

### 3.1 PROGRAM STRUCTURE

I SEM - PHYSICS CYCLE (Aug-Dec)*							
S. NO.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS
			L	T	P	CREDITS	
1	MAT 101	Engineering Mathematics – I	3	1	0	4	4
2	PHY 101	Engineering Physics	4	0	0	4	4
3	EEE 101	Elements of Electrical Engineering	3	0	0	3	3
4	CIV 101	Elements of Civil Engineering	3	0	0	3	3
5	MEC 152	Engineering Graphics	2	0	4	4	6
6	ENG 103	Technical Written Communication	2	1	0	3	3
7	PHY 151	Engineering Physics Lab	0	0	2	1	2
8	MEC 151	Workshop Practice	0	0	2	1	2
9	PPS 105	Building Self Confidence	0	0	2	1	2
		<b>TOTAL</b>	<b>17</b>	<b>2</b>	<b>10</b>	<b>24</b>	<b>29</b>

I SEM - CHEMISTRY CYCLE (Aug-Dec)#							
S. NO.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS
			L	T	P	CREDITS	
1	MAT 101	Engineering Mathematics – I	3	1	0	4	4
2	CHE 101	Engineering Chemistry	4	0	0	4	4
3	ECE 101	Elements of Electronics Engineering	3	0	0	3	3
4	MEC 101	Elements of Mechanical Engineering	3	0	0	3	3
5	CIV 102	Environmental Science and Disaster Management	3	0	0	3	3
6	ENG 104	Technical Spoken Communication	1	0	2	3	3

7	CSE 151	Computer Programming	2	0	4	4	6
8	CHE 151	Engineering Chemistry Lab	0	0	2	1	2
9	PPS 105	Building Self Confidence	0	0	2	1	2
		<b>TOTAL</b>	<b>19</b>	<b>1</b>	<b>10</b>	<b>25</b>	<b>30</b>

<b>II SEM - CHEMISTRY CYCLE (Jan-May)*</b>							
<b>S. NO.</b>	<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>CREDIT STRUCTURE</b>				<b>CONTACT HOURS</b>
			<b>L</b>	<b>T</b>	<b>P</b>	<b>CREDIT S</b>	
1	MAT 102	Engineering Mathematics – II	3	1	0	4	4
2	CHE 101	Engineering Chemistry	4	0	0	4	4
3	ECE 101	Elements of Electronics Engineering	3	0	0	3	3
4	MEC 101	Elements of Mechanical Engineering	3	0	0	3	3
5	CIV 102	Environmental Science and Disaster Management	3	0	0	3	3
6	ENG 104	Technical Spoken Communication	1	0	2	2	3
7	CSE 151	Computer Programming	2	0	4	4	6
8	CHE 151	Engineering Chemistry Lab	0	0	2	1	2
9	PPS 106	Effective Communication	0	0	2	1	2
		<b>TOTAL</b>	<b>19</b>	<b>1</b>	<b>10</b>	<b>25</b>	<b>30</b>

<b>II SEM - PHYSICS CYCLE (Jan-May)#</b>							
<b>S. NO.</b>	<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>CREDIT STRUCTURE</b>				<b>CONTACT HOURS</b>
			<b>L</b>	<b>T</b>	<b>P</b>	<b>CREDIT S</b>	
1	MAT 102	Engineering Mathematics – II	3	1	0	4	4
2	PHY 101	Engineering Physics	4	0	0	4	4

3	EEE 101	Elements of Electrical Engineering	3	0	0	3	3
4	CIV 101	Elements of Civil Engineering	3	0	0	3	3
5	MEC 152	Engineering Graphics	2	0	4	4	6
6	ENG 103	Technical Written Communication	2	1	0	3	3
7	PHY 151	Engineering Physics Lab	0	0	2	1	2
8	MEC 151	Workshop Practice	0	0	2	1	2
9	PPS 106	Effective Communication	0	0	2	1	2
		<b>TOTAL</b>	<b>17</b>	<b>2</b>	<b>10</b>	<b>24</b>	<b>29</b>

**Note: At the end of the 1<sup>st</sup> year (Common to all B.Tech. Program) the total credits offered is 49.**

The 1<sup>st</sup> year B.Tech. Program structure is executed in two cycles.

\* The students undergoing the “Physics” cycle shall take the courses as indicated.

# The students undergoing the “Chemistry” cycle shall take the courses as indicated.

<b>III SEMESTER</b>							
S.No.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS
			L	T	P	CREDIT S	
1	MAT 103	Engineering Mathematics – III	3	1	0	4	4
2	CSE 201	Data Structures	3	0	0	3	3
3	CSE 202	Digital Design	3	0	0	3	3
4	CSE 203	Discrete Mathematics	3	1	0	4	4
5	CSE 204	Object Oriented Programming	0	0	6	3	6
6	CSE 251	Data Structures Lab	0	0	2	1	2
7	CSE 252	Digital Design Lab	0	0	2	1	2
8	PPS 107	Design Thinking And Team Building	0	0	2	1	2
9	ULC 101	University Learning Course *				1	
		<b>TOTAL</b>	<b>12</b>	<b>2</b>	<b>12</b>	<b>20/ 21</b>	<b>26</b>

\*Student has to register for University Learning Course in any one semester 3/ 4/ 6 to earn the mandatory credits

<b>IV SEMESTER</b>							
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S.No	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS
			L	T	P	CREDITS	
1	MAT 104	Engineering Mathematics - IV	3	1	0	4	4
2	CSE 205	Computer Organization and Architecture	3	1	0	4	4
3	CSE 206	Microprocessors and Microcontrollers	3	0	0	3	3
4	CSE 207	Database Management Systems	3	0	0	3	3
5	CSE 208	Theory of Computations	3	1	0	4	4
6	CSE 253	Database Management Systems Lab	0	0	4	2	4
7	CSE 254	Microprocessors and Microcontrollers-Lab	0	0	2	1	2
8	PPS 108	Being Corporate Ready	0	0	2	1	2
9	ULC 101	University learning Course*				1	
		<b>TOTAL</b>	15	3	8	22/ 23	26

\*\* Note Students will undergo professional practice I during the summer break between the fourth and fifth semester and the credits earned will be accounted in the fifth semester.

V SEMESTER							
S. No.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS
			L	T	P	CREDIT S	
1	CSE 210	Operating Systems	3	0	0	3	3
2	CSE 211	Computer Networks	3	0	0	3	3
3	CSE 212	Analysis of Algorithms	3	0	0	3	3
4	CSE 214	Principles of Programming Languages	3	0	0	3	3
5	CSE 216	Software Engineering	3	0	0	3	3
6	CSE 3XX	Discipline Elective-I	0	0	6	3	6
7	MGT 112/ MGT 113	Engineering Economics/ Digital Entrepreneurship	3	0	0	3	3

8	CSE 255	Analysis of Algorithms Lab	0	0	2	1	2
9	PIP 101	Professional Practice - I **				5	
		<b>TOTAL</b>	21	1	8	28	30

^ Internal Evaluation only

VI SEMESTER							
S. No.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS
			L	T	P	CREDITS	
1	CSE 209	Graph Theory and Combinatorics	3	1	0	4	4
2	CSE 213	Object Oriented Analysis and Design	3	0	0	3	3
3	CSE 215	Cryptography and Network Security	3	0	0	3	3
4	CSE 217	Compiler Design	3	1	0	4	4
5	CSE 256	Internet Technologies	0	0	6	3	6
6	CSE 257	Network Programming Lab	0	0	4	2	4
7	CSE 3XX	Discipline Elective – II	3	0	0	3	3
8	MGT 113/ MGT 112	Digital Entrepreneurship/ Engineering Economics	3	0	0	3	3
9	ULC 101	University Learning Course *				1	
		<b>TOTAL</b>	15	1	10	25/ 26	26
VII SEMESTER							
S.No.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS
			L	T	P	CREDITS	
1	CSE 218	Human Computer Interaction	3	0	0	3	3
2	CSE 219	Big Data Analytics	2	0	2	3	4
3	CSE 220	Internet of Things	2	0	2	3	4
4	CSE 3XX	Discipline Elective – III	3	0	0	3	3
5	OPE 4XX	Open Elective – I	3	0	0	3	3
		<b>TOTAL</b>	<b>13</b>	<b>0</b>	<b>4</b>	<b>15</b>	17

VIII SEMESTER							
S.No.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS
			L	T	P	CREDITS	
1	CSE 3XX	Discipline Elective – IV	3	0	0	3	3
2	OPE 4XX	Open Elective – II	3	0	0	3	3
3	PIP 102	Professional Practice- II				15	
		<b>TOTAL</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>6</b>

TABLE -2							
DISCIPLINE ELECTIVES							
S.NO	COURSE CODE	COURSE NAME	L	T	P	CREDITS	CONTACT HOURS
1	CSE 301	Programming in Advanced JAVA	0	0	6	3	6
2	CSE 302	Programming in C# and .NET framework	0	0	6	3	6
3	CSE 303	LAMP	0	0	6	3	6
4	CSE 304	Mobile Communications	3	0	0	3	3
5	CSE 305	Parallel Computing	3	0	0	3	3
6	CSE 306	Cloud Computing	3	0	0	3	3
7	CSE 307	Data Mining	3	0	0	3	3
8	CSE 308	Artificial Intelligence	3	0	0	3	3
9	CSE 309	Virtualization	3	0	0	3	3
10	CSE 310	Mobile Applications Development	0	0	6	3	6
11	CSE 311	Web Services	3	0	0	3	3
12	CSE 312	Game Theory	3	0	0	3	3
13	CSE 313	Storage Area Networks	3	0	0	3	3
14	CSE 314	Embedded Systems	3	0	0	3	3
15	CSE 315	Software Architecture	3	0	0	3	3
16	CSE 316	Advanced Computer Architecture	3	0	0	3	3

17	CSE 317	Programming in Python	0	0	6	3	3
18	CSE318	Information Retrieval	3	0	0	3	3
19	CSE319	Machine Learning	3	0	0	3	3
20	CSE320	Graphics Programming	2	0	2	3	4

**TABLE 3.2.2**

**OPEN ELECTIVE**

S. No.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS
			L	T	P	CREDITS	
<b>Open Elective Courses offered by Department of Civil Engineering, SOE</b>							
1	CIV 401	Geographical Information Systems	3	0	0	3	3
2	CIV 402	Environmental Impact Assessment	3	0	0	3	3
3	CIV 403	Sustainable Materials and Green Buildings	3	0	0	3	3
4	CIV 404	Construction Project Management	3	0	0	3	3
<b>Open Elective Courses offered by Department of Computer Science and Engineering, SOE</b>							
1	CSE 401	Image Processing	3	0	0	3	3
2	CSE 402	Data Structures Using C	3	0	0	3	3
3	CSE 403	Software Testing and Quality Assurance	3	0	0	3	3
4	CSE 404	Social Network Analytics	3	0	0	3	3
5	CSE 405	Digital and Mobile Forensics	3	0	0	3	3
6	CSE 406	Database Management Systems	3	0	0	3	3
7	CSE 407	Multimedia and Animation	3	0	3	3	4
8	CSE 408	Programming in Java	0	0	6	3	6