

B.E. (COMPUTER ENGINEERING) SCHEME 2015

SEMESTER-I

S. NO.	CODE	TITLE	L	T	P	CR
1	UMA003	MATHEMATICS-I	3	1	0	3.5
2	UCB008	APPLIED CHEMISTRY	3	1	2	4.5
3	UEC001	ELECTRONIC ENGINEERING	3	1	2	4.5
4	UES009	MECHANICS	2	1	2*	2.5
5	UTA007	COMPUTER PROGRAMMING-I	3	0	2	4.0
6	UEN002	ENERGY & ENVIRONMENT	3	0	0	3.0
		TOTAL	17	4	8	22.0

* EACH STUDENT WILL ATTEND ONE LAB SESSION OF 2 HRS IN A SEMESTER FOR A BRIDGE PROJECT IN THIS COURSE (MECHANICS).

SEMESTER-II

S.N O.	CODE	TITLE	L	T	P	CR
1	UMA004	MATHEMATICS-II	3	1	0	3.5
2	UPH004	APPLIED PHYSICS	3	1	2	4.5
	UHU003	INTRODUCTION TO PROFESSIONAL ENGINEERING#	2	0	2	3.0
4	UEE001	ELECTRICAL ENGINEERING	3	1	2	4.5
5	UTA009	COMPUTER PROGRAMMING-II	3	0	2	4.0
6	UTA008	ENGINEERING DESIGN-I	2	4	0	4.0
		TOTAL	16	7	8	23.5

FOR THE STUDENTS OF THAPAR UNIVERSITY TITLE OF THIS COURSE WILL BE WRITTEN AS 'PROFESSIONAL COMMUNICATION'

SEMESTER-III

S.NO.	CODE	TITLE	L	T	P	CR
1	UMA007	NUMERICAL ANALYSIS	3	1	2	4.5
2	UES012	ENGINEERING MATERIALS	3	1	2	4.5
	UTA010	ENGINEERING DESIGN-II (CATAPULT)	1	0	2	5.0
4	UCS405	DISCRETE MATHEMATICAL STRUCTURE	3	1	0	3.5
5	UCS304	INFORMATION MANAGEMENT SYSTEM	3	0	4	6.0
6	UEN002	ENERGY AND ENVIRONMENT	3	0	0	3.0
		TOTAL		29		26.5

SEMESTER-IV

S.NO.	CODE	TITLE	L	T	P	CR
1	UMA031	OPTIMIZATION TECHNIQUES	3	1	0	3.5
2	UES010	SOLIDS AND STRUCTURES	3	1	2	4.5
	UES011	THERMO-FLUIDS	3	1	2	4.5
4	UTA002	MANUFACTURING PROCESSES	2	0	3	3.5
5	UCS406	DATA STRUCTURES & ALGORITHMS (4 SELF EFFORT HOURS)	3	0	2	6.0
6	UCS407	INVENTIONS & INNOVATIONS IN COMPUTING	2	0	0	2.0
7	UTA011	ENGINEERING DESIGN III (BUGGY)	1	0	4	6.0
8		EMPLOYMENT DEVELOPMENT SKILLS (EDS)	1	0	0	
		TOTAL		34		30.0

UCS303: OPERATING SYSTEMS	3	0	2	4.0
UCS520: COMPUTER NETWORKS	3	0	2	4.0

ADD 8.0 CR

SEMESTER-V

S.NO.	CODE	TITLE	L	T	P	CR
1	UCS616	ADVANCED DATA STRUCTURES AND ALGORITHMS	3	0	2	4.0
2	UCS503	SOFTWARE ENGINEERING	3	0	2	4.0
	UCS519	COMPUTER ARCHITECTURE AND ORGANIZATION	3	0	2	4.0
4	UCS701	THEORY OF COMPUTATION	3	1	0	3.5
5	UCS521	ARTIFICIAL INTELLIGENCE	3	1	0	3.5
6		PROFESSIONAL PRACTICES [#]	0	1	2	1.5
7		ELECTIVE I	3	0	2	4.0
		TOTAL		31		24.5

#THE COURSE WOULD CONSIST OF TALKS BY WORKING PROFESSIONALS FROM INDUSTRY, GOVERNMENT, ACADEMIA & RESEARCH ORGANIZATIONS.

SEMESTER-VI

S.NO.	CODE	TITLE	L	T	P	CR
1	UCS617	MICROPROCESSOR-BASED SYSTEMS DESIGN	3	0	2	4.0
2	UCS614	EMBEDDED SYSTEMS DESIGN	3	0	2	4.0
	UCS615	IMAGE PROCESSING	3	0	2	4.0
4		ELECTIVE II	3	0	2	4.0
5		ELECTIVE III	3	0	2	4.0
6	UTA012	INNOVATION AND ENTREPRENEURSHIP (5 SELF EFFORT HOURS)	1	0	2	4.5
7	UCS794	CAPSTONE PROJECT* (STARTS) SEH-6	0	0	2	-
		TOTAL		28		24.5

*** DESIGN / FABRICATION / IMPLEMENTATION WORK UNDER THE GUIDANCE OF A FACULTY MEMBER. PRIOR TO REGISTRATION, A DETAILED PLAN OF WORK SHOULD BE SUBMITTED BY THE STUDENT TO THE COURSE COORDINATOR FOR APPROVAL.**

SEMESTER-VII

S.NO.	CODE	TITLE	L	T	P	CR
1	UCS802	COMPILER CONSTRUCTION	3	0	2	4.0
2		ELECTIVE IV	3	0	2	4.0
3		INDEPENDENT STUDY&	0	2	0	1.0
4	UHU005	HUMANITIES FOR ENGINEERS	2	0	2	3.0
5	UCS794	CAPSTONE PROJECT (CONTINUED) SEH-14	0	0	2	12.0
		TOTAL		18		24.0

SEMESTER-VIII

S.NO.	CODE	TITLE	L	T	P	CR
1	UCS895	PROJECT SEMESTER/START-UP SEMESTER				20.0
		OR				
2	UCS896	CAPSTONE PROJECT II	0	0	4	12.0
4	UCS801	SOFTWARE PROJECT MANAGEMENT	3	0	2	4.0
5	UCS806	ETHICAL HACKING	3	0	2	4.0
		TOTAL	6	0	8	20

LIST OF ELECTIVES

ELECTIVE I

S.N O.	CODE	TITLE	L	T	P	CR
1	UCS608	PARALLEL & DISTRIBUTED COMPUTING	3	0	2	4.0
2.	UCS522	COMPUTER VISION	3	0	2	4.0
3.	UML501	MACHINE LEARNING	3	0	2	4.0
4.	UCS523	COMPUTER & NETWORK SECURITY	3	0	2	4.0
5.	UCS524	ENGINEERING SOFTWARE AS A SERVICE	3	0	2	4.0

ELECTIVE II

S.N O.	CODE	TITLE	L	T	P	CR
1	UCS631	GPU COMPUTING	3	0	2	4.0
2.	UCS632	3D MODELLING AND ANIMATION	3	0	2	4.0
3.	UCS633	DATA ANALYTICS & VISUALIZATION	3	0	2	4.0
4.	UCS634	SECURE CODING	3	0	2	4.0
5.	USE401	SOFTWARE METRICS AND QUALITY MANAGEMENT	3	0	2	4.0

ELECTIVE III

S.N O.	CODE	TITLE	L	T	P	CR
1	UCS641	CLOUD COMPUTING	3	0	2	4.0
2.	UCS642	AUGMENTED AND VIRTUAL REALITY	3	0	2	4.0
3.	UML602	NATURAL LANGUAGE PROCESSING	3	0	2	4.0
4.	UCS643	CYBER FORENSICS	3	0	2	4.0
5.	USE601	SOFTWARE VERIFICATION AND VALIDATION	3	0	2	4.0

ELECTIVE IV

S.N O.	CODE	TITLE	L	T	P	CR
1	UCS741	SIMULATION & MODELLING	3	0	2	4.0
2.	UCG731	GAME DESIGN & DEVELOPMENT	3	0	2	4.0
3.	UCS742	DEEP LEARNING	3	0	2	4.0
4.	UCS743	ADVANCED COMPUTER NETWORKS	3	0	2	4.0
5.	UCS709	ADVANCED TOPICS IN SOFTWARE ENGINEERING	3	0	2	4.0