APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

(A State Government University)

B. Tech Curriculum-2024

Semester I to VIII

Artificial Intelligence

Branch Code: AI

(Group A)

Ambady Nagar , Sreekaryam

Thiruvananthapuram- 695016

FIRST SEMESTER (July-December): Group A
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	GAMAT101	BSC	GC	Mathematics for Information Science-1	3	0	0	0	4.5	40	60	3	3
2	B S1/ S2	GAPHT121	BSC	GC	Physics for Information Science	3	0	2	0	5.5	40	60	4	5
		GXCYT122			Chemistry for Information Science									
3	C	GMEST103	ESC	GC	Engineering Graphics and Computer Aided Drawing.	2	0	2	0	4	40	60	3	4
4	D	GXEST104	ESC	GC	Introduction to 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	F	UCEST105	ESC	UC	Algorithmic Thinking with Python	3	0	2	0	5.5	40	60	4	5
6	L	GXESL106	ESC	GC	Basic Electrical and Electronics 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(NASSCOM)	MOOC***			2			-	
	**Total**					30/ 32			20	25/ 26
Bridge Course (Mathematics or Introduction to Computer Science) *:   **Total 15 Hrs.**

SECOND SEMESTER (January-June): Group A
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	GAMAT201	BSC	GC	Mathematics for Information Science-2	3	0	0	0	4.5	40	60	3	3
2	B S1/ S2	GAPHT121	BSC	GC	Physics for Information Science	3	0	2	0	5.5	40	60	4	5
		GXCYT122			Chemistry for Information Science									
3	C	GXEST203	ESC	GC	Foundations of Computing: From Hardware Essentials to Web Design	3	0	0	0	4.5	40	60	3	3
4	D	GXEST204	ESC	GC	Programming in C	3	0	2	0	5.5	40	60	4	5
5	E	PCCST205	PC	PC	Discrete Mathematics	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	GXESL208	ESC	GC	IT Workshop	0	0	2	0	1	50	50*	1	2
	S$_1$/ S$_2$	UCSEM129	SEC	UC	Skill Enhancement Course: Digital 101(NASSCOM)	MOOC						1	
	**Total**					34			24	27/ 28

Internal evaluation by college

**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

Note: *Physics, Chemistry, Health and Wellness & Life Skill and Professional Communication can be offered in both Semester 1 (S1) and Semester 2 (S2). Institutions are encouraged to guide approximately 50% of their branches to choose between Physics **or** Chemistry (Slot B) and Health and Wellness **or** Life Skill and Professional Communication (Slot I) in Semester 1.*

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 Reality 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**

Skill Enhancement Course: *Digital 101 is an introductory Massive Open Online Course (MOOC) offered by NASSCOM. It is designed to provide students with foundational knowledge and skills in digital technologies, preparing them for further studies and careers in the digital domain. By incorporating the Digital 101 course into the curriculum, KTU ensures that all students gain valuable digital skills early in their academic journey, enhancing their readiness for advanced courses and future careers in technology.*

Course Registration and Completion*:*

● *Students have the flexibility to register and complete the Digital 101 course either in their first semester (S1) or second semester (S2).*

● *The credit for this course (1 credit) will be officially recorded in the second semester grade card.*

Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	L	T	P	R	SS	CIA	ESE	Credits	Hrs./ Week
					THIRD SEMESTER (July-December)									
1	A	GAMAT301	BSC	GC	Mathematics for Information Science-3	3	0	0	0	4.5	40	60	3	3
2	B	PCAIT302	PC	PC	Foundations of Artificial Intelligence	3	1	0	0	5	40	60	4	4
3	C	PCCST303	PC	PC	Data Structures and Algorithms	3	1	0	0	5	40	60	4	4
4	D	PBAIT304	PC-PBL	PB	Human Computer Interaction	3	0	0	1	5.5	60	40	4	4
5	F	GAEST305	ESC	GC	Digital Electronics & Logic Design	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	PCCSL307	PCL	PC	Data Structures Lab	0	0	3	0	1.5	50	50	2	3
8	Q	PCCAL308	PCL	PC	Python Programming 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.														

Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	L	T	P	R	SS	CIA	ESE	Credits	Hrs./ Week
					FOURTH SEMESTER (January-June)									
1	A	GAMAT401	BSC	GC	Mathematics for Information Science-4	3	0	0	0	4.5	40	60	3	3
2	B	PCCST402	PC	PC	Database Management Systems	3	1	0	0	5	40	60	4	4
3	C	PCCST403	PC	PC	Operating Systems	3	1	0	0	5	40	60	4	4
4	D	PBAIT404	PC-PBL	PB	Foundation of Machine Learning	3	0	0	1	5.5	60	40	4	4
5	E	PEAIT41N	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	PCCSL407	PCL	PC	Operating Systems Lab	0	0	3	0	1.5	50	50	2	3
8	Q	PCCSL408	PCL	PC	DBMS 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: PEAIT41N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	PEAIT412	Data Warehousing	3-0-0-0	**3**	3
	PEAIT413	Agile Methodologies	3-0-0-0		3
	PECAT414	Nature Inspired Computing Techniques	3-0-0-0		3
	PEAIT416	Graphics and multimedia Principles	3-0-0-0		3
	PECST417	Soft Computing	3-0-0-0		3
	PEAIT418	Security Assessment and Risk Analysis	3-0-0-0		3
	PEAIT419	Introduction to Theory of Computation	3-0-0-0		3
	PEAIT415	**Robotic Process Automation**	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	PCCST501	PC	PC	Computer Networks	3	1	0	0	5	40	60	4	4
2	B	PCAIT502	PC	PC	Recommendation System	3	1	0	0	5	40	60	4	4
3	C	PCAIT503	PC	PC	Web and Mobile Application for AI	3	0	0	0	4.5	40	60	3	3
4	D	PBAIT504	PC-PBL	PB	Real Time Systems	3	0	0	1	5.5	60	40	4	4
5	E	PEAIT52N	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	PCCAL507	PCL	PC	AI Algorithms Lab	0	0	3	0	1.5	50	50	2	3
8	Q	PCAIL508	PCL	PC	Web and Mobile Application Development 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*
	S₅/S₆	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.

Industrial Training:
Students who are not participating in the industrial visit must attend industrial training during that period.

PROGRAM ELECTIVE 2: PEAIT52N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	PEAIT521	Knowledge Engineering	3-0-0-0	**3**	3
	PEAIT522	Healthcare Analytics	3-0-0-0		3
	PEAIT523	Storage Technologies	3-0-0-0		3
	PECST524	Data Compression	3-0-0-0		3
	PEAIT527	Responsible Artificial Intelligence	3-0-0-0		3
	PEAIT528	Malware Detection and Analysis	3-0-0-0		3
	PEAIT525	**UI & UX Design**	3-0-0-0		**5/3**
	PEAIT595	**Augmented and Virtual Reality**	3-0-0-0		**5/3**

Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	L	T	P	R	SS	CIA	ESE	Credits	Hrs/ Week
					SIXTH SEMESTER (January-June)									
1	A	PCAIT601	PC	PC	Foundation of Deep Learning	3	1	0	0	5	40	60	4	4
2	B	PCAIT602	PC	PC	Robotics and Intelligent Systems	3	0	0	0	4.5	40	60	3	3
3	C	PEAIT63N	PE	PE	PE-3	3	0	0	0	4.5	40	60	3	3
4	D	PBCAT604	PC-PBL	PB	Cloud and Big Data Architecture	3	0	0	1	5.5	60	40	4	4
5	F	GAEST605	ESC	GC	Design Thinking and Product Development (Group Specific Syllabus)	2	0	0	0	3	40	60	2	2
6	O	OEAIT61N /IEAIT61N	OE/ILE	OE/IE	OE/ILE-1	3	0	0	0	4.5	40	60	3	3
7	L	PCCAL607	PCL	PC	Robotics Lab	0	0	3	0	1.5	50	50	2	3
8	P	PCAIP608	PWS	PC	Mini Project: Socially Relevant Project	0	0	0	3	3	50	50	2	3
9	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.

Industrial Training:
Students who are not participating in the industrial visit must attend industrial training during that period.

PROGRAM ELECTIVE 3: PEAIT63N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
C	PEAIT631	Neural Networks and Fuzzy Logic	3-0-0-0	**3**	3
	PEAIT632	Game Theory	3-0-0-0		3
	PEAIT634	Software Defined Networks	3-0-0-0		3
	PEAIT636	Film Making & Radio Podcasting	3-0-0-0		3
	PEAIT637	Internet of Things	3-0-0-0		3
	PEAIT639	Principles of Compiler and Language Processing	3-0-0-0		3
	PEAIT635	**DevOps**	3-0-0-0		**5/3**
	PEAIT695	**Ethical Hacking and Security**	3-0-0-0		**5/3**

OPEN ELECTIVE 1: OET61N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OECST611	Data Structures	3-0-0-0	3	3
	OECST612	Data Communication	3-0-0-0		3
	OECST613	Foundations of Cryptography	3-0-0-0		3
	OECST614	Machine Learning for Engineers	3-0-0-0		3
	OECST615	Object oriented Programming	3-0-0-0		3

SEVENTH SEMESTER (July-December)														
Sl. No:	Slot	Course Code	Course Type	Course Category	Course Title (Course Name)	L	T	P	R	SS	CIA	ESE	Credits	Hrs/ Week
1	A	PEAIT74N/ PEAIM74N	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	PEAIT75N/ PEAIM75N	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	OEAIT72N /IEAIT72N/ OEAIM72N	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	PCAIS705	PWS	PC	Seminar	0	0	3	0	1.5	50	0	2	3
6	P**	PCAIP706/ PCAII706	PWS	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**			**17**	**22**

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

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

PROGRAM ELECTIVE 4: PEAIT74N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	PEAIT741	Cognitive Science	3-0-0-0	**3**	3
	PEAIT742	Image and Video Analytics	3-0-0-0		3
	PEAIT743	Cloud Service Management	3-0-0-0		3
	PEAIT744	Virtualization in Cloud	3-0-0-0		3
	PEAIT746	Generative AI	3-0-0-0		3
	PECST747	Blockchain and Cryptocurrencies	3-0-0-0		3
	PEAIT748	Web Application Security	3-0-0-0		3
	PEAIT745	**Game Development**	3-0-0-0		**5/3**

PROGRAM ELECTIVE 5: PEAIT75N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
B	PEAIT751	Network Security Protocol	3-0-0-0	**3**	3
	PEAIT752	Modern Computer Vision	3-0-0-0		3
	PEAIT753	Stream Processing	3-0-0-0		3
	PECST754	Digital Forensics	3-0-0-0		3
	PEAIT756	Digital Marketing	3-0-0-0		3
	PEAIT757	Social Network Security	3-0-0-0		3
	PEAIT758	Computing Linguistics	3-0-0-0		3
	PEAIT755	**Optimization Techniques**	3-0-0-0		**5/3**

OPEN ELECTIVE 2: OEAIT72N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OECST721	Cyber Security	3-0-0-0	3	3
	OECST722	Cloud Computing	3-0-0-0		3
	OECST723	Software Engineering	3-0-0-0		3
	OECST724	Computer Networks	3-0-0-0		3
	OECST725	Mobile Application Development	3-0-0-0		3

Slot I: HMC Elective	
1	Project Management: Planning, Execution, Evaluation and Control
2	Proficiency course in French. (MOOC) (B1 level)
3	Proficiency Course in German (B1 Level). (MOOC)
4	Proficiency Course in Spanish (B1 Level) (MOOC)
5	Introduction to Japanese Language and Culture (N5 level). (MOOC)

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		
					EIGHTH SEMESTER (January-June)									
1	A	PEAIT86N/ PEAIM86N	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	OEAIT83N /IEAIT83N/ OEAIM83N	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**	PCAIP806/ PCAII806/ PCAIJ806	PWS	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

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

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

PROGRAM ELECTIVE 6: PEAIT86N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	PEAIT861	Text and Speech Analysis	3-0-0-0	3	3
	PEAIT863	Software Testing & Automation	3-0-0-0		3
	PEAIT866	Introduction to Metaverse	3-0-0-0		3
	PEAIT867	3D Printing & Design	3-0-0-0		3
	PEAIT868	Information Security & Management	3-0-0-0		3
	PEAIT869	Computer and Network Forensics	3-0-0-0		3
	PEAIT865	**Business Analytics**	3-0-0-0		**5/3**
	PEAIT895	**Security & Privacy in Cloud**	3-0-0-0		**5/3**

OPEN ELECTIVE 3: OEAIT83N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OECST831	Introduction To Algorithms	3-0-0-0	3	3
	OECST832	Web Programming	3-0-0-0		3
	OECST833	Internet of Things	3-0-0-0		3
	OECST834	Computational Complexity	3-0-0-0		3
	OECST835	Computer Graphics	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 Information Science-1	3
2	S1/S2	Physics for Information Science	4
3		Chemistry for Information Science	4
4	S2	Mathematics for Information Science-2	3
5	S3	Mathematics for Information Science-3	3
6	S4	Mathematics for Information Science-4	3
Total Credits			**20**

ESC Courses (Group A)

Sl. No:	Semester	Course Area	Credits
1	S1	Engineering Graphics and Computer Aided Drawing	3
2		Introduction to Electrical and Electronics Engineering	4
3		Algorithmic Thinking with Python	4
4		Basic Electrical and Electronics Engineering Workshop	1
5	S2	Foundations of Computing: From Hardware Essentials to Web Design	3
6		Programming in C	4
7		Engineering Entrepreneurship and IPR	3
8		IT 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	Core 1	4
2	S3	Core 2	4
3		Core 3	4
4		Lab-1	2
5		Lab-2	2
6	S4	Core 4	4
7		Core 5	4
8		Lab-3	2
9		Lab-4	2
10	S5	Core 6	4
11		Core 7	4
12		Core 8	3

13		Lab-5	2
14		Lab-6	2
15	**S6**	Core 9	4
16		Core 10	3
17		Lab-7	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**