

Proposed course structure of B. Tech.(**Information & Communication Technology**)from session 2016-17

Courses (figure in parenthesis indicates L-T-P)		III Sem.		IV Sem.		V Sem.		VI Sem.		VII Sem.		VIII Sem.	
		Course	Credit	Course	Credit	Course	Credit	Course	Credit	Course	Credit	Course	Credit
Discipline based	Core +Elective	Data & File Structures (4-0-0)	4	Design & Analysis of Algorithms (3-1-0)	4	Operating Systems (4-0-0)	4	System Software (3-1-0)	4	Digital Signal Processing (3-1-0)	4	Sensors & Internet of Things (3-1-0)	4
		Signals & Systems (3-1-0)	4	Computer Networks (4-0-0)	4	Artificial Intelligence (3-1-0)	4	Embedded Systems (3-0-0)	3	Information Security (3-1-0)	4	Department Elective III (3-0-0)	3
		Analog & Digital Electronics (4-0-0)	4	Computer Organization & Programming (3-1-0)	4	RF Engineering (3-0-0)	3	Information Theory and Coding (3-1-0)	4	Department Elective I (3-1-0)	4	Department Elective IV (3-0-0)	3
				Object Oriented Modelling & Design (3-0-0)	3	Data Base Management Systems (3-1-0)	4	Web Technology (3-1-0)	4	Department Elective II (3-1-0)	4		
Discipline based/Generic	Core	Discrete Mathematics (3-1-0)	4	Communication Systems (4-0-0)	4			Software Engineering (3-1-0)	4	Seminar (3-0-0)	3	Project Management (3-0-0)	3
Generic (other discipline)	Core	Maths-III (3-1-0)	4			Principles of Economics (3-1-0)	4						
	Elective			Open electives (optional)		Open electives (optional)						*Other discipline elective (3-0-0)	3
Lab/Practical	Core	Data & File Structures Lab (0-0-3)	1.5	Object Oriented Concepts & Programming Lab (0-0-2)	1	Operating Systems (0-0-2)	1	Embedded Systems Design & Programming Lab (0-0-3)	1.5	Digital Signal Processing Lab (0-0-3)	1.5		
		Analog & Digital Electronics Lab (0-0-3)	1.5	Computer Networks Configuration & Programming Lab (0-0-2)	1	Database Management Systems Lab (0-0-2)	1	Web Technology & Programming Lab (0-0-3)	1.5	Information Security Lab (0-0-3)	1.5		
				Communication Systems Lab (0-0-2)	1	RF Engineering Lab (0-0-2)	1						
Dissertation/ Project												Major Project (0-0-12)	6
Contact hours		26		25		25		25		25		25	
Total credit		23		22		22		22		22		22	

Minimum credit requirement for B. Tech. degree: 180

Total Credit of courses offered as per time –table (based on the above) + Other Compulsory Training etc listed below: 173 + 4 = 177

Remaining 3 Credits (Minimum) to be earned by student through the Skill/Ability enhancement courses listed below :

	Credit
* Compulsory	
Civic services and Social Internship	1
Industrial Orientation (3 weeks)	1
Training at Centre of excellence (e.g. Siemens Centre)/Industrial Training/ IEP (6 weeks) (Letter grade course)	2
Optional:	3 or, more
Letter grade courses: MOOC/ Open electives / EdX/ Coursera courses (depending on course)/ NCC –‘B’ Certificate/ ‘C’ Certificate	

Information and Communication Technology Department Electives

7 th Semester			
Department Elective-I (3-1-0)		Department Elective-II (3-1-0)	
Subject code	Subject name	Subject code	Subject name
	Cloud Computing		Advanced JAVA
	Digital Image Processing		.NET Programming
	Data Compression		Parallel & Distributed Computing
	Optimization Techniques		Computer Graphics and Visualization
	Theory of Computation		Advanced Microprocessor & Microcontrollers
	Cognitive & Software Defined Radio		Optical Communication

8 th Semester			
Department Elective III (3-0-0)		Department Elective IV (3-0-0)	
Subject Code	Subject name	Subject code	Subject name
	Information Retrieval Systems		Multimedia Computing
	Machine Human Interface		Cyber Security
	Wireless Communication & Mobile Computing		Big Data Analytics
	Pattern Recognition		Global Information & Positioning Systems
	Real Time Operating Systems		Bioinformatics
	VLSI System Design		Data Mining
	Satellite Communication		Advanced Signal Processing