

JALPAIGURI GOVERNMENT ENGINEERING COLLEGE

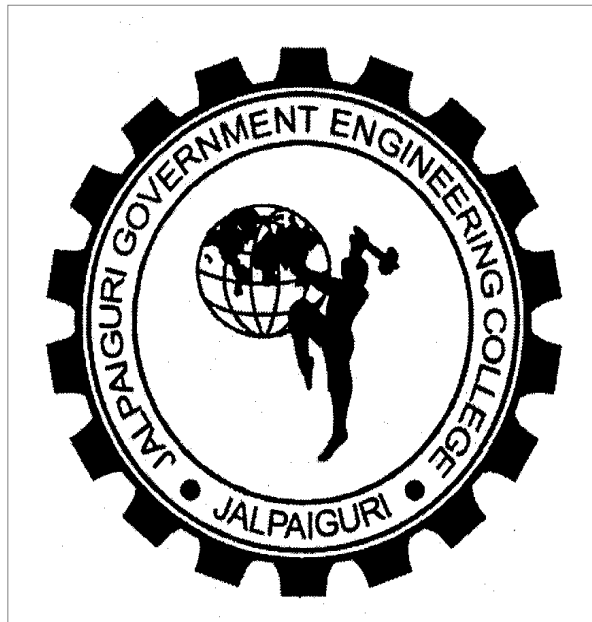
JALPAIGURI- 735 102

(AN AUTONOMOUS GOVERNMENT COLLEGE)

**COURSE STRUCTURE AND SYLLABUS
FOR**

B.TECH. IN MECHANICAL ENGINEERING

(Implemented from the Academic Year 2013-14 -for the new batch only)



www.jgec.ac.in

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Code	Sub.	Contact Hrs./Week		Code	Sub.	Contact Hrs./Week	
		L -T-P-TO	Cr.			L -T-P-TO	Cr.
HU-101	English Language & Technical Communication	2-0-0-2	2	HU-202	Economics for Engineers	3-0-0-3	3
PH-101	Physics – I	3-1-0-4	4	EE-201	Basic Electrical Engineering	3-1-0-4	4
CS-101	Principles of Computer Programming .	3-1-0-4	4	CH-201	Chemistry-I	3-1-0-4	4
M-101	Mathematics-I	3-1-0-4	4	M-201	Mathematics-II	3-1-0-4	4
ME-101	Engineering Mechanics	3-1-0-4	4	EC-201	Basic Electronics Engineering	3-1-0-4	4
PH-191	Physics-I Lab.	0-0-3-3	2	EE-291	Basic Electrical Engg. Lab.	0-0-3-3	2
CS-191	Principles of Computer Programming Lab.	0-0-3-3	2	CH-291	Chemistry-I Lab.	0-0-3-3	2
ME-191	Engineering Drawing. & Graphics	0-0-3-3	2	EC-291	Basic Electronics Engineering Lab.	0-0-3-3	2
HU-181	English Language & Technical Communication Lab	0-0-3-3	2	ME-292	Workshop Practice	0-0-3-3	2
XC-181	Extra Curricular Activities(NSS/ NCC/NSO ETC)	0-0-2-2	1				
		14-4-14-32	27			15-4-12-31	27
HU-301	Value & Ethics in Profession	3-0-0-3	3	M 402	Mathematics-III	3-0-0-3	3
PH 301	Physics-II	3-0-0-3	3	M(CS)401	Numerical Methods	3-0-0-3	3
EE (ME)301	Electrical Machines	3-0-0-3	3	ME 401	Kinematics of Machines	3-1-0-4	4
ME 301	Thermodynamics	3-1-0-4	4	ME 402	Primary Manufacturing Processes	3-0-0-3	3
ME 302	Strength of Materials	3-1-0-4	4	ME 403	Fluid Mechanics & Machinery	3-1-0-4	4
ME 303	Engineering Materials	3-0-0-3	3	CH 401	Basic Environmental Engineering & Elementary Biology	3-0-0-3	3
ME 391	Machine Drawing-I	0-0-3-3	2	M(CS) 491	Numerical Methods Lab	0-0-3-3	2
CE(ME) 392	Strength of Materials Lab	0-0-3-3	2	ME 491	Machine Drawing-II	0-0-3-3	2
EE (ME)391	Electrical Machines Lab	0-0-3-3	2	ME 492	Manufacturing Process Lab	0-0-3-3	2
ME 392	Workshop Practice	0-0-3-3	2	ME 493	Fluid Mechanics & Machinery Lab	0-0-3-3	2
		18-2-12-32	28			18-2-12-32	28
HU 501	Principles of Management	3-0-0-3	3	ME 601	I.C.Engine & Gas Turbine	3-1-0-4	4
ME 501	Heat Transfer	3-1-0-4	4	ME 602	Machine Design	3-1-0-4	4
ME 502	Dynamics of Machines	3-0-0-3	3	ME 603	Power Plant Engineering	3-1-0-4	4
ME 503	Machining & Machine Tools	3-0-0-3	3	ME 604	Advanced Machine Tools	3-1-0-4	4
ME 504	Design of Machine Elements	3-1-0-4	4	ME 605	Elective-II	4-0-0-4	4
ME 505	Elective-I	3-0-0-3	3	ME 691	I.C.Engine Lab	0-0-3-3	2
ME 591	Heat Transfer Lab	0-0-3-3	2	ME 692	Design Practice-II	0-0-3-3	2
ME 592	Dynamics of Machines Lab	0-0-3-3	2	ME 693	Seminar	0-0-3-3	2
ME 593	Machine Tools Lab	0-0-3-3	2	ME 694	Advanced Machine Tools Lab	0-0-3-3	2
ME 594	Design Practice-I	0-0-3-3	2				
		18-2-12-32	28			16-4-12-32	28
HU 701	Financial Management & Accounts	3-0-0-3	3	ME 801	Industrial Engineering & Management	4-0-0-4	4
ME 701	Advanced Manufacturing Technology	3-0-0-3	3	ME 802	Elective-V	4-0-0-4	4
ME 702	Metrology & Measurement	4-0-0-4	4	ME 803	Elective-VI	4-0-0-4	4
ME 703	Elective-III	4-0-0-4	4	ME 891	Industrial Engineering Lab	0-0-3-3	2
ME 704	Elective-IV	4-0-0-4	4	ME 892	Grand Viva Voce	0-0-0-0	4
ME 791	CAD/CAM Lab	0-0-3-3	2	ME 893	Project-II	0-0-9-9	6
ME 792	Metrology & Measurement Lab	0-0-3-3	2				
ME 793	Project-I	0-0-6-6	4				
ME 781	Industrial Training Evaluation	0-0-3-3	2				
		18-0-15-33	28			12-0-12-24	24

Elective-I- ME 505 : A. Refrigeration & Air Conditioning B. Computational Fluid Dynamics C. Mechatronics D. Quality & Reliability Engineering
Elective-II-ME 605: A. Finite Element Methods B. Materials Handling C. Fluid Power Control D. Industrial Robotics E. Mechanics of Composite Materials
Elective-III-ME-703: A.. Advanced Welding Technology B. Advanced Mechanical Vibration C. Total Quality Management D. Non Destructive Testing
Elective-IV-ME-704: A. Operation Research B. Computational Heat Transfer C. Theory of Combustion & Emissions D. Tribology E. Safety & Occupational Health
Elective-V-ME 802: A. Renewable Energy Studies B. Experimental Stress Analysis C. Computer Graphics & Solid Modeling D. Industrial & Organizational Psychology
Elective-VI-ME 803: A. Fracture Mechanics B. Energy Conservation & Management C. Automobile Engineering D. Advanced Mechanics of Materials