SARALA BIRLA UNIVERSITY RANCHI



Established under the Sarala Birla University Act 2017 Govt. of Jharkhand as per Section 2(f) of UGC Act. 1956

CURRICULUM FOR

B.Tech

in

Mechanical Engineering

(Based on AICTE- CBCS)

Effective from 2019-20

	Definition of Credit	
1 Hr. Lectu	ure (L) Per Week	1 Credit
1 Hr. Tutor	ial (T) Per Week	1 Credit
1 Hr. Practi	cal (P) Per Week	0.5 Credit
2 Hr. Practi	cal (P) Per Week	1 Credit
BSC ESC	Basic Scie Engineering S	nce Course cience Course
	Course Code Definitio	ons
Course code BSC		itions nce Course
ESC		
HSMC	Humanities and Social Sciences	s including Management Course
MC	Mandato	ry Course
PCC-ME		Core Course
PEC-ME	Professional E	lectives Course
OEC	Open Elect	tives Course
ME-P1	Project	Stage-I
	Project	Store II
ME-P2		Stage-II
ME-P2 ME-P3		Stage-III
	Project	

Structure of Mechanical Engineering

(Breakup of Credits)

51. No.	Category	Breakup of Credits
1	Humanities and Social Sciences including Management courses	12
2	Basic Science courses	23
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc	29
4	Professional core courses and the particular sector and the particular	44.5
5	Professional Elective courses relevant to chosen specialization/branch	18
6	Open subjects – Electives from other technical and /or emerging subjects	18
7	Project work, seminar and internship in industry or elsewhere	15
8	Mandatory Courses [Environmental Sciences, Induction Program, Indian Constitution, Essence of Indian Traditional Knowledge]	4
	Total Credits:	163.5

BASIC SCIENCE COURSES								
SI. No.	Course Code Course Title			rs Per V		Credits	Preferred Semester	
1	BSC-101	Physics	L 3	T 1	Р 0	4	I	
2	BSC-102	Physics Lab	0	0	3	1.5	I	
3	BSC-103	Chemistry	3	1	0	4	II	
4	BSC-104	Chemistry Lab	0	0	3	1.5	II	
5	BSC-105	Mathematics-I	3	1	0	4	Ι	
6	BSC-106	Mathematics-II	3	1	0	4	II	
7	BSC-107	Mathematics-III	3	1	0	4	III	
Total Credit: 23								
	भेगाः कर्मसु की शादा							

	E	NGINEERING SCIEN	NCE	CO	UR	SES		
SI.			Hour	s per v	week	C III	Preferred	
No.	Course Code	Course Title	L	Т	Р	Credits	Semester	
1	ESC-101	Basic Electrical & Electronics Engineering	3	1	0	4	Ι	
2	ESC-102	Basic Electrical & Electronics Engineering Lab	0	0	2	1	Ι	
3	ESC-103	Engineering Graphics & Design	1	0	4	3	Ι	
4	ESC-104	Programming for Problem Solving	3	0	0	3	II	
5	ESC-105	Programming for Problem Solving Lab	0	θ	4	2	Π	
6	ESC-106	Workshop/ Manufacturing Practices	1	0	4	3	Π	
7	ESC-107	Engineeing Mechanics	3	1	0	→ ⁴	III	
7	ESC-108	Electronics Devices	3	0	0	3	III	
8	ESC-109	Electronics Devices Lab	0	0	2	L ⁵	III	
9	ESC-110	Digital Electronics	3	0	0	3	IV	
10	ESC-111	Digital Electronics Lab	0	0	2	1	IV	
11	ESC-112	Programming using MATLAB	0	0	2	1	III	
			Tota	al Cro	edit:	29		

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Sl. No.	Course	urse Course Title	Hours per week			Credits	Preferred	
NO.	Code			L T			Semester	
1	HSMC-101	English	3	0	0	3	II	
2	HSMC-102	Technical Communication	2	0	0	2	IV	
3	HSMC-103	Technical Communication Lab	0	0	2	1	IV	
5	HSMC-105	French Through Communicative Approach-I		00	0	2	V	
6	HSMC-106	French Through Communicative Approach-II	2	0	0	2	VI	
7	HSMC-107	Professional Practice, Law & Ethics	2	0	0	2	VII	
		SPRANCE SPRANCE		cal Credit		12		

HUMANITIES & SOCIAL SCIENCES INCLUDING

	Mandatory Courses							
SI. No.	Course Code	ode Course Title		Hours per week			Preferred Semester	
1	MC-101	Induction Program	L 0	<u>Т</u> 0	Р 0	0	Ι	
2	MC-102	Environmental Science	2	0	0	2	IV	
3	MC-103	Values & Ethics	2	0	0	2	IV	
		R R	То	tal Credit:		4		
		SARAU SIS	नेतृत् गिरा मिस्		NER			

Branch	F 1: Mechanical Engi	Professional Core (neering(B.Tech)	Courses		
SI. No.	Course Code	Course Title	Hrs. /Week L: T: P	Credits	Preferred Semester
1	PCC-ME-201	Thermodynamics	03:00:00	3	III/IV
2	PCC-ME-202	Thermodynamics Lab	00:00:02	1	III/IV
3	PCC-ME-203	Material Engineering	03:00:00	3	III/IV
4	PCC-ME-204	Material Testing Lab	00:00:02	1	III/IV
5	PCC-ME-205	Strength of Material	03:00:00	3	III/IV
6	PCC-ME-206	Fluid Mechanics & Fluid Machine	03:00:00	3	III/IV
7	PCC-ME-207	Fluid Mechanics Lab	00:00:02	1	III/IV
8	PCC-ME-208	Applied Thermodynamics	03:00:00	3	III/IV
9	PCC-ME-209	Production Practice Lab	00:00:02	1	III/IV
			Total Credits:	19	
Branch	a: Mechanical Engi	neering(B.Tech)	A A A A A A A A A A A A A A A A A A A		
SI. No.	Course Code	Course Title	Hrs. /Week L: T: P	Credits	Preferred Semester
1	PCC-ME-301	Heat Transfer	03:00:00	3	V/VI
2	PCC-ME-302	Solid Mechanics	03:00:00	3	V/VI
3	PCC-ME-303	Manufacturing Process	03:00:00	3	V/VI
4	PCC-ME-304	Kinetimatics & Theory of Machines	03:00:00	3	V/VI
5	PCC-ME-305	Mechanical Engineering Lab(Thermal)	00:00:03	1.5	V/VI
6	PCC-ME-306	Manufacturing Technology	03:00:00	3	V/VI
7	PCC-ME-307	Design of Machine Elements	03:00:00	3	V/VI
8	PCC-ME-308	Mechanical Engineering Lab(Design) II	00:00:03	1.5	V/VI
		•	Total Credits:	21	
Branch	F a: Mechanical Engi	Professional Core (neering(B.Tech)	Courses		
Sl. No.	Course Code	Course Title	Hrs. /Week L: T: P	Credits	Preferred Semester
1	PCC-ME-401	Automation in Manufacturing	03:00:00	3	VII/VIII
2	PCC-ME-402	Mechanical Engineering Lab (Manufacturing) III	00:00:03	1.5	VII/VIII
			Total Credits:	4.5	

Professional Elective Courses

Branch: Mechanical Engineering(B.Tech)

Sl. No.	Course Code	Course Title	Hrs./ Week L: T: P	Credits	Preferred Semester
1	PEC-ME-301	Internal Combustion Engines	03:00:00	3	V/VI
2	PEC-ME-302	Mechatronic Systems	03:00:00	3	V/VI
3	PEC-ME-303	Microprocessors in Automation	03:00:00	3	V/VI
4	PEC-ME-304	Composite Materials	03:00:00	3	V/VI
5	PEC-ME-305	Computer Aided Design	03:00:00	3	V/VI

Professional Elective Courses

Sl. No.	Course Code	Course Title	Hrs./ Week L: T: P	Credits	Preferred Semester
1	PEC-ME-401	Refrigeration and Air Conditioning	03:00:00	3	VII/VIII
2	PEC-ME-402	Finite Element Analysis	03:00:00	3	VII/VIII
3	PEC-ME-403	Power Plant Engineering	03:00:00	3	VII/VIII
4	PEC-ME-404 🛒	Gas Dynamics and Jet Propulsion	03:00:00	3	VII/VIII
5	PEC-ME-405	Process Planning and Cost Estimation	03:00:00	3	VII/VIII
6	PEC-ME-406	Principles of Management	03:00:00	3	VII/VIII
7	PEC-ME-407	Automobile Engineering	03:00:00	3	VII/VIII
8	PEC-ME-408	Design of Transmission Systems	03:00:00	3	VII/VIII
9	PEC-ME-409	Total Quality Management	03:00:00	3	VII/VIII
10	PEC-ME-410	Energy Conservation and Management	03:00:00	3	VII/VIII

Open Elective Course

Sl. No.	Course Code	Course Title	Hrs./ Week L: T: P	Credits
1	OEC-EEE-301	Line Commutated and Active Rectifiers	03:00:00	3
2	OEC-EEE-302	Electrical Drives	03:00:00	3
3	OEC-EEE-303	Electrical Machine Design	03:00:00	3
4	OEC-EEE-304	High Voltage Engineering	03:00:00	3
5	OEC-EEE-305	Electrical Energy Conservation and Auditing	03:00:00	3
6	OEC-EEE-306	Industrial Electrical Systems	03:00:00	3
7	OEC-EEE-307	Digital Control Systems	03:00:00	3
8	OEC-EEE-310	Computational Electromagnetics	03:00:00	3
9	OEC-EEE-311	Control Systems Design	03:00:00	3
10	OEC-EEE-401	Wind and Solar Energy Systems	03:00:00	3
11	OEC-EEE-402	Electrical and Hybrid Vehicles	03:00:00	3
12	OEC-EEE-403	Power System Protection	03:00:00	3
13	OEC-EEE-404	HVDC Transmission Systems	03:00:00	3
14	OEC-EEE-405	Power Quality and FACTS	03:00:00	3
15	OEC-EEE-406	Power System Dynamics and Control	03:00:00	3
16	OEC-EEE-407	Advanced Electric Drives	03:00:00	3
17	OEC-CSE-303	Artificial Intelligence	03:00:00	3
18	OEC-CSE-304	Cryptography & Network Security	03:00:00	3
19	OEC-CSE-305	Internet-of-Things	03:00:00	3
20	OEC-CSE-307	Machine Learning	03:00:00	3
21	OEC-CSE-308	Cloud Computing	03:00:00	3
22	OEC-CSE-309	Computer Graphics 🛕 U	03:00:00	3
23	OEC-CSE-311	Web App Development	03:00:00	3
24	OEC-CSE-401	Soft Computing	03:00:00	3
25	OEC-CSE-403	Data Mining Concepts and Techniques	03:00:00	3
26	OEC-CSE-404	Natural Language Processing	03:00:00	3
27	OEC-CSE-405	Mobile Computing	03:00:00	3
28	OEC-CSE-408	Big Data Analytics	03:00:00	3
29	OEC-CSE-409	Image Processing	03:00:00	3

	Project								
Bra	Branch: Mechanical Engineering(B.Tech)								
Sl. No.	Course Code	Course Title	Hrs. /Week L: T: P	Credits	Preferred Semester				
1	ME-P1	Project Stage-I	00:00:02	1	V				
2	ME-P2	Project Stage-II	00:00:06	3	VI				
3	ME-P3	Project Stage-III	00:00:10	5	VII				
4	ME-P4	Project Stage-IV	00:00:12	6	VIII				
		15 (A)	Total Credits:	15	.0				
		SARANA SIRI	तृत्व A UNIV सु कोश	ALISA ST					

	Branch: Mechanical Engineering(B.Tech)									
Sl. No.	Category	Course Code	Course Title	L	Hours T	Р	Credit	IA	Mark ESE	s Total
			Theo	ry						
1	Basic Science Course	BSC- 101	Physics	3	1	0	4	30	70	100
2	Basic Science Course	BSC- 105	Mathematics – I	3	1	0	4	30	70	100
3	Engineering Science Course	ESC-101	Basic Electrical & Electronics Engineering	3	1	0	4	30	70	100
					_	tal(A)	12	90	210	300
		T	Practical/Drav	ving/	Design					
1	Engineering Science Course	ESC-103	Engineering Graphics & Design	Ţ		4	3	30	20	50
2	Basic Science Course	BSC- 102	Physics Lab	0	0	3	1.5	30	20	50
3	Engineering Science Course	ESC-102	Basic Electrical & Electronics Engineering Lab	0	0	2	1	30	20	50
			S		To	tal <mark>(B</mark>)		90	60	150
		Grand	Fotal (A+B)		$\underline{2}$		17.5	180	270	450
	cture, T-Tutorial, nternal Assessmen		d Semester Examin	natio	ग् व • • •	NIV	E.	25		

	COURSE STRUCTURE SEMESTER II (1st YEAR)										
	Branch: Mechan	ical Enginee	ring(B.Tech)								
Sl. No.	Category	Course Code	Course Title		Hours T	Р	Credit	IA	Mark ESE	s Tota	
	Theory Theory										
1	Basic Science Course	BSC-103	Chemistry	3	1	0	4	30	70	100	
2	Basic Science Course	BSC-106	Mathematics –II	3	1	0	4	30	70	100	
3	Engineering Science Course	ESC-104 Programming for Problem Solving		3	0	0	3	30	70	100	
4	Humanities and Social Sciences including Management Courses	HSMC-101	01 English		0	0	3	30	70	100	
			Caren 193	9	Tota	l(A)	14	120	280	400	
			Practical/Drawing/Desig	n	9					-	
1	Engineering Science Course	ESC-106	Workshop/ Manufacturing Practices	1	0	4	3	30	20	50	
2	Basic Science Course	BSC-104	Chemistry Lab	0	0	3	1.5	30	20	50	
3	Engineering Science Course	ESC-105	ESC-105 Programming for Problem Solving Lab		0	4	2	30	20	50	
		3			Tota	ul(B)	6.5	90	60	150	
		Grand To	tal (A+B)				20.5	210	340	550	
	ecture, T-Tutorial, P- Internal Assessment,		BIRLAU ster Examination	NI	en	h-					

SEMESTER III (2nd VEAR)Brainering Science CourseCourse CourseI HoursCreditSi. CategoryCourse CourseCourse TitleII Joint CourseBSC-107Mathematics -III31Basic Science CourseBSC-107Mathematics -III31O CoursesSENC-108Intermodynamics300Professional Core CoursePCC-ME- 203Electronics Devices300Professional Core CourseSEC-108Electronics Devices300Professional Core CoursePCC-ME- 203Engineering Mechanics3000Professional Core CoursePCC-ME- 202Engineering Mechanics310000Professional Core CoursePCC-ME- 202Tott tottProfessional Core CoursePCC-ME- 202Tott tottProfessional Core Courses202Thermodynami		
No.CategoryCodeCourse TitleITPCredit1Basic Science CourseBSC-107Mathematics –III31042Professional Core CoursesPCC-ME- 201Thermodynamics30033Engineering Science CourseESC-108Electronics Devices30034Professional Core CoursePCC-ME- 203Material Engineering30035Engineering Science CourseESC-107Engineering Mechanics31047Professional Core CoursePCC-ME- 203Engineering Mechanics31047Professional Core CoursePCC-ME- 203Engineering Mechanics31047Professional Core CoursePCC-ME- 202Engineering Lab31047Professional Core CoursesPCC-ME- 202Thermodynamics Lab00211Professional Core CoursesPCC-ME- 204Thermodynamics Lab00212Professional Core CoursesPCC-ME- 204Thermodynamics Lab00213Engineering Science CoursesPCC-ME- 204Programming using 2040021		
No.CodeLTP1Basic Science CourseBSC-107Mathematics –III31042Professional Core CoursesPCC-ME- 201Thermodynamics30033Engineering Science CourseESC-108Electronics Devices30034Professional Core CoursesPCC-ME- 203Material Engineering30035Engineering Science CourseESC-107Engineering Mechanics31047Professional Core CoursePCC-ME- 203Engineering Mechanics31046Professional Core CoursePCC-ME- 203Engineering Mechanics31047Professional Core CoursePCC-ME- 202Thermodynamics Lab00211Professional Core CoursesPCC-ME- 204Thermodynamics Lab00212Professional Core CoursesPCC-ME- 204Material Testing Lab00213Engineering Science CoursesPCC-ME- 204Programming using 2040021	Ma	arks
1Basic Science CourseBSC-107Mathematics –III31042Professional Core CoursesPCC-ME- 201Thermodynamics30033Engineering Science CourseESC-108Electronics Devices30034Professional Core CoursesPCC-ME- 203Material Engineering30035Engineering Science CourseESC-107Engineering Mechanics31047Professional Core CoursePCC-ME- 203Engineering Mechanics31047Professional Core CoursePCC-ME- 202Engineering Mechanics31041Professional Core CoursesPCC-ME- 202Thermodynamics Material Testing Lab00212Professional Core CoursesPCC-ME- 204Programming using Porgramming using0021	IA Es	SE Tota
2Professional Core CoursesPCC-ME- 201Thermodynamics30033Engineering Science CourseESC-108Electronics Devices30034Professional Core CoursesPCC-ME- 203Material Engineering30035Engineering Science CourseESC-107Engineering Mechanics31045Engineering Science CourseESC-107Engineering Mechanics31047Professional Core CoursesPCC-ME- 202Thermodynamics Lab00211Professional Core CoursesPCC-ME- 204Material Testing Lab00212Professional Core CoursesPCC-ME- 204Programming using Programming using0021		
2Courses201Thermodynamics30033Engineering Science CourseESC-108Electronics Devices30034Professional Core CoursesPCC-ME- 203Material Engineering30035Engineering Science CourseESC-107Engineering Mechanics31047Professional Core CoursePCC-ME- 203Engineering Mechanics31047Professional Core CoursesPCC-ME- 202Thermodynamics Lab00211Professional Core CoursesPCC-ME- 202Thermodynamics Lab00212Professional Core CoursesPCC-ME- 204Material Testing Lab00212Engineering Science CoursesPSC 112Programming using Programming using0021	30 7	70 100
3CourseESC-108Electronics Devices30034Professional Core CoursesPCC-ME- 203Material Engineering30035Engineering Science CourseESC-107Engineering Mechanics31045Engineering Science CourseESC-107Engineering Mechanics31047Professional Core CoursesPCC-ME- 202Thermodynamics Lab00211Professional Core CoursesPCC-ME- 202Material Testing Lab00212Professional Core CoursesPCC-ME- 204Material Testing Lab00213Engineering Science CoursesPSC 112Programming using Programming using0021	30 7	70 100
4 Courses 203 Engineering 3 0 0 3 5 Engineering Science Course ESC-107 Engineering Mechanics 3 1 0 4 Total(A) 17 Practical/Drawing/Design 1 Professional Core Courses PCC-ME- 202 Thermodynamics Lab 0 0 2 1 2 Professional Core Courses PCC-ME- 204 Material Testing Lab 0 0 2 1 3 Engineering Science ESC 112 Programming using 0 0 2 1	30 7	70 100
5CourseESC-107Mechanics3104Total(A)17Practical/Drawing/Design1Professional Core CoursesPCC-ME- 202Thermodynamics Lab00212Professional Core CoursesPCC-ME- 204Material Testing Lab00212Engineering ScienceESC 112Programming using Programming using0021	30 7	70 100
Practical/Drawing/Design 1 Professional Core Courses PCC-ME- 202 Thermodynamics Lab 0 0 2 1 2 Professional Core Courses PCC-ME- 204 Material Testing Lab 0 0 2 1 3 Engineering Science ESC 112 Programming using 0 0 2 1	30 7	70 100
1Professional Core CoursesPCC-ME- 202Thermodynamics Lab00212Professional Core CoursesPCC-ME- 204Material Testing Lab00213Engineering Science Engineering ScienceESC 112Programming using Programming using0021	150 3	50 500
Courses 202 Lab Image: Courses 2 Professional Core Courses PCC-ME-204 Material Testing Lab 0 0 2 1 3 Engineering Science ESC 112 Programming using 0 0 2 1	_30 2	20 50
	30 2	20 50
	30 2	20 50
4 Engineering Science ESC-109 Electronics Devices 0 0 2 1	30 2	20 50
Total(B) 4		80 200
Grand Total (A+B) 21	270 43	30 700

SEMESTER IV (2nd YEAR)

SI.	<i></i>	Course	~	Hours				Marks		
No.	o. Category Code		Course Title		Т	Р	Credit	IA	ESE	Total
			The	ory						1
1	Professional Core Courses	PCC-ME- 205	Strength of Material	3	0	0	3	30	70	100
2	Humanities and Social Sciences including Management Courses	HSMC- 102	Technical Communication	2	0	0	2	30	70	100
3	Engineering Science Course	ESC-110	Digital Electronics	3	0	0	3	30	70	100
4	Professional Core Courses	PCC-ME- 206	Fluid Mechanics & Fluid Machine	3	0	0	3	30	70	100
5	Professional Core Courses	PCC-ME- 208	Applied Thermodynamics	3	0	0	3	30	70	100
6	Mandatory Courses	MC-103	Values & Ethics	2	0	S O	2	30	70	100
7	Mandatory Courses	MC-102	Environmental Science	2	0	0	2	30	70	100
Total(A)								210	490	700
		-	Practical/Dra	wing/D	Design		95			
1	Engineering Science Course	ESC-111	Digital Electronics Lab	LoA	40	2	t I	30	20	50
2	Professional Core Courses	PCC-ME- 207	Fluid Mechanics Lab	0	0	2	1	30	20	50
3	Professional Core Courses	РСС-МЕ- 209	Production Practice Lab	0	0	2	1	30	20	50
3	Humanities and Social Sciences including Management Courses	HSMC- 103	Technical Communication Lab	0	0	2	1	30	20	50
		otal(B)	4	120	80	200				
		Gra	nd Total (A+B)				22	330	570	900

SEMESTER V (3rd YEAR)

SI.					Hours				Marks	6	
No.	Category	Course Code	Course Title	L	T	Р	Credit	IA	ESE	Total	
			Theor	y							
1	Professional Core Courses	PCC-ME-301	Heat Transfer	3	0	0	3	30	70	100	
2	Professional Core Courses	PCC-ME-302	Solid Mechanics	3	0	0	3	30	70	100	
3	Professional Core Courses	PCC-ME-303	Manufacturing Process	3	0	0	3	30	70	100	
4	Professional Core Courses	PCC-ME-304	Kinetimatics & Theory of Machines	3	0	0	3	30	70	100	
5	Open Elective Course	A CONTRACTOR	Open Elective Course-I (Humanities)	3	000	0	3	30	70	100	
6	Humanities and Social Sciences including Management Courses	A SAR	Foreign Languages-I	2	0	0		30	70	100	
			चेन		То	tal(A)	17	180	420	600	
			Practical/Draw	ing/De	sign						
1	Professional Core Courses	PCC-ME-305	Mechanical Engineering Lab(Thermal)		0	3	1.5	30	20	50	
2	Project	ME-P1	Mini Project-I	0	0	2	1	75	25	100	
					To	tal(B)	2.5	105	45	150	
		Grand Tot	al (A+B)				19.5	285	465	750	
	ture, T-Tutorial, P ternal Assessment		nester Examinatio	n							

SEMESTER VI (3rd YEAR)

	I									
SI. No.	Category	Course Code	Course Title		Hours	n	Credit	TA	Marks	
110.		Coue		L	Т	Р		IA	ESE	Total
			Theo	ry	1	1				1
1	Professional Core Courses	PCC-ME- 306	Manufacturing Technology	3	0	0	3	30	70	100
2	Professional Core Courses	РСС-МЕ- 307	Design of Machine Elements	3	0	0	3	30	70	100
3	Professional Elective Course		Professional Elective Course-I	3	0	0	3	30	70	100
4	Professional Elective Course		Professional Elective Course- II	3	0	0	3	30	70	100
5	Open Elective Course		Open Elective Course-II (Humanities)	3	0	0	3	30	70	100
6	Humanities and Social Sciences including Management Courses		Foreign Languages-II	2	0	0	2	30	70	100
			Z	9	Эт	otal(A)	17	180	420	600
			Practical/Drav	ving/De	sign		2	15		
1	Professional Core Courses	PCC-ME- 308	Mechanical Engineering Lab(Design) II	नेतृत 0 RL	a 0	3	1.5	30	20	50
2	Project	ME-P2	Mini Project-II	0	0	6	3	75	25	100
	Total(B)							105	45	150
	Grand Total (A+B)							285	465	750
	ture, T-Tutorial, P ternal Assessment,		mester Examination	1						

		S	EMESTER VII	[(4th	YEAF	R)				
an	ch: Mechanical	Engineering	g(B.Tech)							
	Category	Course Code	Course Title		Hours		Credit		Marks	
) .	Category	Course Coue		L	Т	Р	creun	IA	ESE	Tot
			Theor	<u>у</u>						1
	Professional Core Courses	РСС-МЕ- 401	Automation in Manufacturing	3	0	0	3	30	70	100
2	Professional Elective Course		Professional Elective Course- III	3	0	0	3	30	70	100
5	Professional Elective Course		Professional Elective Course-	3	0	0	3	30	70	100
ļ	Open Elective Course	R	Open Elective Course-III	3	0	0	3	30	70	100
	Humanities and Social Sciences including Management Courses	HSMC-107	Professional Practice, Law & Ethics	2	0	0	2	30	70	100
		J J			T	otal(A)	14	150	350	500
		SP	Practical/Draw	ing/Des	sign	19		7		
	Project Stage-III	ME-P3	Project Work		0	10	5	150	50	200
;	Professional Core Courses	РСС-МЕ- 402	Mechanical Engineering Lab (Manufacturing) III	50	0	3	1.5	30	20	50
		· · · · · · · · · · · · · · · · · · ·			Te	otal(B)	6.5	180	70	250
		Grand To	tal (A+B)				20.5	330	420	75

SEMESTER VIII (4th YEAR)

SI.	Category	Course	Course Title		Hours	5	Credit	Marks		S
No.	Category	Code	Course Thie	L	Т	Р	Creuit	IA	ESE	Tota
			Theory							
1	Professional Elective Course		Professional Elective Course-V	3	0	0	3	30	70	100
2	Professional Elective Course		Professional Elective Course-VI	3	0	0	3	30	70	100
3	Open Elective Course		Open Elective Course- IV	33	0	0	3	30	70	100
4	Open Elective Course		Open Elective Course-	3	0	0	3	30	70	100
5	Open Elective Course		Open Elective Course- VI	3	0	0	3	30	70	100
		0	- Ala		T	otal(A)	15	150	350	500
		S	Practical/Drawing/De	sign						
1	Project Stage-IV	ME-P4	Project & Dissertation	0	0	12	6	150	50	200
Total(B)							6	150	50	200
		Grand	Total (A+B)	व			21	300	400	700
	ture, T-Tutorial, P-Pra ternal Assessment, ESI		SIRLI ster Examination		212	ens				