

BE (COMPUTER ENGINEERING) -2019 Scheme
SEMESTER-I

S. N.	COURSE NO.	TITLE	L	T	P	CR
1	UPH004	APPLIED PHYSICS	3	1	2	4.5
2	UEC001	ELECTRONIC ENGINEERING	3	1	2	4.5
3	UTA015	ENGINEERING DRAWING	2	0	4	4.0
4	UHU003	PROFESSIONAL COMMUNICATION	2	0	2	3.0
5	UMA003	MATHEMATICS – I	3	1	0	3.5
6	UTA017	COMPUTER PROGRAMMING - I	3	0	2	4.0
		TOTAL	16	3	12	23.5

SEMESTER-II

S. N.	COURSE NO.	TITLE	L	T	P	CR
1	UCB008	APPLIED CHEMISTRY	3	1	2	4.5
2	UEE001	ELECTRICAL ENGINEERING	3	1	2	4.5
3	UEN002	ENERGY AND ENVIRONMENT	2	0	0	2.0
4	UMA004	MATHEMATICS – II	3	1	0	3.5
5	UES009	MECHANICS	2	1	0	2.5
6	UTA018	COMPUTER PROGRAMMING - II	3	0	2	4.0
7	UTA013	ENGINEERING DESIGN PROJECT – I	-	-	-	4.0 ⁺⁺
		TOTAL	16	4	6	25.0

SEMESTER-III

S. N.	COURSE NO.	TITLE	L	T	P	CR
1	UCS303	OPERATING SYSTEMS	3	0	2	4.0
2	UCS405	DISCRETE MATHEMATICAL STRUCTURES	3	1	0	3.5
3	UCS407	INVENTIONS & INNOVATIONS IN COMPUTING	2	0	0	2.0
4	UCS520	COMPUTER NETWORKS	2	0	2	3.0
5	UES012	ENGINEERING MATERIALS	3	0	2	4.0
6	UMA007	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	UTA014	ENGINEERING DESIGN PROJECT – II	-	-	-	4.0 ⁺⁺
2	UTA002	MANUFACTURING PROCESSES	2	0	2	3.0
3	UMA031	OPTIMIZATION TECHNIQUES	3	1	0	3.5
4	UCS409	PROBABILITY AND STATISTICS	3	0	2	4.0
5	UES034	MEASUREMENT SCIENCE AND TECHNIQUES	3	0	2	4.0
6	UCS310	DATABASE MANAGEMENT SYSTEMS	3	0	2	4.0
7	UCS406	DATA STRUCTURES AND ALGORITHMS	3	0	2	4.0
		TOTAL	17	1	10	26.5

SEMESTER-V

S. N.	COURSE NO.	TITLE	L	T	P	CR
1	UCS503	SOFTWARE ENGINEERING	2	0	2	3.0
2	UCS507	COMPUTER ARCHITECTURE AND ORGANIZATION	3	0	0	3.0
3	UCS521	ARTIFICIAL INTELLIGENCE	2	0	2	3.0
4	UCS525	PROFESSIONAL PRACTICES [#]	0	0	2	1.0
5	UCS616	ANALYSIS AND DESIGNING OF ALGORITHMS	3	0	2	4.0
6	UCS701	THEORY OF COMPUTATION	3	1	0	3.5
7		ELECTIVE-I	2	0	2	3.0
8		GENERIC ELECTIVE-I	2	0	0	2.0
		TOTAL	16	2	10	22.5

[#] The Course would consist of talks by working professionals from Industry, Government, Academia and Research organisation.

SEMESTER-VI

S. N.	COURSE NO.	TITLE	L	T	P	CR
1	UCS614	EMBEDDED SYSTEMS DESIGN	2	0	2	3.0
2		COMPUTER GRAPHICS	3	0	2	4.0
3	UCS617	MICROPROCESSOR-BASED SYSTEMS DESIGN	2	0	2	3.0
4	UTA012	INNOVATION AND ENTREPRENEURSHIP	1	0	2	2.0
5	UCS794	CAPSTONE PROJECT* – STARTS	0	0	2	-
6		ELECTIVE-II	2	0	2	3.0
7		ELECTIVE-III	2	0	2	3.0
8		GENERIC ELECTIVE-II	2	0	0	2.0
		TOTAL	14	0	14	20.0

SEMESTER-VII

S. N.	COURSE NO.	TITLE	L	T	P	CR
1	UCS781	INDEPENDENT STUDY	0	0	2	1.0
2	UCS794	CAPSTONE PROJECT	0	0	2	8.0
3	UCS802	COMPILER CONSTRUCTION	3	0	2	4.0
4	UHU005	HUMANITIES FOR ENGINEERS	2	0	2	3.0
5		ELECTIVE-IV	2	0	2	3.0
		TOTAL	7	0	10	19.0

SEMESTER-VIII

S. N.	COURSE NO.	TITLE	L	T	P	CR
1	UCS895	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	UCS801	IT PROJECT MANAGEMENT	3	0	0	3.0
2	UCS806	ETHICAL HACKING	3	0	2	4.0
3	UCS896	CAPSTONE PROJECT II	0	0	4	8.0
		TOTAL	6	0	6	15.0

OR

S. N.	COURSE NO.	TITLE	L	T	P	CR
1	UCS897	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	UCS608	PARALLEL & DISTRIBUTED COMPUTING	2	0	2	3.0
2.	UCS522	COMPUTER VISION	2	0	2	3.0
3.	UML501	MACHINE LEARNING	2	0	2	3.0
4.	UCS523	COMPUTER & NETWORK SECURITY	2	0	2	3.0
5.	UCS524	ENGINEERING SOFTWARE AS A SERVICE	2	0	2	3.0
6.	UCS526	MATHEMATIC MODELING AND SIMULATION	2	0	2	3.0

ELECTIVE II

S. N.	COURSE NO.	TITLE	L	T	P	CR
1	UCS631	GPU COMPUTING	2	0	2	3.0
2.	UCS632	3D MODELLING AND ANIMATION	2	0	2	3.0
3.	UCS633	DATA ANALYTICS & VISUALIZATION	2	0	2	3.0
4.	UCS634	SECURE CODING	2	0	2	3.0
5.	USE401	SOFTWARE METRICS AND QUALITY MANAGEMENT	2	0	2	3.0
6.	UCS618	MATRIX COMPUTATION	2	0	2	3.0

ELECTIVE III

S. N.	COURSE NO.	TITLE	L	T	P	CR
1	UCS641	CLOUD COMPUTING	2	0	2	3.0
2.	UCS642	AUGMENTED AND VIRTUAL REALITY	2	0	2	3.0
3.	UML602	NATURAL LANGUAGE PROCESSING	2	0	2	3.0
4.	UCS643	CYBER FORENSICS	2	0	2	3.0
5.	UCS644	SOFTWARE VERIFICATION AND VALIDATION	2	0	2	3.0
6.	UCS619	FINANCIAL MATHEMATICS	2	0	2	3.0

ELECTIVE IV

S. N.	COURSE NO.	TITLE	L	T	P	CR
1	UCS741	SIMULATION & MODELLING	2	0	2	3.0
2.	UCG731	GAME DESIGN & DEVELOPMENT	2	0	2	3.0
3.	UCS742	DEEP LEARNING	2	0	2	3.0
4.	UCS743	ADVANCED COMPUTER NETWORKS	2	0	2	3.0
5.	UCS709	ADVANCED TOPICS IN SOFTWARE ENGINEERING	2	0	2	3.0
6.	UCS712	COMPUTATIONAL NUMBER THEORY	2	0	2	3.0

GENERIC ELECTIVE-I

S.N.	COURSE NO.	TITLE	L	T	P	CR
1	UHU007	EMPLOYABILITY DEVELOPMENT SKILL	2	0	0	2.0
2	UHU006	INTRODUCTORY COURSE IN FRENCH/GERMAN/SPANISH	2	0	0	2.0
3	UHU009	INTRODUCTION TO COGNITIVE SCIENCE	2	0	0	2.0
4	UHU008	INTRODUCTION TO CORPORATE FINANCE	2	0	0	2.0
5	UEN004	TECHNOLOGIES FOR SUSTAINABLE DEVELOPMENT	2	0	0	2.0
6	UBT509	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 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	23.5	21	8	10.5	0	2	3	0	68
Core-Professional Courses	0	0	12.5	12	17.5	10	5	0	57
Professional & Generic Electives	0	0	0	0	5	8	3	0	16
Project Based Courses	0	4	0	4	0	-	8	15	31
	Total								172

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