

Department of Mathematics and Computing

Details of Institute Core (IC) Courses

Institute Core (IC) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	MCI101	Mathematics - I	3-1-0	Theory
2	MCI102	Mathematics - II	3-1-0	Theory
3	MCI103	Numerical Methods	2-2-0	Modular

Details of Departmental Compulsary (DC) Courses

Departmental Compulsary (DC) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	MCC201	Modern Algebra	3-0-0	Theory
2	MCC202	Computer Organization and Architecture	3-0-0	Theory
3	MCC203	Real Analysis	3-0-0	Theory
4	MCC204	Computer Organization and Architecture Practical	0-0-2	Practical
5	MCC205	Linear Algebra	3-0-0	Theory
6	MCC301	Number Theory and Cryptography	3-0-0	Theory
7	MCC302	GPU Computing Practical	0-0-2	Practical
8	MCC401	Software Engineering	3-0-0	Theory
9	MCC402	Software Engineering Practical	0-0-2	Practical
10	MCC500	Research Methodology	3-0-0	Theory
11	MCC501	Analysis	3-0-0	Theory
12	MCC502	Differential Equations	3-0-0	Theory
13	MCC503	Numerical Methods	3-0-0	Theory
14	MCC504	Data Structures	3-0-0	Theory
15	MCC505	Probability & Statistics	3-0-0	Theory
16	MCC506	Numerical Methods Practical	0-0-3	Practical
17	MCC507	Data Structures Practical	0-0-2	Practical
18	MCC508	Advanced Algebra	3-0-0	Theory
19	MCC509	Statistical Inference	3-0-0	Theory
20	MCC510	Operating Systems	3-0-0	Theory
21	MCC511	Database Management Systems	3-0-0	Theory
22	MCC512	Operating Systems Practical	0-0-3	Practical
23	MCC513	Database Management Systems Practical	0-0-2	Practical
24	MCC514	Functional Analysis	3-0-0	Theory
25	MCC515	Topology	3-0-0	Theory
26	MCC516	Computational Fluid Dynamics	3-0-0	Theory
27	MCC517	Design and Analysis of Algorithms	3-0-0	Theory
28	MCC518	Computational Fluid Dynamics Practical	0-0-3	Practical
29	MCC519	Design and Analysis of Algorithms Practical	0-0-2	Practical
30	MCC520	Fourier Analysis and its Applications	3-0-0	Theory
31	MCC521	Bayesian Survival Analysis	3-0-0	Theory
32	MCC531	Advanced Data Structures & Algorithm	3-0-0	Theory
33	MCC532	Fundamentals of Machine Learning	3-0-0	Theory
34	MCC533	Computer Oriented Numerical Methods	3-0-0	Theory
35	MCC534	Statistics in Decision Makings	3-0-0	Theory
36	MCC535	Soft Computing Techniques	3-0-0	Theory
37	MCC536	Advanced Data Structures & Algorithm Practical	0-0-2	Practical
38	MCC537	Fundamentals of Machine Learning Practical	0-0-2	Practical
39	MCC538	Computer Oriented Numerical Methods Practical	0-0-2	Practical
40	MCC539	Advanced DBMS	3-0-0	Theory
41	MCC540	Neural Networks and Deep Learning	3-0-0	Theory
42	MCC541	Advanced DBMS Practical	3-0-0	Practical
43	MCC542	Neural Networks and Deep Learning Practical	0-0-2	Practical
44	MCC597	Thesis	0-0-0 (36)	Non-Contact
45	MCC598	Thesis	0-0-0 (18)	Non-Contact
46	MCC599	Thesis	0-0-0 (S/X)	Audit
47	MCS555	Intership	0-0-0	Audit

Details of Engineering Science Option (ESO) Courses

Engineering Science Option (ESO) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	MCE301	Operations Research	3-0-0	Theory
2	MCC505	Probability & Statistics	3-0-0	Theory

Details of Departmental Elective (DE) Courses

Departmental Elective (DE) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	MCD501	Classical Mechanics	3-0-0	Theory
2	MCD502	Graph Theory	3-0-0	Theory
3	MCD503	Integral Equations and Calculus of Variations	3-0-0	Theory
4	MCD504	Measure Theory	3-0-0	Theory
5	MCD505	Basic Number Theory	3-0-0	Theory
6	MCD506	Parallel Computing	3-0-0	Theory
7	MCD507	Representation Theory of Finite Groups	3-0-0	Theory
8	MCD508	Theory of Computation	3-0-0	Theory
9	MCD509	Algebraic Coding Theory	3-0-0	Theory
10	MCD510	Complex Analysis	3-0-0	Theory
11	MCD511	Mathematical Ecology	3-0-0	Theory
12	MCD512	Non-Linear Dynamics and Chaos	3-0-0	Theory
13	MCD513	Methods of Applied Mathematics	3-0-0	Theory
14	MCD514	Sampling Theory	3-0-0	Theory
15	MCD516	Industrial Statistics	3-0-0	Theory
16	MCD531	Cryptography	3-0-0	Theory
17	MCD532	Data Mining	3-0-0	Theory
18	MCD533	Numerical Optimization	3-0-0	Theory
19	MCD534	Sports Analytics	3-0-0	Theory
20	MCD535	Bioinformatics	3-0-0	Theory
21	MCD536	Advanced Algorithms for Graphs	3-0-0	Theory
22	MCD537	Design of Experiments	3-0-0	Theory
23	MCD538	Time Series Analysis	3-0-0	Theory
24	MCD539	Big data	3-0-0	Theory
25	MCD540	Biostatistics	3-0-0	Theory
26	MCD541	GPU Computing	3-0-0	Theory
27	MCD542	Video Analytics	3-0-0	Theory
28	MCD543	Missing Data Analysis in Survey Sampling	3-0-0	Theory
29	MCD544	Software Testing	3-0-0	Theory
30	MCD551	Advanced Analysis	3-0-0	Theory
31	MCD552	Advanced Numerical Methods	3-0-0	Theory
32	MCD553	Modelling and Simulation	3-0-0	Theory
33	MCD554	Advance Sampling Theory - I	3-0-0	Theory
34	MCD555	Advance Sampling Theory - II	3-0-0	Theory
35	MCD556	Algebraic Number Theory	3-0-0	Theory
36	MCD557	Finite Field Theory	3-0-0	Theory
37	MCD558	Wavelets: Theory and Applications	3-0-0	Theory
38	MCD559	Celestial Mechanics	3-0-0	Theory
39	MCD560	Orbital Mechanics	3-0-0	Theory
40	MCD561	Analytical Number Theory	3-0-0	Theory
41	MCD562	Decision Theory	3-0-0	Theory
42	MCD563	Finite Element Analysis	3-0-0	Theory
43	MCD564	Fuzzy Set Theory and its Applications	3-0-0	Theory
44	MCD565	Multigrid Methods	3-0-0	Theory
45	MCD566	Software Reliability	3-0-0	Theory
46	MCD567	Algorithmic Graph Theory	3-0-0	Theory
47	MCD568	Coding Theory	3-0-0	Theory
48	MCD569	Advance Optimization Techniques	3-0-0	Theory
49	MCD570	Nonlinear Programming	3-0-0	Theory
50	MCD571	Hydrodynamics & Application to Groundwater	3-0-0	Theory
51	MCD572	Dynamical Systems: Theory and Applications	3-0-0	Theory
52	MCD573	Mathematical Biology	3-0-0	Theory
53	MCD574	Statistical Reliability Theory	3-0-0	Theory

Details of Open Elective (OE) Courses

Open Elective (OE) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	MCO401	Partial Differential Equations	3-0-0	Theory
2	MCO402	Modelling and Simulation	3-0-0	Theory
3	MCO403	Graph algorithms	3-0-0	Theory
4	MCO501	Discrete Mathematics	3-0-0	Theory
5	MCO502	Optimization Techniques	3-0-0	Theory
6	MCO531	Stochastic Processes	3-0-0	Theory
7	MCO532	Advanced Multivariate Analysis	3-0-0	Theory
8	MCO533	Numerical Linear Algebra	3-0-0	Theory