

Four Year Degree Course in Bachelor of Engineering Branch : B.E./B.Tech./B.Text. E.(Common to all the Branches)  
Semester Pattern (Choice Based Credit system)

Appendix-A

Semester :FIRST/ SECOND GROUP A																	
		TEACHING SCHEME							EXAMINATION SCHEME								
Sr. No.	Subject Code	Subject	HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY					PRACTICAL				
			Lecture	Tutorial	P/D			DURATION OF PAPER (Hr.)	MAX. MARKS THEORY PAPER	MAX. MARKS COLLEGE ASSESMENT	TOTAL	MIN. PASSING MARKS	MAX. MARKS		TOTAL	MIN. PASSING MARKS	
													EXTERNAL	INTERNAL			
<b>THEORY</b>																	
01	1 A 1	Engineering Mathematics I	3	1	-	4	4	3	80	20	100	40	-	-	-	-	
02	1 A 2	Engineering Physics	4	-	-	4	4	3	80	20	100	40	-	-	-	-	
03	1 A 3	Engineering Mechanics	3	1	-	4	4	3	80	20	100	40	-	-	-	-	
04	1 A 4	Computer Programming	3	-	-	3	3	3	80	20	100	40	-	-	-	-	
<b>PRACTICALS</b>																	
05	1 A 5	Workshop Practice	-	-	4	4	2	-	-	-	-	-	25	25	50	25	
06	1 A 6	Engineering Physics Laboratory	-	-	2	2	1	-	-	-	-	-	25	25	50	25	
07	1 A 7	Engineering Mechanics Laboratory	-	-	2	2	1	-	-	-	-	-	25	25	50	25	
08	1 A 8	Computer Programming Laboratory	-	-	2	2	1	-	-	-	-	-	25	25	50	25	
		<b>TOTAL</b>	<b>13</b>	<b>2</b>	<b>10</b>	<b>25</b>	<b>20</b>				<b>400</b>				<b>200</b>		
Note- An Induction Program of Three Weeks duration to be offered to the students at the start of First Year.													<b>TOTAL</b>	<b>600</b>			
<b>Semester :FIRST/ SECOND GROUP B</b>																	
<b>THEORY</b>																	
01	1 B 1	Engineering Mathematics II	3	1	-	4	4	3	80	20	100	40	-	-	-	-	
02	1 B 2	Engineering Chemistry	4	-	-	4	4	3	80	20	100	40	-	-	-	-	
03	1 B 3	Basic Electrical Engineering	3	1	-	4	4	3	80	20	100	40	-	-	-	-	
04	1 B 4	Engineering Graphics	3	-	-	3	3	3	80	20	100	40	-	-	-	-	
<b>PRACTICALS</b>																	
05	1 B 5	English Communication Skills Laboratory	-	-	4	4	2	-	-	-	-	-	25	25	50	25	
06	1 B 6	Engineering Chemistry Laboratory	-	-	2	2	1	-	-	-	-	-	25	25	50	25	
07	1 B 7	Basic Electrical Engineering Laboratory	-	-	2	2	1	-	-	-	-	-	25	25	50	25	
08	1 B 8	Engineering Graphics Laboratory	-	-	2	2	1	-	-	-	-	-	25	25	50	25	
		<b>TOTAL</b>	<b>13</b>	<b>2</b>	<b>10</b>	<b>25</b>	<b>20</b>				<b>400</b>				<b>200</b>		
													<b>TOTAL</b>	<b>600</b>			

Note- An Induction Program of Three Weeks duration to be offered to the students at the start of First Year.

Four Year Degree Course in Bachelor of Engineering Branch: **INFORMATION TECHNOLOGY**  
Semester Pattern (Choice Based Credit Grade System)

**SEMESTER : THIRD**

Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME									
			HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY					PRACTICAL				
			Lecture	Tutorial	P/D			Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks	
													Int.	Ext.			
<b>THEORY</b>																	
01	3IT01	Mathematics-III	3	1	--	4	4	3	80	20	100	40	--	--	--	--	
02	3IT02	Discrete Structure & Graph Theory	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
03	3IT03	Object Oriented Programming	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
04	3IT04	Assembly Language Programming	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
05	3IT05	Analog & Digital Electronics	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
06	4ES06	**Environmental Studies	2	--	--	2	0	--	--	--	--	--	-	-	-	-	
<b>PRACTICALS / DRAWING / DESIGN</b>																	
07	3IT06	Object Oriented Programming Jawa lab.	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
08	3IT07	Assembly Language Programming- Lab.	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
09	3IT08	Analog & Digital Electronics- Lab.	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
10	3IT09	Comp. Skil Lab.-I	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
<b>Total</b>			<b>17</b>	<b>1</b>	<b>8</b>	<b>26</b>	<b>20</b>	--	--	--	<b>500</b>	--	--	--	<b>200</b>	--	
<b>Total</b>															<b>700</b>		

Note: \*(i) The Examination of Mandatory Subject Environmental Science shall be conducted in IV Semester.  
(ii) # C Skill Lab I – based on technology like – Python, R etc. to be decided by individual Dept. of respective College.

**SEMESTER : FOURTH**

Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME									
			HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY					PRACTICAL				
			Lecture	Tutorial	P/D			Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks	
													Int.	Ext.			
<b>THEORY</b>																	
01	4IT01	Computer Organization & Architecture	3	1	--	4	4	3	80	20	100	40	--	--	--	--	
02	4IT02	Data Communication & Networking	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
03	4IT03	Operating System	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
04	4IT04	Data Structures	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
05	4IT05	Social Science & Engg. Economics	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
06	4ES06	**Environmental Science	2	--	--	2	2	3	80	20	100	40	-	-	-	-	
<b>PRACTICALS / DRAWING / DESIGN</b>																	
07	4IT06	Data Communication & Networking Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
08	4IT07	Operating System Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
09	4IT08	Data Structures Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
10	4IT09	Comp. Skill Lab.-II	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
<b>Total</b>			<b>17</b>	<b>1</b>	<b>8</b>	<b>26</b>	<b>22</b>	--	--	--	<b>600</b>	--	--	--	<b>200</b>	--	
<b>Total</b>															<b>800</b>		

Note: \*(i)The Examination of Mandatory Subject Environmental Science shall be conducted in IV Semester.  
(ii) # C Skill Lab I – based on technology like – Python, R etc. to be decided by individual Dept. of respective College.

**SEMESTER : FIFTH**

Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME									
			HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY					PRACTICAL				
			Lecture	Tutorial	P/D			Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks	
		Int.	Ext.														
<b>THEORY</b>																	
01	5IT01	Database Management Systems	4	--	--	4	4	3	80	20	100	40	--	--	--	--	
02	5IT02	Theory of Computation	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
03	5IT03	Software Engineering	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
04	5IT04	Professional Elective –I (PE-I)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
05	5IT05	Open Elective – I (OE-I)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
<b>PRACTICALS / DRAWING / DESIGN</b>																	
06	5IT06	Database Management Systems Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
07	5IT07	Software Engineering Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
08	5IT08	Professional Elective –I Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
09	5IT09	Comp. Skill Lab.-III (#)	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
<b>Total</b>			<b>16</b>	<b>0</b>	<b>8</b>	<b>24</b>	<b>20</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>500</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>200</b>	<b>--</b>	
														<b>Total</b>		<b>700</b>	

**5IT04: PE (I) :** (i) Information Security Systems (ii) Data Science & Statistics (iii) Internet of Things

**5IT05: OE (I) :** (i) Soft Skills & Interpersonal Communication (ii) Computational Biology (iii) Cyber Law & Ethics. Open Elective- I to be offered from the Courses offered by other Engg. & Technology Boards of the University / Massive Open Learning Courses (MOOCs) such as SWAYAM pertaining to the profession.

(#) Computer Skill Lab III-based on technology like-DevOp, Angular & React, etc. to be decided by Individual Dept. of respective College.

An Orientation Program of 15 hours duration / MOOCs on **Indian Constitution** to be offered to the students during the **V th Semester**.

**SEMESTER : SIXTH**

Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME									
			HOURS / WEEK			CREDITS	THEORY					PRACTICAL					
			Lecture	Tutorial	P/D		Total HOURS/WEEK	Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks	
													Int.	Ext.			
<b>THEORY</b>																	
01	6IT01	Compiler Design	4	--	--	4	4	3	80	20	100	40	--	--	--	--	
02	6IT02	Design & Analysis of Algorithms	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
03	6IT03	Artificial Intelligence	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
04	6IT04	Prof. Elective - II (PE-II)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
05	6IT05	Open Elective - II (OE-II)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
<b>PRACTICALS / DRAWING / DESIGN</b>																	
06	6IT06	Compiler Design Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
07	6IT07	Design & Analysis of Algorithms - Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
08	6IT08	Prof. Elective - II - Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
09	6IT09	Comp. Skill Lab.-IV (#)	--	--	2	2	1	--	--	--	--	--	50	--	50	25	
<b>Total</b>			<b>16</b>	<b>0</b>	<b>8</b>	<b>24</b>	<b>20</b>	--	--	--	<b>500</b>	--	--	--	<b>200</b>	--	
<b>Total</b>															<b>700</b>		
<b>6IT04: PE (II) :</b> (i) Cryptography & Network Security (ii) Big Data Analytics (iii) sensors & Activators																	
<b>6IT05: OE (II) :</b> (i) Economic Policy in India (ii) Human Resource Development & organization (iii) Intellectual Property Right. Open Elective- I to be offered from the Courses offered by other Engg. & Technology Boards of the University / Massive Open Learning Courses (MOOCs) such as SWAYAM pertaining to the profession.																	
<b>(#) C Skill Lab IV-</b> Mini project based on Software Engineering to be decided by Individual Dept. of the respective College. An Orientation Programm of 15 hours duration .MOOC on Indian Traditional Knowledge to be offered to the students during the VII Semester.																	

**SEMESTER : SEVENTH**

Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME								
			HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY					PRACTICAL			
			Lecture	Tutorial	P/D			Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks
													Int.	Ext.		
<b>THEORY</b>																
01	7IT01	Mobile Computing	3	--	--	3	3	3	80	20	100	40	--	--	--	--
02	7IT02	Embedded Systems	3	--	--	3	3	3	80	20	100	40	--	--	--	--
03	7IT03	Cloud Computing	3	--	--	3	3	3	80	20	100	40	--	--	--	--
04	7IT04	Prof. Elective - III (PE-III)	3	--	--	3	3	3	80	20	100	40	--	--	--	--
05	7IT05	Prof. Elective- IV (PE-IV)	3	--	--	3	3	3	80	20	100	40	--	--	--	--
<b>PRACTICALS / DRAWING / DESIGN</b>																
06	7IT06	Embedded Systems - Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25
07	7IT07	Prof. Elective - III Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25
08	7IT08	Prof. Elective- IV Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25
09	7IT09	Project & Seminar	--	--	8	8	4	--	--	--	--	--	--	50	50	25
<b>Total</b>			<b>15</b>	<b>0</b>	<b>14</b>	<b>29</b>	<b>22</b>	--	--	--	<b>500</b>	--	--	--	<b>200</b>	--
<b>Total</b>															<b>700</b>	
<b>7IT04: PE(III) : (i) Machine learning (ii) Data Warehousing &amp; Mining (iii) Wireless Sensor Networks</b>																
<b>7IT05: PE(IV) : (i) Block Chain Fundamentals (ii) Business Intelligence (iii) Digital Forensic</b>																

SEMESTER : EIGHT																	
Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME									
			HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY					PRACTICAL				
			Lecture	Tutorial	P/D			Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks	
													Int.	Ext			
<b>THEORY</b>																	
01	8IT01	Object Oriented Analysis & Design	3	--		3	3	3	80	20	100	40	--	--	--	--	
02	8IT02	Professional Ethics & Management	3	--		3	3	3	80	20	100	40	--	--	--	--	
03	8IT03	Entrepreneurship & Project Management	3	--		3	3	3	80	20	100	40	--	--	--	--	
04	8IT04	Prof. Elective-V (PE-V)	3	--		3	3	3	80	20	100	40	--	--	--	--	
<b>PRACTICALS / DRAWING / DESIGN</b>																	
05	8IT05	Object Oriented Analysis & Design Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
06	8IT06	Prof. Elective-V (PE-V)- Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
07	8IT07	Project & Seminar	--	--	12	12	6	--	--	--	--	--	75	75	150	75	
<b>Total</b>			<b>12</b>	<b>--</b>	<b>16</b>	<b>28</b>	<b>20</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>400</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>250</b>	<b>--</b>	
															<b>Total</b>	<b>650</b>	
<b>8IT04 : PE-V: (i) Robotics (ii) Virtual &amp; Augmented Reality (iii) Human Computer Interaction (iv) Cross Platform Application Development</b>																	