

GODAVARI INSTITUTE OF ENGINEERING & TECHNOLOGY
(AUTONOMOUS)

Approved by AICTE, Accredited by NBA & NAAC 'A+' Grade, Recognized under 2(f) and 12(b) of UGC, Permanently Affiliated to JNTUK, Kakinada.

DEPARTMENT OF AUTOMOBILE ENGINEERING

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Chaitanya Knowledge City, Rajanagaram, Rajamahendravaram – 533294. E.G.Dt. - AP.



GR-17

DEPARTMENT OF AUTOMOBILE ENGINEERING

4 YEARS B.Tech. COURSE STRUCTURE & SYLLABUS

With Effective from 2017-18 Batch

Dr D Lingaraju

Sri P. Veeraraju

Sri T.V. Dharmaraju

Dr. P. Senthil Kumar

Dr. S.V.S.N. Murthy

Sri M. Manikanta Dora

Sri L. Sivarama Krishna

Sri S. Rajasekhar

Ms B. Chandrakala

Sri V. Subrahmanyam

Sri J. Rajasekhar

Ms. P. Revathi

Sri P. Manoj Reddy

DEPARTMENT OF AUTOMOBILE ENGINEERING
I YEAR
I SEMESTER

S. No.	Subject		Periods per week			C	Scheme of Examination Maximum Marks		
	Name	Code	L	T	P/D		Internal	External	Total
1	English – I	17198101	3	1	-	3	40	60	100
2	Mathematics - I	17198102	3	1	-	3	40	60	100
3	Engineering Physics	17198104	3	1	-	3	40	60	100
4	Computer Programming	17195103	3	1	-	3	40	60	100
5	Engineering Drawing	17193175	1	-	3	3	40	60	100
6	Environmental Studies	17198106	3	1	-	3	40	60	100
7	English Communication Skills Lab-1	17198111	-	-	3	2	50	50	100
8	Engineering Physics Lab	17198112	-	-	3	2	50	50	100
9	Computer Programming Lab	17195113	-	-	3	2	50	50	100
	Total		16	5	12	24	390	510	900

I YEAR
II SEMESTER

S. No.	Subject		Periods per week			C	Scheme of Examination Maximum Marks		
	Name	Code	L	T	P/D		Internal	External	Total
1	English – II	17198201	3	1	-	3	40	60	100
2	Mathematics – II (Mathematical Methods)	17198202	3	1	-	3	40	60	100
3	Mathematics – III	17198203	3	1	-	3	40	60	100
4	Engineering Chemistry	17198204	3	1	-	3	40	60	100
5	Engineering Mechanics	17193205	3	1	-	3	40	60	100
6	Professional Ethics and Human Values*	17198206	1	2	-	1	40	60	100
7	English Communication Skills Lab – 2	17198211	-	-	3	2	50	50	100
8	Engineering Chemistry Lab	17198212	-	-	3	2	50	50	100
9	Engineering Workshop & IT Workshop	17198213	-	-	3	2	50	50	100
	Total		16	7	9	22	390	510	900

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II YEAR
I SEMESTER

S. No.	Subject		Periods per week			C	Scheme of Examination Maximum Marks		
	Name	Code	L	T	P/D		Internal	External	Total
1	Basic Automobile Engineering	17170301	3	1	-	3	40	60	100
2	Metallurgy & Materials Science	17170302	3	1	-	3	40	60	100
3	Mechanics of Solids	17170303	3	1	-	3	40	60	100
4	Thermodynamics	17170304	3	1	-	3	40	60	100
5	Industrial Engineering & Management	17170305	3	1	-	3	40	60	100
6	Computer Aided Engineering Drawing Practice	17170376	-	-	6	2	40	60	100
7	Automobile Chassis Components Lab	17170311	-	-	3	2	50	50	100
8	Mechanics of Solids & Fluid Mechanics lab	17170312	-	-	3	2	50	50	100
Total			15	5	12	21	340	460	800

II YEAR
II SEMESTER

S. No.	Subject		Periods per week			C	Scheme of Examination Maximum Marks		
	Name	Code	L	T	P/D		Internal	External	Total
1	Kinematics of Machinery	17170401	3	1	-	3	40	60	100
2	Automotive Engines	17170402	3	1	-	3	40	60	100
3	Basic Electrical & Electronics Engineering	17170403	3	1	-	3	40	60	100
4	Fluid Mechanics & Hydraulic Machinery	17170404	3	1	-	3	40	60	100
5	Manufacturing Processes	17170405	3	1	-	3	40	60	100
6	Soft Skills -1	17179406	1	2	-	1	40	60	100
7	Machine Drawing	17170477	-	-	3	3	40	60	100
8	Engine Components & Testing Lab	17170411	-	-	3	2	50	50	100
9	Basic Electrical & Electronics Engineering Lab	17170412	-	-	3	2	50	50	100
Total			16	7	9	23	380	520	900

* Student should carry Mini Project during summer vacation after II B.Tech. II Sem. Course work and it will be evaluated during III B.Tech. I Sem

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III YEAR
I SEMESTER

S. No.	Subject		Periods per week			C	Scheme of Examination Maximum Marks		
	Name	Code	L	T	P/D		Internal	External	Total
1	Dynamics of Machinery	17170501	3	1	-	3	40	60	100
2	Automotive Electrical & Autotronics	17170502	3	1	-	3	40	60	100
3	Design of Automobile Components	17170503	3	1	-	3	40	60	100
4	Vehicle Transport Management	17170504	3	1	-	3	40	60	100
5	Heat Transfer	17170505	3	1	-	3	40	60	100
6	Vehicle Performance & Testing	17170506	3	1	-	3	40	60	100
7	Heat Transfer Lab	17170511	-	-	3	2	50	50	100
8	Basic Automobile Components Manufacturing Lab	17170512	-	-	3	2	50	50	100
9	Mini Project-1 *	17170521	-	-	-	2	100	-	100
Total			18	6	6	24	440	460	900

III YEAR
II SEMESTER

S. No.	Subject		Periods per week			C	Scheme of Examination Maximum Marks		
	Name	Code	L	T	P/D		Internal	External	Total
1	Managerial Economics & Financial Analysis	17179601	3	1	-	3	40	60	100
2	Machine Tools & Metrology	17170602	3	1	-	3	40	60	100
3	CAD / CAM	17170603	3	1	-	3	40	60	100
4	Alternative Energy Sources for Automobiles	17170604	3	1	-	3	40	60	100
5	Departmental Elective I	(See List)	3	1	-	3	40	60	100
6	Automation in Automotive Manufacturing	17170606	3	1	-	3	40	60	100
7	Soft Skills - 2*	17170607	1	2	3	1	40	60	100
8	Machine Tools & Metrology Lab	17170611	-	-	3	2	50	50	100
9	CAD / CAM LAB	17170612	-	-	3	2	50	50	100
Total			19	8	6	23	380	520	900

** Student should carry **Summer Internship** during summer vacation after III B.Tech. II Sem. And it will be evaluated during IV B.Tech. I Sem

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IV YEAR
I SEMESTER

S. No.	Subject		Periods per week			C	Scheme of Examination Maximum Marks		
			L	T	P/D		Internal	External	Total
1	Departmental Elective – II	(See List)	3	1	-	3	40	60	100
2	Vehicle Dynamics	17170702	3	1	-	3	40	60	100
3	Instrumentation & Control Systems	17170703	3	1	-	3	40	60	100
4	Finite Element Methods	17170704	3	1	-	3	40	60	100
5	Open Elective	17170765a	3	1	-	3	40	60	100
6	Automotive pollution & Control	17170706	3	1	-	3	40	60	100
7	Servicing and Maintenance of Automobiles & Instrumentation Lab	17170711	-	-	3	2	50	50	100
8	Tuning of Automobiles through Real time workshop interaction Lab	17170712	-	-	3	2	50	50	100
9	Mini Project-2*	17170731	-	-	-	2	100	-	100
Total			18	6	6	24	440	460	900

IV YEAR
II SEMESTER

S. No.	Subject		Periods per week			C	Scheme of Examination Maximum Marks		
			L	T	P/D		Internal	External	Total
1	Hybrid, Electric & Fuel Cell Vehicles	17170801	3	1	-	3	40	60	100
2	Departmental Elective – III	(See List)	3	1	-	3	40	60	100
3	Departmental Elective – IV	(See List)	3	1	-	3	40	60	100
4	Project Work	17170841	-	-	-	9	60	140	200
5	IPR & PATENTS	17179895	1	2	-	1	40	60	100
Total			10	5	-	19	220	380	600

T : Theory P: Practical D: Drawing C: Credits

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ELECTIVES
OPEN ELECTIVE (17170765)

1. Robotics
2. Computer Graphics
3. Electrical Machines
4. Environmental Pollution and Control
5. Mining Machinery
6. Micro processors and Micro controllers

	Elective-1 (17170665)	Elective-2 (17170761)	Elective-3 (17170863)	Elective-4 (17170864)
Stream-1	Two & Three wheelers	Special Purpose Vehicles	Vehicle Maintenance	Off Road Vehicles
Stream-2	Automotive chassis Components Design	Modern Vehicle Design	Automotive Aerodynamics	Modern Vehicle Technology
Stream-3	Unconventional Machining Process	Product Design & Assembly Automation	Design for Manufacture	Rapid Prototyping
Stream-4	Disaster Management	Management Science	Operations Research	Principles of Entrepreneurship
Stream-5	Non Destructive Testing	Computational Fluid Dynamics	Micro Electro Mechanical Systems	Nano Technology
Stream-6	Trouble Shooting Servicing & Maintenance of Automobiles	Vehicle Body Engineering & Safety	Automotive Chassis & Suspension	Simulation of SI & CI Engines

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