



**BIRLA INSTITUTE OF TECHNOLOGY**  
**MESRA, RANCHI – 835215, INDIA**  
**Course Structure Session - 2016**  
**UNDERGRADUATE (Full Time)**

Program : **BACHELOR OF ENGINEERING**  
Branch : **B.E. MECHANICAL ENGINEERING**

Semester : 1

Total Credits: 29

<b>Subject Code</b>	<b>Subject Title</b>	<b>Credit</b>
AM1201	ENGINEERING MECHANICS	4.00
CH1401	ENGINEERING CHEMISTRY	3.00
EC2001	PRINCIPLES OF ELECTRONICS ENGINEERING	3.00
MA1201	ENGINEERING MATHEMATICS	4.00
PH1201	PHYSICS	4.00
CH1402	CHEMISTRY LAB	2.00
CS1302	FUNDAMENTAL OF UNIX & C PROGRAMMING	3.00
EC2002	BASIC ELECTRONICS ENGINEERING LAB	2.00
ME1202	ENGINEERING GRAPHICS	3.00
<b>Activity</b>	<b>( CHOICE FOR ONLY ONE )</b>	
GA1002	NCC	1.00
GA1004	NSS	1.00
GA1008	CREATIVE ARTS	1.00
GA1006	PT & GAMES	1.00



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Semester : 2

Total Credits: 30

<b>Subject Code</b>	<b>Subject Title</b>	<b>Credit</b>
CH2203	ENVIRONMENTAL SCIENCE	3.00
CS2301	FUNDAMENTAL OF DATA STRUCTURE	4.00
EE2201	PRINCIPLES OF ELECTRICAL ENGG	4.00
HU1101	TECHNICAL ENGLISH	3.00
MA2201	ADVANCE ENGINEERING MATHEMATICS	4.00
ME2001	PRINCIPLES OF MECHANICAL ENGINEERING	3.00
AM2202	ENGINEERING MECHANICS LAB	2.00
CS2302	DATA STRUCTURE LAB	2.00
PE1202	WORKSHOP PRACTICE	2.00
PH1202	PHYSICS LAB	2.00
<b>Activity</b>	<b>( CHOICE FOR ONLY ONE )</b>	
GA2002	NCC	1.00
GA2004	NSS	1.00
GA2006	PT & GAMES	1.00
GA2008	CREATIVE ARTS	1.00



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Semester : 3

Total Credits: 26

Subject Code	Subject Title	Credit
ME3001	THERMODYNAMICS	3.00
ME3003	FLUID MECHANICS AND HYDRAULICS	3.00
ME3005	MECHANICS OF SOLIDS	4.00
PE3001	METALLURGY	3.00
ME3002	FLUID MECHANICS LAB	2.00
ME3004	MECHANICS OF SOLIDS LAB	2.00
ME3006	ENGINEERING MEASUREMENT LAB	2.00
<b>Activity</b>	<b>( CHOICE FOR ONLY ONE )</b>	
GA3002	NCC	1.00
GA3004	NSS	1.00
GA3006	PT & GAMES	1.00
GA3008	CREATIVE ARTS	1.00
<b>Breadth Paper</b>	<b>( CHOICE FOR ONLY ONE )</b>	
HU4001	FRENCH	3.00
HU4003	GERMAN	3.00
<b>Sessionals</b>	<b>( CHOICE FOR ONLY ONE )</b>	
EE3202	BASIC ELECTRICAL ENGINEERING LAB	2.00



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Semester : 4

Total Credits: 23

<b>Subject Code</b>	<b>Subject Title</b>	<b>Credit</b>
BT3021	BIOLOGICAL SCIENCE	3.00
ME4005	NON CONVENTIONAL ENERGY	3.00
ME4001	HEAT POWER CONVERSION	3.00
ME4003	MECHANICS OF MATERIALS	4.00
PE4001	MANUFACTURING PROCESS-I	3.00
ME4004	MECHANICAL ENGG. LAB	2.00
ME4006	NON-CONVENTIONAL ENERGY LAB	2.00
PE4002	MANUFACTURING PROCESS-I LAB	2.00
<b>Activity</b>	<b>( CHOICE FOR ONLY ONE )</b>	
GA4002	NCC	1.00
GA4004	NSS	1.00
GA4006	PT & GAMES	1.00
GA4008	CREATIVE ARTS	1.00



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Semester : 5

Total Credits: 23

<b>Subject Code</b>	<b>Subject Title</b>	<b>Credit</b>
ME5001	IC ENGINE & GAS TURBINE	4.00
ME5003	KINEMATICS & KINETICS OF MACHINES	4.00
PE5001	MANUFACTURING PROCESS – II	3.00
ME5005	DESIGN OF MACHINE ELEMENTS	3.00
ME5002	I.C. ENGINES LAB	2.00
ME5004	ENERGY ENGG. LAB	2.00
ME5006	CADD LAB	2.00
<b>Breadth Paper ( CHOICE FOR ONLY ONE )</b>		
MSH1131	PRINCIPLES OF MANAGEMENT	3.00
MSH1125	ORGANISATION BEHAVIOUR	3.00
PE5011	PROJECT ENGINEERING	3.00
PE5009	INDUSTRIAL ORGANIZATION AND MANAGEMENT	3.00



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Semester : 6

Total Credits: 22

<b>Subject Code</b>	<b>Subject Title</b>	<b>Credit</b>
ME6001	AUTOMOBILE ENGG.	3.00
ME6003	HEAT & MASS TRANSFER	3.00
ME6005	DYNAMICS OF MACHINES	4.00
ME6007	DESIGN OF MECHANICAL SYSTEM	3.00
ME6002	AUTOMOBILE ENGG. LAB	2.00
ME6004	HEAT TRANSFER LAB	2.00
ME6006	DYNAMICS OF MACHINES LAB.	2.00
<b>Elective - 1</b>	<b>( CHOICE FOR ONLY ONE )</b>	
MSH1115	HUMAN RESOURCE MANAGEMENT	3.00
MSH1121	MARKETING MANAGEMENT	3.00
MSH1123	OPERATION RESEARCH	3.00
MSH1137	ECONOMICS	3.00
PE6009	ENGINEERING ECONOMY	3.00



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Semester : 7

Total Credits: 19

Subject Code	Subject Title	Credit
ME7002	PROJECT	4.00
<b>Breadth Paper</b>	<b>( CHOICE FOR ONLY ONE )</b>	
MSH1103	BUSINESS ETHICS	3.00
MSH1109	ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT	3.00
MSH1117	FINANCIAL MANAGEMENT	3.00
<b>Elective - 1</b>	<b>( CHOICE FOR ONLY ONE )</b>	
ME7015	CFD	3.00
ME7323	FINITE ELEMENT ANALYSIS	3.00
ME7327	MECHANICAL VIBRATION	3.00
<b>Elective - 2</b>	<b>( CHOICE FOR ONLY ONE )</b>	
ME7033	POWER PLANT ENGINEERING	3.00
ME7039	MECHATRONICS	3.00
ME7331	REFRIGERATION AND AIR- CONDITIOING	3.00
<b>Free Elective</b>	<b>( CHOICE FOR ONLY ONE )</b>	
CE7021	ENVIRONMENTAL ENGINEERING	3.00
EE3207	ELECTRIC ENERGY GENERATION & CONTROL	3.00
MEC2019	MICRO-ELECTRO-MECHANICAL-SYSTEMS	3.00
PE7021	MAINTENANCE ENGINEERING	3.00
<b>Free Elective</b>	<b>( CHOICE FOR ONLY TWO )</b>	
CE7023	GEOTECHNICAL ENGINEERING	3.00
EE3201	INTRODUCTION TO SYSTEM THEORY	3.00
MEC1047	SENSORS AND TRANSDUCERS	3.00
PE7005	COMPETITIVE MANUFACTURING STRATEGIES	3.00



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Program : **BACHELOR OF ENGINEERING**  
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Semester : 8

Total Credits: 8

<b>Subject Code</b>	<b>Subject Title</b>	<b>Credit</b>
ME8002	INDUSTRIAL PROJECT & COMPREHENSIVE VIVA	8.00