



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



## VJEC B. Tech. CURRICULUM 2024

**Semester I to VIII**

**Artificial Intelligence and Data Science**

**Branch Code: AD**

**(Group A - Computer Science)**

FIRST SEMESTER (July-December): Group A														
10 Days Compulsory Induction Program and UHV														
Sl. No:	Slot	Course Code	Course	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 Computer Science-1	3	0	0	0	4.5	40	60	3	3
2	B S1/ S2	GAPHT121	BSC	GC	Physics for Computer Science	3	0	2	0	5.5	40	60	4	5
		GXCYT122			Chemistry for Computer Science and Electrical Science									
3	C	GXEST103	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	UCPWT127	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	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>					

\*No end semester examination

\*\*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).

<b>Digital 101 (NASSCOM)</b>		
<b>Sl. No:</b>	<b>Technologies Covered</b>	<b>Hours</b>
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, we ensure 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.

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	Hr s./ We ek
						L	T	P	R		CIA	ESE		
1	A	GAMAT201	BSC	GC	Mathematics for Computer Science-2	3	0	0	0	4.5	40	60	3	3
2	B	GAPHT121	BSC	GC	Physics for Computer Science	3	0	2	0	5.5	40	60	4	5
	S1/S2	GXCYT122			Chemistry for Computer Science and Electrical 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	UCPWT127	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>										<b>34</b>			<b>24</b>	<b>27/ 28</b>

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 Computer Science-3	3	0	0	0	4.5	40	60	3	3
2	B	PCADT302	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	PBADT304	PC-PBL	PB	Introduction to Data Science	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	PCADL308	PCL	PC	Python and Statistical Modelling 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	Course	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 Computer 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	PEXXT41N	PE	PE	PE-1	3	0	0	0	4.5	40	60	3	3
6	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	PCADL407	PCL	PC	Foundations of AI and Data Science 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>

### PROGRAM ELECTIVE I: PEXXT41N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	PECST411	Software Engineering	3-0-0-0	3	3
	PEADT412	Data Science Privacy & Ethics	3-0-0-0		3
	PECST413	Functional Programming	3-0-0-0		3
	PEADT414	Fundamentals of Bioinformatics	3-0-0-0		3
	PEADT416	Number Theory	3-0-0-0		3
	PECST417	Soft Computing	3-0-0-0		3
	PEADT418	Microcontrollers	3-0-0-0		3
	PEADT415	Foundations of Pattern Recognition	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	PCCST501	PC	PC	Computer Networks	3	1	0	0	5	40	60	4	4
2	B	PCADT502	PC	PC	Robotics and Intelligent Systems	3	1	0	0	5	40	60	4	4
3	C	PCADT503	PC	PC	Machine Learning	3	0	0	0	4.5	40	60	3	3
4	D	PBADT504	PC-PBL	PB	Big Data Analytics	3	0	0	1	5.5	60	40	4	4
5	E	PEXXT52N	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	PCADL507	PCL	PC	Robotics Lab	0	0	3	0	1.5	50	50	2	3
8	Q	PCADL508	PCL	PC	Data Analytics 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												
<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: PEADT52N**

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
<b>E</b>	PECST521	Software Project Management	3-0-0-0	<b>3</b>	3
	PEADT522	Business Analytics	3-0-0-0		3
	PEADT523	Information Systems	3-0-0-0		3
	PECST524	Data Compression	3-0-0-0		3
	PEADT526	Computational Biology	3-0-0-0		3
	PECST527	Computer Graphics & Multimedia	3-0-0-0		3
	PECST528	Advanced Computer Architectures	3-0-0-0		3
	PEADT 525	Fundamentals of Digital Image Processing	3-0-0-0	<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	PCADT601	PC	PC	Deep Learning	3	1	0	0	5	40	60	4	4
2	B	PCADT602	PC	PC	Internet of Things	3	0	0	0	4.5	40	60	3	3
3	C	PEXXT63N	PE	PE	PE-3	3	0	0	0	4.5	40	60	3	3
4	D	PBADT604	PC-PBL	PB	Data Mining and Warehousing	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	OEXXT61N / IEXXT61N	OE/ILE	OE/IE	OE/ILE-1	3	0	0	0	4.5	40	60	3	3
7	L	PCADL607	PCL	PC	Deep Learning Lab	0	0	3	0	1.5	50	50	2	3
8	P	PCADP608	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												
<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: PEXXT63N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
C	PECST631	Software Testing	3-0-0-0	3	3
	PEADT632	Computational Linguistics	3-0-0-0		3
	PEADT633	Machine Learning in Computational Biology	3-0-0-0		3
	PECST634	Advanced Database Systems	3-0-0-0		3
	PEADT636	Web Mining	3-0-0-0		3
	PECST637	Fundamentals of Cryptography	3-0-0-0		3
	PECST638	Quantum Computing	3-0-0-0		3
	PEADT635	Natural Language Processing	3-0-0-0		3

### OPEN ELECTIVE 1: OECST61N

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)	Credit Structure				SS	Total Marks		Credits	Hrs/Week
						L	T	P	R		CIA	ESE		
1	A	PEXXT74N/ PEXXM74N	PE	PE	PE-4 (Internship Students: Self Study/MOOC Approved by the College/Online Classes)	3	0	0	0	4.5	40	60	3	3
2	B	PEXXT75N/ PEXXM75N	PE	PE	PE-5 (Internship Students: Self Study/MOOC Approved by the College/Online Classes)	3	0	0	0	4.5	40	60	3	3
3	O	OEXXT72N /IEXXT72N/ OEXXM72N	OE/ ILE	OE/I E	OE/ILE-2 (Internship Students: Self Study/MOOC Approved by the College/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 College/Online Classes)	2	0	0	0	3	50	50	2	2
5	S	PCADS705	PWS	PC	Seminar	0	0	3	0	1.5	50	0	2	3
6	P	PCADP706/ PCADI706	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: PEXXT74N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	PECST741	Formal Methods in Software Engineering	3-0-0-0	3	3
	PECST742	Web Programming	3-0-0-0		3
	PEADT741	Recommendation Systems	3-0-0-0		3
	PEADT742	Financial Data Science	3-0-0-0		3
	PEADT746	Cloud Computing	3-0-0-0		3
	PECST747	Blockchain And Cryptocurrencies	3-0-0-0		3
	PEADT748	Generative AI	3-0-0-0		3
	PECST745	Computer Vision	3-0-0-0		3

**PROGRAM ELECTIVE 5: PEXXT75N**

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
<b>B</b>	PEADT751	Computational Health Informatics	3-0-0-0	3	3
	PECST752	Responsible Artificial Intelligence	3-0-0-0		3
	PEADT751	Graph Databases and Analysis	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
	PEADT755	Time Series Modelling	3-0-0-0		3

**OPEN ELECTIVE 2: OECST72N**

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

<b>Slot I: HMC Elective</b>	
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	PEXXT86N/ PEXXM86N	PE	PE	PE-6 (Internship Students: Self Study/MOOC Approved by the College/Online Classes)	3	0	0	0	4.5	40	60	3	3
2	O	OEXXT83N/ IEXXT83N/ OEXXM83N	OE/IL E	OE/IE	OE/ILE-3 (Internship Students: Self Study/MOOC Approved by the College/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 College/Online Classes)	2	0	0	0	3	50	50	1	2
4	P	PCADP806/ PCADI806/ PCADJ806	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: PEXXT86N

SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	PECST861	Software Architectures	3-0-0-0	3	3
	PEADT862	Bio Inspired Optimization Techniques	3-0-0-0		3
	PEADT863	Network Security Protocols	3-0-0-0		3
	PECST864	Computational Complexity	3-0-0-0		3
	PECST866	Speech and Audio Processing	3-0-0-0		3
	PECST867	Storage Systems	3-0-0-0		3
	PECST868	Prompt Engineering	3-0-0-0		3
	PECST865	Next Generation Interaction Design	3-0-0-0	3	3

### OPEN ELECTIVE 3: OEADT83N

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	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>			
<b>Sl. No:</b>	<b>Semester</b>	<b>Course Area</b>	<b>Credits</b>
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>			
<b>Sl. No:</b>	<b>Semester</b>	<b>Course Area</b>	<b>Credits</b>
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 A)</b>			
<b>Sl. No:</b>	<b>Semester</b>	<b>Course Area</b>	<b>Credits</b>
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	3
6		Programming in C	4
7		Engineering Entrepreneurship and IPR	3
8		IT Workshop	1
9	<b>S3</b>	Digital Electronics & Logic Design	4
10	<b>S6</b>	Design Thinking and Product Development	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	S5	Lab-3	2
9		Lab-4	2
10		Core 6	4
11	S6	Core 7	4
12		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, Mini Project-1)</b>			<b>54</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	S7	Seminar	2
2		Major Project/Internship	4
3	S8	Major Project/Internship/Research Project	4
<b>Total Credits</b>			<b>10</b>

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		<b>Skilling Certificates</b> (Approved by the College)		

- *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	54
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	Project Work/Internship and Seminar	PWS	10
9	Health and Wellness	PW	1
10	Skill Enhancement Courses (Digital 101)	SEC	1
11	Mandatory Student Activities	MSA	3
<b>Total Credits</b>			<b>170</b>

**Dr. Manoj V Thomas**  
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Vimal Jyothi Engineering College

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