



B Tech (ICT) Curriculum
(Effective from Aut 2008-09)

1. Introduction: The Academic Council has approved the B Tech Curriculum Review Committee Final Report, and directed that the revised curriculum contained therein should be followed with effect from the 2008 batch and onwards. The present document contains the official description of the course structure for the B Tech 2008 batch onwards.

2. Course Structure for B Tech Program with Effect from 2008 Batch is indicated in Table 1:

Semester I	L-T-P-C	Semester IV	L-T-P-C	Semester VII	L-T-P-C
Communication Skills	2-0-0-2	Probability and Statistics	3-1-0-4	Science Elective – 3	3-0-0-3
Calculus and Complex Variables	3-1-0-4	Analog and Digital Communication	3-0-3-4.5	Technical Elective – 3	3-5
Basic Electronic Circuits	3-0-3-4.5	Systems Software	3-0-3--4.5	Technical Elective – 4	3-5
Introduction to Programming	3-0-3-4.5	Analog Circuits	3-0-3-4.5	Technical Elective – 5	3-5
Approaches to Indian Society	3-0-0-3	Introduction to Business Finance	3-0-0-3	BTP - Part 1	
		Environmental Studies	3-0-0-3		0-1-4-3
				Open Elective - 3	3-0-0-3
Semester credits	18	Semester credits	23.5	Semester credits	18-24
Semester II		Semester V		Semester VIII	
Introduction to Discrete Mathematics	3-1-0-4	Computer Networks	3-0-3-4.5	Science Elective – 4	3-0-0-3
Digital Logic Design	3-0-3-4.5	Embedded Hardware Design	3-0-3-4.5	Technical Elective – 6	3-5
Object Oriented Programming	3-0-3-4.5	Database Management Systems	3--03-4.5	BTP - Part 2 BTP – Parts 1 & 2	0-2-20-12 0-3-24-15
Introduction to Communication Systems	3-0-3-4.5	Group Elective - 1	3-0-0/2-3/4	Open Elective - 4	3-0-0-3
Principles of Economics	3-0-0-3	Technical Elective - 1	3-0-0/2-3/4	.	
		Open Elective - 1	3-0-0-3		
Semester credits	20.5	Semester credits	22.5 - 24.5	Semester credits	21-23
Semester III		Semester VI			
Algebraic Structures	3-1-0-4	Science Elective - 1	3-0-0-3		
Signals and Systems	3-1-0-4	Science Elective - 2	3-0-0-3		
Computer Organisation	3-0-3-4.5	Open Elective - 2	3--0--0--3		
Data Structures	3-0-3-4.5	Group Elective – 2	3-0-0/2-3/4		
Science, Technology and Society	3-0-0-3	Technical Elective - 2	3-5		
Electromagnetic Theory	3-1-0-4	Software Engineering	3-0-3-4.5		
Semester credits	24	Semester credits	19.5-22.5		
Rural Internship	6	Industrial/Research Internship	9		

3. Additional Elements of the Curriculum: Regarding the electives, students are not required to follow the exact sequence indicated above. The provisions governing electives are indicated below.

3.1 Group Electives: The group electives are technical courses in the areas of primary interest of ICT, namely Electronics, Signal Processing and Communication, and Information Technology and Computer Science. Every student is required to take a minimum of two courses in this category, which must be taken in Semesters V and VI only. It is not compulsory to take group electives from the same group: however, students who wish to specialize in a particular area are advised to take 2 group electives from the same area. Group electives taken over and above the minimum requirement of 2 will be considered against the minimum requirement for technical electives. A student taking more than 2 group elective subjects may choose to designate any two from them as his/her group electives. Table 2 lists the group electives.

Table 2: Group Electives

Semester	Electronics	Communication and Signal Processing	Computer Science and Information Technology
V	Introduction to VLSI (3-0-0-3)	Digital Signal Processing (3-0-2-4)	Introduction to Algorithms (3-0-2-4)
VI	Solid State Devices (3-0-0-3)	Statistical Communication Theory (3-0-2-4)	Models of Computation (3-0-0-3) Operating Systems (3-0-2-4)

3.2 Technical Electives: The technical electives fall in one of 4 groups: Electronics, Signal Processing and Communication, Information Technology and Computer Science, and Interdisciplinary. Every student is required to take at least four technical electives. Any group elective course can be taken in place of a technical elective. For example, if a student takes 6 group elective courses, he/she will meet the minimum credit requirements for group electives as well as technical electives.

3.3 Open Electives: *Open electives* are elective courses offered from the following areas: Humanities, Social Sciences, Management, and Engineering Arts including Design, which are not covered in the Technical Electives. The student must take a minimum of 3 credits and is permitted to take up to a maximum of 9 credits for Earned Credit.

3.4 Science Electives: *Science Electives* are courses offered from the areas of the Sciences including Mathematics as well as Engineering Sciences including all sciences other than the Social Sciences, and is inclusive of all other engineering. Students must take a minimum of 6 credits and are permitted to take up to a maximum of 16 credits for Earned Credit.

3.5 B Tech Project: All students must undertake and pass B Tech Project Part 1 (3 credits) and Part 2 (12 credits); either Part 1 may be taken in Semester VII and Part 2 in Semester VIII or both parts may be taken in Semester VIII.

3.6 Internships: All students must undertake and pass Rural Internship of 6 credits (normally offered in the Semester Break between Semesters III and IV) and Industrial/Research Internship of 9 credits (normally offered in Summer Semester after Semester VI).

NB: The course outlines will be notified separately.