

**Department of Applied Mathematics**

Delhi Technological University,
(Formerly Delhi College of Engg.)
Bawana Road, Delhi - 42.

B.Tech Mathematics and Computing														
I Year: First Semester														
Teaching Scheme					Contact Hours/Week			Exam Duration (h)		Relative Weights (%)				
S. No.	Subject Code	Course Title	Subject Area	Credit	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1	AM101	Mathematics-I	BSC	4	3	1	0	3	0	25	-	25	50	-
2	AP101	Physics	BSC	4	3	0	2	3	0	15	25	20	40	-
3	EC101	Basic Electronics & Communication Engineering	ESC	4	3	0	2	3	0	15	25	20	40	-
4	ME105	Computer Aided Engineering Graphics-II	ESC	4	3	0	2	3	0	15	25	20	40	-
5	MC103	Python Programming	SEC	2	0	0	4	0	3	-	50	-	-	50
6	AEC/VAC	AEC/VAC	AEC/VAC	2	2/1/0	0	0/2/4	3/3/0	0/2/3	25/15/0	0/25/50	25/20/0	50/40/0	0/0/50
Total				20										
I Year: Second Semester														
1	AM102	Mathematics-II	BSC	4	3	1	0	3	0	25	-	25	50	-
2	CO102	Programming Fundamentals	ESC	4	3	0	2	3	0	15	25	20	40	-
3	MC102	Discrete Mathematics	ESC	4	3	1	0	3	0	25	-	25	50	-
4	MC104	Complex Analysis	DCC	4	3	1	0	3	0	25	-	25	50	-
5	MC106	MATLAB Programming	SEC	2	0	0	4	0	3	0	50	-	-	50
6	AEC/VAC	AEC/VAC	AEC/VAC	2	2/1/0	0	0/2/4	3/3/0	0/2/3	25/15/0	0/25/50	25/20/0	50/40/0	0/0/50
Total				20										

Additional 02 credits are to be earned from mandatory community engagement course in first year to fulfil the requirement of award of the four year B.Tech Degree.

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II Year: Third Semester														
Teaching Scheme					Contact Hours/Week			Exam Duration (h)		Relative Weights (%)				
S. No.	Subject Code	Course Title	Subject Area	Credit	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1	MC201	Data Structure	ESC	4	3	0	2	3	0	15	25	20	40	-
2	MC203	Real Analysis	DCC	4	3	1	0	3	0	25	0	25	50	-
3	MC205	Probability and Statistics	DCC	4	3	0	2	3	0	15	25	20	40	-
4	MC207	Modern Algebra	DCC	4	3	1	0	3	0	25	0	25	50	-
5	MC209	Database Management Systems	DCC	4	3	0	2	3	0	15	25	20	40	-
6	AEC/VAC	AEC/VAC	AEC/VAC	2	2/1/0	0	0/2/4	3/3/0	0/2/3	25/15/0	0/25/50	25/20/0	50/40/0	0/0/50
7	MS299	Community Engagement Course	Mandatory	2										
Total				24										
II Year: Fourth Semester														
1	MC202	Operating Systems	ESC	4	3	0	2	3	0	15	25	20	40	-
2	MC204	Scientific Computing	DCC	4	3	0	2	3	0	15	25	20	40	-
3	MC206	Analysis and Design of Algorithms	DCC	4	3	1	0	3	0	25	-	25	50	-
4	MC208	Linear Algebra	DCC	4	3	1	0	3	0	25	-	25	50	-
5	MC210	Differential Equations	DCC	4	3	0	2	3	0	15	25	20	40	-
6	AEC/VAC	AEC/VAC	AEC/VAC	2	2/1/0	0	0/2/4	3/3/0	0/2/3	25/15/0	0/25/50	25/20/0	50/40/0	0/0/50
Total				22										

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III Year: Fifth Semester

Teaching Scheme					Contact Hours/Week			Exam Duration (h)		Relative Weights (%)				
S. No.	Subject Code	Course Title	Subject Area	Credit	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1	MC301	Theory of Computation	DCC	4	3	1	0	3	0	25	-	25	50	-
2	MC303	Stochastic Processes	DCC	4	3	1	0	3	0	25	-	25	50	-
3	MC305	Computer Networks	DCC	4	3	1	0	3	0	25	-	25	50	-
4	MGMT	Engineering Economics / Fundamentals of Management	SEC	3	3	1	0	3	0	25	-	25	50	-
5	MC3XX	Departmental Elective Course -1	DEC	4	3/3	0/1	2/0	3	0	15/25	25/0	20/25	40/50	-
6	GEC	General Elective Course -1	GEC	4	3/3	0/1	2/0	3	0	15/25	25/0	20/25	40/50	-
Total				23										

III Year: Sixth Semester

1	MC302	Mathematical Modelling and Simulation	DCC	4	3	0	2	3	0	15	25	20	40	-
2	MC304	Financial Engineering	DCC	4	3	1	0	3	0	25	-	25	50	-
3	MGMT	Fundamentals of Management / Engineering Economics	SEC	3	3	1	0	3	0	25	-	25	50	-
4	MC3XX	Departmental Elective Course -2	DEC	4	3/3	0/1	2/0	3	0	15/25	25/0	20/25	40/50	-
5	MC3XX	Departmental Elective Course -3	DEC	4	3/3	0/1	2/0	3	0	15/25	25/0	20/25	40/50	-
6	GEC	General Elective Course -2	GEC	4	3/3	0/1	2/0	3	0	15/25	25/0	20/25	40/50	-
Total				23										

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IV Year: Seventh Semester														
Teaching Scheme					Contact Hours/Week			Exam Duration (h)		Relative Weights (%)				
S. No.	Subject Code	Course Title	Subject Area	Credit	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1	MC401	B. Tech Project-I	DCC	4	-	-	-	-	-	-	40	-	-	60
2	MC403	Internship	DCC	2	-	-	-	-	-	-	40	-	-	60
3	MC4XX	Departmental Elective Course -4	DEC	4	3/3	0/1	2/0	3	0	15/25	25/0	20/25	40/50	-
4	MC4XX	Departmental Elective Course -5	DEC	4	3/3	0/1	2/0	3	0	15/25	25/0	20/25	40/50	-
5	GEC	General Elective Course -3	GEC	4	3/3	0/1	2/0	3	0	15/25	25/0	20/25	40/50	-
6	AEC/VAC	Indian Knowledge System	VAC	Non Credit										
Total				18										
IV Year: Eight Semester														
1	MC402	B. Tech Project-II	DCC	8	-	-	-	-	-	-	40	-	-	60
2	MC4XX	Departmental Elective Course -6	DEC	4	3/3	0/1	2/0	3	0	15/25	25/0	20/25	40/50	-
3	GEC	General Elective Course -4	GEC	4	3/3	0/1	2/0	3	0	15/25	25/0	20/25	40/50	-
Total				16										
Cumulative Total				166										

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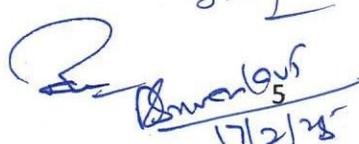
B. Tech. Mathematics and Computing

Departmental Elective Course

Departmental Elective Course -1 (Semester - 5)		Departmental Elective Course -4 (Semester - 7)	
MC307	Artificial Intelligence	MC405	Optimization Techniques
MC309	Number Theory	MC407	Numerical methods for ODE
MC311	Numerical Linear Algebra	MC409	Tensor Calculus
MC313	Operations Research	MC411	Statistical Inference
MC315	Partial Differential Equations	MC413	Big Data Analytics
Departmental Elective Course -2 (Semester - 6)		Departmental Elective Course -5 (Semester - 7)	
MC306	Object Oriented Programming	MC415	Data Warehousing and Data Mining
MC308	Computer Graphics	MC417	Cryptography and Network Security
MC310	Machine Learning	MC419	Differential Geometry
MC312	Wireless and Mobile Computing	MC421	Topology
MC314	Quantum Information Theory	MC423	Functional Analysis
		MC425	Compiler Design
Departmental Elective Course -3 (Semester - 6)		Departmental Elective Course -6 (Semester - 8)	
MC316	Computer Organization and Architecture	MC404	Numerical Methods for PDE
MC318	Software Engineering	MC406	Finite Element Methods
MC320	Web Technology	MC408	Statistical Quality Control and Decision Making
MC322	Graph Theory	MC410	Game Theory
MC324	Fuzzy set and Fuzzy logic	MC412	Information Theory and Coding
		MC414	Natural Language Processing







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Offered by Department of Applied Mathematics

Minor in Mathematics & Computing (For students of other Disciplines)			
S. No.	Course Code	Course Title	Course Type
1	MC208	Linear Algebra	Compulsory
2	MC210	Differential Equation	Compulsory
3	MC205	Probability and Statistics	Compulsory
4	MC302	Mathematical Modelling and Simulation	Elective
5	MC307	Artificial Intelligence	Elective
6	MC311	Numerical Linear Algebra	Elective
7	MC313	Operations Research	Elective
8	MC322	Graph Theory	Elective
9	MC417	Cryptography and Network Security	Elective
10	MC324	Fuzzy set and Fuzzy logic	Elective
Minor in Industrial Mathematics			
S. No.	Course Code	Course Title	Course Type
1	MC205	Probability and Statistics	Compulsory
2	MC303	Stochastic Processes	Compulsory
3	MC304	Financial Engineering	Compulsory
4	MC302	Mathematical Modelling and Simulation	Elective
5	MC313	Operations Research	Elective
6	MC322	Graph Theory	Elective
7	MC324	Fuzzy set and Fuzzy logic	Elective
8	MC408	Statistical Quality Control and Decision Making	Elective
9	MC410	Game Theory	Elective
10	MC411	Statistical Inference	Elective
11	MC405	Optimization Techniques	Elective
12	MC310	Machine Learning	Elective
Minor in Computational Intelligence			
S. No	Course Code	Course Title	Course Type
1	MC205	Probability and Statistics	Compulsory
2	MC206	Analysis and Design of Algorithms	Compulsory
3	MC303	Stochastic Processes	Compulsory
4	MC302	Mathematical Modelling and Simulation	Elective
5	MC307	Artificial Intelligence	Elective
6	MC413	Big Data Analytics	Elective
7	MC408	Statistical Quality Control and Decision Making	Elective
8	MC415	Data Warehousing and Data Mining	Elective
9	MC411	Statistical Inference	Elective
10	MC310	Machine Learning	Elective
11	MC406	Finite Element Methods	Elective

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