

B.Tech. Curriculum for Mathematics and Computing

SEMESTER – I

Subject Name	Type	Subject Code	L-T-P	Credit	Contact Hour
Calculus and Ordinary Differential Equations	Mathematics	MA1L003	3-1-0	4	4
Introduction to Bio Science and Technology	Chemistry	ID2L002	2-0-0	2	2
Happiness and life skill	Humanities, Social Science and Management	ID1LXXX	1-0-0	1	1
Introduction to Bharatiya Knowledge Traditions	Humanities, Social Science and Management	ID1LXXX	2-0-0	2	2
Programming in C	Computer Science Engineering	CS1L002	2-0-2	3	4
Physics/Chemistry (Students can choose only one theory)	Physics/Chemistry	PH1L001/ CY1L001	3-0-0	3	3
Physics/Chemistry Laboratory (Theory corresponding one lab)	Physics/Chemistry	PH1P001/ CY1P001	0-0-3	2	3
Engineering Drawing and Graphics	Infrastructure	CE1P001	1-0-3	3	4
Extra Academic Activity-1		ID1T001	0-0-3	1	-
Total				21	23

SEMESTER – II

Subject Name	Type	Subject Code	L-T-P	Credit	Contact Hour
Linear Algebra and Complex Analysis	Mathematics	MA1L004	3-1-0	4	4
Environmental Science, Technology and Management	Earth, Ocean and Climate Science	ID2L003	2-0-0	2	2
English for learning and Communication	Humanities, Social Science and Management	HS1L011	2-0-2	3	4
Basic Electrical and Electronics Engineering	Electrical Engineering	EE1L002	3-1-0	4	4
Basic Electrical and Electronics Engineering Laboratory	Electrical Engineering	EE1P002	0-0-3	2	3
Discrete Mathematics	Mathematics	MA1L003	3-1-0	4	4
Extra Academic Activity-2		ID1T002	0-0-3	1	-
Total				20	21

SEMESTER-III

Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
	HSS 2		3-0-0	3	3
Probability and Statistics	DC 2	MA2L011	3-0-0	3	3
Data Structure	DC 3	CS2L004	3-0-0	3	3
Formal Languages and Automata Theory	DC 4	CS3L001	3-1-0	4	4
Simulation	SDC 3	MA2L013	1-0-3	3	4
Probability and Statistics Lab	Lab-3 (DC 2)	MA2P011	0-0-3	2	3
Data Structure Lab	Lab-4 (DC 3)	CS2P002	0-0-3	2	3
Total				20	23

SEMESTER-IV					
Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
	HSS 3		3-0-0	3	3
Design and Analysis of Algorithms	DC 5	CS2L002	3-1-0	4	4
Mathematical Analysis	DC 6	MA2L014	3-1-0	4	4
Financial Risk Management	SDC 4	MA2L012	3-0-0	3	3
Design and Analysis of Algorithms Lab	Lab-5 (DC 5)	CS2P001	0-0-3	2	3
Financial Risk Management	Lab-6	MA2P012	0-0-3	2	3
Introduction to Algebra and Number Theory	OE 1	MA2L015	3-1-0	4	4
Total				22	24
SEMESTER-V					
Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
	HSS 4		3-0-0	3	3
Optimization Techniques	DC 7	MA3L012	3-0-0	3	3
Computational Methods	DC 8	MA3L011	3-0-0	3	3
Stochastic Calculus for Finance	SDC 5	MA3L014	2-0-2	3	4
Optimization Techniques Lab	Lab-7 (DC 7)	MA3P012	0-0-3	2	3
Computational Methods Lab	Lab-8 (DC 8)	MA3P011	0-0-3	2	3
OE/DE (List-I)	OE2/DE 1		3-0-0/3-1-0	3/4	3/4
Total				19/20	22/23
SEMESTER-VI					
Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
Numerical Linear Algebra	DC 9	MA3L013	3-0-0	3	3
Database Management Systems	DC 10	CS3L007	3-0-0	3	3
Machine Learning and Artificial Intelligence	DC 11	MA3L015	3-0-0	3	3
Artificial Intelligence	SDC 6	MA3L016	1-0-3	3	4
Numerical Linear Algebra Lab	Lab-9 (DC 9)	MA3P013	0-0-3	2	3
Database Management Systems lab	Lab-10 (DC 10)	CS3P002	0-0-3	2	3
OE/ DE (List I)	OE 3/DE 2		3-0-0/3-1-0	3/4	3/4
Total				19/20	22/23
SEMESTER-VII					
Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
Financial Engineering	DC 12	MA4L011	3-0-0	3	3
OE / DE (List II)	OE 4/DE 3		3-0-0/3-1-0	3/4	3/4

OE / DE (List II)	OE 5		3-0-0/3-1-0	3/4	3/4
Summer Internship	ITD		0-0-2	2	
BTP - 1	Project 1/DE/OE-A	MA4D001/ 1 Subject from OE/DE List II		3	
Total				14/16	9/11

SEMESTER-VIII

Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
OE/DE (List II)	OE 6/ DE 4		3-0-0/3-1-0	3/4	3/4
OE/DE (List II)	OE 7/DE 5		3-0-0/3-1-0	3/4	3/4
OE/DE (List II)	OE 8 / DE 6		3-0-0/3-1-0	3/4	3/4
BTP - 2	Project 2/DE/OE- B & C	MA4D002/ 2 subjects from OE/DE List II		6	
Total				15/18	9/12

SEMESTER-VIII FOR SIX MONTH INTERNSHIP STUDENTS

Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
Six month Internship	Internship	MA4T002	3-0-0/3-1-0	3/4	3/4
OE/DE (List II)	OE 7/DE 5		3-0-0/3-1-0	3/4	3/4
OE/DE (List II)	OE 8 / DE 6		3-0-0/3-1-0	3/4	3/4
BTP - 2	Project 2/DE/OE- B & C	MA4D002/ 2 subjects from OE/DE List II		6	
Total				15/18	9/12

Total Credits: 150