VIMAL JYOTHI
ENGINEERING COLLEGE (AUTONOMOUS)
Jyothi Nagar, Chemperi - 670632, Kannur D.T, Kerala

Curriculum (2024)
B.Tech (Mechanical Engineering)
Semester I to VIII

Branch Code : ME (Group C)

FIRST SEMESTER (July-December): Group C														
10 Days Compulsory Induction Program and UHV														
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course Category**	**Course Title (Course Name)**	**Credit Structure**				**SS**	**Total Marks**		**Credits**	**Hrs./Week**
						L	**T**	**P**	**R**		**CIA**	**ESE**		
1	A	GYMAT101	BSC	GC	Mathematics for Electrical Science and Physical Science-1	3	0	0	0	4.5	40	60	3	3
2	B S1/ S2	GCPHT121	BSC	GC	Physics for Physical Science	3	0	2	0	5.5	40	60	4	5
		GCCYT122			Chemistry for Physical Science									
3	C	GCEST103	ESC	GC	Engineering Mechanics	3	0	0	0	4.5	40	60	3	3
4	D	GCEST104	ESC	GC	Introduction to Mechanical Engineering & Civil Engineering (Part1: Mechanical Engineering)	2	0	0	0	3	20	30	2+2=4	4
					(Part 2: Civil Engineering)	2	0	0	0	3	20	30		
5	F	UCEST105	ESC	UC	Algorithmic Thinking with Python	3	0	2	0	5.5	40	60	4	5
6	L	GCESL106	ESC	GC	Engineering Workshop	0	0	2	0	1	50	50	1	2
7	I* S1/ S2	UCHWT127	HWP	UC	Health and wellness	1	0	1	0	0	50	0	1	2/3
		UCHUT128	HMC		Life Skills and Professional Communication	2	0	1	0	3.5	100	0		
8	S_1/ S_2	UCSEM129	SEC	UC	Skill Enhancement Course: Digital 101(30 Hours, NASSCOM)	MOOC				2			-	
Total										**30/32**			**20**	**24/25**

No Grade Points will be awarded for the MOOC course and I slot course.

- L-T-P-R: Lecture-Tutorial-Practical-Project
- SS (Self Study) Hours= 1.5L+0.5 T+0.5P+R
- CIA: Continuous Internal Assessment, ESE: End Semester Examination

Digital 101 (NASSCOM)		
Sl. No:	**Technologies Covered**	**Hours**
1	Artificial intelligence and Big Data Analytics (AI/BDA)	11
2	Internet of Things (IoT)	2.5
3	Cyber Security	2.5
4	Block Chain	2.5
5	Robotic Process Automation	1.5
6	Augmented and Virtual Reality (AR and VR)	2.5
7	Cloud Computing	2.5
8	3 D Printing and Modelling	2
9	Web, Mobile Dev and Marketing	2
10	Responsible AI	1
	Total Hours	**30**

Note: *Physics, Chemistry, Health and Wellness & Life Skill and Professional Communication can be offered in both Semester 1 (S1) and Semester 2 (S2*

SECOND SEMESTER (January-June): Group C														
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course Category**	**Course Title (Course Name)**	**Credit Structure**				**SS**	**Total Marks**		**Credits**	**Hrs./Week**
						L	**T**	**P**	**R**		**CIA**	**ESE**		
1	A	GYMAT201	BSC	GC	Mathematics for Electrical Science and Physical Science-2	3	0	0	0	4.5	40	60	3	3
2	B S1/S2	GCPHT121	BSC	GC	Physics for Physical Science	3	0	2	0	5.5	40	60	4	5
		GCCYT122			Chemistry for Physical Science									
3	C	GCEST203	ESC	GC	Engineering Graphics and Computer Aided Drawing	2	0	2	0	4	40	60	3	4
4	D	GCEST204	ESC	GC	Basic Electrical & Electronics Engineering (Part 1: Electrical Engineering)	2	0	0	0	3	20	30	2+2=4	4
					(Part 2: Electronics Engineering)	2	0	0	0	3	20	30		
5	E	PCMET205	PC	PC	Material Science and Engineering	3	1	0	0	5	40	60	4	4
6	F	UCEST206	ESC	UC	Engineering Entrepreneurship & IPR	3	0	0	0	4.5	60	40	3	3
7	I* S1/S2	UCHWT127	HWP	UC	Health and wellness	1	0	1	0	0	50	0	1	2/3
		UCHUT128	HMC		Life Skills and Professional Communication	2	0	1	0	3.5	100	0		
8	L	GCESL208	ESC	GC	Basic Electrical and Electronics Engineering workshop	0	0	2	0	1	50	50	1	2
9	S_1/S_2	UCSEM129	SEC	UC	Skill Enhancement Course: Digital 101(30 Hours, NASSCOM)	MOOC							1	
Total										**34**			**24**	**27/28**

No Grade Points will be awarded for the MOOC course and I slot course.

THIRD SEMESTER (July-December)														
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course Category**	**Course Title (Course Name)**	**Credit Structure**				**SS**	**Total Marks**		**Credits**	**Hrs./ Week**
						L	**T**	**P**	**R**		**CIA**	**ESE**		
1	A	GYMAT301	BSC	GC	Mathematics for Electrical Science and Physical Science-3	3	0	0	0	4.5	40	60	3	3
2	B	PCMET302	PC	PC	Mechanics of Solids	3	1	0	0	5	40	60	4	4
3	C	PCMET303	PC	PC	Fluid Mechanics and Machinery	3	1	0	0	5	40	60	4	4
4	D	PBMET304	PC-PBL	PB	Manufacturing Processes	3	0	0	1	5.5	60	40	4	4
5	F	GYEST305	ESC	GC	Introduction to Artificial Intelligence and Data Science	3	1	0	0	5	40	60	4	4
6	G S3/S4	UCHUT346	HMC	UC	Economics for Engineers	2	0	0	0	3	50	50	2	2
		UCHUT347			Engineering Ethics and Sustainable Development									
7	L	PCMEL307	PCL	PC	Computer Aided Machine Drawing & Modelling	0	0	3	0	1.5	50	50	2	3
8	Q	PCMEL308	PCL	PC	Materials Testing lab	0	0	3	0	1.5	50	50	2	3
9	R/M		VAC		REMEDIAL/MINOR/COURSE	3	1	0	0	5			4*	4*
Total										**31/36**			**25/29***	**27/31***

FOURTH SEMESTER (January-June)														
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course Category**	**Course Title (Course Name)**	**Credit Structure**				**SS**	**Total Marks**		**Credits**	**Hrs./ Week**
						L	**T**	**P**	**R**		**CIA**	**ESE**		
1	A	GCMAT401	BSC	GC	Mathematics for Physical Science-4	3	0	0	0	4.5	40	60	3	3
2	B	PCMET402	PC	PC	Machine Tools and Metrology	3	1	0	0	5	40	60	4	4
3	C	PCMET403	PC	PC	Engineering Thermodynamics	3	1	0	0	5	40	60	4	4
4	D	PBMET404	PC-PBL	PB	Mechanics of Machinery	3	0	0	1	5.5	60	40	4	4
5	E	PEMET41N	PE	PE	Elective-1	3	0	0	0	4.5	40	60	3	3
6	G S3/S4	UCHUT346	HMC	UC	Economics for Engineers	2	0	0	0	3	50	50	2	2
		UCHUT347			Engineering Ethics and Sustainable Development									
7	L	PCMEL407	PCL	PC	Fluid Mechanics and Hydraulic Machines Lab	0	0	3	0	1.5	50	50	2	3
8	Q	PCMEL408	PCL	PC	Manufacturing Technology Lab	0	0	3	0	1.5	50	50	2	3
9	R/M/ H		VAC		Remedial/Minor/Honours Course	3	1	0	0	5			4*	4*
Total										**31/ 36**			**24/ 28***	**26/ 30***

Note: *Economics for Engineers and Engineering Ethics and Sustainable Development shall be offered in both S3 and S4.*

PROGRAM ELECTIVE I: PEMET41N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	PEMET411	Turbo Machinery	3-0-0-0	**3**	3
	PEMET412	Nuclear Energy	3-0-0-0		3
	PEMET413	Composite Materials	3-0-0-0		3
	PEMET414	Components of Intelligent Systems	3-0-0-0		3
	PEMET416	Advanced Metal Joining Techniques	3-0-0-0		3
	PEMET417	Technology Management	3-0-0-0		3
	PEMET418	Supply Chain and Logistics Management	3-0-0-0		3
	PEMET415	Advanced Mechanics of Solids	3-0-0-0		3

FIFTH SEMESTER (July-December)														
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course Category**	**Course Title (Course Name)**	**Credit Structure**				**SS**	**Total Marks**		**Credits**	**Hrs./ Week**
						L	**T**	**P**	**R**		**CIA**	**ESE**		
1	A	PCMET501	PC	PC	Dynamics of Machinery	3	1	0	0	5	40	60	4	4
2	B	PCMET502	PC	PC	Advanced Manufacturing Engineering	3	1	0	0	5	40	60	4	4
3	C	PCMET503	PC	PC	Heat and Mass Transfer	3	0	0	0	4.5	40	60	3	3
4	D	PBMET504	PC-PBL	PB	Management for Engineers	3	0	0	1	5.5	60	40	4	4
5	E	PEMET52N	PE	PE	Elective-2	3	0	0	0	4.5	40	60	3	3
6	I*	UCHUM506	HMC	UC	Constitution Of India (MOOC)	-	-	-	-	2	-	-	1	-
7	L	PCMEL507	PCL	PC	Thermal Engineering Lab-1	0	0	3	0	1.5	50	50	2	3
8	Q	PCMEL508	PCL	PC	Mechanical Engineering Lab	0	0	3	0	1.5	50	50	2	3
9	R/M/H		VAC		Remedial/Minor/Honours Course	3	1	0	0	5			4*	4*
	S_5/ S_6	Industrial Visit (Maximum 12 Days are permitted, Not Exceeding more than 6 Working Days) /Industrial Training												
Total										**30/ 35**			**23/27***	**24/28***

No Grade Points will be awarded for the MOOC course and I slot course.

PROGRAM ELECTIVE 2: PEMET 52N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	PEMET521	Computational Fluid Dynamics	3-0-0-0	**3**	3
	PEMET522	Design for Manufacture and Assembly	3-0-0-0		3
	PEMET523	Computer Aided Design and Analysis	3-0-0-0		3
	PEMET524	Additive Manufacturing	3-0-0-0		3
	PEMET526	Energy Economics and Policy	3-0-0-0		3
	PEMET527	Human Resources Management	3-0-0-0		3
	PEMET528	Operations Research	3-0-0-0		3
	PEMET525	Instrumentation and Control Systems	3-0-0-0		3

SIXTH SEMESTER (January-June)														
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course Category**	**Course Title (Course Name)**	**Credit Structure**				**SS**	**Total Marks**		**Credits**	**Hrs/ Week**
						L	**T**	**P**	**R**		**CIA**	**ESE**		
1	A	PCMET601	PC	PC	Industrial and Systems Engineering	3	0	0	0	4.5	40	60	3	3
2	B	PCMET602	PC	PC	Machine Design	3	0	0	0	4.5	40	60	3	3
3	C	PEMET63N	PE	PE	Elective-3	3	0	0	0	4.5	40	60	3	3
4	D	PBMET604	PC-PBL	PB	Thermal Engineering	3	0	0	1	5.5	60	40	4	4
5	F	GCEST605	ESC	GC	Design Thinking and Product Development (Group Specific Syllabus)	2	0	0	0	3	40	60	2	2
6	O	OEXXT61N /IEXXT61N	OE/ILE	OE/IE	Open Elective/Industry Linked Elective-1	3	0	0	0	4.5	40	60	3	3
7	L	PCMEL607	PCL	PC	Computer Aided Design and Analysis Lab	0	0	3	0	1.5	50	50	2	3
8	P	PCMEP608	PWS	PC	Mini Project: Socially Relevant Project	0	0	0	3	3	50	50	2	3
9	Q	PCMEL609	PCL	PC	Thermal engineering Lab-2	0	0	2	0	1	50	50	1	2
10	R/ M/ H		VAC		Remedial/Minor/Honours Course	3	1	0	0	5			4*	4*
	S5/ S6	Industrial Visit (Maximum of 12 Days are permitted, Not Exceeding more than 6 Working Days) /Industrial Training												
Total										**32/ 37**			**23/26***	**26/29***

Note: Open Electives are such courses which will be offered by other departments. Like CSE department students have to opt open electives from ECE/ME/EEE etc. departments.

PROGRAM ELECTIVE 3: PEMET 63N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
C	PEMET 631	Power Plant Engineering	3-0-0-0	**3**	3
	PEMET 632	Compressible Fluid Flow	3-0-0-0		3
	PEMET 633	Industrial Tribology	3-0-0-0		3
	PEMET 634	Finite Element Methods	3-0-0-0		3
	PEMET 636	Nondestructive Testing	3-0-0-0		3
	PEMET 637	Industrial Safety Engineering	3-0-0-0		3
	PEMET 638	Marketing Management	3-0-0-0		3
	PEMET 635	Advanced Materials	3-0-0-0		3

OPEN ELECTIVE 1: OEMET 61N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OEMET 611	Introduction to Business Analytics	3-0-0-0	3	3
	OEMET 612	Quantitative Techniques for Engineers	3-0-0-0		3
	OEMET 613	Automotive Technology	3-0-0-0		3
	OEMET 614	Renewable Energy Engineering	3-0-0-0		3
	OEMET 615	Quality Engineering and Management	3-0-0-0		3
	OEMET 616	Additive Manufacturing	3-0-0-0		3
	OEMET 617	Solar Energy Conservation Systems	3-0-0-0		3

SEVENTH SEMESTER (July-December)														
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course Category**	**Course Title (Course Name)**	**Credit Structure**				**SS**	**Total Marks**		**Credits**	**Hrs/ Week**
						L	**T**	**P**	**R**		**CIA**	**ESE**		
1	A	PEMET74N / PEMEM74N	PE	PE	Elective-4 (Internship Students: Self Study/MOOC / Online Classes)	3	0	0	0	4.5	40	60	3	3
2	B	PEMET75N/ PEMEM75N	PE	PE	Elective-5 (Internship Students: Self Study/MOOC / Online Classes)	3	0	0	0	4.5	40	60	3	3
3	O	OEXXT72N /IEXXT72N/ OEXXM72N	OE/ ILE	OE/IE	Open Elective/Industry Linked Elective-2 (Internship Students: Self Study/MOOC / Online Classes)	3	0	0	0	4.5	40	60	3	3
4	I*	UEHUT704 / UEHUM70N	HMC	UE	Universal Elective (Internship Students: Self Study/MOOC / Online Classes)	2	0	0	0	3	50	50	2	2
5	S	PCMES705	PS	PC	Seminar	0	0	3	0	1.5	50	0	2	3
6	P	PCMEP706/ PCMEI706	PS	PC	Option 1: Major Project Option 2: Internship (4-6 Months)	0	0	0	12	12	100	0	4	8
7	R/H		VAC		Remedial/Honours Course	3	0	0	0	4.5			3*	3*
Total										**26/ 31**			**17/20***	**22/25***

**No Grade Points will be awarded for the I slot courses*
**The students can take the internship option either in 7th or in 8th semester.*
** Option 1: Work on a Project in the institute/department under the mentorship of faculty members.*
*Option 2: Full semester Internship in Industry/organization (**7th or 8th semester**)*

Note: Open Electives are such courses which will be offered by other departments.

PROGRAM ELECTIVE 4: PEMET 74N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	PEMET741	Gas Turbine and Jet Propulsion	3-0-0-0	**3**	3
	PEMET742	Automobile Engineering	3-0-0-0		3
	PEMET743	Design of Machine Elements	3-0-0-0		3
	PEMET744	Failure Analysis and Design	3-0-0-0		3
	PEMET746	Lean Manufacturing	3-0-0-0		3
	PEMET747	Reliability Engineering	3-0-0-0		3
	PEMET748	Robotics	3-0-0-0		3
	PEMET745	Mechatronics	3-0-0-0		3

PROGRAM ELECTIVE 5: PEMET 75N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
B	PEMET 751	Refrigeration and Air Conditioning	3-0-0-0	**3**	3
	PEMET 752	Acoustics and noise Control	3-0-0-0		3
	PEMET 753	Aerospace Engineering	3-0-0-0		3
	PEMET 754	Renewable Energy Engineering	3-0-0-0		3
	PEMET 756	Mobile Robotics	3-0-0-0		3
	PEMET 757	Flexible Manufacturing Systems	3-0-0-0		3
	PEMET 758	Quality Engineering and Management	3-0-0-0		3
	PEMET 755	**Optimization Techniques**	3-0-0-0		**3**

OPEN ELECTIVE 2: OEMET 72N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OEMET 721	Engineering Materials	3-0-0-0	3	3
	OEMET 722	Robotics	3-0-0-0		3
	OEMET 723	Finite Element Methods	3-0-0-0		3
	OEMET 724	Nondestructive Testing	3-0-0-0		3
	OEMET 725	Engineering Instruments and Measurements	3-0-0-0		3
	OEMET 726	Computational Heat Transfer	3-0-0-0		3
	OEMET 727	Power Plant Engineering	3-0-0-0		3

SL. No	Course Code	Slot I: HMC Elective
1	UEHUT704	Project Management: Planning, Execution, Evaluation and Control
2	UEHU**M**701	Proficiency course in French. (MOOC) (B1 level)
3	UEHUM702	Proficiency Course in German (B1 Level). (MOOC)
4	UEHUM703	Proficiency Course in Spanish (B1 Level) (MOOC)
5	UEHUM704	Introduction to Japanese Language and Culture (N5 level). (MOOC)

EIGHTH SEMESTER (January-June)														
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course Category**	**Course Title (Course Name)**	**Credit Structure**				**SS**	**Total Marks**		**Credits**	**Hrs/ Week**
						L	**T**	**P**	**R**		**CIA**	**ESE**		
1	A	PEMET86N / PEMEM86N	PE	PE	Elective-6 (Internship Students: Self Study/MOOC /Academic Council/Online Classes)	3	0	0	0	4.5	40	60	3	3
2	O	OEXXT83N /IEXXT83N / OEXXM83N	OE/ILE	OE/IE	Open Elective/Industry Linked Elective-3 (Internship Students: Self Study/MOOC /Online Classes)	3	0	0	0	4.5	40	60	3	3
3	I*	UEHUT803 / UEHUM803	HMC	UC	Organizational Behavior and Business Communication ((Internship Students: Self Study/MOOC /Online Classes))	2	0	0	0	3	50	50	1	2
4	P	PCMEP806/ PCMEI806/ PCMEJ806	PS	PC	Option 1: Major Project Option 2: Internship (4-6 Months) Option 3: Major Project Phase -II (For the students who have not opted for internship in S7/S8)	0	0	0	12	12	100	0	4	8
5	R/H		VAC		Project: Honours Course	0	0	0	4	4			4*	4
Total										**24/ 28**			**11/15***	**16/20**

****No Grade Points will be awarded for the I slot courses***

** Option 2: Full semester Internship in Industry/organization (**7th or 8th semester**)*

PROGRAM ELECTIVE 6: PEMET 86N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	PEMET 861	Cryogenic Engineering	3-0-0-0	**3**	3
	PEMET 862	Pressure Vessel and Piping Design	3-0-0-0		3
	PEMET 863	Hybrid and Electric Vehicles	3-0-0-0		3
	PEMET 864	Micro and Nano Manufacturing	3-0-0-0		3
	PEMET 866	Advanced Numerical Control in Manufacturing	3-0-0-0		3
	PEMET 867	Metal Additive Manufacturing	3-0-0-0		3
	PEMET 868	Nanotechnology	3-0-0-0		3
	PEMET 865	Aircraft Design	3-0-0-0		3

OPEN ELECTIVE 3:OEMET 83N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OEMET 831	Industrial Hydraulics and Automation	3-0-0-0	3	3
	OEMET 832	3D Printing and Tooling	3-0-0-0		3
	OEMET 833	Numerical Techniques Engineering	3-0-0-0		3
	OEMET 834	Business Organization and Development	3-0-0-0		3
	OEMET 835	World Class Manufacturing	3-0-0-0		3
	OEMET 836	Micro Electro Mechanical Systems	3-0-0-0		3
	OEMET 837	Product Design and Innovation	3-0-0-0		3

HMC Courses			
Sl. No:	**Semester**	**Course Area**	**Credits**
1	**S1/S2**	Life Skills and Professional Communication	1
2	**S3 /S4**	Economics for Engineers	2
3		Engineering Ethics and Sustainable Development	2
4	**S5**	Constitution Of India. (MOOC)	1
5	**S7**	Elective (Project Management/Foreign Languages)	2
6	**S8**	Organizational Behavior and Business Communication	1
Total Credits			**9**

BSC Courses			
Sl. No:	**Semester**	**Course Area**	**Credits**
1	**S1**	Mathematics for Physical Science-1	**3**
2	**S1/S2**	Physics for Physical Science	4
3		Chemistry for Physical Science	4
4	**S2**	Mathematics for Physical Science-2	3
5	**S3**	Mathematics for Physical Science-3	3
6	**S4**	Mathematics for Physical Science-4	3
Total Credits			**20**

ESC Courses (Group C)			
Sl. No:	**Semester**	**Course Area**	**Credits**
1	**S1**	Engineering Mechanics	**3**
2		Introduction to Mechanical Engineering/ Civil Engineering	4
3		Algorithmic Thinking with Python	4
4		Engineering Workshop	1
5	**S2**	Engineering Graphics and Computer Aided Drawing	3
6		Basic Electrical and Electronics Engineering	4
7		Engineering Entrepreneurship and IPR	3
8		Basic Electrical and Electronics Engineering Workshop	1
9	**S3**	Introduction to Artificial Intelligence and Data Science	4
10	**S6**	Design Thinking and Creativity	2
Total Credits			**29**

Programme Core Courses (PC) (ME)			
Sl. No:	**Semester**	**Course Area**	**Credits**
1	**S2**	Material Science and Engineering	4
2	**S3**	Mechanics of Solids	4
3		Fluid Mechanics and Machinery	4
4		Computer Aided Machine Drawing & Modelling	2
5		Materials Testing lab	2
6	**S4**	Machine Tools and Metrology	4
7		Engineering Thermodynamics	4
8		Fluid Mechanics and Hydraulic Machines Lab	2
9		Manufacturing Technology Lab	2
10	**S5**	Dynamics of Machinery	4
11		Advanced Manufacturing Engineering	4
12		Industrial and Systems Engineering	3
13		Thermal Engineering Lab-1	2
14		Mechanical Engineering Lab	2
15	**S6**	Heat and Mass Transfer	3
16		Machine Design	3
17		Computer Aided Design and Analysis Lab	2
18		Thermal engineering Lab-2	1
Total Credits (Theory -10, Lab-8)			**52**

Programme Core-Project Based Learning (PBL)			
Sl. No:	**Semester**	**Course Area**	**Credits**
1	**S3**	PBMET304 Manufacturing Processes	4
2	**S4**	PBMET404 Mechanics of Machinery	4
3	**S5**	PBMET504 Thermal Engineering	4
4	**S6**	PBMET604 Management for Engineers	4
Total Credits			**16**

Programme Elective Courses (PE)			
Sl. No:	**Semester**	**Course Type**	**Credits**
1	S4	PE-1	3
2	**S5**	PE-2	3
3	**S6**	PE-3	3
4	**S7**	PE-4	3
5		PE-5	3
6	**S8**	PE-6	3
Total Credits			**18**

Open Elective Courses/Industry Elective(OE/IEL)			
Sl. No:	**Semester**	**Course Type**	**Credits**
1	**S6**	OE/ILE-1	3
2	**S7**	OE/ILE-2	3
3	**S8**	OE/ILE-3	3
Total Credits			**9**

Project/ Internship and Seminar			
Sl. No:	**Semester**	**Course Type**	**Credits**
1	**S6**	Mini Project	2
2	**S7**	Seminar	2
3		Major Project/Internship	4
4	**S8**	Major Project/Internship/Research Project	4
Total Credits			**12**

Activity Points				
Sl. No.	**Group**	**Courses**	**Credits**	**Minimum Credit Requirements**
1	I	NSS, NCC, NSO (National Sports Organization)	1 (40 Points)	3 Credits (One credit from each Group)
2		Arts/Sports/Games		
3		Union/Club Activities		
4	II	English Proficiency Certification (TOFEL, IELTS, BEC etc.)	1 (40 Points)	
5		Aptitude Proficiency Certification (GRE, CAT, GMAT etc.)/ Valid Gate Score.		
6		Short Term Internship (Minimum 2 weeks), Clinical Exposure/Training (Minimum 2 weeks), Conferences/Paper Presentation/ Workshop Activities/ Professional Body Activities, Participation in University level/State Level/ National Level Hackathons		
7	III	Journal Publication, Patents, Start-Up, Innovation, Winners of National/ International Level Hackathons	1 (40 Points)	
8		**Skilling Certificates** (Approved by the University)		

- ***Students are required to acquire a minimum of 120 activity points, with at least 40 points per group, to fulfill the curriculum requirement of 3 activity credits.***
- ***For B. Tech Lateral Entry students, 30 points per group are required. A minimum of 90 activity points must be acquired to obtain the 3 activity credits mandated by the curriculum.***

Course classifications of the B. Tech Programmes and Overall Credit Structure			
Sl. No	**Category**	**Code**	**Credits**
1	Humanities and Social Sciences including Management Courses	HMC	9
2	Basic Science Courses	BSC	20
3	Engineering Science Courses	ESC	29
4	Programme (Professional) Core Courses	PCC	52
5	Programme (Professional) Core Courses-Project Based Learning	PBL	16
6	Programme Elective Courses	PEC	18
7	Open Elective Courses/Industry Linked Elective	OEC/ILE	9
8	Mini Project,Project Work/Internship and Seminar	PWS	12
9	Health and Wellness	PW	1
10	Skill Enhancement Courses (Digital 101)	SEC	1
11	Mandatory Student Activities	MSA	3
Total Credits			**170**