



APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

(A State Government University)

B. Tech

Curriculum (2024)- Semester I to VIII

Mechatronics Engineering

Branch Code: MR

(Group C)

Ambady Nagar, Sreekaryam

Thiruvananthapuram- 695016

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 Physical Science-1	3	0	0	0	4.5	40	60	3	3
2	B S1/ S2	GZPHT121	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	100	0		
8	S1/ S2	UCSEM129	SEC	UC	Skill Enhancement Course: Digital 101(30 Hours, NASSCOM)	MOOC				2			-	
Total										30/ 32			20	24/ 25
Bridge Course (Mathematics or Introduction to Computer Science) *: Total 15 Hrs.														

*Valuation for HMC courses will be done at college level, Question papers will be provided by the University.

*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: Engineering Physics, Engineering Chemistry, Health and Safety and Life skill and Universal Human Values shall be offered in both S1 and S2. Institutions can advise students belonging to about 50% of the number of branches in the Institution to opt for Engineering Physics/ Health and wellness in S1 and Engineering Chemistry/ Life Skills and Professional Communication in S2 & vice versa.

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 Physical Science-2	3	0	0	0	4.5	40	60	3	3
2	B S1/ S2	GZPHT121	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	GZEST204	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	PCMRT205	PC	PC	Transducers & Measurements	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	PW	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	100	0		
8	L	GZESL208	ESC	GC	Basic Electrical and Electronics Engineering workshop	0	0	2	0	1	50	50	1	2
9	S1/ S2	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 Physical Science-3	3	0	0	0	4.5	40	60	3	3
2	B	PCMRT302	PC	PC	Electrical machines & Drives	3	1	0	0	5	40	60	4	4
3	C	PCMRT303	PC	PC	Mechanics of Solids	3	1	0	0	5	40	60	4	4
4	D	PBMRT304	PC-PBL	PB	Analog electronics	3	0	0	1	5.5	60	40	4	4
5	F	GNEST305	ESC	GC	Introduction to Artificial Intelligence and Data Science	3	1	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	PCMRL307	PCL	PC	Electrical Technology Lab	0	0	3	0	1.5	50	50	2	3
8	Q	PCMRL308	PCL	PC	Instrumentation 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*
Bridge Course for Lateral Entry Students: Total 15 Hrs.														

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	PCMRT402	PC	PC	Digital Electronics	3	1	0	0	5	40	60	4	4
3	C	PCMRT403	PC	PC	Computer architecture and microcontroller	3	1	0	0	5	40	60	4	4
4	D	PBMRT404	PC-PBL	PB	Manufacturing Process	3	0	0	1	5.5	60	40	4	4
5	E	PEMRT41N	PE	PE	PE-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	PCMRL407	PCL	PC	Analog and Digital Electronics Lab	0	0	3	0	1.5	50	50	2	3
8	Q	PCMRL408	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*
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. Institutions can advise students belonging to about 50% of the number of branches in the Institution to opt for Economics for Engineers in S3 and Engineering Ethics & Sustainable Development in S4 and vice versa.

PROGRAM ELECTIVE I: PEMRT 41N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	PEMRT 411	Industrial engineering	3-0-0-0	3	3
	PEMRT 412	Biomedical instrumentation	3-0-0-0		3
	PEMRT 413	Automobile engineering	3-0-0-0		3
	PEMRT 414	Network theory	3-0-0-0		3
	PEMRT 415	Object oriented Programming	3-0-0-0		5/3

Note : Level 5 courses in the B. Tech curriculum carry a total of 5 credits, consisting of 3 credits for the Programme Elective and 2 additional credits. The additional 2 credits shall be awarded only if the student meets the eligibility conditions specified in the B. Tech. -2024 regulations. If those conditions are not fulfilled, the student will receive only 3 credits for the course.

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	PCMRT501	PC	PC	Linear control systems	3	1	0	0	5	40	60	4	4
2	B	PCMRT502	PC	PC	Thermodynamics	3	1	0	0	5	40	60	4	4
3	C	PCMRT503	PC	PC	Industrial Hydraulics & Pneumatics	3	0	0	0	4.5	40	60	3	3
4	D	PBMRT504	PC-PBL	PB	Signal Processing & Communication	3	0	0	1	5.5	60	40	4	4
5	E	PEMRT52N	PE	PE	PE-2	3	0	0	0	4.5	40	60	3	3
6	I*	UCHUM506	HMC	UC	Constitution Of India (MOOC)	-	-	-	-	2	-	-	1	-
7	L	PCMRL507	PCL	PC	CAD Lab	0	0	3	0	1.5	50	50	2	3
8	Q	PCMRL508	PCL	PC	Microcontroller 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: PEMRT 52N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	PEMRT 521	Power electronics	3-0-0-0	3	3
	PEMRT 522	Design of manufacture	3-0-0-0		3
	PEMRT 523	Operational research	3-0-0-0		3
	PEMR T524	Numerical Computation using Python	3-0-0-0		3
	PEMRT 526	Metallurgy and material Engineering	3-0-0-0		3
	PEMRT 525	IoT & Applications	3-0-0-0		5/3

SIXTH 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	PCMRT601	PC	PC	Robotics & Machine vision	3	1	0	0	5	40	60	4	4
2	B	PCMRT602	PC	PC	Autotronics	3	0	0	0	4.5	40	60	3	3
3	C	PEMRT63N	PE	PE	PE-3	3	0	0	0	4.5	40	60	3	3
4	D	PBMRT604	PC-PBL	PB	PLC & Data acquisition system	3	0	0	1	5.5	60	40	4	4
5	F	GYEST605	ESC	GC	Design Thinking and Product Development (Group Specific Syllabus)	2	0	0	0	3	40	60	2	2
6	O	OEMRT61N /IEMRT61N	OE/ILE	OE/IE	OE/ILE-1	3	0	0	0	4.5	40	60	3	3
7	L	PCMRL607	PCL	PC	Mechatronics systems & PLC lab	0	0	3	0	1.5	50	50	2	3
8	P	PCMRP608	PWS	PC	Mini Project: Socially Relevant Project	0	0	0	3	3	50	50	2	3
10	R/ M/ H		VAC		Remedial/Minor/Honours Course	3	0	0	0	4.5			3*	3*
	S5/ S6	Industrial Visit (Maximum of 12 Days are permitted, Not Exceeding more than 6 Working Days) /Industrial Training												
Total										32/ 36			23/26*	25/28*

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: PEMRT 63N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
C	PEMRT 631	Network & Data security	3-0-0-0	3	3
	PEMRT 632	Renewable energy	3-0-0-0		3
	PEMRT 633	Advanced Automation	3-0-0-0		3
	PEMRT 634	Wireless & Sensors networks	3-0-0-0		3
	PEMRT 636	Embedded systems	3-0-0-0		3
	PEMRT 637	mechanics of machinery	3-0-0-0		3
	PEMRT 635	Soft computing	3-0-0-0		5/3

OPEN ELECTIVE 1: OEMRT 61N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OEMRT 611	Transducers & Measurements	3-0-0-0	3	3
	OEMRT 612	PLC & Data acquisition system	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	PEMRT74N / PEMRM74N	PE	PE	PE-4 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
2	B	PEMRT75N/ PEMRM75N	PE	PE	PE-5 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
3	O	OEMRT72N /IEMRT72N/ OEMRM72N	OE/ ILE	OE/IE	OE/ILE-2 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
4	I*	UEHUT704 /UEHUM70N	HMC	UE	Elective (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	2	0	0	0	3	50	50	2	2
5	S	PCMRS705	PS	PC	Seminar	0	0	3	0	1.5	50	0	2	3
6	P	PCMRP706/ PCMRI706	PS	PC	Option 1: Major Project Option 2: Internship (4-6 Months)	0	0	0	8	8	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: PEMRT 74N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	PEMRT 741	Fluid Mechanics & Machinery	3-0-0-0	3	3
	PEMRT 742	Machine learning	3-0-0-0		3
	PEMRT 743	Entrepreneurship	3-0-0-0		3
	PEMRT 744	MEMS	3-0-0-0		3
	PEMRT 746	Energy Management & Auditing	3-0-0-0		3
	PEMRT 745	Smart Manufacturing	3-0-0-0		5/3

PROGRAM ELECTIVE 5: PEMRT 75N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
B	PEMRT 751	Computer networks	3-0-0-0	3	3
	PEMRT 752	Six sigma	3-0-0-0		3
	PEMRT 753	Nano electronics	3-0-0-0		3
	PEMRT 754	Theory of Metal cutting	3-0-0-0		3
	PEMRT 756	Dynamics & Machinery	3-0-0-0		3
	PEMRT 755	Digital Image Processing	3-0-0-0		5/3

OPEN ELECTIVE 2: OEMRT 72N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OEMRT 721	Basics of Robotics & Automation	3-0-0-0	3	3
	OEMRT 722	Industrial Hydraulics & Pneumatics	3-0-0-0		3

SL. No	Course Code	Slot I: HMC Elective
1	UEHUT704	Project Management: Planning, Execution, Evaluation and Control
2	UEHUM701	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)

EIGHT 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	PEMRT86N / PEMRM86N	PE	PE	PE-6 (Internship Students: Self Study/MOOC Approved by the University/Online Classes)	3	0	0	0	4.5	40	60	3	3
2	O	OEMRT83N /IEMRT83 N/ OEMRM83 N	OE/ILE	OE/IE	OE/ILE-3 (Internship Students: Self Study/MOOC Approved by the University/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 Approved by the University/Online Classes)	2	0	0	0	3	50	50	1	2
4	P	PCMRP806 / PCMRI806/ PCMRJ806	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	8	8	100	0	4	8
Total										20			11	16

*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: PEMRT 86N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
B	PEMRT 861	Bio mechatronics	3-0-0-0	3	3
	PEMRT 862	Hybrid & Electric vehicles	3-0-0-0		3
	PEMRT 863	Operations Management	3-0-0-0		3
	PEMRT 864	Ergonomics	3-0-0-0		3
	PEMRT 865	Industrial Instrumentation	3-0-0-0		5/3

OPEN ELECTIVE 3: OEMRT 83N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OEMRT 831	Autotronics	3-0-0-0	3	3
	OEMRT 832	Advanced Automation	3-0-0-0		3

Minor

Specialization	Basket1				Basket2			
Eligible	All branches				All branches			
Semester	Basket 1				Basket 2			
	Course Code	Course Name	Hours	Credit	Course Code	Course Name	Hours	Credit
S3		Introduction to sensors and Transducers				Introduction to sensors and Transducers		
S4		Fundamentals of Analog and Digital electronics				Basics of Industrial Hydraulics & Pneumatics		
S5		Embedded Systems				Data Acquisition & PLC Systems		
S6		Introduction to Robotics & Automation				Advanced Automation Systems		
S7		Mini Project				Mini Project		

Honours

Semester	Group 1				Group 2			
	Course Code	Course Name	Hours	Credit	Course Code	Course Name	Hours	Credit
S4		Micro Mechatronics systems				Industrial Automation		
S5		Drives & Control System for Automation				Advanced Control Systems		
S6		Artificial Intelligence & Expert system in Automation				Advanced Computer concept for Automation		
S7		Advanced application of Mechatronics				CNC Machine systems design		
S8		Mini Project				Mini Project		

HMC Courses			
Sl. No:	Semester	Course Area	Credits
1	S1/S2	Life Skills and Professional Communication	1
2	S3	Economics for Engineers	2
3	/S4	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	Group Specific Mathematics-1	3
2	S1/S2	Physics for Engineers	4
3		Chemistry for Engineers	4
4	S2	Group Specific Mathematics-2	3
5	S3	Group Specific Mathematics-3	3
6	S4	Group Specific Mathematics-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)			
Sl. No:	Semester	Course Area	Credits
1	S2	Transducers & Measurements	4
2	S3	Electrical machines & Drives	4
3		Mechanics of Solids	4
4		Electrical Technology Lab	2
5		Instrumentation Lab	2
6		Digital Electronics	4
7	S4	Computer architecture and microcontroller	4
8		Analog and Digital Electronics Lab	2
9		Mechanical engineering lab	2
10		Linear control systems	4
11	S5	Thermodynamics	4
12		Industrial Hydraulics & Pneumatics	3
13		CAD Lab	2
14		Microcontroller Lab	2
15		Robotics & Machine vision	4
16	S6	Autotronics	3
17		Mechatronics systems & PLC lab	2
Total Credits (Theory -10, Lab-7)			52

Programme Core-Project Based Learning (PBL)			
Sl. No:	Semester	Course Area	Credits
1	S3	Core PBL-1	4
2	S4	Core PBL-2	4
3	S5	Core PBL-3	4
4	S6	Core PBL-4	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	HWP	1
10	Skill Enhancement Courses (Digital 101)	SEC	1
11	Mandatory Student Activities	MSA	3
Total Credits			170