

BE (COMPUTER SCIENCE AND ENGINEERING) -2019 Scheme
SEMESTER-I

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		APPLIED PHYSICS	3	1	2	4.5
2		ELECTRICAL AND ELECTRONICS ENGINEERING	3	1	2	4.5
3		ENERGY AND ENVIRONMENT	2	0	0	2.0
4		MATHEMATICS-I	3	1	0	3.5
5		ENGINEERING DRAWING	2	4	0	4.0
6		COMPUTER PROGRAMMING - I	3	0	2	4.0
		TOTAL	16	7	6	22.5

SEMESTER-II

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		MANUFACTURING PRACTICES	1	0	4	3.0
2		PROFESSIONAL COMMUNICATION	2	0	2	3.0
3		MECHANICS	2	1	2	2.5
4		APPLIED CHEMISTRY	3	1	2	4.5
5		MATHEMATICS-II	3	1	0	3.5
6		COMPUTER PROGRAMMING-II	3	0	2	4.0
		TOTAL	14	3	12	20.5

SEMESTER-III

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		OPERATING SYSTEMS	3	0	2	4.0
2		DISCRETE MATHEMATICAL STRUCTURES	3	1	0	3.5
3		INVENTIONS & INNOVATIONS IN COMPUTING	2	0	0	2.0
4		COMPUTER NETWORKS	2	0	2	3.0
5		COMPARITIVE LANGUAGES	3	0	2	4.0
6		NUMERICAL ANALYSIS	3	0	2	4.0
		TOTAL	16	1	8	20.5

SEMESTER-IV

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		OPTIMIZATION TECHNIQUES	3	0	2	4
2		PROBABILITY AND STATISTICS	3	0	2	4
3		DATABASE MANAGEMENT SYSTEMS	3	0	2	4
4		SOFTWARE ENGINEERING	2	0	2	3
5		DATA STRUCTURES	3	0	2	4
6		INTRODUCTION TO INNOVATION , IP MANAGEMENT AND ENTERPRENURSHIP	3	0	0	3
		TOTAL	17	0	10	22.0

SEMESTER-V

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		COMPUTER ARCHITECTURE AND ORGANIZATION	3	0	0	3.0
2		ANALYSIS AND DESIGN OF ALGORITHM	3	0	2	4.0
3		THEORY OF COMPUTATION	3	1	0	3.5
4		PROFESSIONAL PRACTICES	0	0	2	1.0
5		IT PROJECT MANAGEMENT	3	0	2	4.0
6		SEMINAR	0	0	0	3
7		ELECTIVE-I	2	0	2	3.0
8		GENERIC ELECTIVE-I	2	0	0	2.0
		TOTAL	15	2	8	23.5

SEMESTER-VI

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		ARTIFICIAL INTELLIGENCE	2	0	2	3.0
2		COMPUTER GRAPHICS	3	0	2	4.0
3		QUANTUM COMPUTATION	3	0	2	4.0
4		CAPSTONE PROJECT – STARTS (6 SELF EFFORT HOURS)	-	-	2	-
5		ELECTIVE-II	2	0	2	3
6		ELECTIVE-III	2	0	2	3.0
7		GENERIC ELECTIVE-II	2	0	0	2.0
		TOTAL	14	0	12	19

SEMESTER-VII

S. N.	COURSE NO.	TITLE	L	T	P	CR
		CAPSTONE PROJECT	-	-	2	8.0
1		INDEPENDENT STUDY	0	2	0	1.0
2		COGNITIVE COMPUTING	2	0	0	2
3		COMPILER CONSTRUCTION	3	0	2	4.0
4		HUMANITIES FOR ENGINEERS	2	0	2	3.0
5		ELECTIVE-IV	2	0	2	3.0
		TOTAL	9	2	8	21

SEMESTER-VIII

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		PROJECT SEMESTER*	-	-	-	15.0
		TOTAL	-	-	-	15.0

*TO BE CARRIED OUT IN INDUSTRY/RESEARCH INSTITUTION

OR

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		NETWORK PROGRAMMING	2	0	2	3.0
2		ETHICAL HACKING	3	0	2	4.0
3		CAPSTONE PROJECT II	-	-	0	8
		TOTAL	5	0	4	15.0

OR

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		START- UP SEMESTER**	-	-	-	15.0
		TOTAL	-	-	-	15.0

** BASED ON HANDS ON WORK ON INNOVATIONS AND ENTREPRENEURSHIP

LIST OF PROFESSIONAL ELECTIVES

ELECTIVE I

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		ENGINEERING SOFTWARE AS A SERVICE	2	0	2	3
2		COMPUTER & NETWORK SECURITY	2	0	2	3
3		COMPUTER VISION	2	0	2	3
4		MACHINE LEARNING	2	0	2	3
5		COMPUTATIONAL BIOLOGY AND BIOINFORMATICS	2	0	2	3
6		MATHEMATICAL MODELING AND SIMULATION	2	0	2	3

ELECTIVE II

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		SOFTWARE METRICS AND QUALITY MANAGEMENT	2	0	2	3
2		SECURE CODING	2	0	2	3
3		3D MODELING AND ANIMATION	2	0	2	3
4		GPU COMPUTING	2	0	2	3
5		COMBINATORICS	2	0	2	3
6		MATRIX COMPUTATION	2	0	2	3

ELECTIVE III

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		SOFTWARE VERIFICATION AND VALIDATION	2	0	2	3
2		CYBER FORENSICS	2	0	2	3
3		AUGMENTED AND VIRTUAL REALITY	2	0	2	3
4		CLOUD COMPUTING	2	0	2	3
5		COMPUTATIONAL CHEMISTRY	2	0	2	3
6		FINANCIAL MANAGEMENT	2	0	2	3

ELECTIVE IV

S. N.	COURSE NO.	TITLE	L	T	P	CR
1		ADVANCED TOPICS IN SOFTWARE ENGINEERING	2	0	2	3
2		CYBER SECURITY	2	0	2	3
3		GAME DESIGN & DEVELOPMENT	2	0	2	3
4		DEEP LEARNING	2	0	2	3
5		QUANTUM ALGORITHM	2	0	2	3
6		COMPUTATIONAL FINANCE AND MODELING	2	0	2	3

GENERIC ELECTIVE-I

S.N.	COURSE NO.	TITLE	L	T	P	CR
1		EMPLOYABILITY DEVELOPMENT SKILL	2	0	0	2.0
2		INTRODUCTORY COURSE IN FRENCH/GERMAN/SPANISH	2	0	0	2.0
3		INTRODUCTION TO COGNITIVE SCIENCE	2	0	0	2.0
4		INTRODUCTION TO CORPORATE FINANCE	2	0	0	2.0
5		TECHNOLOGIES FOR SUSTAINABLE DEVELOPMENT	2	0	0	2.0
6		BIOLOGY FOR ENGINEERS	2	0	0	2.0
7		ASTRONOMY AND ASTROPHYSICS	2	0	0	2.0
8		INTELLECTUAL PROPERTY RIGHTS	2	0	0	2.0
9		TOTAL QUALITY MANAGEMENT	2	0	0	2.0
10		INTRODUCTION TO INDIAN CONSTITUTION	2	0	0	2.0
11		ECONOMICS FOR DECISION MAKING	2	0	0	2.0

GENERIC ELECTIVE-II

S.N.	COURSE NO.	TITLE	L	T	P	CR
1		FINE ARTS	1	0	2	2.0
2		FASHION DESIGN	1	0	2	2.0
3		MASS COMMUNICATION	1	0	2	2.0
4		YOGA AND SCIENCE	1	0	2	2.0
5		THEATER/ DRAMA	1	0	2	2.0
6		CULINARY ARTS	1	0	2	2.0
7		PHOTOGRAPHY AND FILM MAKING	1	0	2	2.0
8		SOUND DESIGNING	1	0	2	2.0

SEMESTER WISE CREDITS FOR BE: COMPUTER SCIENCE AND 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	22.5	20.5	4	7	0	0	3	0	57
Core-Professional Courses	0	0	16.5	15	18	11	7.5	0	68
Professional & Generic Electives	0	0	0	0	5	8	3	0	16
Project Based Courses	0	0	0	0	0	0	8	15	23
Total									164

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