工程实践能力和组织协调能力,具有创新意识和国际视野,能在车辆工程领域从事设计开发、制造、试验、研究、运行管理等方面工作的高级工程技术人才。

## 二、基本规格要求

本专业毕业生要求具备以下十二项核心能力:

1. 工程知识:能够将数学、自然科学、工程基础和专业知用于解决车辆工程领域的相关复杂工程问题。
2. 问题分析:能够应用数学、自然科学基本原理,并通过文献研究,识别、表达、分析车辆复杂工程问题,以获得有效结论。
3. 设计/开发解决方案:能够设计针对车辆工程领域的复杂工程问题的解决方案,设计满足汽车特定需求的机械(电)系统、部件或工艺流程,并能够在设计环节中体现创新意识,考虑法律、健康、安全、文化、社会以及环境等因素。
4. 研究:能够基于科学原理并采用科学方法对车辆复杂工程问题进行研究,包括设计实验、分析与解释数据、并通过信息综合得到合理有效的结论。
5. 使用现代工具:能够针对车辆复杂工程问题,开发、选择与使用恰当的技术、资源、现代工程工具和信息技术工具,并能够理解其局限性。
6. 工程与社会:能够基于工程相关背景知识进行合理分析,评价车辆工程实践和车辆复杂工程问题解决方案对社会、健康、安全、法律以及文化的影响,并理解应承担的责任。
7. 环境和可持续发展:能够理解和评价针对车辆复杂工程问题的工程实践对环境、社会可持续发展的影响。
8. 职业规范:具有人文社会科学素养、社会责任感和工程职业道德。
9. 个人和团队:具有在多学科团队中发挥作用的能力。
10. 沟通:能够就车辆复杂工程问题与业界同行及社会公众进行有效沟通和交流,包括撰写报告和设计文稿、陈述发言、清晰表达或回应指令。并具备一定的国际视野,能够在跨文化背景下进行沟通和交流。
11. 项目管理:理解并掌握工程管理原理与经济决策方法,并能在多学科环境中应用。
12. 终身学习:具有自主学习和终身学习的意识,有不断学习和适应发展的能力。

## 三、培养特色

在专业发展上把握现代汽车技术和汽车工业高速发展的趋势,适应国家对车辆工程专业人才的需求;坚持教学工作的中心地位,不断更新教学理念,注重多学科交叉,注重理论与工程实践相结合,注重工程应用,探索创新人才培养模式,改革教学方法,完善课程体系,优化教学内容,加强实践基地建设,创新实践教学,打造高水平师资队伍;推进产学研结合,实现高水平的专业教学与高水平的科学研究相

结合,形成以汽车车身、汽车底盘、汽车安全、新能源汽车等核心内容见长的专业教学特色;注重能力导向,培养汽车工程创新人才。

## 四、学制、毕业基本要求及学位授予

1. 本科基本学制 4 年,弹性学习年限 3—6 年,按照学分管理制度管理。
2. 车辆工程专业学生毕业最低学分数为 165 学分,其中各类别课程及环节要求学分数如下表:

课程类别	通识必修	学门核心	学类核心	专业核心	专业选修	通识选修	集中实践	合计
学分数	27	26	34	16	21	8	33	165

3. 学生修满培养方案规定的必修课、选修课及实践环节,达到规定的最低毕业学分数,并修完规定必修但不记学分的所有课程和环节,德、智、体全面合格,即可毕业。满足学位授予相关文件要求的,授予工学学士学位。

## 五、课程设置及学分分布

### (一)通识教育课程[必修 27 + (6)学分 + 选修 8 学分]

通识教育课程包括必修和选修两部分。通识选修课程按《湖南大学通识选修(文化素质教育)课程方案》实施,通识必修课程如下:

编码	课程名称	学分	备注
GE01101	毛泽东思想和中国特色社会主义理论体系概论	3+(3)	
GE01039	思想道德修养与法律基础	1.5+(1.5)	
GE01100	形势与政策	0.5+(1.5)	
GE01102	中国近现代史纲要	2	
GE01103	马克思主义基本原理(上)	2	
GE01104	马克思主义基本原理(下)	2	
GE01012(-15)	大学英语	8	
GE01088	计算机基本能力测试	0.5	
GE01095	计算机导论与程序设计	2.5	
GE01107(-13)	心理素质与生涯发展	1	
GE01089(-92)	体育	4	

### (二)学门核心(26 学分)

编码	课程名称	学分	备注
GE03025	高等数学 A(1)	5	
GE03026	高等数学 A(2)	5	
GE03003	线性代数 A	3	
GE03004	概率论与数理统计 A	3	
GE03005	普通物理 A(1)	3	
GE03006	普通物理 A(2)	3	
GE03007(8)	普通物理实验 A	2	
ME03001	工程化学	2	

**(三)学类核心(34 学分)**

编码	课程名称	学分	备注
ME04017	机械工程图学(1)	3	
ME04018	机械工程图学(2)	3	
ME04019	工程材料	2	
ME04020	理论力学	4	
ME04021	材料力学	4	
ME05035	互换性与测量技术基础	2	
ME04023	热工学基础	3	
ME04024	机械原理	4	
ME04025	机械设计	4	
ME04026	电工电子学	3	
ME04027	控制工程基础	2	

**(四)专业核心(16 学分)**

编码	课程名称	学分	备注
ME05039	汽车构造及发动机原理	4	
ME05002	汽车理论	4	
ME05003	汽车设计	3	
ME05040	汽车电子技术	3	
ME05041	汽车制造工艺	2	

**(五)选修课(21 学分)**

编码	课程名称	学分	备注
ME06078	机械工程导论 A	1	<p>可在全校范围内跨专业选修 11 学分。</p> <p>学生在校期间参加学科竞赛获奖、公开发表学术论文等经学院认定后可以替代专业选修学分,但最高不超过 4 个学分,具体实施办法参照学院相关文件</p>
ME06079	机械振动学(英文教材、英语授课)	2	
ME04022	流体力学	2	
ME06112	新能源汽车基础	2	
ME06113	有限元分析	2	
ME06114	工程优化设计	2	
ME06064	汽车 NVH 技术	2	
ME06068	汽车结构 CAE 技术	2	
ME06115	汽车碰撞 CAE 技术	2	
ME06116	汽车试验学	2	

续表

编码	课程名称	学分	备注
ME06117	车身结构与设计	2	车身方向 10 学分
ME06002	车身制造工艺学	2	
ME06014	汽车空气动力学	2	
ME06015	汽车人机工程学	2	
ME06059	车身 CAD 技术	2	
ME06118	汽车系统动力学与控制	3	底盘方向 10 学分
ME06066	汽车悬架	2	
ME05036	液压气压与电传动	3	
ME06061	汽车底盘性能仿真	2	
ME06119	汽车安全技术	2	安全方向 10 学分
ME06120	人体损伤生物力学	2	
ME06121	汽车安全实验技术	2	
ME06067	智能车辆	2	
ME06122	汽车安全仿真理论与方法	2	
ME06123	电动车辆原理与构造	2	新能源汽车方向 10 学分
ME06124	电动车辆设计	2	
ME06125	电动汽车动力电池技术	2	
ME06126	电驱动及控制技术	2	
ME06127	电动汽车性能仿真与实验	2	

任选一个方向  
修课  
10 学分

### (六)集中实践(33 学分)

编码	课程名称	学分	备注
GE01040	军训、军事与国防、入学教育	0	
GE09003	中文写作实训	1	
GE09011	英文写作实训	1	
ME10031	机械综合实验(1)	0.5	
ME10032	机械综合实验(2)	0.5	
GE09010	金工实习 A	4	
GE09021	电工电子实习 B	2	
ME10009	机械原理课程设计	1	
ME10033	机械设计课程设计	3	
ME10034	测绘工程软件应用实践	1	
ME10013	驾驶实习	1	
ME10038	拆装实习	1	
ME10014	汽车制造工艺课程设计	2	
ME10002	车辆综合课程设计	2	
ME10039	生产实习	1	
ME10037	毕业设计(论文)	12	(含毕业实习 1 周)

## 六、课程体系与毕业生核心能力的关联度矩阵

课程类别	课程名称	工程知识	问题分析	设计/开发解决方案	研究	使用现代工具	工程与社会	环境与可持续发展	职业规范	个人和团队	沟通与交流	项目管理	终身学习
通识必修课程	毛泽东思想和中国特色社会主义理论体系概论							H					
	思想道德修养与法律基础						L	H					
	形势与政策							H					
	中国近现代史纲要								H				
	马克思主义基本原理(上)								H			H	
	马克思主义基本原理(下)								H			H	
	大学英语					M					H		
	计算机基本能力测试	M				H							M
	计算机导论与程序设计(C模块)	M				H							M
	心理素质与生涯发展						L				M		H
	体育								M				
通识选修课程	文化素质选修(公选课)								H			M	M
学科核心课程	高等数学 A	H											
	线性代数 A	H	M										
	概率论与数理统计 A	M	H										
	普通物理 A	H											
	普通物理实验 A				H								
学科核心课程	工程化学	H					L	M					
	机械工程图学	H				H	L						
	工程材料	H		M									
	理论力学	H											
	材料力学	H											
	互换性与测量技术基础	H	H	L	M	H			M	L	M	L	
	热工学基础	H					M	M					
	机械原理	H		H									
	机械设计	H		H		H	M			L			
电工电子学	H												
控制工程基础	H	H			M								
专业核心课程	汽车构造及发动机原理	H	H	H	M	H	M	L	H	H	M	M	M
	汽车理论	H	H	H	H	H	M	M	M	H	H	M	M
	汽车设计	H	H	H	H	H	H	M	H	H	H	H	M
	汽车电子技术	H	H	H	H	H	H	M	M	H	H	H	M
	汽车制造工艺	H	H	H	H	H	M	H	H	H	H	M	M
选修课		H	H	M		H					M	M	

续表

课程类别	课程名称	工程知识	问题分析	设计/开发解决方案	研究	使用现代工具	工程与社会	环境与可持续发展	职业规范	个人和团队	沟通与交流	项目管理	终身学习
集中实践环节	军事训练								H	M			
	中文写作实训										H		
	英文写作实训										H		
	机械综合实验				H								
	金工实习 A	M					L		L				
	电工电子实习 B	M					L		L				
	机械原理课程设计			H							L		L
	机械设计课程设计			H		H			L		L		L
	测绘工程软件应用实践	H				H					L		
	驾驶实习	H	M			M			H	L	L		M
	拆装实习	H	H	L	M	M		M	H	H	H	H	M
	汽车制造工艺课程设计	H	H	H	M	H	M	M	M	H	H	H	M
	车辆综合课程设计	H	H	H	M	H	M	M	M	H	H	H	M
	生产实习				H						M	L	
毕业设计(论文)	H	H	H			H	M	M		L	H	H	H

注:1)表中教学活动包括:课程、实践环节、训练等;

2)课程与毕业生核心能力关联度的高度分别用“H(高)”“M(中)”“L(低)”表示。

## 七、课程责任教师一览表

序号	姓名	职称	学历学位	专业特长	课程 (专业核心、专业选修、通识选修)
1	白中浩	副教授	博士	汽车安全	汽车电子技术、汽车安全性实验技术、汽车制造工艺课程设计
2	曹立波	教授	博士	汽车车身设计及安全性研究方向	汽车车身结构与设计、车身方向综合课程设计
3	崔向阳	副教授	博士	汽车 CAE	有限元分析、接触碰撞 CAE 技术
4	千年妃	助理教授	博士	汽车 CAE、汽车结构优化、汽车设计	汽车构造、汽车学、认识实习
5	何莉萍	教授	博士	纳米生物复合材料、汽车新材料和功能涂层材料及其先进制备技术、新能源材料与装置	工程材料、电动汽车动力电池技术、电动车辆原理与构造
6	何智成	助理教授	博士	汽车 NVH	汽车 NVH 技术
7	黄智	副教授	博士	汽车电子、机电控制	汽车试验学、汽车电子技术、生产实习
8	雷飞	助理教授	博士	汽车技术	汽车试验学、电动汽车动力电池技术
9	李凡	助理教授	博士	汽车安全、人体损伤生物力学、道路交通事故分析	人体损伤生物力学
10	李光耀	教授	博士	数值模拟、汽车 CAE 技术、无网格、反演和优化技术	有限元分析

续表

序号	姓名	职称	学历学位	专业特长	课程 (专业核心、专业选修、通识选修)
11	李克	副教授	本科	发动机原理和设计	汽车构造
12	李伟平	副教授	博士	车辆系统动力学、汽车空气动力学	汽车设计、汽车空气动力学
13	刘迪辉	副教授	博士	汽车车身冲压工艺	车身制造工艺、汽车底盘性能仿真(AD-AMS 应用)、汽车制造工艺课程设计
14	宋晓琳	教授	博士	汽车安全技术、汽车系统动力学及其控制技术	汽车理论、底盘方向综合课程设计
15	王 琥	副教授	博士	工程优化理论、数值算法	工程优化设计、汽车结构 CAE 技术
16	肖 志	助理教授	博士	汽车交通安全	热工学基础、车身 CAD 技术、生产实习
17	薛殿伦	副教授	博士	汽车自动变速理论与控制	机械振动学、现代汽车概论
18	杨 易	副教授	博士	汽车系统动力学、汽车电子	控制工程基础、汽车系统动力学、生产实习
19	张 农	教授	博士	汽车 NVH、汽车传动	机械振动学
20	张维刚	教授	博士	汽车碰撞安全、汽车设计	汽车设计、汽车安全技术、汽车安全方向综合课程设计
21	张冠军	助理教授	博士	汽车安全、汽车车身设计	汽车理论、车身方向综合课程设计
22	郑 刚	副教授	博士	汽车 CAE	汽车制造工艺学、汽车制造工艺课程设计
23	周 兵	副教授	博士	车辆动力学及控制	汽车构造、汽车底盘控制技术、认识实习
24	谢 晖	研究教授	博士	汽车模具	车身制造工艺学
25	成艾国	研究教授	博士	汽车产品开发过程中的数据管理和流程优化	电动车辆设计
26	陈涛	研究员	博士	汽车安全、汽车 CAE 分析技术	汽车结构 CAE 技术
27	孙光永	研究员	博士	汽车 CAE、汽车结构优化	汽车结构 CAE 技术
28	顾纪超	研究员	博士	汽车 CAE、汽车结构优化	接触碰撞 CAE 技术
29	胡朝晖	研究员	博士	汽车 NVH	汽车 NVH 技术
30	聂 昕	研究员	博士	汽车 CAE	汽车结构 CAE 技术
31	宋 凯	研究员	博士	汽车 CAE	汽车结构 CAE 技术
32	蒋彬辉	研究员	博士	汽车安全	汽车安全仿真实理论与方法
33	颜凌波	研究员	博士	汽车安全、汽车车身设计	汽车车身结构与与设计、车身方向综合课程设计
34	尹汉峰	研究员	博士	特种车辆、车辆动力学与 NVH	汽车安全仿真实理论与方法

## 八、专业责任教授

序号	姓名	职称	学历学位	专业特长	承担授课课程
1	张维刚	教授	博士	汽车碰撞安全、汽车设计	汽车设计、汽车安全技术、汽车安全方向综合课程设计

# Vehicle Engineering

## I . Educational Objectives

This Program aims at the cultivation of senior engineering and technical talents in vehicle engineering field, who have knowledge of science, engineering and humanities, be good at organizing, coordinating and communicating, have awareness of innovation and global vision; and who, with a sound foundation of vehicle theory, design and manufacture fundamental knowledge, a strong ability of research, application and engineering practice; are qualified to undertake the work of design, manufacture, testing, research and management in the field of vehicle engineering.

## II . Graduate Outcomes

Students of this degree will require;

1. **Engineering Knowledge:** An ability to apply knowledge of mathematics, natural science, engineering fundamentals and engineering specialization to solve complex vehicle engineering problems.
2. **Problem Analysis:** An ability to identify, formulate, analyze and research literature of complex vehicle engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
3. **Design/Development of solutions:** An ability to design solutions for complex vehicle engineering problems and design systems, components or processes that meet specified needs with appropriate considerations of legal, public health, safety, cultural, societal, and environmental issues, and show the sense of innovation during design process.
4. **Investigation:** An ability to investigate complex vehicle engineering problems using scientific principles and scientific methods to provide valid conclusions via the process of experiment design, data analysis and interpretation, and information synthesis.
5. **Modern Tool Usage:** An ability to create, select and apply appropriate techniques, resources, and modern engineering and IT tools to complex vehicle engineering problems, with an understanding of the limitations.
6. **The Engineer and Society:** An ability to rationalize and assess societal, health, safety, legal and cultural issues and the consequent responsibilities involving professional engineering practice and solutions to complex vehicle engineering problems by contextual knowledge.
7. **Environment and Sustainability:** An ability to understand and evaluate the impact of professional engineering work in the solution of complex vehicle engineering problems on sustainability of society and environment.
8. **Ethics:** Knowledge of humanities and social sciences, a sense of social responsibility and professional ethics.
9. **Individual and Team work:** An ability to function effectively in diverse and multi-disciplinary teams.
10. **Communication:** An ability to communicate effectively with the engineering community and general public on complex vehicle engineering activities, such as being able to comprehend and write



effective reports, design documentations, make effective presentations, and give and receive clear instructions, with a global vision, can do communication in the multicultural context.

11. **Project Management:** An ability to understand and apply engineering management principles and economic decision-making to managing projects in a multi-disciplinary team.

12. **Lifelong Learning:** An ability to recognize the need and prepare for independent and life-long learning, and to learn and adjust to development.

### III. Program Features

This program goes with the stream of modern vehicle technology and the rapid development of automotive industry with the responsibility of cultivating qualified professional talents in vehicle engineering field. Firstly, this program focuses on the professional education of vehicle body, chassis, safety and new energy power; and the cultivation of innovative talents in vehicle engineering field. Secondly, this program insists the core position of teaching and construction of high-level teaching staff; keep on renewing the teaching idea and teaching methods; pay attention to the interdisciplinary issue, perfect the curriculum system and teaching content. Thirdly, this program based on ability oriented cultivation mode, pay attention to the combination of theory teaching and practice training; strengthen the construction of practice bases and innovate the practice training mode, and form the education mechanism of production-study-research combination.

### IV. Length of Schooling, Graduation Requirements and Degree Awarded

1. The length of schooling is usually 4 years, but flexibly 3—6 years based on the credit system.
2. The minimum credits for the program are 165, which are distributed as follows:

Category	Credits
General Education Courses	27
Core Courses in General Discipline	26
Core Courses in General Category	34
Core Courses in Specialty	16
Elective Courses in Specialty	21
Elective Courses in General Education	8
Intensive Practicum	33
Total	165

3. The students will graduate when they finish all required courses, elective courses and practices specified in this program to get the required minimum credits, complete other required courses without credits, and qualified in virtue, wisdom and health. Those who satisfy the above requirements will be awarded Bachelor of Engineering.

### V. Curriculum and Credit Distribution

1. General Education Courses [required 27 + (6) + elective 8 credits]

The general education courses consist of required courses and elective courses. General education electives are designed according to the *Curriculum Design of General Education Electives of Hunan University*. Required general education courses are illustrated in the following table.

Code	Course Title	Credit(s)	Remarks
GE01101	Introduction to Maoism and Theoretical System of Socialism with Chinese Characteristics	3+ (3)	
GE01039	Moral Cultivation and Law Basics	1.5+ (1.5)	
GE01100	Current Situation and Policies	0.5+ (1.5)	
GE01102	Outline of Modern Chinese History	2	
GE01103	Fundamentals of Marxism I	2	
GE01104	Fundamentals of Marxism II	2	
GE01012(-15)	College English	8	
GE01088	Computer Proficiency Test	0.5	
GE01095	Introduction to Computer Science and Programming	2.5	
GE01107(-13)	Psychological Health & Career Planning	1	
GE01089(-92)	Physical Education	4	

### 2. Core Courses in General Discipline (26 credits)

Code	Course	Credit(s)	Remarks
GE03025	Advanced Mathematics A( I )	5	
GE03026	Advanced Mathematics A( II )	5	
GE03003	Linear Algebra A	3	
GE03004	Probability and Mathematics Statistic A	3	
GE03005	Physics A( I )	3	
GE03006	Physics A ( II )	3	
GE03007(8)	Physics Experiments A	2	
ME03001	Engineering Chemistry	2	

### 3. Core Courses in General Category (34 credits)

Code	Course	Credit(s)	Remarks
ME04017	Mechanical Engineering Graphics I	3	
ME04018	Mechanical Engineering Graphics II	3	
ME04019	Engineering Materials	2	
ME04020	Theoretical Mechanics	4	
ME04021	Material Mechanics	4	
ME05035	Fundamentals of Interchangeability and Measurement Techniques	2	
ME04023	Fundamentals of Thermal Engineering	3	
ME04024	Mechanical Principles	4	
ME04025	Mechanical Design	4	
ME04026	Electrotechnics and Electronics	3	
ME04027	The Basis of Control Engineering	2	

## 4. Core Courses in Specialty (16 credits)

Code	Course	Credit(s)	Remarks
ME05039	Vehicle Construction and Engine Principle	4	
ME05002	Vehicle Theory	4	
ME05003	Vehicle Design	3	
ME05040	Vehicle Electronic Techniques	3	
ME05041	Vehicle Manufacturing Technology	2	

## 5. Elective Courses in Specialty (21 credits)

Code	Course	Credit(s)	Remarks
ME06078	Introduction to Mechanical Engineering A	1	Optional 11 credits, which can be from transdisciplinary studies. The awards in academic competitions and academic paper publications which are recognized by the college, can be used to substitute the credits of elective courses in specialty. The maximum number of substituted credits is four. The measures for the implementations refer to relevant documents of the college.
ME06079	Mechanical Vibration (Teaching in English)	2	
ME04022	Fluid Mechanics	2	
ME06112	The Fundamentals of New Energy Automobile	2	
ME06113	Finite Element Analysis	2	
ME06114	Engineering Optimization Design	2	
ME06064	Automotive NVH Technology	2	
ME06068	CAE Technique for Automotive Structure	2	
ME06115	CAE technique for Automotive Crashworthiness	2	
ME06116	Automotive Test	2	
ME06117	Structure and Design of Vehicle Body	2	Vehicle Body 10 credits
ME06002	Manufacture Technology of Vehicle Body	2	
ME06014	Automotive Aerodynamics	2	
ME06015	Automotive Ergonomics	2	
ME06059	CAD Technique for Vehicle Body	2	
ME06118	Vehicle System Dynamics and Control	3	Vehicle Chassis 10 credits
ME06066	Vehicle Suspension	2	
ME05036	Hydraulic, Pneumatic and Electric Transmission	3	
ME06061	Vehicle Chassis Performance Simulation	2	Vehicle Safety 10 credits
ME06119	Vehicle Safety Technology	2	
ME06120	Injury Biomechanics	2	
ME06121	Vehicle Safety Experimental Technique	2	
ME06067	Intelligent Vehicle	2	
ME06122	Theory and Methods of Vehicle Safety Simulation	2	New Energy Vehicle 10 credits
ME06123	Electric Vehicle Principle and Construction	2	
ME06124	Electric Vehicle Design	2	
ME06125	Power Battery Technique for Electric Vehicle	2	
ME06126	Electric Driven and Control Technology	2	
ME06127	Electric Vehicle Performance Simulation and Experiment	2	

## 6. Intensive Practicum (33 credits)

Code	Course	Credit(s)	Remarks
GE01040	Military Training, Military and National Defense, Entrance Education	0	
GE09003	Chinese Writing Training	1	
GE09011	English Writing Training	1	
ME10031	Comprehensive Experiment for Machine I	0.5	
ME10032	Comprehensive Experiment for Machine II	0.5	
GE09010	Metal Working Practice A	4	
GE09021	Electrical Engineering Practice B	2	
ME10009	Course Design of Mechanical Principles	1	
ME10033	Course Design of Mechanical Design	3	
ME10034	Application for Software of Mapping & Engineering	1	
ME10013	Driving Practice	1	
ME10038	Disassembly and Assembly Practice	1	
ME10014	Course Design of Automotive Manufacturing Technology	2	
ME10002	Comprehensive Course Design for Vehicle Engineering	2	
ME10039	Manufacturing Practice	1	
ME10037	Graduate Design (Thesis)	12	(1 week of Graduation Internship included)





Cont

Category	Course	Engineering Knowledge	Problem Analysis	Design/Development Solution	Investigation	Modern Tool Usage	The Engineering and Society	Environment and Sustainability	Ethics	Individual and Team work	Communication	Project Management	Lifelong Learning
Elective Courses		H	H	M		H						M	M
	Military Training								H	M			
	Chinese Writing Training										H		
	English Writing Training										H		
	Comprehensive Experiment for Machine				H								
	Metal Working Practice A	M					L		L				
	Electrical Engineering Practice B	M					L		L				L
	Course Design of Mechanical Principles			H							L		L
	Course Design of Mechanical Design			H			H		L		L		L
	Application for Software of Mapping & Engineering	H					H				L		
Intensive Practicum	Driving Practice	H	M			M			H	L	L		M
	Disassembly and Assembly Practice	H	H	L	M	M	M		H	H	H	H	M
	Course Design of Automotive Manufacturing Technology	H	H	H	M	H	M	M	M	H	H	H	M
	Comprehensive Course Design for Vehicle Engineering	H	H	H	M	H	M	M	M	H	H	H	M
	Manufacturing Practice				H						M	L	
	Graduate Design (Thesis)	H	H	H		H	M	M		L	H	H	H

Note: 1) The teaching activities in this table include: curriculum, practice and training, etc. ;

2) The correlation between curriculum and the professional competence is ranged by "H (high)"; "M (medium)" and "L (low)".

## VII. Curriculum-responsible Teachers

No.	Name	Title	Academic Degree	Professional Expertise	Courses
1	Bai Zhonghao	Associate Professor	Doctor	Vehicle safety	Vehicle Electronic Techniques, Vehicle Safety Experimental Techniques, Course Design of Automotive Manufacturing Technology
2	Cao Libo	Professor	Doctor	Design and Safety Research for Vehicle Body	Vehicle Body Structure and Design, Comprehensive Course Design for Vehicle Body
3	Cui Xiangyang	Associate Professor	Doctor	Vehicle CAE	Finite Element Analysis, CAE Technology of Touching Collision
4	Gan Nianfei	Assistant Professor	Doctor	Vehicle CAE, Vehicle Structure Optimization, Vehicle Design	Automobile Structure, Vehicle, Cognition Practice
5	He Liping	Professor	Doctor	Nano Composite Materials, New Material and Functional Coating Materials for Vehicle, New Energy Materials and Devices	Engineering Materials, Power Battery Technique for Electric Vehicle, Electric Vehicle Principle and Construction
6	He Zhicheng	Assistant Professor	Doctor	Vehicle NVH	Automotive NVH Technology
7	Huang Zhi	Associate Professor	Doctor	Vehicle Electronics, Electromechanical Control	Automotive Test, Vehicle Electronic Techniques, Manufacturing Practice
8	Lei Fei	Assistant Professor	Doctor	Vehicle Technology	Automotive Test, Power Battery Technique for Electric Vehicle
9	Li Fan	Assistant Professor	Doctor	Vehicle Safety, Human Injury Biomechanics, Road Traffic Accident Analysis	Injury Biomechanics
10	Li Guangyao	Professor	Doctor	Numerical Simulation, Vehicle CAE Technology, Mesh-less Method, inversion and Optimization Techniques	Finite Element Analysis
11	Li Ke	Associate Professor	Undergraduate degree	Engine Principle and Design	Automobile Structure
12	Li Weiping	Associate Professor	Doctor	Vehicle Dynamics, Vehicle Aerodynamics	Vehicle Design, Automotive Aerodynamics
13	Liu Dihui	Associate Professor	Doctor	Vehicle Body Stamping Process	Manufacture Technology of Vehicle Body, Vehicle Chassis Performance Simulation, Course Design of Automotive Manufacturing Technology
14	Song Xiaolin	Professor	Doctor	Vehicle Safety Technology, Vehicle System Dynamics and Control Technology	Vehicle Theory, Comprehensive Course Design for Vehicle Chassis
15	Wang Hu	Associate Professor	Doctor	Engineering Optimization Theory, Numerical Algorithm	Engineering Optimization Design, CAE Technique for Automotive Structure



Cont

No.	Name	Title	Academic Degree	Professional Expertise	Courses
16	Xiao Zhi	Assistant Professor	Doctor	Vehicle and Traffic Safety	Fundamentals of Thermal Engineering, CAD Technique for Vehicle Body, Manufacturing Practice
17	Xue Dianlun	Associate Professor	Doctor	Vehicle Automatic Transmission Theory and Control	Mechanical Vibration, Introduction of Modern Vehicle
18	Yang Yi	Associate Professor	Doctor	Vehicle System Dynamics, Vehicle Electronics	The Basis of Control Engineering, Vehicle System Dynamics and Control, Manufacturing Practice
19	Zhang Nong	Professor	Doctor	Vehicle NVH, Vehicle Transmission	Mechanical Vibration
20	Zhang Weigang	Professor	Doctor	Vehicle Crash Safety, Vehicle Design	Vehicle Design, Vehicle Safety Technology, Comprehensive Course Design for Vehicle Safety
21	Zhang Guanjun	Assistant Professor	Doctor	Vehicle Safety, Vehicle Body Design	Vehicle Theory, Comprehensive Course Design for Vehicle Body
22	Zheng Gang	Associate Professor	Doctor	Vehicle CAE	Automobile Manufacturing Technology, Course Design of Automotive Manufacturing Technology
23	Zhou Bing	Associate Professor	Doctor	Vehicle Dynamics and Control	Automobile Structure, Automotive Chassis Control Technology, Cognition Practice
24	Xie Hui	Research Professor	Doctor	Vehicle Mould	Manufacture Technology of Vehicle Body
25	Cheng Aiguo	Research Professor	Doctor	Data Management and Process Optimization in Vehicle Product Development	Electric Vehicle Design
26	Chen Tao	Researcher	Doctor	Vehicle Safety, Vehicle CAE Analysis Technology	CAE Technique for Automotive Structure
27	Sun Guangyong	Researcher	Doctor	Vehicle CAE, Vehicle Structure Optimization	CAE Technique for Automotive Structure
28	Gu Jichao	Researcher	Doctor	Vehicle CAE, Vehicle Structure Optimization	CAE Technology of Touching Collision
29	Hu Zhaohui	Researcher	Doctor	Vehicle NVH	Automotive NVH Technology
30	Nie Xin	Researcher	Doctor	Vehicle CAE	CAE Technique for Automotive Structure
31	Song Kai	Researcher	Doctor	Vehicle CAE	CAE Technique for Automotive Structure
32	Jiang Binhui	Researcher	Doctor	Vehicle Safety	Theory and Methods of Vehicle Safety Simulation
33	Yan Linbo	Researcher	Doctor	Vehicle Safety, Vehicle Body Design	Vehicle Body Structure and Design, Comprehensive Course Design for Vehicle Body
34	Yin Hanfeng	Researcher	Doctor	Special Vehicles, Vehicle Dynamics and NVH	Theory and Methods of Vehicle Safety Simulation

**VIII. Program-responsible Professor**

No.	Name	Title	Academic Degree	Professional Expertise	Course
1	Zhang Weigang	Professor	Doctor	Vehicle Crash Safety, Vehicle Design	Vehicle Design, Vehicle Safety Technology, Comprehensive Course Design for Vehicle Safety

(翻译人:黄晶)