

**BE (COMPUTER SCIENCE AND BUSINESS SYSTEM) -2019 Scheme**

**SEMESTER-I**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		DISCRETE MATHEMATICS	3	0	0	3.0
2		PROBABILITY & STATISTICS	3	0	0	3.0
3		FUNDAMENTALS OF COMPUTER SCIENCE + LAB	2	1	2	4.0
4		PRINCIPLES OF ELECTRICAL ENGINEERING + LAB	3	0	2	4.0
5		FUNDAMENTALS OF PHYSICS + LAB	3	0	2	4.0
6		BUSINESS COMMUNICATION & VALUE SCIENCE -I	2	1	2	4.0
7		INDUCTION PROGRAM (Non-Credit)				
		TOTAL	16	2	8	22.0

**SEMESTER-III**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		FORMAL LANGUAGE AND AUTOMATA THEORY	3	1	2	5.0
2		COMPUTER ORGANIZATION & ARCHITECTURE	3	0	2	4.0
3		OBJECT ORIENTED PROGRAMMING + LAB	3	0	2	4.0
4		COMPUTATIONAL STATISTICS + LAB	3	0	2	4.0
5		SOFTWARE ENGINEERING + LAB	3	1	2	5.0
6		INDIAN CONSTITUTION (Non-Credit)				
		TOTAL	15	2	10	22.0

**SEMESTER-V**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		DESIGN AND ANALYSIS OF ALGORITHMS	2	0	2	3.0
2		COMPILER DESIGN + LAB (LEX & YACC)	3	0	2	4.0
3		FUNDAMENTALS OF MANAGEMENT	3	1	0	4.0
4		BUSINESS STRATEGY	3	0	0	3.0
5		BUSINESS COMMUNICATION & VALUE SCIENCE-III	2	0	2	3.0
6		ELECTIVE I + LAB	3	1	2	5.0
7		MINI PROJECT	0	0	2	1.0
		TOTAL	16	2	10	23.0

**SEMESTER-II**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		LINEAR ALGEBRA	3	1	0	4.0
2		STATISTICAL MODELING + LAB	3	1	0	4.0
3		DATA STRUCTURES & ALGORITHMS + LAB	2	1	2	4.0
4		PRINCIPLES OF ELECTRONICS + LAB	3	0	2	4.0
5		FUNDAMENTALS OF ECONOMICS	2	0	0	2.0
6		BUSINESS COMMUNICATION & VALUE SCIENCE -II	2	1	2	4.0
7		ENVIRONMENTAL SCIENCES (Non-Credit)				
		TOTAL	15	4	6	22.0
4 Weeks – Exchange Program among the Participating Institutes						

**SEMESTER-IV**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		OPERATING SYSTEMS + LAB (UNIX)	3	0	2	4.0
2		DATABASE MANAGEMENT SYSTEMS + LAB	3	0	2	4.0
3		SOFTWARE DESIGN WITH UML + LAB	3	0	2	4.0
4		INTRODUCTION TO INNOVATION, IP MANAGEMENT AND ENTREPRENEURSHIP	3	0	0	3.0
5		DESIGN THINKING	2	0	4	4.0
6		OPERATIONS RESEARCH + LAB	2	0	2	3.0
7		ESSENCE OF INDIAN TRADITIONAL KNOWLEDGE (Non-Credit)				
		TOTAL	16	0	12	22.0
4 Weeks – Industry Exposure (Optional)						

**SEMESTER-VI**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		COMPUTER NETWORKS + LAB	3	1	2	5.0
2		INFORMATION SECURITY + LAB	3	1	2	5.0
3		ARTIFICIAL INTELLIGENCE + LAB	3	0	4	5.0
4		FINANCIAL AND COST ACCOUNTING	3	1	0	4.0
5		BUSINESS COMMUNICATION & VALUE SCIENCE-IV	2	0	2	3.0
6		ELECTIVE II + LAB	3	1	2	5.0
		TOTAL	17	4	12	27.0
Industrial Project (6 to 8 weeks) – 4 credit points						

**SEMESTER-VII**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		USABILITY DESIGN OF SOFTWARE APPLICATIONS + LAB	2	0	1	2.5
2		IT WORKSHOP SKYLAB/MATLAB + LAB	3	0	1	3.5
3		FINANCIAL MANAGEMENT	3	0	0	3.0
4		HUMAN RESOURCE MANAGEMENT	3	0	0	3.0
5		ELECTIVE III	3	1	2	5.0
6		ELECTIVE IV + LAB	3	1	2	5.0
7		PROJECT EVALUATION I	0	0	2	1
		<b>TOTAL</b>	17	2	8	23.0

**SEMESTER-VIII**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		SERVICES SCIENCE & SERVICE OPERATIONAL MANAGEMENT + LAB	3	0	4	5.0
2		IT PROJECT MANAGEMENT + LAB	3	0	2	4.0
3		MARKETING RESEARCH & MARKETING MANAGEMENT	3	0	0	3.0
4		ELECTIVE V	3	1	2	5.0
5		ELECTIVE VI + LAB	3	1	2	5.0
6		PROJECT EVALUATION II	0	0	4	2.0
		<b>TOTAL</b>	15	2	14	24.0

**LIST OF PROFESSIONAL ELECTIVES**

**ELECTIVE I**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		CONVERSATIONAL SYSTEMS	3	1	2	5.0
2.		CLOUD, MICROSERVICES AND APPLICATION	3	1	2	5.0
3.		MACHINE LEARNING	3	1	2	5.0

**ELECTIVE II**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		ROBOTICS AND EMBEDDED SYSTEMS	3	1	2	5.0
2.		MODERN WEB APPLICATIONS	3	1	2	5.0
3.		DATA MINING & ANALYTICS	3	1	2	5.0

**ELECTIVE III**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		COGNITIVE SCIENCE & ANALYTICS	3	1	2	5.0
2.		INTRODUCTION TO IOT	3	1	2	5.0
3.		CRYPTOLOGY	3	1	2	5.0

**ELECTIVE IV**

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		QUANTUM COMPUTATION & QUATUM INFORMATION	3	1	2	5.0
2.		ADVANCED SOCIAL, TEXT AND MEDIA ANALYTICS	3	1	2	5.0
3.		MOBILE COMPUTING	3	1	2	5.0

**SEMESTER WISE CREDITS FOR BE: COMPUTER ENGINEERING**

Nature of Course	Credits to be Earned(As per Choice Based Credit System)								Total
	Semesters								
	I	II	III	IV	V	VI	VII	VIII	
Core-Foundation Courses	16	18	0	10	10	7	6	3	70
Core-Professional Courses	6	4	22	12	7	15	6	9	81
Professional & Generic Electives	0	0	0	0	5	5	10	10	30
Project Based Courses	0	0	0	0	1	0	1	2	4
<b>Total</b>									<b>185</b>

Nature of Course	Colour Scheme
Core-Foundation Courses	
Core-Professional Courses	
Generic Electives	
Professional Electives	
Project Based Courses	