VJEC B. Tech. CURRICULUM 2024

B. Tech
Curriculum (2024)- Semester I to VIII
CIVIL ENGINEERING
Branch Code: CE
Group - C

FIRST SEMESTER (July-December): Group C															
10 Days Compulsory Induction Program and UHV															
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course**	**Course Title (Course Name)**	**Credit Structure**				**SS**	**Total Marks**		Total	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	100	3	3
2	B(s1/S2)	GCPHT121	BSC	GC	Physics for Physical Science	3	0	2	0	5	40	60	100	4	5
		GCCYT122			Chemistry for Physical Science										
3	C	GCEST103	ESC	GC	Engineering Mechanics	3	0	0	0	4.5	40	60	100	4	4
4	D	GCEST104	ESC	GC	Introduction to Mechanical Engineering & Civil Engineering (Part1: Mechanical Engineering)	2	0	0	0	3	20	30	100	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	100	4	5
6	L	GCESL106	ESC	GC	Engineering Workshop	0	2	0	0	1	50	50*	100	1	2
7	I*(s1/s2)	UCHWT127	HWP	UC	Health And Wellness	1	0	1	0	0	50	-	50	1	2/3
		UCHUT128	HMC		Life Skills and Professional Communication	2	0	1	0	3.5	100	-	100		
8	S1/S2	UCSEM129	SEC	UC	Skill Enhancement Course: Digital 101(Nasscom)					2					
Total										**30/32**				**20**	**24/25**
Bridge Course (Mathematics or Introduction to Computer Science) *: Total 15 Hrs															

Internal evaluation by concerned department.

****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).

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 car*

SECOND SEMESTER (January-June): Group C															
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course Category**	**Course Title (Course Name)**	**Credit Structure**				**SS**	**Total Marks**		Total	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	100	3	3
2	B S1/ S2	GCPHT121	BSC	GC	Physics for Physical Science	3	0	2	0	5.5	40	60	100	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	100	3	4
4	D	GCEST204	ESC	GC	Basic Electrical & Electronics Engineering (Part 1: Electrical Engineering)	2	0	0	0	3	20	30	*50*	2+2 =4	4
					(Part 2: Electronics Engineering)	2	0	0	0	3	20	30	50		
5	E	PCCET205	PC	PC	Mechanics of Solids	3	1	0	0	5	40	60	100	4	4
6	F	UCEST206	ESC	UC	Engineering Entrepreneurship & IPR	3	0	0	0	4.5	60	40	100	3	3
7	I** S1 / S2	UCHWT127	HWP	UC	Health and Wellness	1	0	1	0	0	50	0	50	1	2/3
		UCHUT128	HMC		Life Skills and Professional Communication	2	0	1	0	3.5	100	0	100		
8	L	PCCEL218	PCL	PC	Civil Engineering Drafting Lab	0	0	2	0	1	50	50	*100*	1	2
	S1/ S2	UCSEM129	SEC	UC	Skill Enhancement Course: Digital 101(NASSCOM)	***MOOC***								*1*	
Total										**34**				24	27/ 28

THIRD SEMESTER (July-December)														
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course**	**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	PCCET302	PC	PC	Fluid mechanics	3	1	0	0	5	40	60	4	4
3	C	PCCET303	PC	PC	Structural analysis-I	3	1	0	0	5	40	60	4	4
4	D	PBCET304	PC-PBL	PB	Surveying & Geomatics	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	PCCEL307	PCL	PC	Materials testing lab	0	0	3	0	1.5	50	50	2	3
8	Q	PCCEL308	PCL	PC	Fluid mechanics 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**	**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	PCCET402	PC	PC	Soil mechanics	3	1	0	0	5	40	60	4	4
3	C	PCCET403	PC	PC	Structural analysis-II	3	1	0	0	5	40	60	4	4
4	D	PBCET404	PC-PBL	PB	Design of concrete structures	3	0	0	1	5.5	60	40	4	4
5	E	PECET41N	PE	PE	PE-1	3	0	0	0	4.5	40	60	3	3
6	G S3/S4	UCHUT346 UCHUT347	HMC*	UC	Economics for Engineers Engineering Ethics and Sustainable Development	2	0	0	0	3	50	50	2	2
7	L	PCCEL407	PCL	PC	Survey Lab	0	0	3	0	1.5	50	50	2	3
8	Q	PCCEL408	PCL	PC	Civil engineering modelling 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: *Engineering Economics 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 Engineering Economics in S3 and Engineering Ethics &Sustainable Development in S4 and vice versa*.

PROGRAM ELECTIVE I: PECET 41N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	PECET411	Advanced Solid Mechanics	3-0-0-0	3	3
	PECET412	Concrete Technology	3-0-0-0		3
	PECET413	Mechanics of Fluid Flow	3-0-0-0		3
	PECET414	Cartography and GIS	3-0-0-0		3
	PECET415	Architectural Engineering	3-0-0-0		3
	PECET416	Engineering Geology	3-0-0-0		3
	PECET417	Numerical methods for Engineers	3-0-0-0		3
	PECET418	Environmental law and Policy	3-0-0-0		3

FIFTH SEMESTER (July-December)														
Sl. No:	**Slot**	**Course Code**	**Course Type**	**Course**	**Course Title (Course Name)**	**Credit Structure**				**SS**	**Total Marks**		**Credits**	**Hrs./ Week**
						L	**T**	**P**	**R**		**CIA**	**ESE**		
1	A	PCCET501	PC	PC	Hydrology & water resources engineering	3	1	0	0	5	40	60	4	4
2	B	PCCET502	PC	PC	Transportation engineering	3	1	0	0	5	40	60	4	4
3	C	PCCET503	PC	PC	Environmental engineering	3	0	0	0	4.5	40	60	3	3
4	D	PBCET504	PC-PBL	PB	Foundation engineering	3	0	0	1	5.5	60	40	4	4
5	E	PECET52N	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	PCCEL507	PCL	PC	Geotechnical engineering lab	0	0	3	0	1.5	50	50	2	3
8	Q	PCCEL508	PCL	PC	Concrete lab (MT-2)	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 exceedingly 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: PECET 52 N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
E	PECET521	Advanced Structural Analysis	3-0-0-0	3	3
	PECET522	Modern Construction Technology	3-0-0-0		3
	PECET523	Open Channel Hydraulics	3-0-0-0		3
	PECET524	Disaster management	3-0-0-0		3
	PECET525	Design of prestressed concrete	3-0-0-0		3
	PECET526	Applied hydrology and climatology	3-0-0-0		3
	PECET527	Town Planning	3-0-0-0		3
	PECET528	Optimization techniques and operations research for Civil Engineers	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	PCCET601	PC	PC	Quantity surveying & valuation	3	0	0	0	4.5	40	60	3	3
2	B	PCCET602	PC	PC	Design of steel structures	3	0	0	0	4.5	40	60	3	3
3	C	PECET63N	PE	PE	PE-3	3	0	0	0	4.5	40	60	3	3
4	D	PBCET604	PC-PBL	PB	Construction project management	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	OE/ILE-1	3	0	0	0	4.5	40	60	3	3
7	L	PCCEL607	PCL	PC	Transportation engineering lab	0	0	3	0	1.5	50	50	2	
8	P	PCCEP608	PWS	PC	Mini Project: Socially Relevant Project	0	0	0	3	3	50	50	2	3
9	Q	PCCEL609	PCL	PC	Environmental engineering lab	0	0	2	0	1	50	50	1	3
10	R/ M/ H		VAC		Remedial/Minor/Honours Course	3	0	0	0	5			3*	3*
	S5/ S6	Industrial Visit (Maximum of 12 Days are permitted, Not Exceedingly 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.

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

PROGRAM ELECTIVE 3: PECET63N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
C	PECET631	Advanced Design of Concrete Structures	3-0-0-0	3	3
	PECET632	Irrigation and Drainage Engineering	3-0-0-0		3
	PECET633	Ground Improvement Techniques	3-0-0-0		3
	PECET634	Repair and rehabilitation of structures	3-0-0-0		3
	PECET635	Advanced foundation Engineering	3-0-0-0		3
	PECET636	Solid and Hazardous Waste Management	3-0-0-0		3
	PECET637	Traffic Engineering and Management	3-0-0-0		3

OPEN ELECTIVE 1: OECET61N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OECET 611	Introduction to Construction Engineering	3-0-0-0	3	3
	OECET 612	Environmental Laws and Policy	3-0-0-0		3
	OECET 613	Disaster management	3-0-0-0		3
	OECET 614	Environmental Impact Assessment	3-0-0-0		3
	OECET 615	Structural Geology	3-0-0-0		3
	OECET 616	Applied Earth 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	PECET74N/ PECEM74N	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	PECET75N/ PECEM75N	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/IE	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	PCCES705	PWS	PC	Seminar	0	0	3	0	1.5	50	0	2	3
6	P**	PCCEP706/ PCCEI706	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	5			3*	3*
Total										**26/ 31**			**17/20***	**22/25***

**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: PECET74N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	PECET 741	Structural Dynamics	3-0-0-0	3	3
	PECET 742	Formwork Engineering	3-0-0-0		3
	PECET 743	Environmental Geotechnology	3-0-0-0		3
	PECET 744	Airport Planning and Design	3-0-0-0		3
	PECET 745	Pavement Design and Construction	3-0-0-0		3
	PECET 746	Highway Material & Design	3-0-0-0		3
	PECET 747	River Engineering	3-0-0-0		3

PROGRAM ELECTIVE 5: PECET75N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
B	PECET751	Groundwater Engineering	3-0-0-0	3	3
	PECET752	Sustainable Construction Practices	3-0-0-0		3
	PECET753	Advanced Geotechnical Investigation	3-0-0-0		3
	PECET754	Railway, Port and Harbor Engineering	3-0-0-0		3
	PECET755	Design of hydraulic structures	3-0-0-0		3
	PECET756	Air and Noise Pollution Control Engineering	3-0-0-0		3
	PECET757	Finite element method	3-0-0-0		3

OPEN ELECTIVE 2: OECET 72N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OECET 721	Intelligent Transportation Systems	3-0-0-0	3	3
	OECET 722	Environment Health and Safety	3-0-0-0		3
	OECET 723	Watershed Conservation and Management	3-0-0-0		3
	OECET 724	Forensic Engineering	3-0-0-0		3
	OECET 725	Finance for Engineers	3-0-0-0		3

Slot I: HMC Elective		
SL. No	Course Code	COURSES
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)

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	PECET86N / PECEM86N	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/ILE	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**	PCCEP806/ PCCEI806/ PCCEJ806	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.***

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

PROGRAM ELECTIVE 6: PECET 86 N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
A	PECET 861	Water and air quality management	3-0-0-0	3	3
	PECET 862	Valuation of Real Properties	3-0-0-0		3
	PECET 863	Contracts Management	3-0-0-0		3
	PECET 864	Advanced Design of steel Structures	3-0-0-0		3
	PECET 865	Design of Earthquake Resistant Structures	3-0-0-0		3
	PECET 866	Urban Transportation Planning	3-0-0-0		3
	PECET 867	Rural Water Supply and Onsite Sanitation Systems	3-0-0-0		3

OPEN ELECTIVE 3: OECET 83N					
SLOT	COURSE CODE	COURSES	L-T-P-R	HOURS	CREDIT
O	OECET 831	Waste management	3-0-0-0	3	3
	OECET 832	Rainwater harvesting	3-0-0-0		3
	OECET 833	Public Transportation Systems	3-0-0-0		3
	OECET 834	Fundamentals of building planning	3-0-0-0		3
	OECET 835	Hydrogeology	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		Civil Engineering Drafting Lab	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**	Mechanics of solids	4
2	**S3**	Fluid mechanics	4
3		Structural analysis-I	4
4		Materials testing lab	2
5		Fluid mechanics lab	2
6	**S4**	Soil mechanics	4
7		Structural analysis-II	4
8		Survey lab	2
9		Civil engineering modelling Lab	2
10	**S5**	Hydrology & water resources engineering	4
11		Transportation engineering	4
12		Environmental engineering	3
13		Geotechnical engineering lab	2
14		Concrete lab (MTL-2)	2
15	**S6**	Quantity surveying & valuation	3
16		Design of steel structures	3
17		Transportation engineering lab	2
19		Environmental engineering lab	1
Total Credits (Theory -10, Lab-8, Mini Project-1)			**52**

Programme Core-Project Based Learning (PBL)			
Sl. No:	**Semester**	**Course Area**	**Credits**
1	**S3**	Surveying & geomatics	4
2	**S4**	Design of concrete structures	4
3	**S5**	Foundation engineering	4
4	**S6**	Construction project management	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**

<table>
<tr><th colspan="5">Activity Points</th></tr>
<tr><th>Sl. No.</th><th>Group</th><th>Courses</th><th>Credits</th><th>Minimum Credit Requirements</th></tr>
<tr><td>1</td><td rowspan="3">I</td><td>NSS, NCC, NSO (National Sports Organization)</td><td rowspan="3">1
(40 Points)</td><td rowspan="8">3 Credits
(One credit from each Group)</td></tr>
<tr><td>2</td><td>Arts/Sports/Games</td></tr>
<tr><td>3</td><td>Union/Club Activities</td></tr>
<tr><td>4</td><td rowspan="3">II</td><td>English Proficiency Certification (TOFEL, IELTS, BEC etc.)</td><td rowspan="3">1
(40 Points)</td></tr>
<tr><td>5</td><td>Aptitude Proficiency Certification (GRE, CAT, GMAT etc.)/ Valid Gate Score.</td></tr>
<tr><td>6</td><td>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</td></tr>
<tr><td>7</td><td rowspan="2">III</td><td>Journal Publication, Patents, Start-Up, Innovation, Winners of National/ International Level Hackathons</td><td rowspan="2">1
(40 Points)</td></tr>
<tr><td>8</td><td>Skilling Certificates (Approved by the College)</td></tr>
</table>

- ***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	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**

Overall Credit Structure semester wise B. Tech Programmes in Civil engineering			
semester	course work Type and category	Total credits allotted	Credits allotted semester wise
S1	Basic Science Courses (BSC): 2 Nos	1x3+1x4 = 7	**20**
	Humanities and Social Sciences including Management Courses (HMC) / Health and wellness -: 1 Nos	1x1 = 1	
	Engineering Science Courses (ESC): 4 Nos	1x3+2x4+ 1x1 = 12	
S2	Basic Science Courses (BSC): 2 Nos	1x3+1x4 = 7	**24**
	Humanities and Social Sciences including Management Courses (HMC)/ Health and wellness -: 1 Nos	1x1 = 1	
	Engineering Science Courses (ESC): 4 Nos	2x3+1x4 = 10	
	Programme Core Courses (PC): 2 Nos	1x4+1x1=5	
	Skill Enhancement Courses (SEC): 1 Nos	1x1= 1	
S3	Basic Science Courses (BSC): 1 Nos	1x3 = 3	**25**
	Humanities and Social Sciences including Management Courses (HMC) -: 1 Nos	1x2 = 2	
	Engineering Science Courses (ESC): 1 Nos	1x4 = 4	
	Programme Core Courses (PC): 4 Nos	2x4+2x2=12	
	Programme (Professional) Core Courses-Project Based Learning (PBL)	1x4 =4	
S4	Basic Science Courses (BSC): 1 Nos	1x3 = 3	**24**
	Humanities and Social Sciences including Management Courses (HMC) -: 1 Nos	1x2 = 2	
	Programme Core Courses (PC): 4 Nos	2x4+2x2=12	
	Programme (Professional) Core Courses-Project Based Learning (PBL)	1x4 =4	
	Programme Elective Courses (PEC): 1 Nos	1x3 =3	
S5	Humanities and Social Sciences including Management Courses (HMC) -: 1 Nos	1x1= 1	**23**
	Programme Core Courses (PC): 5 Nos	2x4+1x3 +2x2=15	
	Programme (Professional) Core Courses-Project Based Learning (PBL)	1x4 =4	
	Programme Elective Courses (PEC): 1 Nos	1x3 =3	
S6	Engineering Science Courses (ESC): 1 Nos	1x2 = 2	**23**
	Programme Core Courses (PC): 5 Nos	2x3+1x2 +1x1=9	
	Programme (Professional) Core Courses-Project Based Learning (PBL)	1x4 =4	
	Programme Elective Courses (PEC): 1 Nos	1x3 =3	
	Open Elective Courses/Industry Linked Elective: 1 Nos	1x3 =3	
	Project Work/Internship and Seminar	1x2=2	
S7	Humanities and Social Sciences including Management Courses (HMC) -: 1 Nos	1x2 = 2	**17**
	Programme Elective Courses (PEC): 2 Nos	2x3 =6	
	Open Elective Courses/Industry Linked Elective: 1 Nos	1x3 =3	
	Project Work/Internship and Seminar: 2 Nos	1x2+1x4 =6	
S8	Humanities and Social Sciences including Management Courses (HMC) -: 1 Nos	1x1 = 1	**11**
	Programme Elective Courses (PEC): 1Nos	1x3 =3	
	Open Elective Courses/Industry Linked Elective: 1 Nos	1x3 =3	
	Project Work/Internship and Seminar: 1 Nos	1x4 =4	
	Total		**167**
	Mandatory Student Activities (MSA)		03