Noorul Islam Centre for Higher Education

(Deemed to be University u/s 3 of the UGC Act 1956)

Kumaracoil, Thuckalay, Kanyakumari District - 629 180

Accredited by NAAC with 'A' Grade

AM25 M.E.AUTOMOBILE ENGINEERING

Student Performance and Learning Outcomes

AM25 M.E.AUTOMOBILE ENGINEERING

Programme Outcomes - PO	
PO-A	Apply knowledge of mathematics, science, and engineering to solve the problems related to automobileengineering.
PO-B	Identify, formulate and analyze the complex safety problems using the principles of mathematics, natural sciences, and engineering concepts.
PO-C	Design solutions for complex safety problems and design system components or processes to meet the desired needs in public health, road safety and environmental consideration.
P0-D	Design and conduct experiments, analyze and interpret data through appropriate methods in order to provide a valid conclusion.
PO-E	Gain and use knowledge on contemporary issues and apply appropriate techniques, skills and engineering tools necessary for implementation in real-time issues.
PO-F	Assess the societal needs in the field of occupational health and safety and to bring effective solutions through professional engineering practice.
PO-G	Understand the impact of professional engineering solutions in the context of social, cultural and environmental responsibilities and the need for sustained development.
PO-H	To provide excellent guidelines to exhibit ethical behaviour and to enrol as a professional in a competitive engineering society.
PO-I	Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings
PO-J	Communicate effectively to the engineering community and with the society through effective reports, documents, presentations, symbols, guidelines, and drawings.
PO-K	Demonstrate the knowledge and understanding of the safety engineering and management principles and apply these to manage and execute projects, audits in the multidisciplinary environment.
PO-l	Recognize the need for, and have the preparation ability to effectively engage in the fast-changing field of safety engineering and make students to be successful professionals, committed to lifelong learning.

PROGRAMME SPECIFIC OUTCOMES - PSO	
PSO-1	Demonstrate the ability of analyzing the common business problems to design and develop appropriate technical solutions in automobile sectors.
PSO-2	Ability to utilize available resources and reduce pollution.
PSO-3	Practice and promote ideas to cater social needs.

Sl.No.	SUBJECT CODE	SUBJECT NAME
SEMESTER II		
1.	AM2505	Combustion Thermodynamics And Heat Transfer
2.	AM2506	Vehicle Control System
3.	AM2507	Automotive Transmission
4.	AM2508	Automotive Infotronics
5	AM2508	Electric And Hybrid Vehicles
6	AM25B2	Automotive Materials
7	AM2572	Modeling and Simulation of Auto Components Laboratory
SEMESTER IV		
8	AM25P5	PROJECT WORK –PHASE II

COURSE OUTCOMES	
AM2505	COMBUSTION THERMODYNAMICS AND HEAT TRANSFER
CO1	The Students will be able to understand the thermodynamics behind combustion
CO2	The students will be able to understand chemical kinetics of combustion
CO3	The students will be able to acquire the essentials of flame in conbustion
CO4	The students will be able to learn the basics of heat transfer in IC Engines
CO5	The students will be able to learn Instrumentations used for engine parameter measurements

AM 2506 VEHICLE CONTROL SYSTEMS	
CO1	Understand the components of chassis management system
CO2	Know about functions of drive line control system
CO3	Study about driver assistance systems in automobiles
CO4	Know about safety security and compact systems in vehicles
CO5	Understand the intelligent transportation system

AM 2507 ENGINE AND VEHICLE COMPONENTS DESIGN	
CO1	Students are able to understand design of engine components
CO2	Students are able to understand how design of engine components are done?
CO3	Students gain skills required to design frame
CO4	Students are able to understand design of steering system
CO5	Students are able to understand design of wheel and tyre

AM 2508 VEHICLE DYNAMICS	
CO1	The students will be able to describe the principles of total resistance offered to vehicle
CO2	The students will be able to describe the principles ,vehicle handling systems
CO3	The students will be able to describe the principles of vehicle steering anagle
CO4	The students will be able to explain various methods of stability of vehicles
CO5	The students will be able to know the basic working principles of vehicle suspension, tyres and specification

AM 2509 AUTOMOTIVE POLLUTION AND CONTROL	
CO1	Understand and examine fundamental concepts of automobiles pollution
CO2	Ability to understand emission from SI engines and its control
CO3	Ability to understand emission from CI engines and its control
CO4	Ability to study various types of noise pollution from automobiles
CO5	Knowledge and use of test procedure and measurement

AM 25B2 AUTOMOTIVE MATERIALS	
CO1	Understand and examine fundamental concepts of automotive materials
CO2	Ability to understand, selection of material
CO3	Ability to understand, analyze ferrous and non ferrous alloy
CO4	Ability to study various types of body materials
CO5	Knowledge and use of non electric and magnetic materials

AM 2572 MODELING AND SIMULATION OF AUTO COMPONENTS LABORATORY	
CO1	Student will be able to understand the 3D modeling
CO2	Student will be able to model components of vehicles
CO3	Student will be able to simulate components of vehicles
CO4	The students will be able to explain various methods manufacturing.
CO5	The students will be able to explain the basic working principles of simulation of automotive components.

AM25P5 PROJECT WORK –PHASE II	
CO1	Demonstrate a sound technical knowledge of their selected project topic.
CO2	Undertake problem identification, formulation and solution.
CO3	Design engineering solutions to complex problems utilising a systems approach.
CO4	Conduct an engineering project
CO5	Demonstrate the knowledge, skills and attitudes of a professional engineer.