

DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE STRUCTURE FOR BTECH (IT) UNDER AUTONOMOUS STATUS
With effect from Admitted Batch 2015

FIRST YEAR SEMESTER – I										
Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT111	English	HS	3	1	-	4	40	60	100	3
IT112	Engineering Mathematics-I	BS	3	1	-	4	40	60	100	3
IT113	Engineering Chemistry	BS	3	1	-	4	40	60	100	3
IT114	Professional Ethics & Human Values	HS	2	1	-	3	100	-	100	2
IT115	Basics of Electronics Engineering	ES	3	1	-	4	40	60	100	3
IT116	Engineering Chemistry Lab	BS	-	-	3	3	50	50	100	2
IT117	Programming with C Lab	PC	1	1	3	5	50	50	100	3
ITAC1	NCC / NSS / SPORT	AC	-	-	3	3	-	-	-	-
	TOTAL		15	6	9	30	360	340	700	19

FIRST YEAR SEMESTER – II										
Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT121	Engineering Mathematics-II	BS	3	1	-	4	40	60	100	3
IT122	Engineering Physics	BS	3	1	-	4	40	60	100	3
IT123	Environmental Science	BS	3	1	-	4	40	60	100	3
IT124	Engineering Drawing	ES	1	-	3	4	40	60	100	3
IT125	Elements of Electrical Engineering	ES	3	1	-	4	40	60	100	3
IT126	Engineering Physics lab	BS	-	-	3	3	50	50	100	2
IT127	Language lab	HS	-	-	3	3	50	50	100	2
IT128	Object Oriented Programming with C++ Lab	ES	1	1	3	5	50	50	100	3
IT129	Workshop	ES	-	-	3	3	50	50	100	2
ITAC2	NCC / NSS / SPORTS	AC	-	-	3	3				
	TOTAL		14	5	18	37	400	500	900	24
FIRST SEM, SECOND SEM COMMON FOR CSE & IT DEPARTMENTS										

SECOND YEAR SEMESTER – I										
Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT211	Data Structures	PC	4	1	-	5	40	60	100	4
IT212	Digital Logic Design	ES	3	1	-	4	40	60	100	3
IT213	Discrete Mathematical Structures	BS	4	1	-	5	40	60	100	4
IT214	Computer Organization	PC	4	1	-	5	40	60	100	4
IT215	Data Communications	PC	3	1	-	4	40	60	100	3
IT216	Data Structures Lab	PC	-	-	3	3	50	50	100	2
IT217	Digital Electronics lab	ES	-	-	3	3	50	50	100	2
IT218	Python Programming Lab	PC	-	1	3	4	50	50	100	3
TOTAL			18	6	9	33	350	450	800	25

SECOND YEAR SEMESTER – II										
Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT221	Computer Networks	PC	3	1	-	4	40	60	100	3
IT222	Information Systems Design	PC	3	1	-	4	40	60	100	3
IT223	Operating Systems	PC	4	1	-	5	40	60	100	4
IT224	Probability Statistics & Queuing Theory	BS	4	1	-	5	40	60	100	4
IT225	Computer Graphics & Multimedia	PC	3	1	-	4	40	60	100	3
IT226	Networking Lab	PC	-	-	3	3	50	50	100	2
IT227	Computer Graphics & Multimedia Lab	PC	-	-	3	3	50	50	100	2
IT228	Operating Systems (Linux) Lab	PC	-	-	3	3	50	50	100	2
TOTAL			17	5	9	31	350	450	800	23
<p>* The students must undergo a non credit course on any one of the Foreign languages (Japanese, German, French, Chinese, etc) after second year Sem2 during summer vacation or Third year Sem 1</p>										

THIRD YEAR SEMESTER – I										
Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT311	* Open Elective-1	OE	3	1	-	4	40	60	100	3
IT312	Database Management Systems	PC	3	1	-	4	40	60	100	3
IT313	Unix Network Programming	PC	3	1	-	4	40	60	100	3
IT314	Formal Languages Automata Theory	PC	4	1	-	5	40	60	100	4
IT315	Object Oriented Programming through JAVA	PC	3	1	-	4	40	60	100	3
IT316	Database Management Systems Lab	PC	-	-	3	3	50	50	100	2
IT317	Unix Network Programming Lab	PC	-	-	3	3	50	50	100	2
IT318	Java Programming Lab	PC	-	-	3	3	50	50	100	2
IT319	Quantitative Aptitude - 1 & Verbal Aptitude – 1	HS	4	-	-	4	100	-	100	2
TOTAL			20	5	9	34	450	450	900	24

THIRD YEAR SEMESTER – II										
Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT321	Compiler Design	PC	4	1	-	5	40	60	100	4
IT322	Design & Analysis of Algorithms	PC	4	1	-	5	40	60	100	4
IT323	Object Oriented Analysis and Design with UML	PC	3	1	-	4	40	60	100	3
IT324	Mobile Computing and Application Development	PC	3	1	-	4	40	60	100	3
IT325	Professional Elective-I	PE	4	1	-	5	40	60	100	4
IT326	Mobile Computing and Application Development Lab	PC	-	-	3	3	50	50	100	2
IT327	Web based open source technologies Lab	PC	-	1	3	4	50	50	100	3
IT328	Computer Aided Software Engineering tools Lab	PC	-	-	3	3	50	50	100	2
IT329	Soft Skills lab	HS	-	-	3	3	100	-	100	2
IT3210	Quantitative Aptitude-2 & Verbal Aptitude - 2	HS	4	-	-	4	100	-	100	2
TOTAL			22	6	12	40	550	450	1000	29

FOURTH YEAR SEMESTER – I										
Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT411	*Open-Elective- II	OE	3	1	-	4	40	60	100	3
IT412	Cryptography & Network Security	PC	3	1	-	4	40	60	100	3
IT413	Data Analytics	PC	3	1	-	4	40	60	100	3
IT414	Professional Elective – II	PE	4	1	-	5	40	60	100	4
IT415	Professional Elective – III	PE	4	1	-	5	40	60	100	4
IT416	Analytics Lab	PC	-	-	3	3	50	50	100	2
IT417	Network Security Lab	PC	-	-	3	3	50	50	100	2
IT418	PROJECT I	PW	-	-	6	6	100	-	100	4
IT419	# Industrial Training	IT	-	-	-	-	-	100	100	2
TOTAL			17	5	12	34	400	500	900	27
# Assessment done based on the Industrial Training (Industrial training / Internship / Certification course) taken after Third Year Semester – II during summer vacation.										

FOURTH YEAR SEMESTER – II										
Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT421	Professional Elective – IV	PE	4	1	-	5	40	60	100	4
IT422	Professional Elective – V	PE	4	1	-	5	40	60	100	4
IT423	PROJECT II	PW	-	-	9	9	100	100	200	8
IT424	Massive Open Online Course	OOC	-	-	-	-	100	-	100	2
TOTAL			8	2	9	19	280	220	500	18
TOTAL CREDITS										189

NOTE:

- Students are enabled for self-learning outside the class rooms through Academic activities (Paper Presentation, Participation in Programming/coding contests/Workshops Etc), Extra Curricular activities/NSS/NCC/Sports.

OPEN ELECTIVES – 1
III Year Semester – 1

Department	Name of the Course offered
INFORMATION TECHNOLOGY	IT 311 (A) Intellectual Property Right And Patents IT 311 (B) Data Structures IT 311 (C) Software Engineering Concepts

OPEN ELECTIVES – II
IV Year Semester – 1

Department	Name of the Course offered
INFORMATION TECHNOLOGY	IT 411 (A) Introduction to Engineering Analytics IT 411 (B) Foundations of Web Development & Design IT 411 (C) Open Source Technologies IT 411 (D) Multimedia Concepts

Category	Professional Elective –I IT 325	Professional Elective-II IT 414	Professional Elective-III IT 415	Professional Elective-IV IT 421	Professional Elective-V IT 422
1	Distributed Operating Systems	Artificial Intelligence and Robotics	Machine Learning	Soft computing	Image Processing
2	Technology management	Parallel computing	Storage Area Networks	Cognitive computing	Cyber Security
3	Software Testing and Automation	Data Ware Housing And Mining	User Experience (Ux)	Cloud computing	Enterprise Resource Planning
4	Client Server Technologies	Software Project Management	Intellectual property right & patents	E commerce	Internet of Things