



Course Name	Automotive Electrical and Electronics
Major	Computer Software, Electronic Information Science and Technology, Electrical Engineering
Objective	To make the students master the basic principle and control method of various kinds of control technologies, to lay the foundation of knowledge for the future engaged in automotive electronics design, production and maintenance.
Semester	4 th
Language	English
Learning/Teaching methods	Course teaching, experimental demonstration and practice operation
Hour	48h
Credit	3.0
Prerequisite	Single chip microcomputer, C language, Can bus, Advanced mathematics
Content	<ol style="list-style-type: none"> 1. Automotive Electronic Control Technology Overview (6h) 2. Automotive electronic control technology foundation (8h) 3. Engine Control System 4. Gasoline engine fuel injection control system 5. Spark control system 6. Auxiliary control 7. Diesel Engine Electronic Control System 8. Automobile brake system control 9. Acceleration Slip Regulation(ASR) 10. Automatic transmission control system 11. Driving and safety control system
Grade/Exam	exam 70%+performance in class (homework+discussion)10%+experiment 20%
Reference	<p>[1] Feng Chong-yi, Lu Zhi-xiong. Automotive electronic control technology (Second Edition) China Communications Press, October 2011</p> <p>[2]Barry Hollembeak. Automotive electrical and electronic. Bei Jing institute of technology press.2011.12.</p> <p>[3](US)Barry Hollembeak(write) Wei Huan-dian, Liu Yong-wei(translation). Automotive electrical and electronic systems, Beijing institute of technology press, 2011.12.</p> <p>[4] (Germany) Conrad Reif, Li Yuhua translated. Automotive electronics (3rd edition German automotive engineering). Xi 'an jiaotong university press, October 2011</p> <p>[5] Kai Borgeest. Automotive electronics technology hardware, software, systems integration and project management. Machinery Industry Press, 2014,3.</p>