ACADEMIC CURRICULA

UNDERGRADUATE DEGREE PROGRAMMES

Bachelor of Technology

(B.Tech. - Four Years)

(Choice Based Flexible Credit System)

Regulations 2018

Volume - 1

(Revised in March 2019)

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

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

Kattankulathur, Kancheepuram District 603203, Tamil Nadu, India

2. B.Tech. in Automobile Engineering

2. (a) Mission of the Department

Mission Stmt - 1	*To impart students with quality education centered on altering global requirements and add values to their career desires*
Mission Stmt - 2	*To enhance the knowledge and skill of students in collaboration with public and private sectors*
Mission Stmt - 3	*To identify and acknowledge economic, social and environmental issues that influences the quality of life in the vicinity and the globe*
Mission Stmt - 4	*To inculcate leadership qualities needed for automotive industries through robust curriculum with international outlook for sustainable future*
Mission Stmt - 5	*To build trust and co-operation at the workplace through effective inter-personal and communication skills*

2. (b) Program Educational Objectives (PEO)

PEO - 1	*Pursue advanced education, research and development, and other creative and innovative efforts in Automobile engineering*
PEO - 2	*Successfully apply analytical techniques, problem-solving skills necessary to adapt to technological changes and for a career in the field of automobile and mechanical engineering*
PEO - 3	*Implement their engineering knowledge acquired from projects, laboratory experimentation, classroom lectures and demonstrations to acknowledge the full range of technical and associated environmental issues*
PEO - 4	*Efficaciously use their communication skills in oral, written, visual and graphic modes within interpersonal, team, and group environments*
PEO - 5	*Retain the intellectual curiosity that motivates lifelong learning making them versatile to the rapidly evolving industrial challenges*

2. (c) Mission of the Department to Program Educational Objectives (PEO) Mapping

	Mission Stmt. - 1	Mission Stmt. - 2	Mission Stmt. - 3	Mission Stmt. - 4	Mission Stmt. - 5
PEO - 1	*H*	*M*	*M*	*L*	*L*
PEO - 2	*H*	*M*	*M*	*H*	*L*
PEO - 3	*H*	*H*	*M*	*M*	*H*
PEO - 4	*M*	*H*	*H*	*M*	*H*
PEO - 5	*H*	*M*	*H*	*H*	*M*

H – High Correlation, M – Medium Correlation, L – Low Correlation

2. (d) Mapping Program Educational Objectives (PEO) to Program Learning Outcomes (PLO)

	Program Learning Outcomes (PLO)														
	Graduate Attributes (GA)												Program Specific Outcomes (PSO)		
	Engineering Knowledge	Problem Analysis	Design & Development	Analysis, Design, Research	Modern Tool Usage	Society & Culture	Environment & Sustainability	Ethics	Individual & Team Work	Communication	Project Mgt. & Finance	Life Long Learning	PSO - 1	PSO - 2	PSO - 3
PEO - 1	*H*	*L*	*M*	*M*	*H*	*L*	*L*	*M*	*M*	*H*	*L*	*H*	*H*	*M*	*H*
PEO - 2	*H*	*H*	*M*	*H*	*M*	*L*	*L*	*L*	*H*	*M*	*M*	*H*	*M*	*M*	*H*
PEO - 3	*H*	*H*	*H*	*H*	*H*	*H*	*H*	*H*	*H*	*M*	*M*	*H*	*H*	*H*	*H*
PEO - 4	*L*	*M*	*L*	*L*	*M*	*L*	*M*	*H*	*H*	*H*	*M*	*M*	*M*	*M*	*L*
PEO - 5	*M*	*M*	*M*	*M*	*M*	*H*	*M*	*H*	*H*	*M*	*M*	*M*	*M*	*M*	*M*

H – High Correlation, M – Medium Correlation, L – Low Correlation

PSO – Program Specific Outcomes (PSO)

PSO - 1	*Ability to implement the knowledge of the design, manufacture, and maintenance of major subsystems and technologies associated with automobiles for sustainable professional career*
PSO - 2	*Ability to comprehend and communicate effectively within a multidisciplinary working environment in the context of the emerging technologies.*
PSO - 3	*Ability to acquire technical and managerial skill that makes them an employable graduate.*

2. (e) Program Structure: B.Tech. in Automobile Engineering

Humanities & Social Sciences including Management Courses (H)					
Course Code	Course Title	Hours/ Week L	T	P	C
18LEH101J	English	2	0	2	3
18LEH102J	Chinese	2	0	2	3
18LEH103J	French				
18LEH104J	German				
18LEH105J	Japanese				
18LEH106J	Korean				
18PDH101T	General Aptitude	0	0	2	1
18PDH102T	Management Principles for Engineers	2	0	0	2
18PDH103T	Social Engineering	2	0	0	2
18PDH201T	Employability Skills & Practices	0	0	2	1
Total Learning Credits					12

Engineering Science Courses (S)					
Course Code	Course Title	Hours/ Week L	T	P	C
18MES101L	Engineering Graphics and Design	1	0	4	3
18MES102J	Basic Civil and Mechanical Engineering	3	1	2	5
18EES102L	Electrical and Electronics Eng. Workshop	1	0	4	3
18CSS101J	Programming for Problem Solving	3	0	4	5
18AUS101L	Artifact Dissection Laboratory	0	0	2	1
18MES201T	Engineering Mechanics	3	1	0	4
Total Learning Credits					21

Project Work, Seminar, Internship In Industry / Higher Technical Institutions (P)					
Course Code	Course Title	Hours/ Week L	T	P	C
18AUP101L	Massive Open Online Course - I	0	0	2	1
18AUP102L	Industrial Training-I				
18AUP103L	Seminar - I				
18AUP104L	Massive Open Online Course - II	0	0	2	1
18AUP105L	Industrial Training-II				
18AUP106L	Seminar - II				
18AUP107L	Minor Project	0	0	6	3
18AUP108L	Internship (4-6 weeks)				
18AUP109L	Project	0	0	20	10
18AUP110L	Semester Internship				
Total Learning Credits					15

Open Elective Courses (Any 3 Courses)					
Course Code	Course Title	Hours/ Week L	T	P	C
18AUO101T	Hybrid and Electric Vehicles	3	0	0	3
18AUO102T	Renewable Sources of Energy	3	0	0	3
18AUO103T	Special Type of Vehicles	3	0	0	3
18AUO104T	Fuel Cells and Applications	3	0	0	3
18AUO105T	Transport Management	3	0	0	3
18AUO106T	Composite Materials for Automotive Applications	3	0	0	3
18AUO107T	Non Destructive Testing and evaluation	3	0	0	3
18AUO108T	Advanced engine technology	3	0	0	3
18AUO109T	New Product Development	3	0	0	3
18AUO110T	Automotive standards and regulations	3	0	0	3
18AUO111T	Automotive Sciences	3	0	0	3
18AUO112T	Intelligent Vehicle Technology	3	0	0	3
Total Learning Credits					9

Basic Science Courses (B)					
Course Code	Course Title	Hours/ Week L	T	P	C
18PYB101J	Physics: Electromagnetic Theory, Quantum Mechanics, Waves and Optics	3	1	2	5
18CYB101J	Chemistry	3	1	2	5
18MAB101T	Calculus and Linear Algebra	3	1	0	4
18MAB102T	Advanced Calculus and Complex Analysis	3	1	0	4
18MAB201T	Transforms and Boundary Value Problems	3	1	0	4
18MAB202T	Numerical Methods for Engineers	3	1	0	4
18BTB101T	Biology	2	0	0	2
Total Learning Credits					28

Professional Core Courses (C)					
Course Code	Course Title	Hours/ Week L	T	P	C
15MEC101T	Thermodynamics	3	1	0	4
18AUC201J	Manufacturing Technology for Automotive Engineers	3	0	2	4
18AUC204L	Automotive Components and Assembly drawing	0	0	4	2
18MEC106T	Mechanics of Solids	3	1	0	4
18AUC203T	Applied Thermal Engineering for Automotive Engineers	3	1	0	4
18MEC102T	Fluid Mechanics	3	1	0	4
18MEC109L	Strength of Materials Laboratory	0	0	2	1
18MEC104T	Fluid Dynamics Laboratory	0	0	2	1
18AUC301J	Automotive Engines	3	0	2	4
18MEC108T	Materials Technology	3	0	0	3
18MEC201T	Machines and Mechanisms	3	1	0	4
18AUC302J	Vehicular Structures and Driveline Systems	3	0	2	4
18MEC111L	Materials Technology Laboratory	0	0	2	1
18AUC303J	Automotive Electrical and Electronic Systems	3	0	2	4
18AUC304J	CAD Analysis for Automotive Engineers	3	0	2	4
18AUC305T	Design of Automotive Components	3	0	0	3
18AUC401J	Vehicle Dynamics	3	0	2	4
18AUC402L	Vehicle Testing Laboratory	0	0	2	1
18AUC350T	Comprehension	0	1	0	1
Total Learning Credits					57

Mandatory Courses (M)					
Code	Course Title	L	T	P	C
18PDM101L	Professional Skills and Practices	0	0	2	0
18PDM201L	Competencies in Social Skills	0	0	2	0
18PDM203L	Entrepreneurial Skill Development				
18PDM202L	Critical and Creative Thinking Skills	0	0	2	0
18PDM204L	Business Basics for Entrepreneurs				
18PDM301L	Analytical and Logical Thinking Skills	0	0	2	0
18PDM302L	Entrepreneurship Management				
18LEM101T	Constitution of India	1	0	0	0
18LEM102J	Value Education	1	0	1	0
18GNM101L	Physical and Mental Health using Yoga	0	0	2	0
18GNM102L	NSS	0	0	2	0
18GNM103L	NCC				
18GNM104L	NSO				
18LEM109T	Indian Traditional Knowledge	1	0	0	0
18LEM110L	Indian Art Form	0	0	2	0
18CYM101T	Environmental Science	1	0	0	0

Professional Elective Courses (E) (Any 6 Courses)					
Course Code	Course Title	Hours/ Week L	T	P	C
	Sub-stream: Manufacturing				
18AUE321T	*Automotive Components Manufacturing*	*3*	*0*	*0*	*3*
18AUE322T	*Welding and Joining Technique*	*3*	*0*	*0*	*3*
18AUE323T	*Automotive Surface Engineering*	*3*	*0*	*0*	*3*
18AUE324T	*Agile Manufacturing*	*3*	*0*	*0*	*3*
18AUE325T	*Manufacturing Systems and Simulation*	*3*	*0*	*0*	*3*
18AUE326T	*Composite Materials and Structures*	*3*	*0*	*0*	*3*
18AUE327T	*Metrology and Measurements*	*3*	*0*	*0*	*3*
18AUE421T	*Advanced Manufacturing Process*	*3*	*0*	*0*	*3*
18AUE422T	*Computer Integrated Manufacturing*	*3*	*0*	*0*	*3*
18AUE423T	*Process Planning and Cost Estimation*	*3*	*0*	*0*	*3*
18AUE424T	*Automotive Quality Systems*	*3*	*0*	*0*	*3*
18AUE425T	*Industrial Engineering and Operational Research*	*3*	*0*	*0*	*3*
	Sub-stream: Engine				
18AUE331T	*Heat ventilation and air conditioning*	*3*	*0*	*0*	*3*
18AUE332T	*Engine testing and validation*	*3*	*0*	*0*	*3*
18AUE333T	*Fuel testing and standards*	*3*	*0*	*0*	*3*
18AUE334T	*Automotive exhaust system development*	*3*	*0*	*0*	*3*
18AUE335T	*Engine auxiliary systems*	*3*	*0*	*0*	*3*
18AUE431T	*Design of automotive thermal system*	*3*	*0*	*0*	*3*
18AUE432T	*Simulation of Internal Combustion engines*	*3*	*0*	*0*	*3*
18AUE433T	*Automotive emission formation and controls*	*3*	*0*	*0*	*3*
18AUE434T	*Alternative fuels and energy systems*	*3*	*0*	*0*	*3*

Professional Elective Courses (E)					
Course Code	Course Title	Hours/ Week L	T	P	C
	Sub-stream: Design				
18AUE341T	*Automotive Driveline Design*	*3*	*0*	*0*	*3*
18AUE342T	*Automotive Chassis Component Design*	*3*	*0*	*0*	*3*
18AUE344T	*Concepts of Engineering Design*	*3*	*0*	*0*	*3*
18AUE345T	*Rapid prototyping and tooling*	*3*	*0*	*0*	*3*
18AUE346T	*Modeling and Control of Vibration in Mechanical Systems*	*3*	*0*	*0*	*3*
18AUE347T	*Geometrical Dimensioning and Tolerance*	*3*	*0*	*0*	*3*
18AUE348T	Design for Manufacture	*3*	*0*	*0*	*3*
18AUE441T	*Optimization techniques in Engineering Design*	*3*	*0*	*0*	*3*
18AUE442T	*Multibody Dynamics*	*3*	*0*	*0*	*3*
18AUE443T	*Finite Element Analysis*	*3*	*0*	*0*	*3*
18AUE444T	*Design of Experiments*	*3*	*0*	*0*	*3*
18AUE445T	*Product Life Cycle Management*	*3*	*0*	*0*	*3*
	Sub-stream : Vehicular Technologies				
18AUE351T	*Auxiliary vehicle systems*	*3*	*0*	*0*	*3*
18AUE352T	*Two and three wheeler technology*	*3*	*0*	*0*	*3*
18AUE353T	*Vehicle performance and testing*	*3*	*0*	*0*	*3*
18AUE354T	*Tyre technology*	*3*	*0*	*0*	*3*
18AUE355T	*Motorsport technology*	*3*	*0*	*0*	*3*
18AUE356T	*Automotive NVH*	*3*	*0*	*0*	*3*
18AUE451T	*Advanced vehicle technology*	*3*	*0*	*0*	*3*
18AUE452T	*Automotive safety and ergonomics*	*3*	*0*	*0*	*3*
18AUE453T	*Vehicle maintenance*	*3*	*0*	*0*	*3*
18AUE454T	*Vehicle body engineering and Aerodynamics*	*3*	*0*	*0*	*3*
18AUE455T	*Machine Learning Approach for Automotive Applications*	*3*	*0*	*0*	*3*
18AUE202T	*Sensors, Actuators and Signal Conditioners*	*3*	*0*	*0*	*3*
18AUE317J	*Automotive Control Engineering*	*2*	*0*	*2*	*3*

2. (f) Program Articulation: B.Tech. in Automobile Engineering

Course Code	Course Name	Program Learning Outcomes (PLO)													
		Graduate Attributes											PSO		
		Engineering Knowledge	Problem Analysis	Design & Development	Analysis, Design, Research	Modern Tool Usage	Society & Culture	Environment & Sustainability	Ethics	Individual & Team Work	Communication	Project Mgt. & Finance	Life Long Learning	PSO - 1	PSO - 2	PSO - 3
18AUS101L	*Artifact Dissection Laboratory*	*H*	*M*	*L*	*H*	*H*	*L*	*M*	*M*	*H*	*M*	*L*	*H*	*H*	*M*	*H*
18AUC201J	*Manufacturing Technology for Automotive Engineers*	*H*	*M*	*M*	*M*	*H*	*L*	*M*	*M*	*H*	*M*	*M*	*H*	*H*	*H*	*H*
18AUC203T	*Applied Thermal Engineering for Automotive Engineers*	*H*	*M*	*L*	*L*	*M*	*L*	*M*	*M*	*H*	*H*	*M*	*H*	*H*	*H*	*H*
18AUC204L	*Automotive Components and Assembly drawing*	*H*	*L*	*H*	*L*	*M*	*L*	*L*	*M*	*H*	*H*	*L*	*H*	*H*	*H*	*H*
18AUC301J	*Automotive Engines*	*H*	*H*	*M*	*M*	*M*	*L*	*M*	*L*	*M*	*H*	*L*	*H*	*H*	*H*	*H*
18AUC302J	*Vehicular Structures and Driveline Systems*	*H*	*H*	*M*	*M*	*M*	*L*	*M*	*L*	*M*	*H*	*L*	*H*	*H*	*H*	*H*
18AUC303J	*Automotive Electrical and Electronic Systems*	*H*	*H*	*M*	*M*	*M*	*L*	*M*	*M*	*H*	*M*	*M*	*H*	*H*	*H*	*H*
18AUC304J	*CAD Analysis for Automotive Engineers*	*H*	*H*	*H*	*H*	*L*	*L*	*L*	*L*	*M*	*H*	*L*	*M*	*H*	*H*	*M*
18AUC305T	*Design of Automotive Components*	*H*	*H*	*H*	*H*	*M*	*L*	*L*	*L*	*M*	*M*	*L*	*M*	*H*	*H*	*M*
18AUC401J	*Vehicle Dynamics*	*H*	*H*	*H*	*H*	*H*	*M*	*M*	*M*	*H*	*M*	*M*	*M*	*H*	*H*	*H*
18AUC402L	*Vehicle Testing Laboratory*	*H*	*H*	*H*	*H*	*H*	*M*	*M*	*M*	*H*	*M*	*M*	*M*	*H*	*H*	*H*
18AUE321T	*Automotive Components Manufacturing*	*H*	*H*	*M*	*H*	*H*	*L*	*M*	*H*	*H*	*M*	*M*	*H*	*H*	*H*	*M*
18AUE322T	*Welding & Joining Technique*	*H*	*M*	*L*	*L*	*H*	*L*	*M*	*M*	*M*	*L*	*L*	*H*	*H*	*H*	*M*
18AUE323T	*Automotive Surface Engineering*	*H*	*M*	*M*	*M*	*H*	*L*	*M*	*M*	*M*	*M*	*L*	*M*	*H*	*H*	*M*
18AUE324T	*Agile Manufacturing*	*H*	*H*	*L*	*H*	*H*	*M*	*H*	*M*	*H*	*H*	*H*	*H*	*H*	*H*	*M*
18AUE325T	*Manufacturing systems and simulation*	*H*	*H*	*M*	*M*	*H*	*M*	*H*	*M*	*M*	*M*	*M*	*H*	*H*	*H*	*M*
18AUE326T	*Composite Materials and Structures*	*H*	*H*	*H*	*H*	*H*	*H*	*H*	*H*	*H*	*M*	*M*	*H*	*H*	*H*	*H*
18AUE327T	*Metrology and Measurements*	*H*	*H*	*H*	*H*	*H*	*H*	*H*	*M*	*M*	*M*	*L*	*H*	*H*	*H*	*H*
18AUE421T	*Advanced Manufacturing Process*	*H*	*M*	*M*	*L*	*H*	*L*	*H*	*M*	*M*	*M*	*M*	*H*	*H*	*H*	*M*
18AUE422T	*Computer Integrated Manufacturing*	*H*	*H*	*H*	*M*	*H*	*L*	*H*	*M*	*M*	*H*	*H*	*H*	*H*	*H*	*M*
18AUE423T	*Process Planning & Cost Estimation*	*H*	*H*	*M*	*L*	*H*	*L*	*H*	*M*	*M*	*M*	*M*	*H*	*H*	*H*	*M*
18AUE424T	*Automotive Quality Systems*	*H*	*L*	*L*	*M*	*M*	*L*	*M*	*M*	*M*	*M*	*H*	*H*	*H*	*H*	*M*
18AUE425T	*Industrial Engineering & Operational Research*	*H*	*H*	*H*	*M*	*H*	*L*	*M*	*M*	*H*	*H*	*H*	*H*	*H*	*H*	*M*
18AUE331T	*Heat ventilation and air conditioning*	*H*	*H*	*H*	*M*	*H*	*L*	*M*	*M*	*H*	*H*	*H*	*H*	*H*	*H*	*M*
18AUE332T	*Engine testing and validation*	*H*	*H*	*M*	*H*	*M*	*M*	*M*	*M*	*M*	*M*	*L*	*H*	*H*	*H*	*M*
18AUE333T	*Fuel testing and standards*	*H*	*M*	*L*	*M*	*L*	*M*	*M*	*M*	*L*	*M*	*L*	*M*	*H*	*H*	*M*
18AUE334T	*Automotive exhaust system development*	*H*	*H*	*H*	*M*	*M*	*M*	*H*	*M*	*M*	*M*	*M*	*H*	*H*	*H*	*M*
18AUE335T	*Engine auxiliary systems*	*H*	*H*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*L*	*H*	*H*	*M*
18AUE431T	*Design of automotive thermal system*	*H*	*H*	*M*	*M*	*L*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*H*	*H*	*M*
18AUE432T	*Simulation of Internal Combustion engines*	*H*	*H*	*M*	*H*	*M*	*L*	*M*	*M*	*M*	*M*	*L*	*M*	*H*	*H*	*M*
18AUE433T	*Automotive emission formation and controls*	*H*	*H*	*M*	*H*	*M*	*L*	*M*	*M*	*M*	*M*	*L*	*M*	*H*	*H*	*M*
18AUE434T	*Alternative fuels and energy systems*	*H*	*M*	*M*	*H*	*L*	*H*	*H*	*M*	*L*	*M*	*L*	*H*	*H*	*H*	*M*
18AUE341T	*Automotive Driveline Design*	*H*	*H*	*H*	*H*	*M*	*L*	*M*	*L*	*M*	*M*	*H*	*M*	*H*	*H*	*M*
18AUE342T	*Automotive Chassis Component Design*	*H*	*H*	*H*	*H*	*M*	*L*	*L*	*L*	*M*	*M*	*L*	*M*	*H*	*H*	*M*
18AUE344T	*Concepts of Engineering Design*	*H*	*H*	*H*	*H*	*M*	*M*	*M*	*L*	*M*	*M*	*M*	*H*	*H*	*H*	*M*

18AUE345T	Rapid prototyping and tooling	M	M	H	H	M	M	M	M	H	H	M	M	H	H	M
18AUE346T	Modeling and Control of Vibration in Mechanical Systems	H	H	M	H	M	L	L	L	H	M	M	M	H	H	M
18AUE347T	Geometrical Dimensioning and Tolerance	H	H	H	H	H	H	H	H	H	M	M	H	H	H	H
18AUE348T	Design for Manufacture	H	H	H	H	H	H	H	M	M	M	L	H	H	H	H
18AUE441T	Optimization techniques in Engineering Design	H	H	H	H	H	H	L	H	H	M	H	H	H	H	M
18AUE442T	Multi-body Dynamics	H	H	H	H	H	L	L	M	H	H	M	M	H	H	M
18AUE443T	Finite Element Analysis	H	H	H	H	H	L	L	M	H	H	M	M	H	H	M
18AUE444T	Design of Experiments	H	H	H	H	H	H	H	H	H	M	M	H	H	H	H
18AUE445T	Product Life Cycle Management	H	H	H	H	H	H	H	M	M	M	L	H	H	H	H
18AUE351T	Auxiliary vehicle systems	H	M	L	M	H	M	M	M	M	M	M	H	H	H	M
18AUE352T	Two and three wheeler technology	H	H	H	H	M	M	M	M	M	M	L	H	H	H	H
18AUE353T	Vehicle performance and testing	H	H	H	H	H	M	H	M	M	M	L	H	H	H	H
18AUE354T	Tyre technology	H	H	H	M	M	L	H	M	M	M	L	H	H	M	M
18AUE355T	Motorsport technology	H	H	H	H	H	H	H	H	H	M	M	H	H	H	H
18AUE356T	Automotive NVH	H	H	H	H	H	H	H	M	M	M	L	H	H	H	H
18AUE451T	Advanced vehicle technology	H	H	H	H	H	M	H	M	M	M	L	H	H	M	H
18AUE452T	Automotive safety and ergonomics	H	H	H	H	H	H	H	H	M	M	L	H	H	H	H
18AUE453T	Vehicle maintenance	H	H	M	M	H	H	H	H	H	M	M	H	H	H	H
18AUE454T	Vehicle body engineering and Aerodynamics	H	H	H	H	H	M	H	M	M	M	L	H	H	H	H
18AUE455T	Machine Learning Approach for Automotive Applications	H	H	H	H	H	H	L	H	H	M	H	H	H	H	M
18AUE202T	Sensors, Actuators and Signal Conditioners	H	H	H	H	H	H	H	H	H	M	M	H	H	H	H
18AUE317J	Automotive Control Engineering	H	H	H	H	H	H	H	M	M	M	L	H	H	H	H
18AUO101T	Hybrid and Electric Vehicles	H	H	H	H	M	M	M	M	M	M	L	M	H	M	H
18AUO102T	Renewable Sources of Energy	H	M	H	H	M	L	H	M	M	M	L	H	H	H	M
18AUO103T	Special Type of Vehicles	H	H	H	H	M	M	M	M	M	M	L	M	H	M	H
18AUO104T	Fuel Cells and Applications	H	M	H	H	M	L	H	M	M	M	L	H	H	H	M
18AUO105T	Transport Management	H	H	H	H	M	M	M	M	M	M	L	M	H	M	H
18AUO106T	Composite Materials for Automotive Applications	H	M	H	H	M	L	H	M	M	M	L	H	H	H	M
18AUO107T	Non Destructive Testing and evaluation	H	H	H	H	M	M	M	M	M	M	L	M	H	M	H
18AUO108T	Advanced engine technology	H	M	H	H	M	L	H	M	M	M	L	H	H	H	M
18AUO109T	New Product Development	H	H	H	H	M	M	M	M	M	M	L	M	H	M	H
18AUO110T	Automotive standards and regulations	H	H	H	H	H	M	H	M	H	M	M	H	H	M	H
18AUO111T	Automotive Sciences	H	H	H	H	H	M	H	M	H	M	M	H	H	M	H
18AUO112T	Intelligent Vehicle Technology	H	L	L	L	H	H	H	H	M	M	M	M	M	M	M
18AUP101L	Massive Open Online Course - I	H	M	M	M	M	M	M	M	H	H	H	M	H	H	H
18AUP102L	Industrial Training-I	H	M	M	M	M	M	M	M	H	H	H	M	H	H	H
18AUP103L	Seminar - I	H	H	H	H	H	M	M	H	H	H	H	H	H	M	M
18AUP104L	Massive Open Online Course - II	H	M	M	M	M	M	M	M	H	H	H	M	H	H	H
18AUP105L	Industrial Training-II	H	H	H	H	H	M	M	H	H	H	H	H	H	M	M
18AUP106L	Seminar - II	H	H	H	H	H	M	M	H	H	H	H	H	H	M	M
18AUP107L	Minor Project	H	M	M	M	M	M	M	M	H	H	H	M	H	H	H
18AUP108L	Internship (4-6 weeks)	H	M	M	M	M	M	M	M	H	H	H	M	H	H	H
18AUP109L	Project	H	M	M	M	M	M	M	M	H	H	H	M	H	H	H
18AUP110L	Semester Internship	H	M	M	M	M	M	M	M	H	H	H	M	H	H	H
	Program Average	H	H	H	M	H	H	H	M	H	M	M	H	H	H	M

H – High Correlation, M – Medium Correlation, L – Low Correlation

2. (g) Implementation Plan: B.Tech. in Automobile Engineering

Semester - I

Code	Course Title	Hours/ Week L	T	P	C
18LEH10XJ	Chinese / French / German / Japanese/ Korean	2	0	2	3
18MAB101T	Calculus and Linear Algebra	3	1	0	4
18CYB101J	Chemistry	3	1	2	5
18CSS101J	Programming for Problem Solving	3	0	4	5
18EES102L	Electrical and Electronics Eng. Workshop	1	0	4	3
18PDM101L	Professional Skills and Practices	0	0	2	0
18LEM102J	Value Education	1	0	1	0
18GNM102L	NSS	0	0	2	0
18GNM103L	NCC				
18GNM104L	NSO				
Total Learning Credits					**20**

Semester - II

Code	Course Title	Hours/ Week L	T	P	C
18LEH101J	English	2	0	2	3
18MAB102T	Advanced Calculus and Complex Analysis	3	1	0	4
18PYB101J	Physics: Electromagnetic Theory, Quantum Mechanics, Waves and Optics	3	1	2	5
18MES101L	Engineering Graphics and Design	1	0	4	3
18MES102J	Basic Civil and Mechanical Engineering	3	1	2	5
18AUS101L	Artifact Dissection Laboratory	0	0	2	1
18PDH101T	General Aptitude	0	0	2	1
18LEM101T	Constitution of India	1	0	0	0
18GNM101L	Physical and Mental Health using Yoga	0	0	2	0
Total Learning Credits					**22**

Semester - III

Code	Course Title	Hours/ Week L	T	P	C
18MAB201T	Transforms and Boundary Value Problems	3	1	0	4
18MES201T	Engineering Mechanics	3	1	0	4
18MEC101T	Thermodynamics	3	1	0	4
18AUC201J	Manufacturing Technology for Automotive Engineers	3	0	2	4
18AUC204L	Automotive Components and Assembly drawing	0	0	4	2
18PDH103T	Social Engineering	2	0	0	2
18PDM201L	Competencies in Social Skills	0	0	2	0
18PDM203L	Entrepreneurial Skill Development				
18CYM101T	Environmental Science	1	0	0	0
Total Learning Credits					**20**

Semester - IV

Code	Course Title	Hours/ Week L	T	P	C
18MAB202T	Numerical Methods for Engineers	3	1	0	4
18BTB101T	Biology	2	0	0	2
18AUC203T	Applied Thermal Engineering for Automotive Engineers	3	1	0	4
18MEC106T	Mechanics of Solids	3	1	0	4
18MEC102T	Fluid Mechanics	3	1	0	4
18MEC104L	Fluid Dynamics Laboratory	0	0	2	1
18MEC109L	Strength of Materials Laboratory	0	0	2	1
18PDH102T	Management Principles for Engineers	2	0	0	2
18PDM202L	Critical and Creative Thinking Skills	0	0	2	0
18PDM204L	Business Basics for Entrepreneurs				
Total Learning Credits					**22**

Semester - V

Code	Course Title	Hours/ Week L	T	P	C
18AUC301J	Automotive Engines	3	0	2	4
18MEC201T	Machines and Mechanisms	3	1	0	4
18MEC108T	Materials Technology	3	0	0	3
18MEC111L	Materials Technology Laboratory	0	0	2	1
	Professional Elective – 1	3	0	0	3
	Professional Elective – 2	3	0	0	3
	Open Elective – 1	3	0	0	3
18AUP101L	Massive Open Online Course - I	0	0	2	1
18AUP102L	Industrial Training-I				
18AUP103L	Seminar - I				
18PDM301L	Analytical and Logical Thinking Skills	0	0	2	0
18PDM302L	Entrepreneurship Management				
18LEM110L	Indian Art Form	0	0	2	0
Total Learning Credits					**22**

Semester - VI

Code	Course Title	Hours/ Week L	T	P	C
18AUC302J	Vehicular Structures and Driveline systems	3	0	2	4
18AUC303J	Automotive Electrical and Electronic Systems	3	0	2	4
18AUC304J	CAD Analysis for Automotive Engineers	3	0	2	4
18AUC305T	Design of Automotive Components	3	0	0	3
18AUC350T	Comprehension	0	1	0	1
	Professional Elective – 3	3	0	0	3
	Open Elective – 2	3	0	0	3
18AUP104L	Massive Open Online Course - II	0	0	2	1
18AUP105L	Industrial Training-II				
18AUP106L	Seminar - II				
18PDH201T	Employability Skills and Practices	0	0	2	1
18LEM109T	Indian Traditional Knowledge	1	0	0	0
Total Learning Credits					**24**

Semester - VII

Code	Course Title	Hours/ Week L	T	P	C
18AUC401J	Vehicle Dynamics	3	0	2	4
18AUC402L	Vehicle Testing laboratory	0	0	2	1
	Professional Elective – 4	3	0	0	3
	Professional Elective – 5	3	0	0	3
	Professional Elective – 6	3	0	0	3
	Open Elective – 3	3	0	0	3
18AUP107L	Minor Project	0	0	6	3
18AUP108L	Internship (4-6 weeks)				
Total Learning Credits					**20**

Semester - VIII

Code	Course Title	Hours/ Week L	T	P	C
18AUP109L	Project	0	0	20	10
18AUP110L	Semester Internship				
Total Learning Credits					**10**