2.6 Student Performance and Learning Outcomes

2.6.1 Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website.

Supporting Document: University Schemes for All Branches



		First	Year First Semester				
	M	andatory Induc	tion Program- 3 weeks duration				
SI No.	Category	Subject Code	Subject Name		tal No. tact ho T		Credits
Theo	l m					Ι Ρ	
1	Basic Science course	BS-PH101	Physics-I	3	1	0	4
2	Basic Science course	BS-M102	Mathematics –IB	3	1	0	4
	Engineering Science				1		
3	Courses	ES-EE101	Basic Electrical Engineering	3	1	0	4
		Total Theo	ry	9	3	0	12
Pract	tical				•		
1	Basic Science course	BS-PH191	Physics-I Laboratory	0	0	3	1.5
2	Engineering Science Courses	ES-EE191	Basic Electrical Engineering Laboratory	0	0	2	1
3	Engineering Science Courses	ES-ME192	Workshop/Manufacturing Pract ices	1	0	4	3
		Total Practi	ical	1	0	9	5.5
			Total of First Semester	10	3	9	17.5
		First Y	ear Second Semester				
SI	Catagomi	Subject	Subject Name	Total No. of contact hours			Credits
No.	Category	Code	Subject Name	L	T	Р	Credit
Theo	rv						
1	Basic Science course	BS-CH201	Chemistry-I (Gr-A)	3	1	0	4
2	Basic Science course	BS-M202	Mathematics –IIB	3	1	0	4
3	Engineering Science	ES-CS201	Programming for	3	0	0	3
3	Courses	E3-C3201	Problem Solving	<u> </u>		U	3
4	Humanities and Social Sciences including Management courses	HM-HU201	English	2	0	0	2
		Total Theo	rv	11	2	0	13
Pract	tical		,		ı		I.
1	Basic Science course	BS-CH291	Chemistry-I Laboratory	0	0	3	1.5
2	Engineering Science	ES-CS291	Programming for	0	0	4	2
	Courses	L3-C3231	Problem Solving			_	
3	Engineering Science Courses	ES-ME291	Engineering Graphics & Design (Gr-A)	1	0	4	3
	Humanities and Social						
4	Sciences including Management courses	HM-HU291	Language Laboratory	0	0	2	1
	Ŭ	Total Practi	ical	1	TIO	3,37	7.5
			Total of Second Semester	12	U)02/7	PASUR	a 20,5
	1			ge!	Jeni Educa	hon S.	7.5 20.50 50 5.50 80 10 5.50 80 10 6.50 80 10
		Regent Educa	tion and Research Foundation	Ke.	Bara Kan	ckbois.	

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Curriculum Structure

Civil Engineering

Semester III (Second year)

S1. No.	Category	Code	Course Title	Hou	rs per	week	Credits		
				L	T	P			
Theor	ry			•	•	•	•		
1	Basic Sciencecourses	CE(BS)301	Biology for Engineers	2	1	0	3		
2	Engineering Science Courses	CE(ES)301	Engineering Mechanics	3	1	0	4		
3	Engineering Science Courses	CE(ES)302	Energy Science & Engineering	1	1	0	2		
4	Basic Sciencecourses	CE(BS)301	Mathematics-III (Transform & Discrete Mathematics)	2	0	0	2		
5	Humanities and Social Sciences including Management courses	CE(HS)301	Humanities-I (Effective Technical Communication)	3	0	0	3		
6	Humanities and Social Sciences including Management courses	CE(HS)302	Introduction to Civil Engineering	1	1	0	2		
		I		Theor	y crec	lits	16		
Pract	tical/ Sessional								
1	Engineering Science Courses	CE(ES)391	Basic Electronics	1	0	2	2		
2	Engineering Science Courses	CE(ES)392	Computer-aided Civil Engineering Drawing	1	0	2	2		
3	Engineering Science Courses	CE(ES)393	Life Science	1	0	2	2		
	•	•		Practica	Practical credits				
				To	otal c	redits	22		

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Semester IV	(Second year)
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Engineering Science Courses Engineering Science Courses Professional Core courses Itumanities and Social Sciences Including	CE(ES)401 CE(ES)402 CE(PC)401 CE(PC)402 CE(PC)403 CE(PC)404 CE(HS)401	Introduction to Fluid Mechanics Introduction to Solid Mechanics Soil Mechanics – I Environmental Engineering -I Surveying & Geomatics Concrete Technology Civil Engineering - Societal &	2 2 2 2 2 2 2 2	0 0 1 1 1	0 0 0 0 0	2 2 3 3
Engineering Science Courses Engineering Science Courses Professional Core courses Unmanities and Cocial Sciences	CE(ES)402 CE(PC)401 CE(PC)402 CE(PC)403 CE(PC)404	Introduction to Solid Mechanics Soil Mechanics – I Environmental Engineering -I Surveying & Geomatics Concrete Technology	2 2 2 2	0 1 1 1	0 0 0 0	2 3 3 3
Courses Engineering Science Courses Professional Core courses Humanities and Social Sciences	CE(ES)402 CE(PC)401 CE(PC)402 CE(PC)403 CE(PC)404	Introduction to Solid Mechanics Soil Mechanics – I Environmental Engineering -I Surveying & Geomatics Concrete Technology	2 2 2 2	0 1 1 1	0 0 0 0	2 3 3 3
Professional Core courses Humanities and Social Sciences	CE(PC)401 CE(PC)402 CE(PC)403 CE(PC)404	Soil Mechanics – I Environmental Engineering -I Surveying & Geomatics Concrete Technology	2 2 2	1 1 1	0 0	3 3
Professional Core courses Professional Core courses Professional Core courses Humanities and Social Sciences	CE(PC)402 CE(PC)403 CE(PC)404	Environmental Engineering -I Surveying & Geomatics Concrete Technology	2	1	0	3
Professional Core courses Professional Core courses Humanities and Social Sciences	CE(PC)403 CE(PC)404	Engineering -I Surveying & Geomatics Concrete Technology	2	1	0	3
Professional Core courses Humanities and Social Sciences	CE(PC)404	Concrete Technology	-		-	
Humanities and Social Sciences			2	1	Λ	_
Social Sciences	CE(HS)401	Civil Engineering - Societal &			U	3
Management courses		Global Impact	2	0	0	2
Mandatory Courses non-credit)	CE(MC)401	Management I (Organizational Behavior)	2	0	0	0
		The	ory	cre	dits	18
cal/ Sessional						
Professional Core courses	CE(ES)491	Fluid Mechanics Laboratory	0	0	2	1
Professional Core courses	CE(ES)492	Solid Mechanics Laboratory	0	0	2	1
Professional Core courses	CE(ES)493	Engineering Geology Laboratory	0	0	2	1
Professional Core courses	CE(PC)493	Surveying & Geomatics	0	0	2	1
Professional Core courses	CE(PC)494	Concrete Technology Laboratory	0	0	2	1
		Practi	cal	cre	dits	5
						23
H H	Ianagement courses Iandatory C	Innagement courses Innagement co	Annagement courses Annagement courses Annagement CE(MC)401 Annagement I (Organizational Behavior) The all Sessional Professional Core courses CE(ES)491 Professional Core courses CE(ES)492 Professional Core courses CE(ES)493 Professional Core courses CE(PC)493 Professional Core courses CE(PC)494 CE(PC)494 Concrete Technology Laboratory CE(PC)494	Annagement courses Annagement courses Annagement courses Annagement courses Annagement I (Organizational Behavior) Theory Theory Theory Theory Theory Theory Theory Tofessional Core courses CE(ES)491 Professional Core courses CE(ES)492 Professional Core courses CE(ES)493 Professional Core courses CE(ES)493 Professional Core courses CE(PC)493 Professional Core courses CE(PC)494 Concrete Technology Laboratory O Practical Total Core Courses	Anagement courses Anagement courses Anagement courses Anagement I (Organizational Behavior) Theory cre Theory	Indatory Courses (CE(MC)401 Management I (Organizational Behavior) Theory credits al/ Sessional Professional Core courses (CE(ES)491 Fluid Mechanics Laboratory 0 0 2 Professional Core courses (CE(ES)492 Solid Mechanics Laboratory 0 0 2 Professional Core courses (CE(ES)493 Engineering Geology Laboratory 0 0 2 Professional Core courses (CE(PC)493 Surveying & Geomatics 0 0 2 Professional Core courses (CE(PC)493 Surveying & Geomatics 0 0 2 Professional Core courses (CE(PC)493 Surveying & Geomatics 0 0 2



Semester V (Third year)

		Semester v	(Third year)				
Sl. No.	Category	Code	Course Title	Но	urs per	week	Credits
				L	Т	P	
Theo	ry	1		ı			
1	Professional Core courses	CE(PC)501	Design of RC Structures	2	1	0	3
2	Professional Core courses	CE(PC)502	Engineering Hydrology	2	1	0	3
3	Professional Core courses	CE(PC)503	Structural Analysis – I	2	1	0	3
4	Professional Core courses	CE(PC)504	Soil Mechanics – II	2	1	0	3
5	Professional Core courses	CE(PC)505	Environmental Engineering – II	2	1	0	3
6	Professional Core courses	CE(PC)506	Transportation Engineering		1	0	3
7	Mandatory courses (non-credit)	CE(MC)501	Constitution of India/ Essence of Indian Knowledge Tradition	-	-	-	0
				T	heory	credits	18
Pract	tical/ Sessional						
1	Professional core courses	CE(PC)591	RC Design Sessional	0	0	2	1
2	Professional core courses	CE(PC)594	Soil Mechanics Laboratory	0	0	2	1
3	Professional core courses	CE(PC)595	Environmental Engineering Laboratory	0	0	2	1
4	Professional core courses	CE(PC)596	Transportation Engineering Laboratory	0	0	2	1
5	Professional core courses	CE(PC)597	Computer Application in CE	0	0	2	1
				Pra	ctical	credits	5
				,	Total o	credits	23





Semester VI (Third year)

S1. No.	Category	Code	Course Title	Hours per week			Credits
				L	T	P	
Theo	ry						
1	Professional Core courses	CE(PC)601	Construction Engineering & Management	2	0	0	2
2	Professional Core courses	CE(PC)602	Engineering Economics, Estimation & Costing	2	0	0	2
3	Professional Core courses	CE(PC)603	Water Resources Engineering	2	2 0		2
4	Professional Core courses	CE(PC)604	Design of Steel Structures	2	0	0	2
5	Professional Elective courses	CE(PE)601	Elective-I	2	0	0	2
6	Professional Elective courses	CE(PE)602	Elective-II	2 0		0	2
7	Open Elective courses	CE(OE)601	Open Elective-I (Humanities)	2	0	0	2
	·		T	heor	y cr	edits	14
Prac	tical/ Sessional						
1	Professional Core courses	CE(PC)693	Water ResourceEngineering Laboratory	0	0	2	1
2	Professional Core courses	CE(PC)694	Steel Structure Design Sessional	0 0 2		2	1
3	Professional Core courses	CE(PC)695	Quantity Survey Estimation and Valuation Sessional	0	1	2	2
			Pra	ctica	al cr	edits	4
			ŗ	Γota	l cre	edits	18

CE(PE)601 (Elective-I)	CE(PE)602 (Elective-II)
601A: Stability of Slopes	602A: Building Construction Practice
601B: Foundation Engineering	602B : Structural Analysis-II
601C: Ground Improvement Technique	602C : Industrial Structures
CE(OE)601 (Open Elective-I)	
601A: Soft Skills and Interpersonal Communication – I 601B: Introduction to Philosophical Thoughts	Principal Principal Spring and Education Principal Spring
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Semester VII (Fourth year)

S1.	Category	Code	Course Title	Но	urs p	er week	Credits
No.				L	T	P	
Theo	ory	1					
1	Open Elective courses	CE(OE)701	Open Elective-II	2	0	0	2
2	Professional Elective courses	CE(PE)701	Elective III	2	1	0	3
3	Professional Elective courses	CE(PE)702	Elective IV	2	1	0	3
4	Professional Elective courses	CE(PE)703	Elective V	2	1	0	3
5	Professional Elective courses	CE(PE)704	Elective-VI	2	1	0	3
6	Professional Elective courses	CE(PE)705	Elective-VII	2	0	0	2
					The	ory credits	16
Prac	etical/ Sessional						
1	Internship	CE(IN)791	Industrial Internship (after sixth semester)				1
2	Project	CE(PROJ)792	Project-1 (Project work)	0	0	10	5
				P	racti	cal credits	6
					To	tal credits	22

CE(OE)701 (Open Elective-II)	CE(PE)701 (Elective-III)
A: Metro Systems & Engineering	701A: Computational Hydraulics
B: ICT for Development	701B: Disaster Preparedness and Planning
C: Cyber Law & Ethics	701C: Hydraulic Structure
CE(PE)702 (Elective-IV)	CE(PE)703 (Elective-V)
702A: Prestressed Concrete	703A: Air and Noise Pollution and Control
702B: Repairs & Rehabilitation of Structures	703B: Physico-Chemical Processes for Water and Wastewater Treatment
702C: Finite Element Method	703C: Water and Air Quality Modelling
CE(PE)704 (Elective-VI)	CE(PE)705 (Elective-VII)
704A: Structural Dynamics	705A: Railway and Airport Engineering
704B: Advanced Structural Analysis	705B: Pavement Design
704C: Coastal Hydraulics and Sediment Transport	705C: Transport System Planning Regent Education Process Control Process Cont
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Semester VIII (Fourth year)

S1.	Category	Code	Course Title	Н	ours p	erweek	Credits
No.				L	T	P	
Theor	y	<u> </u>		1	<u> </u>		
1	Humanities and Social Sciences including Management courses	CE(HS)801	Professional Practice, law & Ethics	2	0	0	2
2	Professional Elective Courses	CE(PE)801	Elective VIII	2	0	0	2
3	Open Elective courses	CE(OE)801	Open Elective-III	2	0	0	2
4	Open Elective courses	CE(OE)802	Open Elective-IV	2	0	2	2
				Th	eory	credits	8
Pract	ical/ Sessional						
1	Comprehensive Viva	CE(CV)882	Comprehensive Viva Voce				1
2	Project	CE(PROJ) 8 81	Project-2 (Continuedfrom VII)	0	0	10	5
	-			Prac	tical	credits	6
				T	otal o	eredits	14
	CE(PE)801 (Elective-	VIII)					
801B: 801C:	GIS & Remote Sensing Rock Mechanics Environmental laws and Pavement Materials and	d Policy					
	EE(OE)801 (Open Elec		CE(OE)8	802 (O	pen l	Elective	e-IV)
	ıman Resource Developn	nent and	A: Soft Skills ar			ty Deve	lopment
_	nizational Behavior		B: Earthquake I	_	_		
	ridge Engineering		C: Urban Trans	-		_	
	ep Foundations oundwater Contaminatio	n	D: Environmental Impact Assessment and Life cycle Analysis				
יוט .ע	oundwater Containination	11	Life cycle Allai	y 513			

TOTAL CREDITS – [38 +(22+23)+(23+18)+(21+15))=160

SEM 1 & SEM 2	SEM3	SEM4	SEM5	SEM6	SEM7	SENTA KANITANA Regent Kanitana Bara Kanitana	e Ko Total
38	22	23	23	18	21	15	160



Curriculum Structure

B. Tech in Computer Science & Engineering

		i	Semester III (Second ye	ar)			
Sl.	Type of course	Code	Course Title	Н	ours per w	eek	G 114
No.				L	T	P	Credits
Theo	<u>, </u>						
1	Engineering ScienceCourse	ESC 301	Analog and DigitalElectronics	3	0	0	3
2	Professional Core Courses	PCC-CS301	Data Structure & Algorithms	3	0	0	3
3	Professional Core Courses	PCC-CS302	Computer Organisation	3	0	0	3
4	Basic Science course	BSC 301	Mathematics-III (Differential Calculus)	2	0	0	2
5	Humanities & SocialSciences including Management courses	HSMC 301	Economics for Engineers(Humanities- II)	3	0	0	3
Pract	ical			·			
6	Professional Core Courses	PCC-CS393	IT Workshop (Sci Lab/MATLAB/Python/ R)	0	0	4	2
7	Engineering ScienceCourse	ESC 391	Analog and DigitalElectronics	0	0	4	2
8	Professional Core Courses	PCC-CS391	Data Structure & Algorithms	0	0	4	2
9	Professional Core Courses	PCC-CS392	Computer Organisation	0	0	4	2
	1		To	tal credi	ts		22
		Semes	ster IV (Second year)				
Sl.	Type of course	Code	Course Title	Н	ours per w	eek	
No.				L	T	P	_Credits
The	ory					_	
1	Professional Core Courses	PCC- CS40	Discrete Mathematics	3	otal.	0	4 oundation
2	Professional Core Courses	PCC-CS 402	Computer Architecture	3	Regent Education	ore Koryara	00121 3



3	Professional Core Courses	PCC- CS40	Formal Language &Automata Theory	3	0	0	3
		3					

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4	Professional Core Courses	PCC- CS40 4	Design & Analysis of Algorithm s	3	0	0	3
5	Basic Science courses	BSC 401	Biology	2	1	0	3
6	Mandat ory Courses	MC401	Environmental Sciences	1	-	-	1
Prac	ctical				,		
7	Engineering Science Course	PCC-CS 492	Computer Architecture	0	0	4	2
8	Professional Core Courses	PCC- CS49 4	Design & Analysis of Algorithms	0	0	4	2
					Total	credits	21

			Semester V (Third year	r)			
Sl.	Type of course	Code	Course Title	Н	ours per	week	Credits
No.				L	T	P	
1	Engineering Science Course	ESC501	Software Engineer ing	3	0	0	3
2	Professional Core Courses	PCC- CS50	Compiler Design	3	0	0	3
3	Professional Core Courses	PCC- CS50 2	Operating Systems	3	0	0	3
4	Professional Core Courses	PCC- CS50	Object Oriented Programming	3	0	0	3
5	Humanities &Social Sciences including Management courses	HSMC-501	Introduction to Industrial Management (Humanities III)	3	O Dia	" 2 1/530	3 3ich Foundation aich Foundation ewill Telinipara ewill 700121 3.3.3.3.3.3
6	Professional Elective	PEC-IT 501A/B/C/D	(Elective-I) Theory of	3	Regent Ed	anihaliao Koil	3



			Tot	al credits			24
10	Professional Core Courses	PCC- CS59	Object Oriented Programming		0	4	2
9	Professional Core Courses	PCC- CS59 2	Operating Systems		0	4	2
Prac 8	Professional Core Courses	ESC -591	Software Engineering		0	4	2
7	Mandatory Courses	MC- CS501A/B	Intelligence/ Advanced Computer Architecture/ Computer Graphics Constitution of India/ Essence of Indian Knowledge Tradition	-	-	-	0

			Semester VI (Third yea	r)			
Sl.	Type of course	ourse Code	Course Title	H	week	Credits	
No.				L	T	P	
1	Professional Core	PCC-	Database	3	0	0	3
	Courses	CS60	Management				
		1	Systems				
2	Professional Core	PCC-	Computer Networks	3	0	0	3
	Courses	CS60					
		2					
3	Professional	PEC-	(Elective-II) Advanced	3	0	0	3
	Electivecourses	IT601A/B/	Algorithms/				
		C/D	Distributed Database				
			Management System/				
			Signals & Systems /				
			Image Processing				

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4	Professional	PEC-	(Elective-III) Parallel	3	0	0	3
	Electivecourses	IT602A/B/					
		C/D	Distributed				
			Algorithms/				
			Data Warehousing &				
			Data Mining/Human				
			Computer				
			Interaction/Pattern Recognition				
5	Open	OEC-	(Open Elective-)	3	0	0	3
	Elective					· ·	5
	courses	11001112	Human Resource				
			Development and				
			Organizational				
			Behavior				
6	Project	PROJ	Research	3	0	0	3
		-	Methodology				
		CS60					
		1					
			Practical				
7	Professional Core	PCC-	Database	0	0	4	2
	Courses	CS69	Management				
		1	Systems				
8	Professional Core	PCC-	Computer Networks	0	0	4	2
	Courses	CS692					
	J	'	Tot	tal credit	S		22

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			Semester VII (Fourth year	r)			
Sl.	Type of course	Code	Course Title		Hours pe	Credits	
No.				L	T	P	
1	Professional Electivecourses	CS701A/B/ C/D/E	(Elective-IV) Quantum Computing/ Cloud Computing/ Digital Signal Processing/Multi-agent Intelligent Systems/Machine learning	3	0	0	3
2	Professional Electivecourses	C/D/E	(Elective-V) Neural Networks and Deep Learning/ Soft Computing/ Ad-Hoc and Sensor Networks/Information Theory and Coding/Cyber Security	3	0	0	3
3	Open Elective courses	OEC- CS701A/B/ C	(Open Elective-II) Operations Research/Multimedia Systems/Introduction to Philosophical Thoughts	3	0	0	3
4	Humanities &Social Sciences including Management courses	HSM C 701	Project Management and Entrepreneurship	2	1	0	3
5	Project	PROJ- CS781	Project-II	0	0	12	6
			Total c	redits			18

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			ter VIII (Fourth year)				
		[Sum	mer Industry Internsh	ip)			
Sl.	Type of course	Code	Course Title	Н	week	Credits	
No.				L	T	P	
1	Professional Elective courses		(Elective-VI) Signals and Networks/Cryptograph y & Network Security/ Speech and Natural Language Processing/ Web and Internet Technology/Internet of Things	3	0	0	3
2	Open Elective courses	OEC- CS801A/B/ C/D/E	Open Elective-III	3	0	0	3
3	Open Elective courses	OEC- CS802A/B/ C	(Open Elective-IV) E-Commerce and ERP/Micro-electronics and VLSI Design/Economic Policies in India	3	0	0	3
4	Project	PROJ - CS88	Project-III	0	0	12	6
	1	1	Tota	al credits	S		15





Curriculum Structure

Syllabus for B. Tech in Electronics & Communication Engineering

2nd Year: 3rd Semester

		A. Theory							
S1 No	Field	Theory	Со	ntact	Hours	/week	Credit Points		
			L	T	P	Total			
1.	EC301	Electronic Devices	3	0	0	3	3		
2.	EC302	Digital System Design	3	0	0	3	3		
3.	EC303	Signals and Systems	3	0	0	3	3		
4.	EC304	Network Theory	3	0	0	3	3		
5.	ES-CS301	Data Structure & Algorithm (ES)	3	0	0	3	3		
6.	BS-M301	Probability & Statistics(BS)	3	0	0	3	3		
Total T	heory					18	18		
		B. Practical							
7.	EC391	Electronic Devices Lab.	0	0	2	2	1		
8.	EC392	Digital System Design Lab.	0	0	2	2	1		
9	ES-CS391	Data Structure Lab(ES)	0	0	2	2	1		
			Tota	ıl Pra	ctical	6	3		
			То	tal C	redits	24	21		
C. Non Credit Course									
	MC381	Environmental Science	0	0	2	2	0		

2ndYear: 4th Semester

		Zild I car. Hill Schlester							
		A. Theory							
S1 No	Field	Theory	Co	ntact	Hours	s/week	Credit Points		
			L	T	P	Total			
1.	EC401	Analog Communication	3	0	0	3	3		
2.	EC402	Analog Electronic Circuits	3	0	0	3	3		
3.	EC403	Microprocessor & Microcontrollers	3	0	0	3	3		
4.	ES-CS401	Design and Analysis of Algorithm(ES)	3	0	0	3	3		
5.	BS-M401	Numerical Methods(BS)	2	0	0	2	2		
6.	BS-B401	Biology for Engineers	2	1	0	3	3		
Total T	heory					14	17		
		B. Practical							
7.	EC491	Analog Communication Lab	0	0	2	2	1		
8.	EC492	Analog Electronic Circuits Lab.	0	0	2	2	1		
9.	EC493	Microprocessor & Microcontrollers Lab	0	0	2	2	1		
10.	BS-M(CS)491	Numerical Methods Lab	0	0	2	2	1		
11.	HS-HU481	Soft Skill Development Lab	0	0	2.	2	1		
Total Practical 5									
Total Credits 24 5000 22									
	·			1	V ' C	WOLL - SICH	1.010310		



3rd Year: 5th Semester

A. The	eory							
Sl No.				Conta	ct Ho	urs/w	veek	Credit
	Field		Theory				_	Points
				L	T	P	Total	
1.	EC50	1	Electromagnetic Waves	3	0	0	3	3
2.	EC502	2	Computer Architecture	3	0	0	3	3
3.	EC503	3	Digital Communication &	3	1	0	4	3.5
			Stochastic Process					
4.	EC504	4	Digital Signal Processing	3	0	0	3	3
5.	PE-EC5	05	Program Elective I	3	0	0	3	3
6.	OE-EC506 A	/B/C/D	Open Elective I	3	0	0	3	3
Total 7	Γheory						19	18.5
B.	Practical			•	•		•	
7.	EC591	F	Electromagnetic Wave Lab	0	0	2	2	1
8.	EC592	Γ	Digital Communication Lab.	0	0	2	2	1
9.	EC593	Di	gital Signal Processing Lab.	0	0	2	2	1
Total F	Practical				•		6	3
C. Sess	sional	onal						
10.	MC-HU581	Effec	ctive Technical Communication	0	0	3	3	0
Total (Credits			· ·			28	21.5

3rd Year: 6th Semester

			C. Theory					
S1 No	Field		Theory	Со	ntact	Hours/	week	Credit Points
					T	P	Total	
1.	EC60	1	Control System & Instrumentation	3	0	0	3	3
2.	EC60	2	Computer Network	3	0	0	3	3
3.	PE-EC	603	Program Elective II	3	0	0	3	3
4.	OE-EC	604	Open Elective II	3	0	0	3	3
5.	HS-HU	601	Economics for Engineers	3	0	0	3	3
Total T	heory						15	15
			D. Practical					
6.	EC692		Computer Network Lab.	0	0	2	2	1
7.	EC691		Control System and Instrumentation Lab.	0	0	2	2	1
8.	EC681]	Mini Project/ Electronic Design Workshop	0	0	4	4	2
	Total Practical					8	4	
	Total Credits					23	19	
9	MC681		Universal Human Values	2	0	0	2	0

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4th Year: 7th Semester

		D. Theory						
Sl No	Field	Theory	Co	Credit Points				
			L	T	P	Total		
1.	PE-EC701	Program Elective -3	3	0	0	3	3	
2.	PE-EC702	Program Elective -4	3	0	0	3	3	
3.	PE-EC703	Program Elective -5	3	0	0	3	3	
4.	OE-EC704	Open Elective - 3	3	0	0	3	3	
5.	HS-HU701	Principles of Management	2	0	0	2	2	
Total T	Theory					14	14	
		E. Practical						
6 EC781 Industrial Training During Semester Break(6 th & 7 th)							1	
7.	EC782	Project Stage – I	0	0	8	8	4	
Total P	ractical					8	5	
	Total Credits							

4th Year: 8th Semester

		E. Theory							
Sl No	Field	Theory	Co	Contact Hours/week					
			L	Т	P	Total			
1.	PE- EC801	Program Elective – 6	3	0	0	3	3		
2.	PE- EC802	Program Elective - 7	3	0	0	3	3		
3.	OE- EC803	Open Elective - 4	3	0	0	3	3		
4.	OE- EC804	Open Elective - 5	3	0	0	3	3		
Total T	heory					12	12		
		F. Practical							
5.	EC881	Project Stage – II	0	0	15	15	7.5		
6.	EC882	Grand Viva					1.5		
		Total Practical				15	9		
Total C	ontact /Credits		_		•	27	21		



Professional Electives

Sl	Course Code	Course Title	Hou	rs/week		Credits	Semester
No.			L	T	P		
1	PE-EC505A	Nano Electronics	3	0	0	3	
2	PE-EC505B	Speech and Audio Processing	3	0	0	3	V
3	PE-EC505C	Power Electronics	3	0	0	3	
4	PE-EC505D	Scientific Computing	3	0	0	3	
5	PE-EC603A	Introduction to MEMS	3	0	0	3	
6	PE-EC603B	Bio-Medical Electronics	3	0	0	3	VI
7	PE-EC603C	CMOS VLSI Design	3	0	0	3	
8	PE-EC603D	Information Theory & Coding	3	0	0	3	
9	PE-EC701A	Microwave Theory and Techniques	3	0	0	3	
10	PE-EC701B	Satellite Communication	3	0	0	3	
11	PE-EC701C	Mobile Communication and Networks	3	0	0	3	
12	PE-EC702A	Adaptive Signal Processing	3	0	0	3	VII
13	PE-EC702B	Digital Image and Video Processing	3	0	0	3	
14	PE-EC702C	Neural Network and Fuzzy Logic Control	3	0	0	3	
15	PE-EC703A	Embedded System	3	0	0	3	
16	PE-EC703B	Wireless Sensor Networks	3	0	0	3	
17	PE-EC703C	Wavelet Transforms	3	0	0	3	
18	PE-EC801A	Antennas and Propagation	3	0	0	3	
19	PE-EC801B	Fibre Optic Communication	3	0	0	3	
20	PE-EC801C	Error Correcting Codes	3	0	0	3	VIII
21	PE-EC802A	Mixed Signal Design	3	0	0	3	
22	PE-EC802B	Industrial Automation and Control	3	0	0	3	
23	PE-EC802C	VLSI Design Automation	3	0	0	3	

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List of Open Elective

Sl	Course Code	Course Title	Hou	rs/week		Credits	Semester
No.			L	Т	P		
1	OE-EC506A	Soft Skill and Interpersonal Communication	3	0	0	3	
2	OE-EC506B	Cyber Law & Intellectual Property Rights	3	0	0	3	V
3	OE-EC506C	Human Resource Management	3	0	0	3	
4	OE-EC604A	Electronic Measurements and Measuring Instruments	3	0	0	3	
5	OE-EC604B	Operating System	3	0	0	3	VI
6	OE-EC604C	Object Oriented Programming	3	0	0	3	
7	OE-EC704A	Web Technology	3	0	0	3	
8	OE-EC704B	Optimisation Technique	3	0	0	3	VII
9	OE-EC704C	Entrepreneurship	3	0	0	3	
10	OE-EC803A	Internet of Things(IoT)	3	0	0	3	
11	OE-EC803B	Big Data Analysis	3	0	0	3	
12	OE-EC803C	Cyber Security	3	0	0	3	VIII
13	OE-EC804A	Artificial Intelligence	3	0	0	3	
14	OE-EC804B	Microwave Integrated Circuits	3	0	0	3	
15	OE-EC804C	Organisational Behaviour	3	0	0	3	

B. Tech in Electrical Engineering

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Sl. No.	CODE	Paper		act per er week		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 301	Electric Circuit Theory	3	1	0	4	4
2	PC-EE 302	Analog Electronics	3	0	0	3	3
3	PC-EE 303	Electromagnetic field theory	3	0	0	3	3
4	ES-ME 301	Engineering Mechanics	3	0	0	3	3
5	BS-M 301	Mathematics-III	3	0	0	3	3
6	BS-EE301	Biology for Engineers	3	0	0	3	3
7	MC-EE 301	Indian Constitution	3	0	0	3	0
		TOTAL OF SEMESTER:				22	19

Practical / Sessional:

Sl.	CODE	Paper		act per er week		Total Contact	Credits
No.			L	T	P	Hrs	
1	PC-EE 391	Electric Circuit Theory Laboratory	0	0	2	2	1
2	PC-EE 392	Analog Electronics laboratory	0	0	2	2	1
3	PC-CS 391	Numerical Methods laboratory	0	0	2	2	1
		Total of Practical / Sessional				06	3
TOTAL OF SEMESTER:					28	22	

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Sl. No.	CODE	Paper	Contact periods Per week				Total Contac	Credits t	
]	L	1	[P	Hrs	
1	PC-EE 401	Electric machine-I	3		0		0	3	3
2	PC-EE 402	Digital Electronic	3	0		0		3	3
3	PC-EE 403	Electrical and Electronics Measurement	3		0		0	3	3
4	ES-EE 401	Thermal Power Engineering	3		0		0	3	3
5	HM-EE401	Values and Ethics in profession	3		0		0	3	3
6	MC- EE401	Environmental Science	3		0		0	3	0
	_	TOTAL OF SEMESTER:						18	15

Practical / Sessional:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 491	Electric machine-I laboratory	0	0	2	2	1
2	PC-EE 492	Digital electronics laboratory	0	0	2	2	1
3	PC-EE 493	Electrical and electronic measurement laboratory	0	0	2	2	1
4	ES-ME 491	Thermal power engineering laboratory	0		2	2	1
		Total of Practical / Sessional				08	4
TOTA	AL OF SEMES	TER:				26	19





Sl.	CODE	Paper		act per		Total	Credits
No.			P	er week		Contact	
			L	T	P	Hrs	
1	PC-EE 501	Electric machine-II	3	0	0	3	3
2	PC-EE 502	Power system-I	3	0	0	3	3
3	PC-EE 503	Control system	3	0	0	3	3
4	PC-EE 504	Power electronics	3	0	0	3	3
5	PE-EE 501	A. High voltage	3	0	0	3	3
		Engineering					
		B. Power Plant Engineering					
		C. Renewable & Non					
		conventional energy					
6	OE-EE 501	A. Data structure &	3	0	0	3	3
		algorithm					
		B. Object oriented					
		programming					
		C. Computer organization					
		& architecture					
		TOTAL OF SEMESTER:				18	18

Practical / Sessional:

Sl. No.	CODE	Paper		act per er wee		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 591	Electric Machine-II laboratory	0	0	2	2	1
2	PC-EE 592	Power system-I laboratory	0	0	2	2	1
3	PC-EE 593	Control system laboratory	0	0	2	2	1
4	PC-EE 594	Power Electronics laboratory	0	0	2	2	1
		Total of Practical / Sessional				08	4
TOT	AL OF SEMES	TER:				26	22

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Sl. No.	CODE	Paper		act per er week		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 601	Power System-II	3		0	3	3
2	PC-EE-602	Micro processor & micro controller	3	0	0	3	3
3	PE-EE 601	A. Digital control systemB. HVDC transmissionC. Electrical Machine Design	3	0	0	3	3
4	PE-EE 602	 A. Electrical and Hybrid vehicle B. Power quality & FACTS C. Industrial Electrical systems 	3	0	0	3	3
5	OE-EE 601	A. Digital Signal ProcessingB. Communication EngineeringC. VLSI & Microelectronics	3	0	0	3	3
6	HM-EE 601	Economics for Engineers	3	0	0	3	3
		TOTAL OF SEMESTER:				18	18

Practical / Sessional:

Sl. No.	CODE	Paper		act per er weel		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 691	Power system-II laboratory	0	0	2	2	1
2	PC-EE692	Micro processor & microcontroller laboratory	0	0	2	2	1
2	PC-EE 681	Electrical & Electronic design laboratory	1	0	4	5	3
		Total of Practical / Sessional				09	05
TOT	AL OF SEMES	TER:				27	23

Summer Internship of 3-week duration after 6th semester. Students will be assessed based on submission of report on internship and presentation in a seminar in Tth semester ducation sitesearch Foundation

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Sl. No.	CODE	Paper		act per er weel		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 701	Electric Drive	3	0	0	3	3
2	PE-EE 701	 A. Control system Design B. Electrical Energy conservation & Auditing C. Power generation economics 	3	0	0	3	3
3	OE-EE701	A. Artificial intelligenceB. Internet of thingsC. Computer graphics	3	0	0	3	3
4	OE-EE702	A. Embedded systemB. Digital image processingC. Computer network	3		0	3	3
5	HM-EE701	Principle of Management	3	0	0	3	3
		TOTAL OF SEMESTER:				15	15

Practical / Sessional:

Sl. No.	CODE	Paper		tact per Per weel		Total Contact	Credits
			L	L T P		Hrs	
1	PC-EE 791	Electric Drive laboratory	0	0	2	2	1
2	PW-EE 781	Project stage-I	0	0	4	4	2
3	PW-EE782	Seminar	0	0	0	0	1
		Total of Practical / Sessional				06	04
TOTAL OF SEMESTER:					21	19	

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8th Semester

Sl. No.	CODE	Paper		act per er weel		Total Contact	Credits
110.			L	T	P	Hrs	
1	PC-EE 801	Utilization of Electric Power	3	0	0	3	3
2	PE- EE 801	A. Line –commutated and active PWM rectifiers B. Power system dynamics & control C. Advanced Electric Drives D. Industrial Automation and Control	3	0	0	3	3
3	OE-EE 801	 A. Soft computing Techniques B. Biomedical Instrumentation. C. Introduction to Machine learning D. Sensors and Transducers 	3	0	0	3	3
		TOTAL OF SEMESTER:				09	09

Practical / Sessional:

Sl.	CODE	Paper	Contact periods			Total	Credits
No.			Per week			Contact	
			L	T	P	Hrs	
1	PW-EE 881	Project stage-II	0	0	16	16	8
		Total of Practical /				16	08
		Sessional					
TOTAL OF SEMESTER:					25	17	

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$\frac{Curriculum\ Structure}{B.\ Tech\ in\ Electrical} \underbrace{\&\ Electronic}_{\&\ Engineering} (EEE) \\ 3^{rd}\ Semester$

Sl. No.	CODE	Paper		act peri er week		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EEE-301	Electric Circuit Theory	3	1	0	4	4
2	PC-EEE-302	Analog Electronics	3	0	0	3	3
3	PC-EEE-303	Electromagnetic field theory	3	0	0	3	3
4	ES-ME-301	Engineering Mechanics	3	0	0	3	3
5	BS-M-301	Mathematics-III	3	0	0	3	3
6	BS-EEE-301	Biology for Engineers	3	0	0	3	3
7	MC-EEE-301	Indian Constitution	3	0	0	3	0
		TOTAL OF SEMESTER:				22	19

Practical / Sessional:

Sl.	CODE	Paper		act per er weel		Total Contact	Credits
No.			L	T	P	Hrs	
1	PC-EEE-391	Electric Circuit Theory Laboratory	0	0	2	2	1
2	PC-EEE-392	Analog Electronics laboratory	0	0	2	2	1
3	PC-CS-391	Numerical Methods laboratory	0	0	2	2	1
		Total of Practical / Sessional				06	3
TOT	AL OF SEMEST	ER:				28	22

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Sl.	CODE	Paper		act per		Total	Credits
No.			P	er week		Contact	
			L	T	P	Hrs	
1	PC-EEE-401	Electric machine-I	3	0	0	3	3
2	PC-EEE-402	Digital Electronics	3	0	0	3	3
3	PC-EEE-403	Electrical and Electronic Measurement	3	0	0	3	3
4	ES-EEE-401	Thermal Power Engineering	3	0	0	3	3
5	HM-EEE-401	Values and Ethics in profession	3	0	0	3	3
6	MC- EEE-401	Environmental Science	3	0	0	3	0
		TOTAL OF SEMESTER:				18	15

Practical / Sessional:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact	Credits
			L	T	P	Hrs	
1	PC-EEE-491	Electric Machine-I laboratory	0	0	2	2	1
2	PC-EEE-492	Digital Electronics laboratory	0	0	2	2	1
3	PC-EEE-493	Electrical and Electronic measurement laboratory	0	0	2	2	1
4	ES-ME-491	Thermal Power Engineering laboratory	0		2	2	1
		Total of Practical / Sessional				08	4
TOT	AL OF SEMEST	ER:				26	19

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5th Semester

Theory:

Sl. No.	CODE	Paper		act per er weel		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EEE-501	Electric machine-II	3	0	0	3	3
2	PC-EEE-502	Power System-I	3	0	0	3	3
3	PC-EEE-503	Control system	3	0	0	3	3
4	PC-EEE-504	Power Electronics	3	0	0	3	3
5	PE-EEE- 501A/B/C	High Voltage Engineering/Power Plant Engineering/Renewable& Non Conventional Energy	3	0	0	3	3
6	OE-EEE- 501A/B/C	Data Structure & Algorithm/Object Oriented Programming/Computer Organization	3	0	0	3	3
		TOTAL OF SEMESTER:				18	18

Practical / Sessional:

Sl. No.	CODE	Paper		act per er weel		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EEE-591	Electric Machine-II laboratory	0	0	2	2	1
2	PC-EEE-592	Control system laboratory	0	0	2	2	1
3	PC-EEE-593	Power Electronics laboratory	0	0	2	2	1
		Total of Practical / Sessional				06	3
TOT	AL OF SEMEST	TER:				24	21

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6th Semester

Theory:

Sl. No.	CODE	Paper		tact per Per weel		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EEE-601	Power System-II	3		0	3	3
2	PC-EEE-602	Microprocessor & Micro controller	3	0	0	3	3
3	PE-EEE-601	A. Nano Electronics B. Electrical Machine Design C. VLSI & Microelectronics	3	0	0	3	3
4	PE-EEE-602	A. Electrical & Hybrid vehicle B. Power Quality & FACTS C. Industrial Electrical Systems	3	0	0	3	3
5	OE-EEE-601	A. Artificial Intelligence B. Database Management Systems C. Analytical Instrumentation	3	0	0	3	3
6	HM-EEE-601	Economics for Engineers	3	0	0	3	3
		TOTAL OF SEMESTER:				18	18

Practical / Sessional:

Sl. No.	CODE	Paper		act per er weel		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EEE-691	Power system laboratory	0	0	2	2	1
2	PC-EEE-692	Microprocessor &Microcontroller laboratory	0	0	2	2	1
3	PC-EEE-681	Electrical & Electronic design laboratory	1	0	4	5	3
		Total of Practical / Sessional				09	05
TOT	AL OF SEMEST	ER:				The state of the s	/23

Summer Internship of 3-week duration after 6th semester. Students will be a sessed based onsubmission of report on internship and presentation in a seminar in 7th semester.



	7th Semester
Theory:	

Sl. No.	CODE	Paper		act peri		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EEE-701	Analog and digital communication	3	0	0	3	3
2	PE-EEE-701	A. Electric Drive B. Digital Control system C. HVDC transmission System	3	0	0	3	3
3	OE- EEE-701	A. Embedded systemB. Computer networkC. Introduction to Machine learning	3	0	0	3	3
4	OE- EEE-702	A. Internet of Things B. Computer Graphics C. Soft computing Techniques	3		0	3	3
5	HM- EEE-701	Principle of Management	3	0	0	3	3
		TOTAL OF SEMESTER:				15	15

Practical / Sessional:

Sl.	CODE	Paper	Contact periods Per week			Total	Credits
No.						Contact	
			L	T	P	Hrs	
1	PC-EEE 791	Analog and digital	0	0	2	2	1
		Communication					
		laboratory					
2	PW-EEE 781	Project stage-I	0	0	4	4	2
3	PW-EEE782	Seminar	0	0	0	0	1
		Total of Practical /				06	04
		Sessional					
TOTA	AL OF SEMEST	TER:			1	21	19
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$\underline{^{8\text{th}}\ Semester}$

Theory:

Theor	V						
Sl. No.	CODE	Paper Contact periods Per week		Total Contact	Credits		
			L	T	P	Hrs	
1	PC-EEE-801	Digital signal processing	3	0	0	3	3
2	PE- EEE-801	 A. Utilization of Electric Power B. Advanced Electric Drives C. Power system dynamics and control D. Industrial Automation and Control 	3	0	0	3	3
3	OE- EEE-801	 A. Digital Image Processing B. Biomedical Instrumentation C. Cryptography and Network Security D. Sensors and Transducers 	3	0	0	3	3
		TOTAL OF SEMESTER:				09	09

Practical / Sessional:

Sl. No.	CODE	Paper		Contact periods Per week		Total Contact	Credits
			L	T	P	Hrs	
	PC-EEE-891	Digital signal processing laboratory	0	0	2	2	1
1	PW-EEE-881	Project stage-II	0	0	16	16	8
		Total of Practical / Sessional				18	09
TOT	TOTAL OF SEMESTER:					27	18

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	Second Year Third Semester							
Sl No.	Category	Subject Code	Subject Name		Total No. of contact hours L T P		Credits	
Theo	rv			L	1	Г		
1	Basic Science course	BS-M301	Mathematics III	3	1	0	4	
2	Basic Science course	BS-BIO301	Biology	3	0	0	3	
3	Engineering Science Courses	ES-ECE301	Basic Electronics Engineering	3	0	0	3	
4	Engineering Science Courses	ES-ME301	Engineering Mechanics	3	1	0	4	
5	Professional Core courses	PC-ME301	Thermodynamics	3	1	0	4	
6	Professional Core courses	PC-ME302	Manufacturing Processes	4	0	0	4	
		Total Theor	y	19	3	0	22	
Pract	tical							
1	Professional Core courses	PC-ME391	Practice of Manufacturing Processes	0	0	3	1.5	
		Total Practic	al	0	0	3	1.5	
	Total of Third Semester			19	3	3	23.5	

	Second Year Fourth Semester							
SI	Category	Subject	Subject Name	Total No. of contact hours			Credits	
No.		Code		L	T	P		
Theo	ry							
1	Engineering Science Courses	ES-ME401	Materials Engineering	3	0	0	3	
2	Professional Core courses	PC-ME401	Applied Thermodynamics	3	1	0	4	
3	Professional Core courses	PC-ME402	Fluid Mechanics & Fluid Machines	3	1	0	4	
4	Professional Core courses	PC-ME403	Strength of Materials	3	1	0	4	
5	Professional Core courses	PC-ME404	Metrology andInstrumentation	3	1	0	4	
	Total Theory				4	0	19	
Pract	tical				•	•		
1	Professional Core courses	PC-ME491	Practice of Manufacturing Processes and Systems Laboratory	0	0	3	1.5	
2	Professional Core courses	PC-ME492	Machine Drawing- I	0	0	3	1.5	
3	Mandatory courses	MC 481	Environmental Science	-	-	2	0	
		Total Practi	cal	0	, 0	8	3	
			Total of Fourth Semester	15	14	8	22	
			R	e asul Eque	Principalian Princ	esearch O.Sew Kolhala	22 Foundation Telinipara Telinipara TOO 121	



	Third Year Fifth Semester							
Sl No.	Category	Subject Code	Subject Name	conta	Total No. of contact hours		Credits	
Theo	ry				_	-		
1	Professional Core courses	PC-ME501	Heat Transfer	3	1	0	4	
2	Professional Core courses	PC-ME502	Solid Mechanics	3	1	0	4	
3	Professional Core courses	PC-ME503	Kinematics & Theory of Machines	3	1	0	4	
4	Humanities and Social Sciences including Management courses	HM-HU501	Effective Technical Communication	3	0	0	3	
5	Mandatory courses	MC501	Essence of Indian Knowledge Tradition	-	2	-	0	
		Total Theo	ry	12	5	0	15	
Pract	ical/ Sessional							
1	Professional Core courses	PC-ME591	Mechanical Engineering Laboratory I (Thermal)	0	0	3	1.5	
2	Professional Core courses	PC-ME592	Machine Drawing-II	0	0	3	1.5	
3	Project (Summer internship)	PW-ME581	Project-I (30 hrs. Total)	0	0	2	1	
		Total Practi	ical	0	0	8	4	
			Total of Fifth Semester	12	5	8	19	

			ear Sixth Semester	Tota	l Na	o f		
Sl	Category	Subject Code	Subject Name	Total No. of contact hours				
No.	No.		J The state of the	L	T	P		
Theo	ry							
1	Professional Core courses	PC-ME601	Manufacturing Technology	4	0	0	4	
2	Professional Core courses	PC-ME602	Design of Machine Elements	3	1	0	4	
3	Professional Elective courses	PE-ME601	Elective-I	3	0	0	3	
4	Professional Elective courses	PE-ME602	Elective-II	3	0	0	3	
5	Humanities and Social Sciences including Management courses	HM-HU601	Operations Research	3	0	0	3	
6	Mandatory courses	MC601	Constitution of India	-	2	-	0	
		Total Theo	ry	16	3	0	17	
Pract	tical/ Sessional				•	•		
1	Professional Core courses	PC-ME691	Mechanical Engineering Laboratory II (Design)	0	0	3	1.5	
2	Project (or Summer internship)	PW-ME681	Project-II (90 hrs. Total)	+20	, Ø	4	ndation 2	
		Total Practi	cal	162 0 64	OSe?	ich feli	1.0 al a 3.5	
			Total of Sixth Semester	W C	63.8	3/9-100	20.5	
			<i>∀e∂g</i>	ara Kaningka	Ji6 . K.			

Bara kanthalia,Barrackpore, P.O.: Sewli Telini Para,Kolkata – 700121, Dist: - North 24 parganas, Phone No.: 03330085434 & 03330085433



	Fourth Year Seventh Semester							
Sl No.	Category	Subject Code	Subject Name	conta		urs	Credits	
		0040		L	T	P		
Theo	ry	T						
1	Professional Core courses	PC-ME701	Advanced Manufacturing Technology	3	0	0	3	
2	Professional Elective courses	PE-ME701	Elective III	3	0	0	3	
3	Professional Elective courses	PE-ME702	Elective-IV	3	0	0	3	
4	Open Elective courses	OE-ME 701	Open Elective- I	3	0	0	3	
5	Humanities and Social Sciences including Management courses	HM-HU701	Economics for Engineers	2	0	0	2	
		Total The	eory	14	0	0	14	
Prac	tical/ Sessional							
1	Professional Core courses	PC-ME791	Mechanical Engineering Laboratory III (Manufacturing)	0	0	3	1.5	
2	Project	PW-ME781	Project-III	0	0	6	3	
		Total Prac	ctical	0	0	9	4.5	
	Total of Seventh Semeste				0	9	18.5	

	Fourth Year Eighth Semester							
Sl No.	Category	Subject Code	Subject Name	Total No. of contact hours			Credits	
110.				L	T	P		
Theo	ry							
1	Professional Elective courses	PE-ME801	Elective V	3	0	0	3	
2	Professional Elective courses	PE-ME802	Elective VI	3	0	0	3	
3	Open Elective courses	OE-ME 801	Open Elective-II	03/4	50%	0	Foundation	
4	Open Elective courses	OE-ME 802	Open Elective- III	3	50 E	ese Dew	16/11/23	
		Total The		POLEGICS	all DP	0.03/3	12	
Pract	tical/ Sessional		Re	B3(3 K3(13)	TYDOLG.			
1	Project	PW-ME881	Project-IV	Ŏ	0	10	5	
2	Professional Core courses	PW-ME882	Comprehensive viva	0	0	0	1.5	
	Total Practical 0 0 10						6.5	
Total of Eighth Semester 12 0 10						18.5		
	Total Credit						160	

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List of Professional Electives

There are six Professional Electives in Semester VI, VII and VIII as follows: (Elective-I) PE-ME601, (Elective-II) PE-ME602, (Elective-III) PE-ME701, (Elective-IV) PE-ME702, (Elective-V) PE-ME801 and (Elective VI) PE-ME802.

There are three baskets of Professional Electives in each of Semester VI, VII and VIII. Students are to choose two papers from the basket of Professional Electives corresponding to a particular Semester.

List of Professional Electives in Semester VI for (Elective-I) PE-ME601 and (Elective-II) PE-ME602

Subject Code	Subject name			
Thermo-Fluid C	Group			
A	Internal Combustion Engines and Gas Turbines			
В	Refrigeration and Air Conditioning			
С	Turbo Machinery			
D	Fluid Power Control			
Е	Advanced Fluid Mechanics			
Design Group				
F	Composite Materials			
G	Mechatronics			
Manufacturing	Group			
H Robotics				
I	Material Handling			
J	Principles and Practices of Management			

Note: If a student chooses the paper, **Turbo Machinery (Code: C)** as a **Professional Elective-**I in

Semester VI, its paper code will be PE-ME601C.



List of Professional Electives in Semester VII for (Elective-III) PE-ME701 and (Elective-IV) PE-ME702

Subject Code	Subject name		
Thermo-Fluid Group			
A	Automobile Engineering		
В	Gas Dynamics and Jet Propulsion		
С	Computational Fluid Dynamics		
D	Elements of Atmospheric Fluid Dynamics		
Design Group			
Е	Selection and Testing of Materials		
F	Mechanical Vibration		
G	Finite Element Analysis		
Manufacturing Group			
Н	Advanced Welding Technology		
I	Quantity Production Methods		
J	CAD/CAM		

List of Professional Electives in Semester VIII for (Elective-V) PE-ME801 and (Elective-VI) PE-ME802

Subject Code	Subject name		
Thermo-Fluid Group			
A	Analysis and Performance of Fluid Machines		
В	Power Plant Engineering		
С	Cryogenics		
D	Introduction to Wind Engineering		
Design Group			
Е	Tribology		
F	3D Printing and Design		
Manufacturing Group			
G	Micro and Nano Manufacturing		
Н	Process Planning and Cost Estimation		
I	Maintenance Engineering		

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List of Open Electives

There are three Open Elective Course Papers in Semester VII and VIII as follows: (Open Elective-I) OE-ME701, (Open Elective-II) OE-ME801 and (Open Elective-III) OE-ME802

There are two baskets of Open Electives one each of Semester VII and VIII. Students are to choose one paper from the basket of Open Electives corresponding to Semester VIII.

There are two baskets of Open Electives corresponding to Semester VIII.

List of Open Electives (OE-ME701) in Semester VII

Subject Code	Subject Name
A	Industrial Engineering
В	Project Management
С	Introduction to Product Design and Development
D	Non-conventional Energy Sources
Е	Biomechanics and Biomaterials
F	Computational Methods in Engineering
G	Artificial Intelligence (AI)
Н	Machine Learning
I	Water Resource Engineering

List of Open Electives (OE-ME801 and OE-ME802) in Semester VIII

Subject Code	Subject Name
A	Total Quality Management
В	Entrepreneurship Development
С	Safety and Occupational Health
D	Industrial Pollution and Control
Е	Energy Conservation and Management
F	Waste to Energy- An Overview
G	Automation & Control



Н	Internet of Things (IoT)
I	Block Chain
J	Cyber Security
K	Quantum Computing
L	Data Sciences
M	Virtual Reality (VR)

Note: If a student chooses the paper, **Industrial Engineering (Code: A)** as an **Open Elective-I** in **SemesterVII**, its paper code will be **OE-ME701A**.

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The Internal Assessment marks for theory should be based on Class Test and Attendance as follows:

Continuous Assessment also Popularly Known as CA Internal Exam is an Integral Part of Academic Activity which Include Internal Class Presentation, Pen Paper Mode Exam, Group Discussion and Online MCQ Test in Portal.

Schedule and Activity List of Continuous Assessment:

Continuous Assessment	Activities
CA1	PPT presentation, Quiz, Group Discussion
CA2	Report writing, contents/Exercise and Assignment
CA3	Class test in Pen and paper Mode (DVS Portal)
CA4	Centralized MCQ online test in Portal

Continuous Assessment 1 (CA1)

CA1 would be based on presentation, Quiz, Group Discussion etc skill of a student. Faculties would advice students to make ppt presentation based on the some contents/assignments of the courses taught in the semester and also assess students on Quiz, Group Discussion etc. During setting the strategies of content/topics of presentation, components of outcome based education (OBE) and Bloom's Level (BL) of taxonomy should be considered. Appropriate assessment rubrics to be developed and followed during this evaluation. The pdf version of the presentation would be uploaded in the University portal during submission of marks of the CA1. This would help students to enhance their presentation, group activity etc skills.

Continuous Assessment 2 (CA2)

CA2 would be based on report writing skill of a student. Faculties would advice students to submit report based on the contents/exercise and assignments of the courses taught in the semester. During setting the strategies of content/topics of presentation, components of outcome based education (OBE) and Bloom's Level (BL) of taxonomy should be considered. Appropriate assessment rubrics to be developed and followed during this evaluation. The pdf version of the report would be uploaded in the University portal during submission of marks of the CA2. This would help students to enhance their report.

Continuous Assessment 3 (CA3)

CA3 would be based on class test in pen and paper mode. The process of CA4 of the last semester would be followed in this matter. After the internal examinations conducted at college level, the scripts are to be uploaded in the University portal and assessment to be done online in the University portal. Marks would be automatically transferred to the CA3 panel. During setting the question papers, appropriate strategies of OBE. iara Kaurayana, p.O. Semil Lejunbara Sur Foncayon 2 'Jesearci Lonicano, and BL to be followed. This would help students to enhance their offline.

Continuous Assessment 4 (CA4)



CA4 would be based on centralized online test to be arranged by the University. The process of online examinations used in the end semester examinations in last academic year would be followed. Students would appear on online MCQ based questions in the proctored environment. The CA4 would be based on the entire syllabus of the curriculum and would be conducted at the completion of the semester. This would help students to enhance their online examination skill.

The below table will help you understand how the grade points are calculated:

The marks will be given in all examinations which will include college assessment marks and the total marks for each Theory / Practical shall be converted into Grades as per Table given.

G*= Letter Grade Indicator

G*	Classification	Score on 100 Percentage Points	Points
О	Outstanding	100 to 90	10
Е	Excellent	89 to 80	9
A	Very Good	79 to 70	8
В	Good	69 to 60	7
С	Fair	59 to 50	6
D	Below Average	49 to 40	5
F	Failed	Below 40	2
I	Incomplete		2

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