

DEPARTMENT OF INFORMATION TECHNOLOGY  
CURRICULUM 2019 OF 2ND TO 4TH YEAR OF THE  
UNDERGRADUATE ENGINEERING DEGREE PROGRAMME

2 <sup>nd</sup> Year 1 <sup>st</sup> Semester								
Subject Code	Subject Name	Category	Type	Contact			Credit	Marks
				L	T	P		
IT/PC/B/T/211	Data Structures and Algorithms	PC	Basic	3	0	0	3	100
IT/BS/B/T/212	Mathematics for IT-I	BS	Basic	3	0	0	3	100
IT/PC/B/T/213	Database Management Systems	PC	Basic	3	0	0	3	100
IT/PC/B/T/214	Object Oriented Programming	PC	Basic	3	0	0	3	100
IT/PC/B/T/215	Computer Organization and Architecture	PC	Basic	3	0	0	3	100
IT/PC/B/S/211	Data Structures and Algorithms Lab	PC	Basic	0	0	3	1.5	100
IT/PC/B/S/212	Database Management Systems Lab	PC	Basic	0	0	3	1.5	100
IT/PC/B/S/213	Object Oriented Programming Lab	PC	Basic	0	0	3	1.5	100
IT/PC/B/S/214	Assembly and Machine Language Lab	PC	Basic	0	1	3	2.5	100
Sub-Total				15	1	12		
Total				28			22	900

2 <sup>nd</sup> Year 2 <sup>nd</sup> Semester								
Subject Code	Subject Name	Category	Type	Contact			Credit	Marks
				L	T	P		
IT/PC/B/T/221	Object Oriented Systems	PC	Basic	3	0	0	3	100
IT/BS/B/T/222	Mathematics for IT-II	BS	Basic	3	0	0	3	100
IT/PC/B/T/223	Software Engineering	PC	Basic	3	0	0	3	100
IT/PC/B/T/224	Graph Theory and Combinatorics	PC	Basic	3	0	0	3	100
IT/PC/B/T/225	Computer Networks	PC	Basic	3	0	0	3	100
IT/PC/B/T/226	Graphics and Geometric Modeling	PC	Basic	3	0	0	3	100
IT/PC/B/S/221	Object Oriented Systems Lab	PC	Basic	0	0	3	1.5	100
IT/PC/B/S/222	Computer Networks Lab	PC	Basic	0	0	3	1.5	100
IT/PC/B/S/223	Software Engineering Lab	PC	Basic	0	1	3	2.5	100
Sub-Total				18	1	9		
Total				28			23.5	900

3 <sup>rd</sup> Year 1 <sup>st</sup> Semester									
Subject Code	Subject Name		Category	Type	Contact			Credit	Marks
					L	T	P		
IT/PE/B/T/311A	Cloud Computing	Elective-I	PE	Basic	4	0	0	4	100
IT/PE/B/T/311B	Sensor Networks								
IT/PE/B/T/311C	Artificial Intelligence								
IT/PC/B/T/312	Wireless and Mobile Networks	PC	Basic	3	0	0	3	100	
IT/PC/B/T/313	Web Technologies – I	PC	Basic	3	0	0	3	100	
IT/PC/H/T/314	Automata and Compiler	PC	Honours	4	0	0	4	100	
IT/PC/B/T/315	Operating Systems	PC	Basic	3	0	0	3	100	
IT/PE/B/S/311A	Cloud Computing Lab	Elective-I Lab	PE	Basic	0	0	3	1.5	100
IT/PE/B/S/311B	Sensor Networks Lab								
IT/PE/B/S/311C	Artificial Intelligence Lab								
IT/PC/H/S/312	Compiler Lab	PC	Honours	0	0	3	1.5	100	
IT/PC/B/S/313	Operating System Laboratory	PC	Basic	0	0	3	1.5	100	
Sub-Total					17	0	9		
Total					26			21.5	800

3 <sup>rd</sup> Year 2 <sup>nd</sup> Semester									
Subject Code	Subject Name		Category	Type	Contact			Credit	Marks
					L	T	P		
IT/PC/B/T/321	Design & Analysis of Algorithms		PC	Basic	3	0	0	3	100
IT/PC/B/T/322	Information Security		PC	Basic	3	0	0	3	100
IT/PC/B/T/323	Web Technologies – II		PC	Basic	3	0	0	3	100
IT/PC/B/T/324	Multimedia Coding and Communications		PC	Basic	3	0	0	3	100
IT/PE/H/T/325A	Soft Computing	Elective-II	PE	Honours	3	0	0	3	100
IT/PE/H/T/325B	Big Data								
IT/PE/H/T/325C	Mobile Applications Development								
	Open Elective		OE	Basic	3	0	0	3	100
IT/PC/B/S/321	Web Application Laboratory		PC	Basic	0	0	3	1.5	100
IT/PE/H/S/322A	Soft Computing Lab	Elective-II Lab	PE	Honours	0	0	3	1.5	100
IT/PE/H/S/322B	Big Data Lab								
IT/PE/H/S/322C	Mobile Applications Development Lab								
IT/PC/B/S/323	Multimedia Lab		PC	Basic	0	1	3	2.5	100
Sub-Total					18	1	9		
Total					28			23.5	900

4 <sup>th</sup> Year 1 <sup>st</sup> Semester									
Subject Code	Subject Name		Category	Type	Contact			Credit	Marks
					L	T	P		
IT/PC/B/T/411	Machine Learning		PC	Basic	3	0	0	3	100
IT/PE/B/T/412A	Data Warehousing and Data Mining	Elective-III	PE	Basic	3	0	0	3	100
IT/PE/B/T/412B	IoT and Next Generation Networks								
IT/PE/B/T/412C	Bio-Informatics								
IT/PC/B/T/413	Distributed Computing		PC	Basic	3	0	0	3	100
IT/PC/H/T/414	Network Security		PC	Honours	3	0	0	3	100
IT/PC/B/S/411	Machine Learning Lab		PC	Basic	0	1	3	2.5	100
IT/PS/B/S/412	Project		PS	Basic	0	2	7	5.5	200
IT/PS/B/S/413	Seminar		PS	Basic	0	1	2	2	100
	Internship		-	-	-	-	-	0	-
Sub-Total					12	4	12		
Total					28			22	800

4 <sup>th</sup> Year 2 <sup>nd</sup> Semester									
Subject Code	Subject Name		Category	Type	Contact			Credit	Marks
					L	T	P		
IT/PC/H/T/421	Data Science		PC	Honours	3	0	0	3	100
IT/HS/B/T/422	Management		HS	Basic	3	0	0	3	100
IT/PE/H/T/423A	Pattern Recognition and Applications	Elective-IV	PE	Honours	4	0	0	4	100
IT/PE/H/T/423B	NLP and Text Mining								
IT/PE/H/T/423C	Cyber Forensics and Security								
IT/PC/B/T/424	Digital Image Processing		PC	Basic	3	0	0	3	100
IT/PC/B/S/421	Comprehensive Viva Voce		PC	Basic	0	0	3	1.5	100
IT/PS/B/S/422	Project		PS	Basic	0	2	7	5.5	200
IT/PS/B/S/423	Seminar		PS	Basic	0	1	2	2	100
Sub-Total					13	3	12		
Total					28			22	800

## Open Electives (Catered by Dept. of IT)

Open Electives										
Subject Code	Subject Name	Category	Type	Contact			Credit	Marks	To be taught in	Student Strength
				L	T	P				
<b>FET/OE/B/T/0XX</b>	Database Management Systems Basics	PC	Basic	3	0	0	3	100	Odd Semester	80
<b>FET/OE/B/T/0XX</b>	Object Oriented Programming Fundamentals	PC	Basic	3	0	0	3	100	Even Semester	80