

## CVR COLLEGE OF ENGINEERING (B8)

### Tentative Course Structure for B.Tech. (CS&IT) 1st Year B.Tech. - Computer Science and Information Technology 1st Semester Course Structure

Regulations: R18-CBCS    Admission Year : 2019-20    With effect from Academic year 2019-20 Onwards

Sl. No.	Subject Code	Subject	Category	Periods per Week		Credits	Scheme of Examination Maximum Marks			Page No.
				L	T/P /D		Internal	External	Total	
1		English	HS	3	0	3	30	70	100	
2		Mathematics-I	BS	3	0	3	30	70	100	
3		Engineering Chemistry	BS	3	0	3	30	70	100	
4		Problem Solving Through C	ES	3	0	3	30	70	100	
5		Engineering Drawing	ES	2	3	3.5	30	70	100	
<b>Practicals</b>										
6		English Language Communication Skills Lab - I	HS	0	2	1	30	70	100	
7		Engineering Chemistry Lab	BS	0	2	1	30	70	100	
8		Computer Programming Lab	ES	0	3	1.5	30	70	100	
9		IT Workshop	ES	0	2	1	30	70	100	
<b>Total</b>				<b>14</b>	<b>12</b>	<b>20</b>	<b>270</b>	<b>630</b>	<b>900</b>	
<b>Total Hours</b>				<b>26</b>						

### First Year B.Tech. - Computer Science and Information Technology 2nd Semester Course Structure

Regulations: R18-CBCS    Admission Year : 2019-20    With effect from Academic year 2019-20 Onwards

Sl. No.	Subject Code	Subject	Category	Periods per Week		Credits	Scheme of Examination Maximum Marks			Page No.
				L	T/P /D		Internal	External	Total	
1		Mathematics-II	BS	3	0	3	30	70	100	
2		Basic Electrical and Electronics Engineering (EEE)	ES	3	0	3	30	70	100	
3		Applied Physics	BS	3	0	3	30	70	100	
4		Object Oriented Programming through Python	ES	2	0	2	30	70	100	
5		Environmental Science	BS	3	0	3	30	70	100	
<b>Practicals</b>										
6		English Language Communication Skills Lab-II	HS	0	2	1	30	70	100	
7		EEE Lab	ES	0	3	1.5	30	70	100	
8		Applied Physics Lab	BS	0	2	1	30	70	100	
9		Object Oriented Programming through Python Lab	ES	0	3	1.5	30	70	100	
10		Engineering Workshop	ES	0	2	1	30	70	100	
<b>Total</b>				<b>14</b>	<b>12</b>	<b>20</b>	<b>300</b>	<b>700</b>	<b>1000</b>	
<b>Total Hours</b>				<b>26</b>						

**Note:** Lecture Hours (L), Tutorials (T), Practical (P), Drawing (D) & Credits (C)

**1. HS : HUMANITIES AND SOCIAL SCIENCES**

**2. ES : ENGINEERING SCIENCES**

**3. PC : PROFESSIONAL CORE**

**4. PE : PROFESSIONAL ELECTIVE**

**5. OE : OPEN ELECTIVE**

**6. SDC : SKILL DEVELOPMENT COURSE**

**CVR COLLEGE OF ENGINEERING (B8)**

**2nd Year B.Tech. Computer Science and Information Technology**

**1st Semester Course Structure**

Regulations: R18-CBCS

Admission Year : 2019-20

With effect from Academic year 2020-21 Onwards

Sl. No.	Subject Code	Subject	Category	Periods per Week		Credits	Scheme of Examination Maximum Marks			Page No.
				L	T/P /D		Internal	External	Total	
1		Data Structures and Algorithms through Python	PC	3	0	3	30	70	100	
2		Discrete Structures and Graph Theory	PC	3	0	3	30	70	100	
3		Boolean Algebra and Circuit Design	ES	3	0	3	30	70	100	
4		Foundations of Data Science	BS	3	0	3	30	70	100	
5		Java Programming	ES	3	0	3	30	70	100	
<b>Practicals</b>										
6		Data Structures and Algorithms through Python Lab	PC	0	3	1.5	30	70	100	
7		Data Science With R Lab	BS	0	2	1	30	70	100	
8		Java Programming Lab	ES	0	3	1.5	30	70	100	
9		Verbal Ability Lab	HS	0	2	1	30	70	100	
<b>Total</b>				<b>15</b>	<b>10</b>	<b>20</b>	<b>270</b>	<b>630</b>	<b>900</b>	
<b>Total Periods</b>				<b>25</b>						

**2nd Year B.Tech. Computer Science and Information Technology**

**2nd Semester Course Structure**

Regulations: R18-CBCS

Admission Year : 2019-20

With effect from Academic year 2020-21 Onwards

Sl. No.	Subject Code	Subject	Category	Periods per Week		Credits	Scheme of Examination			Page No.
				L	T/P /D		Internal	External	Total	
1		Computer Organization	PC	3	0	3	30	70	100	
2		Operating Systems	PC	3	0	3	30	70	100	
3		Design and Analysis of Algorithms	PC	3	0	3	30	70	100	
4		Database Management Systems	PC	3	0	3	30	70	100	
5		Artificial Intelligence	PC	3	0	3	30	70	100	
<b>Practicals</b>										
6		Unix and Shell Programming Lab	PC	0	3	1.5	30	70	100	
7		Database Management Systems Lab	PC	0	2	1	30	70	100	
8		Artificial Intelligence Lab	PC	0	3	1.5	30	70	100	
9		Reasoning & Data Interpretation Lab	BS	0	2	1	30	70	100	
10		Gender Sensitization	MC	1	0	0	100		100	
<b>Total</b>				<b>16</b>	<b>10</b>	<b>20</b>	<b>370</b>	<b>630</b>	<b>1000</b>	
<b>Total Periods</b>				<b>26</b>						

**Note:** Lecture Hours (L), Tutorials (T), Practicals (P), Drawing (D) & Credits (C )

**1. HS : HUMANITIES AND SOCIAL SCIENCES**

**2. ES : ENGINEERING SCIENCES**

**3. PC : PROFESSIONAL CORE**

**4. PE : PROFESSIONAL ELECTIVE**

**5. OE : OPEN ELECTIVE**

**6. SDC : SKILL DEVELOPMENT COURSE**

## CVR COLLEGE OF ENGINEERING (B8)

### 3rd Year B.Tech. Computer Science and Information Technology

#### 1st Semester Course Structure

Regulations: R15-CBCS

Admission Year: 2019-20

With effect from Academic year 2021-22 Onwards

Sl. No.	Subject Code	Subject	Category	Periods per Week		Credits	Scheme of Examination Maximum Marks			Pg. No.
				L	T/P /D		Internal	External	Total	
1		Computer Networks	PC	3	0	3	30	70	100	
2		Machine Learning	PC	3	0	3	30	70	100	
3		Web Technologies	PC	3	0	3	30	70	100	
4		Software engineering	PC	3	0	3	30	70	100	
5		Open Elective-I	OE	3	0	3	30	70	100	
<b>Practicals</b>										
6		Machine Learning Lab	PC	0	3	1.5	30	70	100	
7		Web Technologies Lab	PC	0	3	1.5	30	70	100	
8		Advance English Communications Lab	HS	0	2	1	30	70	100	
9		Effective Technical Communication Lab	HS	0	2	1	30	70	100	
10		Indian Constitution	MC	1	0	0	100	0	100	
<b>Total</b>				<b>16</b>	<b>10</b>	<b>20</b>	<b>370</b>	<b>630</b>	<b>1000</b>	
<b>Total Hours</b>				<b>26</b>						

**Note:** Lecture Hours (L), Tutorials (T), Practicals (P), Drawing (D) & Credits (C)

**1. HS : HUMANITIES AND SOCIAL SCIENCES**

**3. PC : PROFESSIONAL CORE**

**5. OE : OPEN ELECTIVE**

**2. ES : ENGINEERING SCIENCES**

**4. PE : PROFESSIONAL ELECTIVE**

**6. SDC : SKILL DEVELOPMENT COURSE**

### 3rd Year B.Tech. Computer Science and Information Technology

#### 2nd Semester Course Structure

Regulations: R18-CBCS

Admission Year: 2019-20

With effect from Academic year 2021-22 Onwards

Sl. No.	Subject Code	Subject	Category	Periods per Week		Credits	Scheme of Examination Maximum Marks			Pg. No.
				L	T/P /D		Internal	External	Total	
1		Big Data Analytics and Platforms	PC	3	0	3	30	70	100	
2		Automata and Compiler Design	PC	3	0	3	30	70	100	
3		Internet of Things and Cloud Computing	PC	3	0	3	30	70	100	
<b>Professional Elective - I:</b>										
4		Neural Networks and Fuzzy Systems	PE	3	0	3	30	70	100	
		Data Mining								
		Cryptography and Network Security								
		Digital Image Processing								
	Java Frameworks									
5		<b>Open Elective - II</b>	OE	3	0	3	30	70	100	
<b>PRACTICALS</b>										
6		Big Data Analytics and Platforms Lab	PC	0	3	1.5	30	70	100	
7		Internet of Things and Cloud Computing Lab	PC	0	2	1	30	70	100	
8		Mobile Application Development Lab	PC	0	3	1.5	30	70	100	
9		Quantitative Ability Lab	BS	0	2	1	30	70	100	
10		Indian Traditional Knowledge	MC	1	0	0	100	0	100	
<b>Total</b>				<b>16</b>	<b>10</b>	<b>20</b>	<b>370</b>	<b>630</b>	<b>1000</b>	
<b>Total Hours</b>				<b>26</b>						

**Note:** Lecture Hours (L), Tutorials (T), Practicals (P), Drawing (D) & Credits (C)

**1. HS : HUMANITIES AND SOCIAL SCIENCES**

**3. PC : PROFESSIONAL CORE**

**5. OE : OPEN ELECTIVE**

**2. ES : ENGINEERING SCIENCES**

**4. PE : PROFESSIONAL ELECTIVE**

**6. SDC : SKILL DEVELOPMENT COURSE**

## CVR COLLEGE OF ENGINEERING (B8)

### 4th Year B.Tech. - Computer Science and Information Technology 1st Semester Course Structure

Regulations: R18-CBCS

Admission Year: 2019-20

With effect from Academic year 2022-23 Onwards

Sl. No.	Subject Code	Subject	Category	Periods per Week		Credits	Scheme of Examination Maximum Marks			Pg. No.
				L	T/P /D		Internal	External	Total	
1		Blockchain Technologies	PC	3	0	3	30	70	100	
2		Managerial Economics and Financial Accounting	HS	3	0	3	30	70	100	
<b>Professional Elective - II:</b>										
3		Reinforcement Learning	PE	3	0	3	30	70	100	
		Cognitive Analytics								
		NoSQL Databases								
		Pattern Recognition								
		High Performance Computing								
<b>Professional Elective - III:</b>										
4		Deep Learning	PE	3	0	3	30	70	100	
		Social Media Analytics								
		Cyber Security & Forensics								
		Natural Language Processing								
		GPU Computing								
<b>Professional Elective - IV:</b>										
5		Soft Computing	PE	3	0	3	30	70	100	
		Image and Video Analytics								
		Adhoc Sensor Networks								
		Speech Processing								
		Quantum Computing								
<b>Practicals</b>										
6		CASE Tools and Compiler Design Lab	PC	0	2	1	30	70	100	
7		Advanced Machine Learning Lab	PC	0	2	1	30	70	100	
8		Industry Oriented Mini Project	PC	0	0	2	30	70	100	
9		Technical Seminar - I	PC	0	2	1	100		100	
<b>Total Hours</b>				<b>15</b>	<b>6</b>	<b>20</b>	<b>340</b>	<b>560</b>	<b>900</b>	
<b>Total Hours</b>				<b>21</b>						

**Note:** Lecture Hours (L), Tutorials (T), Practicals (P), Drawing (D) & Credits (C )

**1. HS : HUMANITIES AND SOCIAL SCIENCES**  
**3. PC : PROFESSIONAL CORE**  
**5. OE : OPEN ELECTIVE**

**2. ES : ENGINEERING SCIENCES**  
**4. PE : PROFESSIONAL ELECTIVE**  
**6. SDC : SKILL DEVELOPMENT COURSE**

**4th Year B.Tech. - Computer Science and Information Technology**

**2nd Semester Course Structure**

**Regulations: R18-CBCS**

**Admission Year: 2019-20**

**With effect from Academic year 2022-23 Onwards**

Sl. No.	Subject Code	Subject	Category	Periods per Week		Credits	Scheme of Examination Maximum Marks			Pg. No.
				L	T/P/D		Internal	External	Total	
1		Management Science	HS	3	0	3	30	70	100	
<b>Professional Elective - V:</b>										
2		Virtual Reality	PE	3	0	3	30	70	100	
		Realtime Analytics								
		IOT Security								
		Human Computer Interaction								
		Semantics Web and Social Networks								
3	<b>Open Elective - III:</b>		OE	3	0	3	30	70	100	
<b>Practicals</b>										
4		Technical Seminar - II	PC	0	2	1	100		100	
5		Project Work	PC	0	20	10	30	70	100	
<b>Total</b>				<b>9</b>	<b>22</b>	<b>20</b>	<b>220</b>	<b>280</b>	<b>500</b>	
<b>Total Hours</b>				<b>31</b>						

**Note:** Lecture Hours (L), Tutorials (T), Practicals (P), Drawing (D) & Credits (C )

**1. HS : HUMANITIES AND SOCIAL SCIENCES**

**2. ES : ENGINEERING SCIENCES**

**3. PC : PROFESSIONAL CORE**

**4. PE : PROFESSIONAL ELECTIVE**

**5. OE : OPEN ELECTIVE**

**6. SDC : SKILL DEVELOPMENT COURSE**