B.Tech. in Mathematics & Computing

Semester-wise Course Structure (2024-28 Batch)

(w.e.f. AY 2025-26)

Semester I (1 Year: Odd Sem)

Course/Subject	L	T	P	Credit
Classical Physics (IS) (PY111)	3	1	0	11
Inorganic and Physical Chemistry (IS) (CY111)	3	1	0	11
Real Analysis and Calculus (IS) (MA 111)	3	1	0	11
Computer Programming (IE) (CS101)	3	1	2	13
Biology (IS) (BY101)	2	1	0	8
Chemistry Lab (IS) (CY111L)	0	0	1	1
Physics Lab (IS) (PY111L)	0	0	1	1
Engineering Graphics (EP) (ME121)	0	0	3	3
Total Credits				**59**
Univershal Human Values (HU) (HU101)	1	1	0	5
Basic English (HU)* (LM101)	1	2	0	7

Semester II (1 Year: Even Sem)

Course/Subject	L	T	P	Credit
Modern Physics (IS) (PY112)	2	1	0	8
Differential Equations (IS) (MA121)	3	1	0	11
Engineering Thermodynamics (IE) (CH161)	3	1	0	11
Fundamentals of Electronics Engineering (IE) (EC111)	3	1	2	13
Engineering Practices in Mathematics and Computing (EP) (MA122)	1	0	2	5
Chemistry Lab (IS) (CY121L)	0	0	1	1
Physics Lab (IS) (PY121L)	0	0	1	1
Workshop Practices (EP) (ME131)	0	0	3	3
Total Credits				**53**
Community Internship (HU)	0	0	5	5

Semester III (2 Year: Odd Sem)

Course/Subject	L	T	P	Credit
Linear Algebra & Complex Analysis (IS) (MA 211)	2	1	0	8
Discrete Mathematics (DC/CSE) (CS201)	3	0	0	9
Data Structures (IE/CSE) (CS211)	3	0	2	11
Object Oriented Methodologies (DC/CSE) (CS224)	3	0	2	11
Elementary Number Theory and Algebra (DC) (MA 212)	3	1	0	11
Professional Communications (L) (PC101)	2	1	0	8
Total Credits				**58**

Semester IV (2 Year: Even Sem)

Course/Subject	L	T	P	Credit
Database Management Systems (DC/CSE) (CS212)	3	0	0	9
Database Management Systems Lab (DC/CSE) (CS212L)	0	0	2	2
Computer Organization and Architecture (DC/CSE) (CS232)	3	0	0	9
Numerical Methods (IS) (MA 221)	2	1	0	8
Statistical Methods and Data Analysis (IS) (MA 231)	2	1	0	8
Design and Analysis of Algorithms (CS241)	3	0	0	9
Design and Analysis of Algorithms Lab (CS241L)	0	0	2	2
Artificial Intelligence (CS360)	3	0	0	9
Artificial Intelligence Lab (CS360L)	0	0	2	2
Financial Engineering-I (MA 241) (DE-1)	3	0	0	9
Total Credits				**67**

After Semester IV

Course/Subject	L	T	P	Credit
Summer Internship - II (4 weeks)	0	0	11	3

Semester V (3 Year: Odd Sem)

Course/Subject	L	T	P	Credit
Operating Systems (DC/CSE) (CS311)	3	0	0	9
Operating Systems Lab (DC/CSE) (CS311L)	0	0	2	2
Introduction to Machine Learning (DC) (MA351)	2	0	0	6
Introduction to Machine Learning Lab (DC) (MA351L)	0	0	2	2
Computational PDEs (DC) (MA 321)	2	0	0	6
Computational PDEs Lab (DC) (MA 321L)	0	0	2	2
Mathematical Finance (MA 341) (DE-2)	3	0	0	9
Data Analytics (CS457)	3	0	0	9
Theory of Computation (DC/CSE) (CS321)	3	0	0	9
Total Credits				**54**

Semester VI (3 Year: Even Sem)

Course/Subject	L	T	P	Credit
Computer Networks (DC/CSE) (CS351)	3	0	0	9
Computer Networks Lab (DC/CSE) (CS351L)	0	0	2	2
Data Mining (DC/CSE) (CS458)	3	0	0	9
Data Mining Lab (DC/CSE) (CS458L)	0	0	2	2
Stochastic Processes (DC) (MA331)	3	0	0	9
Financial Engineering-II (MA342) (DE-3)	3	0	0	9
Operations Research (DC) (MA325)	3	0	0	9
Devops & Cloud (CS331)	3	0	0	9
Total Credits				**58**

After Semester VI

Course/Subject	L	T	P	Credit
Summer Internship - III (6 weeks)	0	0	12	5

Semester VII (4 Year: Odd Sem)

Course/Subject	L	T	P	Credit
Computational Intelligence (MA451) (DE-4)	3	0	0	9
OE-1 (OE)	3	0	0	9
OE-2 (OE)	3	0	0	9
Principles of Economics (MT5100) [LM-1] / Leadership and People Management [CDC]	2	0	0	6
Ethics and Corporate Governence (HU) [CDC]	2	0	0	6
Foundations of Management (MT5405) [LM-2]	2	0	0	6
Organizational Psychology (HU331)	2	0	0	6
Sociology of Industry and Work Culture (HU313)	2	0	0	6
Employability Skills and Industry Readiness [CDC]	0	0	2	2
Total Credits				**59**

Semester VIII (4 Year: Even Sem)

Course/Subject	L	T	P	Credit
BTP (Internal/External)	0	0	40	40