



**SREE BUDDHA**  
**COLLEGE OF ENGINEERING, PATTOOR**  
**(AUTONOMOUS)**  
(Affiliated to APJAK Technological University, Kerala)

**Curriculum**  
**(2024)**  
**B.Tech-Semester I to VIII**

**Computer Science and Engineering**  
**(Artificial Intelligence)**  
**Branch Code: CA**  
**(Group A)**



### Note

This curriculum adheres to the syllabus prescribed by APJ Abdul Kalam Technological University for the academic year 2024. All courses, credits, and evaluation criteria are implemented as per the regulations and guidelines issued by the university.

The institution ensures full compliance with the university's curriculum framework, ensuring quality education aligned with its standards.



  
Chairman

**Academic Council**  
CHAIRMAN  
ACADEMIC COUNCIL  
SREE BUDDHA COLLEGE OF ENGINEERING  
PATTOOR, (AUTONOMOUS), NOORAHAD  
ALAPPUZHA-690529

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
		GACYT122			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	GYEST104	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	GYESL106	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	S1/ S2	UCSEM129	SEC	UC	Skill Enhancement Course: Digital 101(NASSCOM)	MOOC				2			-	
<b>Total</b>									30/ 32			<b>20</b>	<b>25/ 26</b>	
<b>Bridge Course (Mathematics or Introduction to Computer Science) *:</b>										<b>Total 15 Hrs.</b>				

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	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	3.5	100	0		
8	L	GXESL208	ESC	GC	IT Workshop	0	0	2	0	1	50	50*	1	2
	S1/ S2	UCSEM129	SEC	UC	Skill Enhancement Course: Digital 101(NASSCOM)	MOOC							1	
<b>Total</b>									34			<b>24</b>	<b>27/ 28</b>	

*\*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
<b>Total Hours</b>		<b>30</b>

**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.*

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	GAMAT301	BSC	GC	Mathematics for Information Science-3	3	0	0	0	4.5	40	60	3	3
2	B	PCCST302	PC	PC	Theory of Computation	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	PBCST304	PC-PBL	PB	Object Oriented Programming	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/S 4	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*
<b>Total</b>									<b>31/36</b>			<b>25/29*</b>	<b>27/31*</b>	
<b>Bridge Course for Lateral Entry Students: Total 15 Hrs.</b>														

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	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	PBCST404	PC-PBL	PB	Computer Organization and Architecture	3	0	0	1	5.5	60	40	4	4
5	E	PECAT41N	PE	PE	PE-1	3	0	0	0	4.5	40	60	3	3
6	G S3/S 4	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*
<b>Total</b>									<b>31/36</b>			<b>24/28*</b>	<b>26/30*</b>	

**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: PECAT41N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	PECST411	Software Engineering	3-0-0-0	3	3
	PECST412	Pattern Recognition	3-0-0-0		3
	PECST413	Functional Programming	3-0-0-0		3
	PECAT414	Nature Inspired Computing Techniques	3-0-0-0		3
	PECST416	Signals And Systems	3-0-0-0		3
	PECST417	Soft Computing	3-0-0-0		3
	PECST419	Cyber Ethics Privacy and Legal Issues	3-0-0-0		3
	<b>PECAT415</b>	<b>Algorithm Analysis and Design</b>	3-0-0-0		<b>5/3</b>
	<b>PECST495</b>	<b>Advanced Data Structures</b>	3-0-0-0		<b>5/3</b>

*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	PCCAT502	PC	PC	Introduction to Artificial Intelligence	3	1	0	0	5	40	60	4	4
3	C	PCCST503	PC	PC	Machine Learning	3	0	0	0	4.5	40	60	3	3
4	D	PBCAT504	PC-PBL	PB	Advanced Graph Algorithms	3	0	0	1	5.5	60	40	4	4
5	E	PECAT52N	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	PCCSL508	PCL	PC	Machine Learning 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 <sub>5</sub> /S <sub>6</sub>	Industrial Visit (Maximum 12 Days are permitted, Not Exceeding more than 6 Working Days) /Industrial Training												
<b>Total</b>										<b>30/35</b>			<b>23/27*</b>	<b>24/28*</b>

*\*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: PECAT52N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	PECST521	Software Project Management	3-0-0-0	3	3
	PECAT522	Artificial Neural Networks Techniques	3-0-0-0		3
	PEAIT521	Knowledge Engineering	3-0-0-0		3
	PEAIT523	Healthcare Analytics	3-0-0-0		3
	PECST526	Digital Signal Processing	3-0-0-0		3
	PECST527	Computer Graphics & Multimedia	3-0-0-0		3
	PECST528	Advanced Computer Architectures	3-0-0-0		3
	PECST525	<b>Data Mining</b>	<b>3-0-0-0</b>		<b>5/3</b>
	PECAT595	<b>Foundations of Security in Computing</b>	<b>3-0-0-0</b>		<b>5/3</b>

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	PCCAT601	PC	PC	Agent Based Intelligent Systems	3	1	0	0	5	40	60	4	4
2	B	PCCAT602	PC	PC	Robotics and Automation	3	0	0	0	4.5	40	60	3	3
3	C	PECAT63N	PE	PE	PE-3	3	0	0	0	4.5	40	60	3	3
4	D	PBCAT604	PC-PBL	PB	Introduction to Deep Learning	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	OECAT61N/ IECAT61N	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	PCCSP608	PWS	PC	Mini Project: Socially Relevant Project	0	0	0	0	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												
<b>Total</b>										<b>32/ 36</b>		<b>23/26*</b>	<b>25/28*</b>	

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: PECAT63N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
C	PECST631	Software Testing	3-0-0-0	3	3
	PECAT632	Introduction to Business Analytics	3-0-0-0		3
	PECAT633	AI For Cyber Security	3-0-0-0		3
	PECAT634	Wireless Sensor Networks	3-0-0-0		3
	PECST636	Digital Image Processing	3-0-0-0		3
	PECAT637	Embedded Systems and its Applications	3-0-0-0		3
	PECST635	Cloud Computing	3-0-0-0		5/3
	PECST695	Mobile Application Development	3-0-0-0		5/3

## OPEN ELECTIVE 1: OECAT61N

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 Categor	Course Title (Course Name)	Credit Structure					Total Marks		Credits	Hrs/Week
						L	T	P	R	SS	CIA	ESE		
1	A	PECAT74N	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	PECAT74N	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	OECAT72N /IECAT72N/ OECAM72N	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	PCCAS705	PWS	PC	Seminar	0	0	3	0	1.5	50	0	2	3
6	P	PCCAP706/ PCCAI706	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*
<b>Total</b>											<b>26</b>		<b>17</b>	<b>22</b>

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



\*Students can opt for the internship either in the 7<sup>th</sup> or 8<sup>th</sup> 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 (7<sup>th</sup> or 8<sup>th</sup> semester)

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

### PROGRAM ELECTIVE 4: PECAT74N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
<b>A</b>	PECST741	Formal Methods in Software Engineering	3-0-0-0	3	3
	PECST742	Web Programming	3-0-0-0		3
	PECST743	Bioinformatics	3-0-0-0		3
	PECST744	Information Security	3-0-0-0		3
	PECAT746	Programming in R	3-0-0-0		3
	PECAT747	Biomedical Electronics	3-0-0-0		3
	PECST748	Real Time Systems	3-0-0-0		3
	PECST745	Computer Vision	3-0-0-0		<b>5/3</b>

### PROGRAM ELECTIVE 5: PECAT75N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
<b>B</b>	PECST751	Advanced Computer Networks	3-0-0-0	3	3
	PECST752	Responsible Artificial Intelligence	3-0-0-0		3
	PECST753	Fuzzy Systems	3-0-0-0		3
	PECST754	Digital Forensics	3-0-0-0		3
	PECST756	Game Theory and Mechanism Design	3-0-0-0		3
	PECST757	High Performance Computing	3-0-0-0		3
	PECST758	Programming Languages	3-0-0-0		3
	<b>PECST755</b>	<b>Internet of Things</b>	3-0-0-1		<b>5/3</b>

### OPEN ELECTIVE 2: OECAT72N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
<b>O</b>	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)

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	PECAM86N	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	OECAT83N/ IECAT83N/ OECAM83N	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	PCCAP806	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
<b>Total</b>									<b>20</b>			<b>11</b>	<b>16</b>	

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

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

### PROGRAM ELECTIVE 6: PECAT86N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	PECST861	Software Architectures	3-0-0-0	3	3
	PECST862	Natural Language Processing	3-0-0-0		3
	PECAT863	Network Security Protocols	3-0-0-0		3
	PECAT864	Big Data Analytics	3-0-0-0		3
	PECST866	Speech and Audio Processing	3-0-0-0		3
	PECAT867	Stochastic Decision Making	3-0-0-0		3
	PECAT868	Introduction to Reinforcement Learning	3-0-0-0		3
	PECST865	Next Generation Interaction Design	3-0-0-0		5/3

**OPEN ELECTIVE 3: OECAT83N**

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
<b>O</b>	OECST831	Introduction to Algorithms	3-0-0-0	3	3
	OECST832	Web Programming	3-0-0-0		3
	OECST833	Software Testing	3-0-0-0		3
	OECST834	Internet of Things	3-0-0-0		3
	OECST835	Computer Graphics	3-0-0-0		3

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

<b>BSC Courses</b>			
Sl. No:	Semester	Course Area	Credits
1	<b>S1</b>	Group Specific Mathematics-1	3
2	<b>S1/S2</b>	Physics for Engineers	4
3		Chemistry for Engineers	4
4	<b>S2</b>	Group Specific Mathematics-2	3
5	<b>S3</b>	Group Specific Mathematics-3	3
6	<b>S4</b>	Group Specific Mathematics-4	3
<b>Total Credits</b>			<b>20</b>

<b>ESC Courses (Group B)</b>			
Sl. No:	Semester	Course Area	Credits
1	<b>S1</b>	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	<b>S2</b>	Foundations of Computing: From Hardware Essentials to Web Design / Engineering Mechanics (EEE, CP, RA and RU)	3
6		Programming in C	4
7		Engineering Entrepreneurship and IPR	3
8		IT Workshop	1
9	<b>S3</b>	Introduction to Artificial Intelligence and Data Science	4
10	<b>S6</b>	Design Thinking and Creativity	2
<b>Total Credits</b>			<b>29</b>

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	S4	Lab-2	2
6		Core 4	4
7		Core 5	4
8		Lab-3	2
9	S5	Lab-4	2
10		Core 6	4
11		Core 7	4
12	S6	Core 8	3
13		Lab-5	2
14	S6	Lab-6	2
15		Core 9	4
16		Core 10	3
17		Lab-7	2
18		Mini Project	2
<b>Total Credits (Theory -10, Lab-7)</b>			<b>52</b>

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
<b>Total Credits</b>			<b>16</b>

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
<b>Total Credits</b>			<b>18</b>

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
<b>Total Credits</b>			<b>9</b>

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			<b>12</b>

Activity Points				
Sl. No.	Group	Courses	Credits	Minimum Credit Requirements
1	I	NSS, NCC, NSO (National Sports Organization)	1 (40 Points)	<b>3 Credits</b> (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		<b>Skilling Certificates</b> (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.*

<b>Course classifications of the B. Tech Programmes and Overall Credit Structure</b>			
<b>Sl. No</b>	<b>Category</b>	<b>Code</b>	<b>Credits</b>
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
<b>Total Credits</b>			<b>170</b>