

IT - COURSE STRUCTURE R - 2019

FIRST YEAR SEMESTER – I

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT111	Engineering Mathematics – I	BS	3	0	0	1	6	10	40	60	100	3
IT112	Communicative English	HS	3	0	0	1	2	6	40	60	100	3
IT113	Basic Electronics Engineering	ES	3	0	0	1	6	10	40	60	100	3
IT114	Fundamentals of Information Technology	ES	3	0	0	1	2	6	40	60	100	3
IT115	Problem Solving with C	ES	3	0	0	1	6	10	40	60	100	3
IT116	English Language Laboratory	HS	0	0	3	0	1	4	50	50	100	1.5
IT117	Problem Solving with C Lab	ES	0	0	3	0	3	6	50	50	100	1.5
IT118	Environmental studies (Mandatory non-credit course)	MC	3	0	0	0	1	4	50	-	50	-
TOTAL			18	0	6	5	27	56	350	400	750	18

FIRST YEAR SEMESTER – II

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT121	Engineering Mathematics – II	BS	3	0	0	1	6	10	40	60	100	3
IT122	Engineering Physics	BS	3	0	0	1	4	8	40	60	100	3
IT123	Engineering Chemistry	BS	3	0	0	1	4	8	40	60	100	3
IT124	Digital Logic Design	ES	3	0	0	1	6	10	40	60	100	3
IT125	Engineering Drawing	ES	2	0	3	1	4	10	40	60	100	3.5
IT126	Engineering Physics Lab.	BS	0	0	3	0	1	4	50	50	100	1.5
IT127	Engineering Chemistry Lab.	BS	0	0	3	0	1	4	50	50	100	1.5
IT128	Engineering Workshop	ES	0	0	3	0	1	4	50	50	100	1.5
IT129	Human Values and Professional Ethics(Mandatory non-credit course)	MC	3	0	0	0	1	4	50	0	50	-
TOTAL			17	0	12	5	28	62	400	450	850	20

SECOND YEAR SEMESTER – I

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT211	Data Structures	PC	2	1	0	1	4	8	40	60	100	3
IT212	Basics of Electrical Engineering	ES	3	0	0	1	4	8	40	60	100	3
IT213	Discrete Mathematical Structures	BS	3	0	0	1	5	9	40	60	100	3
IT214	Computer Organization	PC	2	1	0	1	3	7	40	60	100	3
IT215	Microprocessors	PC	2	1	0	1	2	6	40	60	100	3
IT216	Data Structures Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT217	Microprocessor Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT218	Python Programming Lab	SC	0	1	3	0	1	5	50	50	100	2.5
TOTAL			12	4	9	5	25	55	350	450	800	20.5
SECOND YEAR SEMESTER – II												
Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT221	Operating Systems	PC	2	1	0	1	3	7	40	60	100	3
IT222	Probability Statistics & Queuing Theory	BS	3	0	0	1	6	10	40	60	100	3
IT223	Data Communications	PC	3	0	0	1	2	6	40	60	100	3
IT224	Database Management Systems	PC	2	1	0	1	3	7	40	60	100	3
IT225	Object Oriented Programming using JAVA	PC	3	0	0	1	4	8	40	60	100	3
IT226	Object Oriented Programming using JAVA Lab	SC	0	0	3	0	3	6	50	50	100	1.5
IT227	Operating Systems Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT228	Database Management Systems	PC	0	0	3	0	3	6	50	50	100	1.5
TOTAL			13	2	9	5	27	56	350	450	800	19.5
THIRD YEAR SEMESTER – I												
Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT311	Open Elective-1	OE	3	0	0	1	2	6	40	60	100	3
IT312	Computer Networks	PC	3	0	0	1	2	6	40	60	100	3

IT313	Automata Theory and Compiler Design	PC	3	1	0	1	3	8	40	60	100	3
IT314	Software Engineering	PC	3	0	0	1	2	6	40	60	100	3
IT315	Artificial Intelligence	PC	2	1	0	1	3	7	40	60	100	3
IT316	QA-1 & VA-1	HS	0	0	3	1	3	7	100	-	100	1.5
IT317	UML & Testing Lab	PC	0	0	3	0	0	3	50	50	100	1.5
IT318	Computer Networks lab	SC	0	0	3	0	1	4	50	50	100	1.5
IT319	Web Technologies Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT3110	Internship in Industry-I	PR	-	-	-	0	2	2	100	-	100	2
IT3111	Constitution of Indian & - Intellectual Property Rights	MC	3	0	0	0	1	4	50	0	50	
TOTAL			17	2	12	6	22	59	600	450	1050	23

THIRD YEAR SEMESTER – II

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT321	Open Elective - 2	OE	3	0	0	1	2	6	40	60	100	3
IT322	Professional Elective - 1	PE	3	0	0	1	2	6	40	60	100	3
IT323	Professional Elective - 2	PE	3	0	0	1	2	6	40	60	100	3
IT324	Design and Analysis of Algorithms	PC	3	0	0	1	3	7	40	60	100	3
IT325	DesignThinking	HS	3	0	0	1	2	6	40	60	100	3
IT326	QA-2 & Soft Skills	HS	0	0	3	2	3	8	100		100	1.5
IT327	Elective Lab	SC	0	1	3	0	3	7	50	50	100	2.5
IT328	Internet of Things Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT329	Graphics and Multimedia Lab	PC	0	0	3	0	1	4	50	50	100	1.5
TOTAL			15	1	12	7	21	56	450	450	900	22

FOURTH YEAR SEMESTER – I

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT411	Open Elective-3	OE	3	0	0	1	2	6	40	60	100	3
IT412	Professional Elective-3	PE	3	0	0	1	2	6	40	60	100	3
IT413	Professional Elective-4	PE	3	0	0	1	2	6	40	60	100	3
IT414	Cryptography & Network Security	PC	3	0	0	1	3	7	40	60	100	3

IT415	Foundation on Data Science	PC	2	1	0	1	2	6	40	60	100	3
IT416	Data Science Applications Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT417	Elective Lab	SC	0	1	3	0	3	7	50	50	100	2.5
IT418	Project Phase-I	PR	0	0	4	0	4	8	100		100	2
IT419	Internship in Industry-II	PR	-	-	-	0	2	2	100	-	100	2
TOTAL			14	2	10	5	23	54	500	400	900	23
FOURTH YEAR SEMESTER – II												
Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT421	Open Elective-4	OE	3	0	0	1	2	6	40	60	100	3
IT422	Professional Elective-5 / MOOC - 1	PE	3	0	0	1	2	6	40	60	100	3
IT423	Project Phase-II	PR	0	0	16	0	16	32	100	100	200	8
TOTAL			6	0	16	2	20	44	180	220	400	14
TOTAL CREDITS											160	

Proposed Electives

YEAR - SEM	III/IV SEM 2	IV/IV SEM 1	IV/IV SEM 2
ELECTIVE-STREAM	Professional Elective - 1	PE-III	PE-V
Stream 1 : Networks	Unix Network Programming	Mobile Adhoc Networks	Storage Area Networks
Stream 2: Data Engineering	Data Warehousing and Data Mining	Soft Computing	NLP
Stream 3 : Management	Business Automation	Organization Behaviour	Principles of Economics Management
Stream 4 : Security & Embedded	Embedded Systems	Cyber Security with web security	Malware Analysis
Stream 5 : Software Engineering	Management Information Systems	Software Testing Methodologies	Design Patterns
ELECTIVE-STREAM	PE-II	PE-IV	Proposed MOOC courses
Stream 1 : Networks	Distributed Operating Systems	Cloud Computing	Data Visualization with tableau
Stream 2: Data Engineering	Machine Learning	Deep Learning	modeling and simulation using matlab
Stream 3 : Management	Operation Research	Intellectual Property Rights	Mongo DB for developers
Stream 4 : Security & Embedded	Internet Of Things	Digital Forensics	Rasberri pi platform
Stream 5 : Software Engineering	User Experience(Ux)	Software Project Management	
	Elective lab 1	Elective lab 2	
	ETL Tools	Mobile Appplication development lab	
	DEVOpps	Matlab	
	ADV.Java	R-programming	