



MANAV RACHNA UNIVERSITY
DEPARTMENT OF COMPUTER SCIENCE & TECHNOLOGY
B.TECH-CSE (CSU01)
Programme

SEMESTER - 1											
SUBJECT CODES	SUBJECT NAME	PRE-REQUISITE	OFFERING DEPARTMENT	COURSE NATURE (Hard/Soft)	(Core/Elective)	L	T	P	O	NO. OF CONTACT HOURS PER	NO. OF CREDITS
PHH101B- T & P	QUANTAM MECHANICS FOR ENGINEERS	NIL	PH	HARD	CORE	3	1	2	0	6	5
MAH101B-T & P	CALCULUS & LINEAR ALGEBRA	NIL	MA	HARD	CORE	3	1	2	0	6	5
CSH101B-T&P	USING C	NIL	CS	HARD	CORE	3	1	2	0	6	5
HLS103B/HLS104B	PROFESSIONAL ENGLISH-BASIC	NIL	HL	SOFT	CORE	2	0	2	0	4	3
CSW102B	(HTML5,CSS,JAVASCRIPT,JQUERY)	NIL	CS	WORKSHOP	CORE	0	0	3	0	3	1.5
CHH137	ENVIRONMENTAL STUDIES	NIL	CH	AUDIT	CORE	2	0	0	2	2	0
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)						13	3	11	2	27	19.5

SEMESTER - 2											
SUBJECT CODES	SUBJECT NAME	PRE-REQUISITE	OFFERING DEPARTMENT	COURSE NATURE (Hard/Soft)	(Core/Elective)	L	T	P	O	NO. OF CONTACT HOURS PER	NO. OF CREDITS
CHH144	CHEMISTRY-I	NIL	CH	HARD	CORE	3	1	2	0	6	5
MAH104B-T & P	DISCRETE MATHS	NIL	MA	HARD	CORE	3	1	2	0	6	5
ECH103B-T/P	Basics of Electronics & Electrical Engineering	NIL	EC	HARD	CORE	3	1	2	0	6	5
CSH103B-T&P	DATA STRUCTURES & ALGORITHMS	NIL	CS	HARD	CORE	3	1	2	0	6	5
MEW102B	ENGINEERING GRAPHICS & DRAWING	NIL	ME	WORKSHOP	CORE	0	0	3	0	3	1.5
LWH324	INDIAN CONSTITUTION	NIL	LW	AUDIT	CORE	1	0	0	0	1	0
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)						12	4	11	0	28	21.5

CSO104B	Post 2nd Sem Summer Training (Mandatory) (Project Management)										2
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SEMESTER - 3											
SUBJECT CODES	SUBJECT NAME	PRE-REQUISITE	OFFERING DEPARTMENT	COURSE NATURE (Hard/Soft)	(Core/Elective)	L	T	P	O	NO. OF CONTACT HOURS PER	NO. OF CREDITS
CSH201B-T&P	OOPS USING JAVA	PROGRAMMING FOR PROBLEM SOLVING USING	CS	HARD	CORE	3	1	2	0	6	5
CSH202B-T&P	DATABASE MANAGEMENT SYSTEM	NIL	CS	HARD	CORE	3	1	2	0	6	5
CSH209B-T&P	ORGANISATION	NIL	CS	HARD	CORE	3	1	2	0	6	5
CSH204-B-T&P	ANALYSIS & DESIGN OF ALGORITHMS	Data Structures	CS	HARD	CORE	3	1	2	0	6	5
CSW203B	(MONGODB,TYPESCRIPT,ANGULAR JS)	USER INTERFACE-I (HTML5,CSS,JAVASCRIPT,J)	CS	WORKSHOP	CORE	0	0	3	0	3	1.5
FLS101B/FLS102B/FLS103B	FOREIGN LANGUAGE	NIL	FL	AUDIT	ELECTIVE	1	1	0	0	2	0
CDO201	CDC	NIL	CDC	OUTCOME	CORE	0	0	1	0	1	0.5
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)						13	5	12	0	30	22

SEMESTER - 4											
SUBJECT CODES	SUBJECT NAME	PRE-REQUISITE	OFFERING DEPARTMENT	COURSE NATURE (Hard/Soft)	(Core/Elective)	L	T	P	O	NO. OF CONTACT HOURS PER	NO. OF CREDITS
MAH202B-T & P	PROBABILITY & STATISTICS	NIL	MA	HARD	CORE	3	1	2	0	6	5
CSH205B-T&P	ARTIFICIAL INTELLIGENCE	NIL	CS	HARD	CORE	3	1	2	0	6	5
CSH206B-T&P	OPERATING SYSTEM	NIL	CS	HARD	CORE	3	1	2	0	6	5
CSH207B-T&P	SOFTWARE ENGG.	NIL	CS	HARD	CORE	3	1	2	0	6	5
CSW208B	USING PYTHON	NIL	CS	WORKSHOP	CORE	0	0	3	0	3	1.5
FLS105B/FLS106B/FLS107B	FOREIGN LANGUAGE	NIL	FL	AUDIT	ELECTIVE	1	1	0	0	2	0
CDO202	CDC	NIL	CDC	OUTCOME	CORE	0	0	1	0	1	0.5
MC7	KNOWLEDGE	NIL	ED	AUDIT	CORE	1	0	0	0	1	0
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)						13	5	12	0	31	22
CSO209B	SUMMER TRAINING POST 4TH SEMESTER										2

MCS232/MCS231	BASICS OF ECONOMICS	NIL	MC	SOFT	ELECTIVE	1	0	2	0	3	2
MOOC	NPTEL Courses from MOOC										
CSW406B/CSW407B	USER EXPERIENCE	NIL	CS	WORKSHOP	ELECTIVE	0	0	3	0	3	1.5
MOOC	NPTEL Courses from MOOC										
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)						9	1	9	0	19	14.5

SEMESTER - 8											
SUBJECT CODES	SUBJECT NAME	PRE-REQUISITE	OFFERING DEPARTMENT	COURSE NATURE (Hard/Soft)	(Core/Elective)	L	T	P	O	NO. OF CONTACT HOURS PER	NO. OF CREDITS
EDS 288/EDS 289/EDS 235	SOCIOLOGY	NIL	ED	SOFT	ELECTIVE	1	0	2	0	3	2
MOOC	NPTEL Courses from MOOC										
CSH408B-T&P	Mobile App. Analytics	NIL	CS	HARD	ELECTIVE	3	0	2	0	5	4
CSH409B-T&P	Business Intelligence & Analytics	NIL	CS								
CSH410B-T&P	Recognition	NIL	CS								
CSH411B-T&P	Cloud Security	Cloud Computing	CS								
CSH412B-T&P	Software Requirement Engineering	Software Engineering	CS								
MOOC	NPTEL Courses from MOOC										
CSN413B	PROJECT	NIL	CS	NTCC	CORE	320 TO 360 HOURS				8	
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)						4	0	4	0	8	14

Minimum Credit required for award of B.Tech CSE degree is 155-165.

*COURSE NATURE	Hard course (H): A course having L-T and P and/or O component ; L(Lecture), T(Tutorial), P(Practical) and O(Outcome)
	Soft Course (S): A course aimed at development of a person's emotional, social, ethical, professional and creative potentials. The course shall have L-T and/or P component.
	Workshop Course (W): A completely hands on course conducted in laboratory, aimed at developing application/implementation/ designing skills of a person. The course shall have P component.
	Audit Course (A): Are University compulsory courses for which no credit is assigned but are mandatory to earn the degree
	Non Teaching Credit Course(N): The course involves no teaching and has P and O component. Shall include projects, seminars, dissertations etc.

**OFFERING DEPARTMENT NAMES			A course shall be assigned credits as under:
EC		DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING	One credit for each lecture hour; One credit for each tutorial hour ; One credit for each Outcome hour; Two credits for each workshop/ laboratory/practical/project session of 3 hours; One credit for each laboratory or practical or project session of 2 hours NOTE: FOR ENGG PROGRAMS AS PER AICTE REGULATIONS - For all workshop/lab courses one credit shall be assigned to a 2 hours engagement.
PH		DEPARTMENT OF PHYSICS	
CS		DEPARTMENT OF COMPUTER SCIENCE & TECHNOLOGY	
HL		DEPARTMENT OF HUMANITIES & LANGUAGES	
CH		DEPARTMENT OF CHEMISTRY	
MA		DEPARTMENT OF MATHEMATICS	
ME		DEPARTMENT OF MECHANICAL ENGINEERING	
MC		DEPARTMENT OF MANAGEMENT & COMMERCE	
ED		DEPARTMENT OF EDUCATION	
LW		DEPARTMENT OF LAW	
MRCFL		MANAV RACHNA CENTRE OF FOREIGN LANGUAGES	

*** Electives are subject to change according to expertise available/ required.