

**DEPARTMENT OF AUTOMOBILE ENGINEERING
GRBT-20 Course Structure**

I B.Tech., I SEMESTER

S.No	Category	Course Code	Course Title	Hrs/Week			Credits	Intern al	Extern al	Total
				L	T	P				
1	BSC-1	201HB101	Mathematics-I	3	0	0	3	30	70	100
2	HSMC-1	201HB102	Communicative English-I	3	0	0	3	30	70	100
3	BSC-2	201HB103b	Engineering Chemistry	3	0	0	3	30	70	100
4	ESC-2	201EE104	Basic Electrical & Electronics Engineering	3	0	0	3	30	70	100
5	ESC-1	201ME105	Engineering Graphics	1	0	4	3	30	70	100
6	BSCL-1	201HB111b	Engineering Chemistry Laboratory	0	0	3	1.5	50	50	100
7	ESCL-1	201EE112	Basic Electrical & Electronics Engineering Laboratory	0	0	3	1.5	50	50	100
8	ESC-3	201ME113d	Basic Engineering Workshop	0	0	3	1.5	50	50	100
Total				13	0	13	19.5	300	500	800
BSC=7.5 ESC=9 HSMC=3										

I B.Tech., II SEMESTER

S.No	Category	Course Code	Course Title	Hrs/Week			Credits	Intern al	Extern al	Total
				L	T	P				
1	BSC-3	201HB201	Mathematics-II	3	0	0	3	30	70	100
2	BSC-4	201HB202b	Engineering Physics	3	0	0	3	30	70	100
3	ESC-5	201ME203a	Engineering Mechanics	3	0	0	3	30	70	100
4	ESC-4	201CS204a	Fundamentals of Computer Programming	3	0	0	3	30	70	100
5	ESC-6	201AM205	Fundamentals of Automobile Engineering	3	0	0	3	30	70	100
6	MC-1	201HB296	Environmental Science	2	0	0	0	30*	-	-
7	BSCL-2	201HB211b	Engineering Physics Laboratory	0	0	3	1.5	50	50	100
8	HSMC-2	201HB212	Communicative English Laboratory	0	0	3	1.5	50	50	100
9	ESCL-2	201CS213a	Fundamentals of Computer Programming Laboratory	0	0	3	1.5	50	50	100
Total				17	0	9	19.5	300	500	800
BSC =7.5 ESC=10.5 HSMC=1.5 MC=0										

Dr D. Lingaraju
(JNTUKakinada)

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D. MadhuSudhakar
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II B.Tech., I SEMESTER

S.No	Category	Course Code	Course Title	Hrs/Week			Credits	Internal	External	Total
				L	T	P				
1	BSC-5	201HB301	Mathematics-III	3	0	0	3	30	70	100
2	ESC-6	201AM302	Metallurgy & Materials Science	3	0	0	3	30	70	100
3	PCC-1	201AM303	Strength of Materials	3	0	0	3	30	70	100
4	PCC-2	201AM304	Fluid Mechanics & Hydraulic Machines	3	0	0	3	30	70	100
5	PCC-3	201AM305	Automobile Chassis Components	3	0	0	3	30	70	100
6	PCC-L1	201AM311	Strength of Materials & Metallurgy Lab	0	0	3	1.5	50	50	100
7	PCC-L2	201AM312	Automobile Chassis Components Lab	0	0	3	1.5	50	50	100
8	PCC-L3	201AM313	Fluid Mechanics & Hydraulic Machines Lab	0	0	3	1.5	50	50	100
9	SOC-1	201HB381	English for Career	1	0	2	2	-	15+35	50
Total				16	0	11	21.5	300	550	850

II B.Tech., II SEMESTER

S.No	Category	Course Code	Course Title	Hrs/Week			Credits	Internal	External	Total
				L	T	P				
1	BSC-6	201HB401	Probability & Statistics	3	0	0	3	30	70	100
2	PCC-4	201AM402	Thermodynamics	3	0	0	3	30	70	100
3	PCC-5	201AM403	Automobile Engines	3	0	0	3	30	70	100
4	HSC-2	201ME404	Industrial Engineering & Management	3	0	0	3	30	70	100
5	PCC-6	201AM405	Automobile Electrical & Autotronics	3	0	0	3	30	70	100
6	ESC-L4	201AM411	Automobile Assembly Drawing Lab	0	0	3	1.5	50	50	100
7	PCC-L6	201AM412	IC Engines & Fuels Lab	0	0	3	1.5	50	50	100
8	PCC-L7	201AM413	Automobile Electrical & Autotronics Lab	0	0	3	1.5	50	50	100
9	SOC-2	201CS481A	Programming with Python	1	0	2	2	-	15+35	50
10	MC-2	201CE491	Constitution of India	2	0	0	0	30*	70*	100*
Total				18	0	11	21.5	300	550	850
Honor course &/Minor course (Optional)							4			
Summer Internship after second year (to be evaluated during 5th sem)										

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III B.Tech., I SEMESTER

S.No	Category	Course Code	Course Title	Hrs/Week			Credits	Intern al	External	Total
				L	T	P				
1	PCC-7	201AM501	Kinematics of Machinery	3	0	0	3	30	70	100
2	PCC-8	201AM502	Production Technology	3	0	0	3	30	70	100
3	PCC-9	201AM503	Design of Automotive Elements	3	0	0	3	30	70	100
4	PEC-1	201AM564A 201AM564B 201AM564C 201AM564D	1. Hybrid, Electric & Fuel Cell Vehicles 2. Two and Three Wheelers 3. Vehicle Body Engineering & Safety 4. Measurements and Control Systems	3	0	0	3	30	70	100
5	OEC/JOE -1		Open Elective-1 (See enclosed table)	3	0	0	3	30	70	100
6	PCC-L8	201AM511	Production Technology Lab	0	0	3	1.5	50	50	100
7	PCC-L9	201AM512	Auto Scanning and Vehicle Testing Lab	0	0	3	1.5	50	50	100
8	SOC-3	201AM581	Electric Vehicle Design & Assembling	0	1	2	2	-	15+35	50
9	MC-3	201MB591	IPR and Patents	2	0	0	0	30*	70*	100*
10	Proj	201AM531 201AM521	Internship-I/ Mini Project/ Study Project	0	0	0	1.5	100	-	100
Total				16	0	11	21.5	350	500	850

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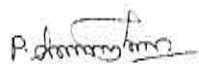
DEPARTMENT OF AUTOMOBILE ENGINEERING
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III B.Tech., II SEMESTER

S.No	Category	Course Code	Course Title	Hrs/Week			Credits	Internal	External	Total
				L	T	P				
1	PCC-10	201AM601	Dynamics of Machinery	3	0	0	3	30	70	100
2	PCC-11	201AM602	Heat Transfer	3	0	0	3	30	70	100
3	PCC-12	201AM603	Automotive Pollution & Control	3	0	0	3	30	70	100
4	PEC-2	201AM664A	1. CFD for Automobile Applications	3	0	0	3	30	70	100
		201AM664B	2. Alternative Energy Sources for Automobiles							
		201AM664C	3. Noise Vibrations and Harshness							
		201AM664D	4. Vehicle Maintenance							
5	OEC/JOE-2		Open Elective-2 (See enclosed table)	3	0	0	3	30	70	100
6	PCC-L10	201AM611	Theory of Machines Lab	0	0	3	1.5	50	50	100
7	PCC-L11	201AM612	Vehicle Maintenance Lab	0	0	3	1.5	50	50	100
8	PCC-L12	201AM613	Heat Transfer Lab	0	0	3	1.5	50	50	100
9	SOC-4	201AM681	Accident Analysis	0	1	2	2	-	15+35	50
10	MC-4	201HB691	Quantitative Aptitude and Reasoning	2	0	0	0	30*	70*	100*
Total				18	0	11	21.5	300	550	850

Summer Internship after third year (to be evaluated during 7th sem)


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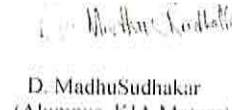

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IV B.Tech., I SEMESTER

S.No	Category	Course Code	Course Title	Hrs/Week			Credits	Internal	External	Total
				L	T	P				
1	PEC-3	201AM761A 201AM761B 201AM761C 201AM761D	1. Metal Cutting and Machine Tools 2. Automobile HVAC 3. Special Purpose Vehicles 4. Vehicle Infotronics	3	0	0	3	30	70	100
2	PEC-4	201AM762A 201AM762B 201AM762C 201AM762D	1. Automobile Certification and Homologation 2. Finite Element Analysis 3. Vehicle Transport Management 4. Electronic Engine & Vehicle Management Systems	3	0	0	3	30	70	100
3	PEC-5	201AM763A 201AM763B 201AM763C 201AM763D	1. Automobile Control Systems and Ergonomics 2. Vehicle Dynamics 3. CAD/CAM 4. Smart, Autonomous and Connected Vehicles	3	0	0	3	30	70	100
4	OEC/JOE-3		Open Elective-3 (See enclosed table)	3	0	0	3	30	70	100
5	OEC/JOE-4		Open Elective-4 (See enclosed table)	3	0	0	3	30	70	100
6	H&SSE	201AM706	UHV 2 Understanding Harmony	3	0	0	3	30	70	100
7	SOC-5	201AM781	Additive Manufacturing	0	1	2	2	-	15+35	50
8	Proj	201AM731 201AM721	Internship-2/ Mini Project/ Study Project	0	0	0	3	100	-	100
Total				19	0	2	23	280	470	750

IV B.Tech., II SEMESTER

S.No	Category	Course Code	Course Title	Hrs/Week			Credits	Internal	External	Total
				L	T	P				
1	Major Project	201AM841	Project work	0	0	0	12	60	140	200
Total				0	0	0	12	60	140	200

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Open Elective Courses/Job Oriented Electives:

	Open Elective-1 (III-1)	Open Elective-2 (III-2)	Open Elective-3 (IV-1)	Open Elective-4 (IV-2)
CIVIL Engineering	Environmental Pollution & Control (201CE565a)	Solid Waste Management (201CE665a)	Building Technology (201CE764a)	Safety Engineering (201CE765a)
EEE	Fundamentals of Utilization of Electrical Energy (201EE565a)	Concepts of Power System Engineering (201EE665a)	Fundamentals of smart grid technologies (201EE764a)	Basics of Electrical Measurements and Instrumentation (201EE765a)
MECH	Robotics (201ME565a)	Introduction to MEMS (201ME665a)	Nano Technology and its Applications (201ME764a)	Introduction to Operations Research (201ME765a)
ECE	Microprocessors and its Interfacing (201EC565a)	IoT and its Applications (201EC665a)	Introduction to Embedded Systems (201EC764a)	Fundamentals of Digital Image Processing (201EC765a)
CSE, CSC, CSM	Foundations of Operating Systems (201CS565a)	Fundamentals of Databases (201CS665a)	Information Security (201CS764a)	Human Computer Interaction (201CS765a)
Automobile Engineering	Basic Automobile Engineering (201AM565a)	Hybrid and Electric Vehicles (201AM665a)	Modern Vehicle Technology (201AM764a)	Alternative Energy Resources for Automotives (201AM765a)
MINING Engineering	Elements of Mining Technology (201MM565a)	Open Pit Slope Analysis and Design (201MM665a)	Mining and its importance (201MM764a)	Remote Sensing & GIS in Mining (201MM765a)
Petroleum	Fundamentals of Petroleum Engineering (201PT565a)	Basic Concepts in Petroleum Drilling Engineering (201PT665a)	Introduction to Petroleum Production Engineering (201PT764a)	Basic Concepts in Petroleum Reservoir Engineering (201PT765a)
MBA	Principles of Management (201MB565a)	Operations Management (201MB665a)	Entrepreneurship for Engineers (201MB764a)	Digital Marketing (201MB765a)

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