

Sri Ramakrishna Mission Vidyalaya College of Arts and Science
(AUTONOMOUS)
B.Voc (Automobiles)

Programme Educational Objectives:

PROGRAMME OUTCOMES:

The Department of Automobiles provides the practical learning environment for the students which aim to meet out the industrial requirements in the field of Automobiles by providing more practical exposures and on job trainings.

The program Educational Objectives are as follows:

- PO1.** Provide graduates with the fundamental knowledge in science and mathematics required to understand the principles of Engineering.
- PO2.** Develop creative and innovative thinking ability of the students which are required for industry.
- PO3.** Create a technically skilled employee by imparting theoretical, practical and on job training to students.
- PO4.** Imparting the leadership qualities required for team work, production planning, decision making and industrial safety, so that they are work ready at exit point of the Programme.
- PO5.** Create well-disciplined and responsible citizens for the overall welfare of our nation.

PROGRAMME SPECIFIC OUTCOMES:

- PSO1.** Ability to apply knowledge of vehicle science and automobile fundamentals in the field of competitive automotive field.
- PSO2.** Understand the applications of electrical, electronics and hydraulic devices in the field of Automobile.
- PSO3.** Diagnose the automotive system failures and repair / replace the components / systems so as to bring the vehicle in original condition.
- PSO4.** Ability to work in an industry as a team member as well as an individual with professional qualities and evolve oneself for lifelong learning.
- PSO5.** Ability to lead professionally in an industrial environment by applying managerial and technical skills related to Research and development, production and service activities.

Course outcomes (CO):

CO1	Realize the Construction, working and other fine points of Internal Combustion Engines used in automobiles.	K2
CO2	Attain the concept of automotive transmission system	K1 & K2
CO3	Explicate the working principle of transmission and components of driveline system.	K2
CO4	Understand the need of tyre and various braking system in automobile	K2

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : Automotive Electrical And Electronics Course code : 20KUA1C02

Course outcomes (CO):

CO1	Enumerate the basic terminologies, components and concepts of Automotive electrical and Electronics systems in automobiles	K1&K2
CO2	Explain the construction, characteristics and maintenance of starting and ignition system	K2
CO3	Enlighten purpose, circuits, construction and working of components of lighting and accessories system.	K2
CO4	Interface automotive sensors, actuators with microcontrollers and various future technologies of vehicle.	K2 & K3

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : Automobile Technology And Maintenance Course Code : 20KUA2C03

Course outcomes (CO):

CO1	Understand diagnose procedures: repairing, overhauling and troubles in petrol and diesel engine and sub system.	K2&K3
CO2	Enlighten the principle of cooling & various lubrication systems.	K2
CO3	Understand the fundamentals, principle of operation and Performance of various clutches, gear boxes, Axles, etc.,	K4
CO4	Illustrate the basic concepts of steering, brake, suspension and wheel maintenance.	K2 & K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : Automotive Electrical And Electronics Lab Course Code : 20KUAT2P1

Course outcomes (CO):

CO1	Ability to rectify the faults in electrical and electronics systems.	K2&K4
CO2	Fathom the battery testing and maintenance.	K1 & K2
CO3	Understand the testing of starting motors, generators and alternators.	K2
CO4	Describe the Diagnosis of ignition system faults.	K2 & K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : Automobile Repair and Maintenance Lab Course code : 20KUAT2P2

Course outcomes (CO):

CO1	Understand the general procedures for servicing and maintenance schedule.	K1&K2
CO2	Expose the safety aspects with respect to man, machine and tools.	K1 & K2
CO3	Demonstrate the procedure for reconditioning and repairing of various component and subsystems of vehicles.	K2 & K4
CO4	Perform dismantling & assembling of automobile components by using tools.	K2 & K3

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : Internship Training -I

Course code : 20KUAT2I1

Course outcomes (CO):

CO1	Understanding career field, including the skills and responsibilities.	K1&K2
CO2	Develop effective work habits, including time management, punctuality, inter personal skills.	K2& K3
CO3	Exhibit critical thinking and problem solving skills by analyzing underlying issues to challenges.	K3 & K4
CO4	Articulate career options by considering opportunities in company, sector, industry, professional and educational advancement.	K3 & K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : Advanced Automobile Technology Course code : 20KUA3C04
Course outcomes (CO):

CO1	Understand the availability of alternate fuels and other alternate Energy sources.	K2
CO2	Make out the advanced engine function concepts.	K1 & K2
CO3	Understand the Emission norms, standards and emission control systems.	K2
CO4	Understand the recent development and technologies of Automobile Engineering.	K2

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : Automobile Repair And Maintenance Course Code : 20KUA3C05
Course outcomes (CO):

CO1	Understand the various methods of maintenance and techniques.	K2&K4
CO2	Demonstrate the maintenance procedure for automotive transmission systems.	K1 & K2
CO3	Illustrate trouble diagnosis procedure for lubrication and fuel delivery system.	K2
CO4	Developing the ideas on trouble diagnosis procedure for electrical and electronic systems in automobiles.	K2 & K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : Automotive Safety

Course code : 20KUA4C07

Course outcomes (CO):

CO1	Express the characteristics and importance of safety.	K2&K4
CO2	Understand and analyze the safety systems - ABS, air bags and seat belt, etc.,	K1 & K2
CO3	Analyze the comfort system requirements for automobiles.	K2
CO4	Describe the various systems that enhance vehicle safety, passenger comfort, and recent technologies in automobile.	K2 & K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : Workshop Technology Lab -I

Course code : 20KUAT4P3

Course outcomes (CO):

CO1	Learn about fault diagnosis and service of transmission system.	K2&K4
CO2	Describe the minor tuning on engine and vehicle.	K1 & K2
CO3	Perform removal and re - fitting of tire using automatic tire changer.	K2
CO4	Identify and repair of all the major vehicle systems.	K2 & K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course outcomes (CO):

CO1	Understanding career field, including the skills and responsibilities.	K1&K2
CO2	Develop effective work habits, including time management, punctuality, inter personal skills.	K2& K3
CO3	Exhibit critical thinking and problem solving skills by analyzing underlying issues to challenges.	K3 & K4
CO4	Articulate career options by considering opportunities in company, sector, industry, professional and educational advancement.	K3 & K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : Workshop Supervising And Management Course code : 20KUA5C09

Course outcomes (CO):

CO1	Gain knowledge about to Identifying, understanding and working with professional standards.	K2&K4
CO2	Manage quality issues in the work done by the technicians and components.	K1 & K2
CO3	Understanding of motor vehicle act.	K2
CO4	Identifying and understanding the various automotive components.	K2 & K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : Automobile Workshop Practice Lab Course code : 20KUAT5P4

Course outcomes (CO):

CO1	Understand the functioning of maintenance shop.	K1 & K2
CO2	Identify with the vehicle trouble shooting and Maintenance.	K1 & K2
CO3	Developing the knowledge to use the Electrical equipment's and trouble shooting.	K3 & K4
CO4	Fault diagnosis and service of vehicle air conditioning system.	K2 & K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course Title : PROJECT

Course code : 20KUAT6PR

Course outcomes (CO):

CO1	Expand the technical knowledge of their selected project topic.	K1 & K2
CO2	Exhibit the knowledge, skills and attitudes of a professional engineer.	K2 & K4
CO3	Analyze the learning and understand techniques for Project planning, scheduling and Execution Control.	K4
CO4	Apply the theoretical concepts to solve industrial problems with teamwork and multidisciplinary approach.	K3

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low

Course outcomes (CO):

CO1	Understanding career field, including the skills and responsibilities.	K1&K2
CO2	Develop effective work habits, including time management, punctuality, inter personal skills.	K2& K3
CO3	Exhibit critical thinking and problem solving skills by analyzing underlying issues to challenges.	K3 & K4
CO4	Articulate career options by considering opportunities in company, sector, industry, professional and educational advancement.	K3 & K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	M		S	M	M	M	L
CO2	S	S	S	S	M		S	S	S	S	M
CO3	S	S	M	S	S		S	S	S	S	M
CO4	S	S	M	S	M		S	S	S	S	M

S - Strong; M - Medium; L - Low



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