

**Semester Wise Course Structure & Evaluation Scheme  
(School of Engineering)- 2022-23  
B.Tech. Computer Science & Engineering,  
Harcourt Butler Technical University, Kanpur  
(As per NEP-2020)**

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### III Semester

Sl no.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESE	Total Mark
					MSE	TA	Lab	Total		
1	BSC		Engineering Mathematics-II	4 (3-0-2)	15	20	15	50	50	100
2	ESC		Digital Electronics	4 (3-0-2)	15	20	15	50	50	100
3	PCC		Data Structure using C	5(3-1-2)	15	20	15	50	50	100
4	PCC		Python Programming	4(2-1-2)	15	20	15	50	50	100
5	PCC		Computer Organization	3(2-1-0)	30	20	-	50	50	100
6	PCC		Introduction to Emerging Technologies in ICT	4(3-1-0)	30	20	-	50	50	100
<b>Total Credits</b>					<b>24</b>					<b>600</b>

### IV Semester

Sl no.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESE	Total Marks
					MSE	TA	Lab	Total		
1	BSC		Engineering Mathematics-III	4(3-1-0)	30	20	-	50	50	100
2	ESC		Web Technology	4(3-0-2)	15	20	15	50	50	100
3	PCC		Principals of Programming Languages	4(3-1-0)	30	20	-	50	50	100
4	PCC		Software Engineering	5(3-1-2)	15	20	15	50	50	100
5	PCC		Operating System	4(3-1-0)	30	20	-	50	50	100
6	HSMC		Engineering Economics & Management	3(2-1-0)	30	20	-	50	50	100
<b>Total Credits</b>					<b>24</b>					<b>600</b>

### V Semester

Sl no.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESE	Total Marks
					MSE	TA	Lab	Total		
1	PCC		Computer Network	4(3-0-2)	15	20	15	50	50	100
2	PCC		Database Management Systems	4(3-0-2)	15	20	15	50	50	100
3	PCC		Design and Analysis of Algorithms	4(3-0-2)	15	20	15	50	50	100
4	PCC		Theory of Automata and Formal Languages	4(3-1-0)	30	20	-	50	50	100
5	PCC		Data Science	4(3-0-2)	15	20	15	50	50	100
6	OEC-I		Open Elective-I	2(2-0-0)	30	20	-	50	50	100
<b>Total Credits</b>					<b>22</b>					<b>600</b>

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OEC-II:

1. Soft Computing
2. Artificial Intelligence
3. 3D Printing
4. Logistic and supply chain management
5. One course offered by each degree awarding department
6. One course offered by each School of basic & Applied Sciences
7. One course offered by School of Humanities & social Sciences

## VIII Semester

Sl no.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESE	Total Marks
					MSE	TA	Lab	Total		
1	*PEC-V		Programme Elecive-V	4 (3-1-0)	30	20	-	50	50	100
2	OEC-III		Open Elective-III	2(2-0-0)	30	20	-	50	50	100
3	Project		Project	16(0-0-32)	-	100	100	200	200	400
<b>Total Credits</b>					<b>22</b>					<b>600</b>

OEC-III:

1. Robotics
2. Data Sciences
3. Machine learning
4. Sustainable Development
5. One course offered by each degree awarding department
6. One course offered by each School of basic & Applied Sciences
7. One course offered by School of Humanities & social Sciences

**Note: (\*) 1.** The elective courses in the curriculum can be revamped and kept open so that each year the new courses as per industrial needs can be incorporated.

**(\*) 2.** In Final year, during industrial internship, students may be allowed to opt their elective course as MOOCs on NPTEL/ Swayam etc. platform in online mode under the mentorship of Head of the department/faculty member.

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