



(UGC-AUTONOMOUS)

B.Tech. in COMPUTER SCIENCE AND ENGINEERING

COURSE STRUCTURE & SYLLABUS (R19)

Applicable From 2019-20 Admitted Batch

I YEAR I SEMESTER

S. No.	Course Code	Course Title	Course Area	Hours Per Week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	1910001	Mathematics - I	BS	3	1	0	4	30	70	100
2	1910008	Chemistry	BS	3	1	0	4	30	70	100
3	1910201	Basic Electrical Engineering	ES	3	0	0	3	30	70	100
4	1910372	Engineering Workshop	ES	1	0	3	2.5	30	70	100
5	1910009	English	HSMC	2	0	0	2	30	70	100
6	1910073	Engineering Chemistry Lab	BS	0	0	3	1.5	30	70	100
7	1910074	English Language and Communication Skills Lab	HSMC	0	0	2	1	30	70	100
8	1910271	Basic Electrical Engineering Lab	ES	0	0	2	1	30	70	100
9		Induction Programme		0	0	0	0	-	-	-
Total Credits				12	2	10	19	240	560	800

YEAR II SEMESTER

S. No.	Course Code	Course Title	Course Area	Hours Per Week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	1920002	Mathematics - II	BS	3	1	0	4	30	70	100
2	1920008	Applied Physics	BS	3	1	0	4	30	70	100
3	1920501	Programming for Problem Solving	ES	3	1	0	4	30	70	100
4	1920371	Engineering Graphics	ES	1	0	4	3	30	70	100
5	1920072	Applied Physics Lab	BS	0	0	3	1.5	30	70	100
6	1920571	Programming for Problem Solving Lab	ES	0	0	3	1.5	30	70	100
7	1920021	Environmental Science	ES	3	0	0	0			
Total Credits				13	3	10	18	180	420	600

II YEAR I SEMESTER

S. No.	Course Code	Course Title	Course Area	Hours Per Week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1.	1930405	Analog and Digital Electronics	ES	3	0	0	3	30	70	100
2.	1930511	Data Structures	PC	3	1	0	4	30	70	100
3.	1930512	Computer Oriented Statistical Methods	BS	3	1	0	4	30	70	100
4.	19305013	Computer Organization and Architecture	PC	3	0	0	3	30	70	100
5.	1930514	Object Oriented Programming using C++	PC	2	0	0	2	30	70	100
6.	1930475	Analog and Digital Electronics Lab	ES	0	0	2	1	30	70	100
7.	1930572	Data Structures Lab	PC	0	0	3	1.5	30	70	100
8.	1930573	IT Workshop Lab	PC	0	0	3	1.5	30	70	100
9.	1930574	C++ Programming Lab	PC	0	0	2	1	30	70	100
10.	1930022	Gender Sensitization Lab	MC	0	0	2	0	-	-	-
Total Credits				15	1	12	21	270	630	900

II YEAR II SEMESTER

S. No.	Course Code	Course Title	Course Area	Hours Per Week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1.	1940515	Discrete Mathematics	PC	3	0	0	3	30	70	100
2.	1940010	Business Economics & Financial Analysis	MS	3	0	0	3	30	70	100
3.	1940516	Operating Systems	PC	3	0	0	3	30	70	100
4.	1940517	Database Management Systems	PC	3	1	0	4	30	70	100
5.	1940518	Java Programming	PC	3	1	0	4	30	70	100
6.	19404075	Operating Systems Lab	PC	0	0	3	1.5	30	70	100
7.	1940576	Database Management Systems Lab	PC	0	0	3	1.5	30	70	100
8.	1940577	Java Programming Lab	PC	0	0	2	1	30	70	100
9.	1940023	Constitution of India	MC	3	0	0	0	-	-	-
Total Credits				18	2	8	21	240	560	800

III YEAR I SEMESTER

S. No.	Course Code	Course Title	Course Area	Hours Per Week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1.	1950519	Formal Languages & Automata Theory	PC	3	0	0	3	30	70	100
2.	1950520	Software Engineering	PC	3	0	0	3	30	70	100
3.	1950521	Computer Networks	PC	3	0	0	3	30	70	100
4.	1950522	Web Technologies	PC	3	0	0	3	30	70	100
5.		Professional Elective-I	PE	3	0	0	3	30	70	100
6.		Professional Elective -II	PE	3	0	0	3	30	70	100
7.	1950578	Software Engineering Lab	PC	0	0	3	1.5	30	70	100
8.	1950579	Computer Networks & Web Technologies Lab	PC	0	0	3	1.5	30	70	100
9.	1950075	Advanced Communication Skills Lab	HSMC	0	0	2	1	30	70	100
10.	1950024	Intellectual Property Rights	MC	3	0	0	0	-	-	-
Total Credits				21	0	8	22	270	630	900

III YEAR II SEMESTER

S. No.	Course Code	Course Title	Course Area	Hours Per Week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1.	1950523	Machine Learning	PC	3	1	0	4	30	70	100
2.	1950524	Compiler Design	PC	3	1	0	4	30	70	100
3.	1950525	Design and Analysis of Algorithms	PC	3	1	0	4	30	70	100
4.		Professional Elective - III	PE	3	0	0	3	30	70	100
5.		Open Elective-I	OE	3	0	0	3	30	70	100
6.	1950580	Machine Learning Lab	PC	0	0	3	1.5	30	70	100
7.	1950581	Compiler Design Lab	PC	0	0	3	1.5	30	70	100
8.	1950582	Professional Elective-III Lab	PE	0	0	2	1	30	70	100
Total Credits				18	3	8	22	240	560	800

Professional Elective-I

1950541	Information Theory & Coding
1950542	Advanced Computer Architecture
1950543	Data Analytics
1950544	Image Processing
1950545	Principles of Programming Languages

Professional Elective - II

1950546	Computer Graphics
1950547	Advanced Operating Systems
1950548	Informational Retrieval Systems
1950549	Distributed Databases
1950550	Natural Language Processing

Professional Elective - III

1950651	Concurrent Programming
1950652	Network Programming
1950653	Scripting Languages
1950654	Mobile Application Development
1950655	Software Testing Methodologies