

CURRICULA

POST GRADUATE DEGREE PROGRAMS

(effective from 2010 – 2011)

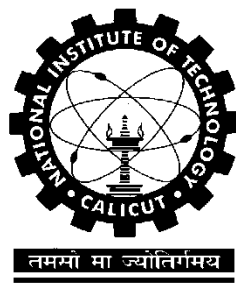


National Institute of Technology Calicut

CURRICULA

POST GRADUATE DEGREE PROGRAMS

(effective from 2010 – 2011)



National Institute of Technology Calicut
NITC PO, Calicut – 673601
Kerala, India

INSTITUTE SLOTS

THEORY COURSES

Day	8.00 - 9.00	9.00- 10.00	10.15 – 11.15	11.15- 12.15	1.00- 2.00	2.00- 3.00	3.00- 4.00	4.00- 5.00	5.00- 6.00
	1	2	3	4	5	6	7	8	9
MON	A	F	D	B	G	E+	-	-	H
TUE	B	G	E	C	A+	F+	-	-	H
WED	C	A	F	D	H	G+	-	-	E@
THU	D	B	G	E	-	C+	-	-	G@
FRI	E	C	A	F	H+	B+	-	-	D+

Note: E@ and G@ are substitute slots for E and G in case U or UA is allotted for Practical Courses

PRACTICAL COURSES.

Day	8.00 - 9.00	9.00- 10.00	10.15– 11.15	11.15- 12.15	1.00- 2.00	2.00- 3.00	3.00- 4.00	4.00- 5.00	5.00- 6.00
	1	2	3	4	5	6	7	8	9
MON	-	-	-	-	-	P			-
						PA		PB	
TUE	-	-	-	-	-	Q			-
						QA		QB	
WED	-	-	-	-	-	R			-
						RA		RB	
THU	-	-	U			S			-
			UA		-	SA		SB	
FRI	-	-	-	-	-	T			-
						TA		TB	



Department of Civil Engineering

M.Tech - Structural Engineering

Semester 1

S.No.	Code	Title	L	T	P/S	C
1	CE6101	Theory of Elasticity and Plasticity	3	0	0	3
2	CE6102	Structural Dynamics	3	0	0	3
3	CE6103	Advanced Theory and Design of Concrete Structures	3	0	0	3
4	CE6191	Computational Lab	0	0	2	1
5	CE6192	Stress Analysis Lab	0	0	2	1
6		Elective	3	0	0	3
7		Elective	3	0	0	3
8		Elective	3	0	0	3
Total Credits – 11 (Core) + 6 or 9 (Electives)						

Semester 2

S.No.	Code	Title	L	T	P/S	C
1	CE6111	Finite Element Method	3	0	0	3
2	CE6112	Theory of Plates and Shells	3	0	0	3
3	CE6113	Advanced Theory and Design of Metal Structures	3	0	0	3
4	CE6193	Structural Engineering Design Studio	0	0	2	1
6	CE6197	Seminar	0	0	2	1
7		Elective	3	0	0	3
8		Elective	3	0	0	3
		Elective	3	0	0	3
Total credits– 11 (Core) + 6 or 9 (Electives)						

Semester 3

S.No.	Code	Title	L	T	P/S	C
1	CE7198	Project				8
2		Elective	3	0	0	3
3		Elective	3	0	0	3
Total Credits – 8 (Core) + 0 to 6 (Electives)						

Semester 4

S.No.	Code	Title	L	T	P/S	C
1	CE7199	Project				12
2		Total credits				12

Minimum requirements:

1. A minimum of 60 credits have to be earned for the award of M.Tech degree in this programme.
2. Students to register for six electives in three semesters together with two or three electives each in the first two semesters and a maximum of two in the third semester. Fourth semester is reserved for project work only.
3. Industrial Training (1 credits) during summer term is optional



List Of Electives

S.No.	Code	Title	Credits
1	CE6121	Structural Optimisation	3
2	CE6122	Modelling, Simulation and Computer Application	3
3	CE6123	Earthquake Analysis and Design of Structures	3
4	CE6124	Analytical Dynamics	3
5	CE6125	Bridge Engineering	3
6	CE6126	Construction Project Management	3
7	CE6127	Forensic Engineering and Rehabilitation of Structures	3
8	CE6128	Multibody Dynamics and Applications	3
9	CE6129	Tall Structures	3
10	CE6130	Structural Health Monitoring	3
11	CE6131	Structural Reliability	3
12	CE6132	Concrete Shells and Folded Plates	3
13	CE6133	Random Vibrations	3
14	CE6134	Engineering Fracture Mechanics	3
15	CE6135	Advanced Prestressed Concrete Design	3
16	CE6136	Design of Plated Structures and Shells	3
17	CE6137	Mechanics of Composite Structures	3
18	CE6138	Advanced Finite Element Analysis	3
19	CE6139	Advanced Theory of Shells	3
20	CE6140	Theory of Plasticity	3
21	CE6221	Geographic Information System and Applications	3
22	CE6302	Stochastic Processes in Structural Mechanics	3
23	CE6313	Stability of Structures	3
24	CE6421	Advanced Design of Foundation	3



Department of Civil Engineering

MTech - Traffic and Transportation Planning

Semester 1

S.No	Code	Title	L	T	P/S	C
1	CE6201	Traffic Engineering	3	-	-	3
2	CE6202	Transportation Planning - I	3	-	-	3
3	CE6203	Pavement Materials, Design & Construction	3	-	-	3
4	MA6004	Applied Probability & Statistics	3	-	-	3
5	CE6291	Transportation Engineering Laboratory & Seminar	-	-	2	1
6	CE6292	Computational Laboratory	-	-	2	1
7	*****	Elective	3	-	-	3
8	*****	Elective	3	-	-	3

Total Credits – 14 (Core) + 3 or 6 (Electives)

Semester 2

S.No	Code	Title	L	T	P/S	C
1	CE6211	Theories of Traffic Flow	3	-	-	3
2	CE6212	Transportation Planning - II	3	-	-	3
3	CE6213	Pavement Evaluation & Management	3	-	-	3
4	CE6214	Transportation Data Analysis Methods	3	-	-	3
5	CE6293	Transportation Engineering Laboratory & Seminar	-	-	2	1
6	CE6294	Computer Aided Design in Transportation Engineering	-	-	2	1
7	*****	Elective	3	-	-	3
8	*****	Elective	3	-	-	3

Total Credits – 14 (Core) + 3 or 6 (Electives)

Semester 3

S.No	Code	Title	L	T	P/S	C
1	CE7297	Mini Project - OPTIONAL	-	-	6	3
2	CE7298	Project	-	-	-	8
3	*****	Elective	3	-	-	3
4	*****	Elective	3	-	-	3

Total Credits – 8 (Core) + 0 to 6 (Electives/Mini Project)

Semester 4

S.No	Code	Title	L	T	P/S	C
1	CE7299	Project	-	-	-	12

Total Credits – 12 (Core)

Stipulations:

1. A minimum of 60 credits have to be earned for the award of M.Tech. degree in this programme.
2. Students have to register for a minimum of four electives in three semesters. (One or two electives in the first two semesters and maximum of two courses, including Mini project, in the third semester). Fourth Semester is reserved for Project work only.
3. Industrial Training (1 credit) during the gap between 2nd and 3rd semesters is optional



List Of Electives

S.No.	Code	Title	Credit
1	CE6221	Geographic Information System & Its Applications	3
2	CE6222	Transportation Systems & Analysis	3
3	CE6223	Public Transport Planning & Design	3
4	CE6224	Transportation Infrastructure Design	3
5	CE6225	Transportation Economics & Appraisal	3
6	CE6226	Transportation System Management	3
7	CE6227	Transportation System Evaluation	3
8	CE6228	Pavement Management Systems	3
9	CE6229	Environmental Impact Assessment of Transportation Projects	3
10	CE6230	Database Management	3
11	CE6231	Soft Computing Tools	3
12	MA6005	Optimisation Techniques - I	3
13	MA6006	Optimisation Techniques - II	3
14	CE8201	Highway Design and Safety	3
15	CE8202	Advanced Travel Demand Modelling	3

**** Any other subject offered in the Institute with approval from the Programme Coordinator



Department of Civil Engineering

M.Tech - Offshore Structures

Semester 1

S.No	Code	Title	L	T	P/S	C
1	CE6301	Wave Hydrodynamics	3	-		3
2	CE6302	Stochastic Processes in Structural Mechanics	3	-		3
3	CE6303	Design of Offshore Structures	3	-		3
4	CE6391	Computational Lab	0	-	2	1
5	CE6392	Offshore Engineering Lab	0	-	2	1
6	*****	Elective	3	-		3
7	*****	Elective	3	-		3
8	*****	Elective	3	-		3

Total credits

11 (core) + 9 or 6 (electives)

Semester 2

S.No	Code	Title	L	T	P/S	C
1	CE6311	Offshore Structural Systems—Modelling and Behaviour	3	-		3
2	CE6312	Marine Foundations	3	-		3
3	CE6313	Stability of Structures	3	-		3
4	CE6393	Offshore Structures Design Studio	0	-	2	1
5	CE6397	Seminar	0	-	2	1
6	*****	Elective	3	-		3
7	*****	Elective	3	-		3
8	*****	Elective	3	-		3

Total credits

11 (core) + 9 or 6 (electives)

Semester 3

S.No	Code	Title	L	T	P/S	C
1	CE7398	Project		-		8
2	*****	Elective	3	-	0	3
3	*****	Elective	3	-	0	3

Total credits

8 (core) + 0 or 6 (electives)

Semester 4

S.No	Code	Title	L	T	P/S	C
1	CE7399	Project		-		12



List Of Electives

S.No.	Code	Title	Credits
1	CE6321	Ship Hydrodynamics	3
2	CE6101	Theory of Elasticity and Plasticity	3
3	CE6102	Structural Dynamics	3
4	CE6121	Structural Optimisation	3
5	CE6122	Modelling, Simulation and Computer Application	3
6	CE6124	Analytical Dynamics	3
7	CE6322	Multibody Dynamics and Applications	3
8	CE6130	Structural Health Monitoring	3
9	CE6131	Structural Reliability	3
10	CE6225	Geographic Information System and Applications	3
11	CE6138	Advanced Finite Element Analysis	3
12	CE6139	Advanced Theory of Shells	3
13	CE6140	Theory of Plasticity	3
14	CE6323	Advanced Wave Hydrodynamics	3
15	CE6324	Dynamics of Floating Bodies	3
16	CE6111	Finite Element Method	3
17	CE6112	Theory of Plates and Shells	3
18	CE6133	Random Vibrations	3
19	CE6134	Engineering Fracture Mechanics	3
20	CE6136	Design of Plated Structures and Shells	3

* Any other subject offered in the Institute with approval from the Programme Coordinator/Faculty Advisor



Department of Civil Engineering

M.Tech - Environmental Geotechnology

Semester 1

S.No.	Code	Title	L	T	P/S	C
1	CE6401	Ground Improvement		3	0	3
2	CE6402	Fundamentals of Soil Behaviour		3	0	3
3	CE6101	Theory of Elasticity		3	0	3
4	CE6491	Environmental Geotechnical Laboratory		0	2	1
5	CE6492	Computational Geomechanics Laboratory		0	2	1
6		Elective		3	0	3
7		Elective		3	0	3
8		Elective		3	0	3
		Total credits				20

Semester 2

S.No.	Code	Title	L	T	P/S	C
1	CE6411	Waste Disposal Methods and Management		3	0	3
2	CE6412	Reinforced Earth and Geotextiles		3	0	3
3	CE6414	Groundwater Hydrology				
4	CE6493	Foundation Engineering Design studio		0	2	1
5	CE6497	Seminar		0	2	1
6		Elective		0	2	1
7		Elective		3	0	3
		Elective		3	0	3
		Total credits				15

Semester 3

S.No.	Code	Title	L	T	P/S	C
1	CE7498	Project				8
2		Elective		3	0	3
3		Elective		3	0	3
		Total credits				14

Semester 4

S.No.	Code	Title	L	T	P/S	C
1	CE7499	Project word and Viva voce				12
2		Total credits				12

Minimum requirements:

1. A minimum of 60 credits have to be earned for the award of M.Tech degree in this programme.
2. Students to register for six electives in three semesters together with two or three electives each in the first two semesters and a maximum of two in the third semester. Fourth semester is reserved for project work only.
3. Industrial Training (1 credits) during summer term is optional.



List Of Electives

S.No.	Code	Title	Credits
1	CE 6421	Advanced Design of Foundations	3
2	CE 6422	Design of Engineered Landfills	3
3	CE 6423	Foundation Engineering for Difficult and Contaminated Grounds	3
4	CE 6424	Wastewater Engineering	3
5	CE 6425	Analysis and Design of Earth Retaining Structures	3
6	CE 6426	Landslide Mitigation Methods	3
7	CE 6427	Groundwater Contamination	3
8	CE 6428	Earthquake Geotechnical Engineering	3
9	CE 6429	Bioremediation Technologies	3
10	CE 6411	Finite Element Method	3
11	CE 6203	Pavement Materials, Design, and Construction	3
12	CE 6213	Pavement Evaluation and Management	3
13	CE 6225	Geographic Information System and its Applications	3
14	CE 6312	Marine Foundations	3



Department of Computer Science and Engineering

M.Tech. - Computer Science and Engineering

Semester 1

Code	Title		L	T	P/S	C
1	CS 6101	Mathematical Foundations of Computer Science	3	0	2	4
2	CS 6111	Algorithms and Complexity	3	0	2	4
3	CS 6103	Software Systems Lab	1	0	6	4
4		Elective	3	0	2	4
5		Elective	3		0/2	3 to 4
		Total Credits				19/20

Semester 2

Code	Title		L	T	P/S	C
1	CS 6104	Term paper (optional)	0	0	6	3
2		Elective	3	0	2	4
3		Elective	3	0	2	4
4		Elective	3	0	2	4
5		Elective	3		0/2	3 to 4
6		Elective (Optional)	3		0/2	3 to 4
		Total credits				16 to 23

Semester 3

Code	Title		L	T	P/S	C
1	CS 7198	Project				8
2		Elective(optional)	3		0/2	3 to 4
		Total credits				8/11/12

Semester 4

Code	Title		L	T	P/S	C
1	CS 7199	Project				12
		Total credits				12

Minimum Requirements

1. A Candidate should have earned a total of at least **60** credits, including 20 credits from project work.
2. The number of electives credited by a student can be varied subject to minimum credit requirements for completion of the course.

Credits for elective courses may vary depending on the practical work involved.



List Of Electives

S.No.	Code	Title	Credit
1.	CS 6102	Compiler Design	4
2.	CS 6112	Operating System Design	4
3.	CS 6121	Computability Theory	3
4.	CS 6122	Computer Architecture	4
5.	CS 6123	Database Design	4
6.	CS 6124	Topics in Programming Languages	4
7.	CS 6125	Computer Networking	4
8.	CS 6131	Logic and Computation	3
9.	CS 6132	Topics in Algorithms	4
10.	CS 6133	Game Theory	4
11.	CS 6134	Quantum Computation	3
12.	CS 6135	Logic for Computer Science	4
13.	CS 6136	Topics in Combinatorial Algorithms	4
14.	CS 6141	Distributed Computing	4
15.	CS 6142	Topics in Computer Architecture	4
16.	CS 6143	Trends in Middleware Systems	4
17.	CS 6144	Multicore Systems	4
18.	CS 6151	Software Engineering	4
19.	CS 6152	Object Oriented Modeling and Design	4
20.	CS 6154	Topics in Database Design	4
21.	CS 6161	Embedded Systems and Applications	4
22.	CS 6171	Natural Language Processing	4
23.	CS 6172	Computational Intelligence	4
24.	CS 6173	Image Processing	4
25.	CS 6174	Pattern Recognition	4
26.	CS 6181	Bioinformatics	4
27.	CS 6201	Cryptography	4
28.	CS 6211	Formal Methods in Secure Computing	4
29.	CS 6212	Network Security	4
30.	CS 6213	Foundations of Information Security	4
31.	CS 6214	Advanced Topics in Information Security	4
32.	CS 6231	Theoretical aspects of cryptographic algorithms	3
33.	CS 6232	Cryptocomplexity	4
34.	CS 6233	Information Theory and Coding	4
35.	CS 6261	Perimeter Security	4
36.	CS 6271	Data Compression	4
37.	CS 6282	Pragmatics of Information Security	4
38.	CS 6283	Computer Laws and Ethics	3
39.	CS 6284	Security Policies and Assurance	3
40.	CS 6285	Information Security Management	4
41.	CS 6286	Metrics for Information Security Assessment	4
42.	MA 8152	Fuzzy Set Theory and Applications	3
43.	MA 7156	Advanced Topics in Graph Theory	3



Department of Computer Science and Engineering

M.Tech. - Information Security (CSB)

Semester 1

Code	Title		L	T	P/S	C
1	CS 6101	Mathematical Foundations of Computer Science	3	0	2	4
2	CS 6213	Foundations of Information Security	3	0	2	4
3	CS 6103	Software Systems Lab	1	0	6	4
4		Elective	3	0	2	4
5		Elective	3		0/2	3 to 4
		Total Credits				19/20

Semester 2

Code	Title		L	T	P/S	C
1	CS 6204	Term paper(optional)	0	0	6	3
2		Elective	3	0	2	4
3		Elective	3	0	2	4
4		Elective	3	0	2	4
5		Elective	3		0/2	3 to 4
6		Elective(Optional)	3		0/2	3 to 4
		Total credits				16 to 23

Semester 3

Code	Title		L	T	P/S	C
1	CS 7298	Project				8
2		Elective(optional)	3		0/2	3 to 4
		Total credits				8/11/12

Semester 4

Code	Title		L	T	P/S	C
1	CS 7299	Project				12
		Total credits				12

Minimum Requirements

1. A Candidate should have earned a total of at least **60** credits, including 20 credits from project work.
2. The number of electives credited by a student can be varied subject to minimum credit requirements for completion of the course.

Credits for elective courses may vary depending on the practical work involved.



List Of Electives

Code	Title	Credit	
1.	CS 6102	Compiler Design	4
2.	CS 6110	Algorithms and Complexity	4
3.	CS 6112	Operating System Design	4
4	CS 6121	Computability Theory	3
5	CS 6122	Computer Architecture	4
6	CS 6123	Database Design	4
7	CS 6124	Topics in Programming Languages	4
8	CS 6125	Computer Networking	4
9	CS 6131	Logic and Computation	3
10	CS 6132	Topics in Algorithms	4
11	CS 6133	Game Theory	4
12	CS 6134	Quantum Computation	3
13	CS 6135	Logic for Computer Science	4
14	CS 6136	Topics in Combinatorial Algorithms	4
15	CS 6141	Distributed Computing	4
16	CS 6142	Topics in Computer Architecture	4
17	CS 6143	Trends in Middleware Systems	4
18	CS 6144	Multicore Systems	4
19	CS 6151	Software Engineering	4
20	CS 6152	Object Oriented Modeling and Design	4
21	CS 6154	Topics in Database Design	4
22	CS 6161	Embedded Systems and Applications	4
23	CS 6171	Natural Language Processing	4
24	CS 6172	Computational Intelligence	4
25	CS 6173	Image Processing	4
26	CS 6174	Pattern Recognition	4
27	CS 6181	Bioinformatics	4
28	CS 6201	Cryptography	4
29	CS 6211	Formal Methods in Secure Computing	4
30	CS 6212	Network Security	4
31	CS 6214	Advanced Topics in Information Security	4
32	CS 6231	Theoretical aspects of cryptographic algorithms	3
33	CS 6232	Cryptocomplexity	4
34	CS 6233	Information Theory and Coding	4
35	CS 6261	Perimeter Security	4
36	CS 6271	Data Compression	4
37	CS 6282	Pragmatics of Information Security	4
38	CS 6283	Computer Laws and Ethics	3
39	CS 6284	Security Policies and Assurance	3
40	CS 6285	Information Security Management	4
41	CS 6286	Metrics for Information Security Assessment	4
42	MA 8152	Fuzzy Set Theory and Applications	3
43	MA 7156	Advanced Topics in Graph Theory	3



Department of Computer Science and Engineering
Master of Computer Applications (MCA)

Semester 1

Sl. No.	Code	Title	L	T	P	C
1	CS2001	Logic Design	3	0	2	4
2	CS2301	Introduction to Programming	4	0	0	4
3	MA6010	Discrete Mathematics	3	0	0	3
4	MS1001	Professional Communication	3	0	0	3
5		Maths Elective I				3
6	CS2391	Introductory Programming Laboratory	1	0	3	3
		Total Credits				20

Semester 2

Sl. No.	Code	Title	L	T	P	C
1	CS2004	Computer Organization	3	0	2	4
2	CS2005	Data Structures and Algorithms	4	0	0	4
3		Maths Elective II				3
4		Maths Elective III				3
5		Elective I				*
6	CS2094	Data Structures Laboratory	1	0	3	3
		Total Credits				20*

Semester 3

Sl. No.	Code	Title	L	T	P	C
1	CS3002	Database Management Systems	3	0	2	4
2	CS3003	Operating Systems	3	0	2	4
3		Elective II				*
4		Elective III				*
5		Lab Elective I				*
		Total Credits				17*

Semester 4

Sl. No.	Code	Title	L	T	P	C
1	CS3004	Software Engineering	3	0	2	4
2	CS3006	Computer Networks	3	0	2	4
3	CS3301	Object Oriented Programming	3	0	2	4
4		Elective IV				*
5		Elective V				*
		Total Credits				17*

Semester 5

Sl. No.	Code	Title	L	T	P	C
1	ME4104	Principles of Management	3	0	0	3
2		Elective VI				*
3		Elective VII				*
4		Elective VIII				*
5		Elective IX				*
		Total Credits				17*



Semester 6

Sl. No.	Code	Title	L	T	P	C
1	CS3099	Project				09
		Total Credits				09

Total credits required: 100 (Minimum)

List Of Electives

Theory:

S. No.	Code	Title	L	T	P	C
1	CS4021	Number Theory and Cryptography	3	0	2	4
2	CS4022	Principles of Programming Languages	3	0	2	4
3	CS4023	Computational Intelligence	3	0	2	4
4	CS4024	Information Theory	4	0	0	4
5	CS4025	Graph Theory and Combinatorics	4	0	0	4
6	CS4026	Combinatorial Algorithms	3	0	2	4
7	CS4027	Topics in Algorithms	4	0	0	4
8	CS4028	Quantum Computation	4	0	0	4
9	CS4029	Topics in Theory of Computation	4	0	0	4
10	CS4030	Computational Complexity	4	0	0	4
11	CS4031	Computational Algebra	3	0	2	4
12	CS4032	Computer Architecture	3	0	2	4
13	CS4033	Distributed Computing	3	0	2	4
14	CS4034	Middleware Technologies	3	0	2	4
15	CS4035	Computer Security	3	0	2	4
16	CS4036	Advanced Database Management Systems	3	0	2	4
17	CS4037	Cloud Computing	3	0	2	4
18	CS4038	Data Mining	3	0	2	4
19	CS4039	Multi Agent Systems	3	0	2	4
20	CS4040	Bioinformatics	3	0	2	4
21	CS4041	Natural Language Processing	3	0	2	4
22	CS4042	Web Programming	3	0	2	4
23	CS4043	Image Processing	3	0	2	4
24	CS4044	Pattern Recognition	3	0	2	4
25	CS4045	Medical Image Processing	3	0	2	4
26	CS4046	Computer Vision	3	0	2	4
27	CS4047	Computer Graphics	3	0	2	4
28	CS4048	Topics in Compilers	3	0	2	4
29	CS4049	Advanced Computer Networks	3	0	2	4
30	CS4050	Design and Analysis of Algorithms	3	0	2	4
31	CS4051	Coding Theory	3	0	2	4
32	CS4052	Logic for Computer Science	3	0	2	4

Laboratory:

S. No.	Code	Title	L	T	P	C
1	CS3091	Compiler Laboratory	1	0	3	3
2	CS3092	Operating Systems Laboratory	1	0	3	3
3	CS3093	Networks Laboratory	1	0	3	3
4	CS3094	Programming Languages Laboratory	1	0	3	3
5	CS3095	Database Management Systems Laboratory	1	0	3	3
6	CS3096	Computational Intelligence Laboratory	1	0	3	3
7	CS3097	Web Programming Laboratory	1	0	3	3
8	CS4091	Biocomputing Laboratory	1	0	3	3
9	CS4092	Data Mining Laboratory	1	0	3	3



10	CS4093	Image Processing Laboratory	1	0	3	3
11	CS4094	Computer Vision Laboratory	1	0	3	3
12	CS4095	Computer Graphics Laboratory	1	0	3	3
13	CS4096	Software Engineering Laboratory	1	0	3	3
14	CS4097	Object Oriented Programming Laboratory	1	0	3	3

Notes:

1. The total credit requirements for the programme is a minimum of 100 credits of which 60 credits are from core courses and the rest from elective courses.
2. The credit requirements for each semester indicate the minimum number of credits a student has to register in a semester.
3. Either theory or lab elective courses may be credited for elective courses. However only laboratory electives may be credited for courses marked in the curriculum as laboratory electives. Courses marked as 'Maths Elective' need to be credited from the courses offered by the Mathematics department.
4. In addition to the electives listed in the curriculum, a student may be permitted to credit as an elective any other course offered in the institute, subject to consent from the Faculty Advisor.

* The credits for each elective course may vary depending on the courses credited. However a student is required to register for the number of courses stipulated in the curriculum in each semester and satisfy the total credit requirement in each semester.



Department of Electrical Engineering

M Tech - Instrumentation and Control

Semester 1

S.No	Code	Title	L	T	P/S	C
1	MA6002	Applied Mathematics	3	0	-	3
2	EE6101	Dynamics of Linear Systems	3	0	-	3
3	EE6103	Applied Instrumentation	3	0	-	3
4		Elective -1	3	0	-	3
5		Elective -2	3	0	-	3
6		Elective -3	3	0	-	3
7	EE6191	Instrumentation & Control Systems Lab	-	-	3	2
		TOTAL CREDITS	18	0	3	20

Semester 2

S.No	Code	Title	L	T	P/S	C
1	EE6102	Optimal and Adaptive Control	3	0	-	3
2	EE6104	Advanced Instrumentation	3	0	-	3
3	EE6106	System Identification and Parameter Estimation	3	0	-	3
4	EE6108	Nonlinear System Analysis	3	0	-	3
5		Elective -1	3	0	-	3
6		Elective -2	3	0	-	3
7	EE6192	Mini Project	-	-	3	1
8	EE6194	Seminar	-	-	3	1
		TOTAL CREDITS	18	0	6	20

Semester 3

S.No	Code	Title	L	T	P/S	C
1	EE7191	Main Project -1	0	0	16	8
		TOTAL CREDITS	0	0	16	8

Semester 4

S.No	Code	Title	L	T	P/S	C
1	EE7192	Main Project -2	0	0	24	12
		TOTAL CREDITS	0	0	24	12

Minimum Requirements for M Tech Degree: 60 credits



List Of Electives

	Code	Title	Credit
1	MA7160	Simulation and Modelling	3
2	MA7165	Statistical Digital Signal Processing	3
3	MA8154	Wavelets Theory	3
4	ME6429	Research Methodology	3
5	EE6121	Data Acquisition and Signal Conditioning	3
6	EE6122	Biomedical Instrumentation	3
7	EE6123	Performance Modeling of Systems-1	3
8	EE6124	Performance Modelling of Systems II	3
9	EE6125	Digital Control Systems	3
10	EE6126	Advanced Topics in Control Systems	3
11	EE6127	Variable Structure Control Systems	3
12	EE6128	Optimal Estimation and Filtering	3
13	EE6129	Artificial Neural Networks and Fuzzy Systems	3
14	EE6304	Advanced Digital Signal Processing	3
15	EE6401	Energy Auditing & Management	3
16	EE6402	Process Control & Automation	3
17	EE6403	Computer Controlled Systems	3
18	EE6404	Industrial Load Modelling & Control	3
19	EE6406	Industrial Instrumentation	3
20	EE6421	Advanced Microcontroller Based Systems	3
21	EE6422	Engineering Optimization	3
22	EE6423	Industrial Communication	3
23	EE6424	Robotic Systems and Applications	3
24	EE6428	SCADA Systems & Applications	3



Department of Electrical Engineering
M Tech - Industrial Power and Automation

Semester 1

S.No	Code	Title	L	T	P/S	C
1	MA6003	Mathematical Methods for Power Engineering	3	0	-	3
2	EE6401	Energy Auditing & Management	3	0	-	3
3	EE6301	Power Electronic Circuits	3	0	-	3
4	EE6403	Computer Controlled Systems	3	0	-	3
5		Elective -1	3	0	-	3
6		Elective -2	3	0	-	3
7	EE6491	Industrial Power & Automation Laboratory	-	-	3	2
		TOTAL CREDITS	18	0	3	20

Semester 2

S.No	Code	Title	L	T	P/S	C
1	EE6402	Process Control and Automation	3	0	-	3
2	EE6404	Industrial Load Modelling & Control	3	0	-	3
3	EE6306	Power Electronic Drives	3	0	-	3
4	EE6406	Industrial Instrumentation	3	0	-	3
5		Elective -1	3	0	-	3
6		Elective -2	3	0	-	3
7	EE6492	Mini Project	-	-	3	1
8	EE6494	Seminar	-	-	3	1
		TOTAL CREDITS	18	0	6	20

Semester 3

S.No	Code	Title	L	T	P/S	C
1	EE7491	Main Project -1	0	0	16	7
2	EE7493	Industrial Training	Minimum 20 days			1
		Total credits	0	0	16	8

Semester 4

S.No	Code	Title	L	T	P/S	C
1	EE7492	Main Project -2	0	0	24	12
		TOTAL CREDITS	0	0	24	12

Minimum Requirements for M Tech Degree: 60 credits

Note:- EE7493 Industrial Training shall be completed during vacation and will be credited in 3rd semester along with major project -1



List Of Electives

S. No.	Code	Title	C
1	MA7160	Simulation and Modelling	3
2	MA7165	Statistical Digital Signal Processing	3
3	MA7166	Statistical Methods for Quality Management	3
4	MA7169	Applied Fuzzy Logic and Fuzzy sets	3
5	MA8154	Wavelets Theory	3
6	MA8163	Advanced Operations Research	3
7	MA8167	Design of Experiments	3
8	MA8171	Knowledge Discovery and Data Mining	3
9	ME6412	Design and analysis of energy systems	3
10	ME6421	Direct Energy Conversion Systems	3
11	ME6423	Energy Policies for Sustainable Development	3
12	ME6427	Energy Efficient Buildings	3
13	ME6428	Integrated Energy Systems	3
14	ME6429	Research Methodology	3
15	ME6439	Energy Modeling, Economics and Project Management	3
16	ME6441	Information Technology in Energy Management	3
17	EE6421	Advanced Microcontroller Based Systems	3
18	EE6422	Engineering Optimization	3
19	EE6423	Industrial Communication	3
20	EE6424	Robotic Systems and Applications	3
21	EE6426	Distribution Systems Management and Automation	3
22	EE6428	SCADA Systems & Applications	3
23	EE6101	Dynamics of Linear Systems	3
24	EE6102	Optimal and Adaptive Control	3
25	EE6103	Applied Instrumentation	3
26	EE6104	Advanced Instrumentation	3
27	EE6121	Data Acquisition and Signal Conditioning	3
28	EE6122	Biomedical Instrumentation	3
29	EE6123	Performance Modelling of Systems I	3
30	EE6124	Performance Modelling of Systems -II	3
31	EE6125	Digital Control Systems	3
32	EE6129	Artificial Neural Network and Fuzzy Systems	3
33	EE6201	Computer Methods in Power Systems	3
34	EE6204	Digital Protection of Power Systems	3
35	EE6221	Distributed Generation	3
36	EE6222	Power Quality	3
37	EE6302	Advanced Power Electronics Circuits	3
38	EE6303	Dynamics of Electrical Machines	3
39	EE6304	Advanced Digital Signal Processing	3
40	EE6308	FACTS and Custom Power	3
41	EE6321	Power Semiconductor Devices & Modeling	3
42	EE6322	Static VAR Controllers and Harmonic Filtering	3
43	EE6327	Linear and Digital Electronics	3

****Electives: Any other subject offered in the Institute with approval from the Programme Coordinator can also be credited.



Department of Electrical Engineering

M Tech - Power Systems

Semester 1

S.No	Code	Title	L	T	P/S	C
1	MA6003	Mathematical Methods for Power Engineering	3	0	-	3
2	EE6201	Computer Methods in Power Systems	3	0	-	3
3	EE6301	Power Electronics Circuits	3	0	-	3
4		Elective -1	3	0	-	3
5		Elective -2	3	0	-	3
6		Elective -3	3	0	-	3
7	EE6291	Power Systems Lab	-	-	3	2
		TOTAL CREDITS	18	0	3	20

Semester 2

S.No	Code	Title	L	T	P/S	C
1	EE6202	Power System Dynamics and Control	3	0	-	3
2	EE6204	Digital Protection of Power systems	3	0	-	3
3	EE6308	FACTS and Custom Power	3	0	-	3
4	EE6426	Distribution Systems Management & Automation	3	0	-	3
5		Elective -1	3	0	-	3
6		Elective -2	3	0	-	3
7	EE6294	Seminar	-	-	3	1
8	EE6292	Mini Project	-	-	3	1
		TOTAL CREDITS	18	0	6	20

Semester 3

S.No	Code	Title	L	T	P/S	C
1	EE7291	Main Project -1	0	0	16	8
		TOTAL CREDITS	0	0	16	8

Semester 4

S.No	Code	Title	L	T	P/S	C
1	EE7292	Main Project -2	0	0	24	12
		TOTAL CREDITS	0	0	24	12

Minimum Requirements for M Tech Degree: 60 credits



List Of Electives

S.No	Code	Title	C
1	EE6221	Distributed Generation	3
2	EE6222	Power Quality	3
3	EE6223	High Voltage Engineering I	3
4	EE6224	High Voltage Engineering II	3
5	EE6101	Dynamics of Linear Systems	3
6	EE6102	Optimal and Adaptive Control	3
7	EE6103	Applied Instrumentation	3
8	EE6122	Biomedical Instrumentation	3
9	EE6129	Artificial Neural Networks and Fuzzy Systems	3
10	EE6302	Advanced Power Electronic Circuits	3
11	EE6303	Dynamics of Electrical Machines	3
12	EE6304	Advanced Digital Signal Processing	3
13	EE6306	Power Electronic Drives	3
14	EE6321	Power Semiconductor Devices and Modeling	3
15	EE6322	Static VAR Controllers and Harmonic Filtering	3
16	EE6323	Digital Simulation of Power Electronic Systems	3
17	EE6401	Energy Auditing & Management	3
18	EE6402	Process Control & Automation	3
19	EE6404	Industrial Load Modelling & Control	3
20	EE6406	Industrial Instrumentation	3
21	EE6421	Advanced Microcontroller Based Systems	3
22	EE6422	Engineering Optimization	3
23	EE6423	Industrial Communication	3
24	EE6428	SCADA Systems & Applications	3

***Any other subject offered in the Institute with approval from the Programme Coordinator



Department of Electrical Engineering

M Tech in Power Electronics

Semester 1

S.No	Code	Title	L	T	P/S	C
1	MA6003	Mathematical Methods for Power Engineering	3	0	-	3
2	EE6301	Power Electronic Circuits	3	0	-	3
3	EE6303	Dynamics of Electrical Machines	3	0	-	3
4		Elective -1	3	0	-	3
5		Elective -2	3	0	-	3
6		Elective -3	3	0	-	3
7	EE6391	Power Electronics Lab	-	-	3	2
		TOTAL CREDITS	18	0	3	20

Semester 2

S.No	Code	Title	L	T	P/S	C
1	EE6302	Advanced Power Electronic Circuits	3	0	-	3
2	EE6304	Advanced Digital Signal Processing	3	0	-	3
3	EE6306	Power Electronic Drives	3	0	-	3
4	EE6308	FACTS and Custom Power	3	0	-	3
5		Elective -1	3	0	-	3
6		Elective -2	3	0	-	3
7	EE6392	Mini Project	-	-	3	1
8	EE6394	Seminar	-	-	3	1
		TOTAL CREDITS	18	0	6	20

Semester 3

S.No	Code	Title	L	T	P/S	C
1	EE7391	Main Project -1	0	0	16	8
		TOTAL CREDITS	0	0	16	8

Semester 4

S.No	Code	Title	L	T	P/S	C
1	EE7392	Main Project -2	0	0	24	12
		TOTAL CREDITS	0	0	24	12



List Of Electives

S.No	Code	Title	C
1	EE6321	Power Semiconductor Devices and Modelling	3
2	EE6322	Static VAR Controllers and Harmonic Filtering	3
3	EE6323	Digital Simulation of Power Electronic Systems	3
4	EE6324	Advanced Control of PWM Inverter-fed Induction Motor Drives	3
5	EE6325	Switched Mode and Resonant Converters	3
6	EE6327	Linear and Digital Electronics	3
7	EE6102	Optimal and Adaptive Control	3
8	EE6121	Data Acquisition and Signal Conditioning	3
9	EE6122	Biomedical Instrumentation	3
10	EE6125	Digital Control Systems	3
11	EE6129	Artificial Neural Networks and Fuzzy Systems	3
12	EE6204	Digital Protection of Power systems	3
13	EE6222	Power Quality	3
14	EE6401	Energy Auditing & Management	3
15	EE6402	Process Control & Automation	3
16	EE6403	Computer Controlled Systems	3
17	EE6404	Industrial Load Modelling & Control	3
18	EE6406	Industrial Instrumentation	3
19	EE6421	Advanced Micro-Controller Based Systems	3
20	EE6422	Engineering Optimization	3
21	EE6424	Robotic Systems and Applications	3
22	EE6426	Distribution systems Management & Automation	3
23	EE6428	SCADA Systems & Applications	3



Department of Electronics & Communication Engineering

M. Tech. - Electronic Design & Technology

Semester 1

S.No	Code	Title	L	T	P/S	C
1	EC6101	Digital System Design	3	0	3	4
2	EC6102	Embedded System Design	3	0	3	4
3	EC6201	Basics of VLSI	3	0	3	4
4	EC6103	Analog and Data Conversion Systems	4	0	0	4
5		Elective 1	3	0	0	3
		Total credits				19

Semester 2

S.No	Code	Title	L	T	P/S	C
1	EC6104	DSP system design	3	0	0	3
2	EC6105	Electromagnetic compatibility	4	0	0	4
3	EC6106	Electronics System Design Lab	0	0	3	2
4	EC6107	DSP Lab	0	0	3	2
5	EC6108	Seminar	0	0	2	1
		Elective2	3	0	0	3
		Elective3	3	0	0	3
		Elective4	3	0	0	3
		Total credits				21

Semester 3

S.No	Code	Title	L	T	P/S	C
1	EC7101	Project Work	-	-	-	8
		Total credits				8

Semester 4

S.No.	Code	Title	L	T	P/S	C
1	EC7102	Project Work	-	-	-	12
		Total credits			12	

Minimum Requirements

1. Minimum number of credits to be earned by a student is 60



List Of Electives

S.No.	Code	Title	Credit
1	EC6121	Electronics Packaging	3
2	EC6122	Control System Design	3
3	EC6123	Electronic Instrumentation	3
4	EC6124	Biomedical Instrumentation	3
5	EC6125	High Speed Digital Design	3
6	EC6126	Real Time Operating Systems	3
7	EC6127	Design for Manufacturability	3
8	EC6128	Advanced Processor Architectures	3
9	EC6129	Analog and Digital Filter Design	3
10	EC6130	Hardware Software co design	3
11	EC6131	Advanced Circuit Analysis	3

- Any other subject (core/elective) offered by the Department from time to time shall be taken as elective with the consent of course co-ordinator/faculty.



Department of Electronics & Communication Engineering

M. Tech. - Microelectronics and VLSI Design

Semester 1

S. No.	Code	Name of the Subject	L	T	P/S	C
1.	EC6201	Basics of VLSI	3	0	3	4
2.	EC6202	Semiconductor Device Theory and Modelling	3	0	0	3
3.	EC6203	VLSI Technology	3	0	0	3
4.	EC6204	Analog Integrated Circuit Design	3	0	0	3
5.		Elective 1	3	0	0	3
6.	EC6205	Micro Electronic Lab I	0	0	3	2
7.	EC6206	System Design Using HDL	0	0	3	2
		Total credits				20

Semester 2

S. No.	Code	Name of the Subject	L	T	P/S	C
1.	EC6207	MOS Device Modeling	3	0	0	3
2.	EC6208	VLSI System Design	3	0	0	3
3.		Elective 1	3	0	0	3
4.		Elective 2	3	0	0	3
5.		Elective 3	3	0	0	3
6.	EC6209	Micro Electronic Lab II	0	0	3	2
7.	EC6210	VLSI Design Lab	0	0	3	2
8.	EC6211	Seminar	0	0	2	1
		Total credits				20

Semester 3

S. No.	Code	Name of the Subject	L	T	P/S	C
1.	EC7201	Project Work	-	-	-	8
		Total credits				8

Semester 4

S. No.	Code	Name of the Subject	L	T	P/S	C
1.	EC7202	Project Work	-	-	-	12
		Total credits				12



List Of Electives

S.No.	Code	Name of the Subject	L	T	P/S	C
1.	EC6221	Compound Semiconductors: Properties & Applications	3	0	0	3
2.	EC6222	Micro Electro Mechanical Systems	3	0	0	3
3.	EC6223	Foundation of VLSI CAD	3	0	0	3
4.	EC6224	Testing & Verification of VLSI Circuits	3	0	0	3
5.	EC6225	Semiconductor Power Devices	3	0	0	3
6.	EC6226	Nanoelectronics	3	0	0	3
6.	EC6227	Low Power VLSI	3	0	0	3
8.	EC6228	Mixed Signal circuit design	3	0	0	3
9.	EC6229	Selected topics in circuits design	3	0	0	3
10.	EC6230	CMOS RF circuit design	3	0	0	3

*Any other subject (core/elective) offered by the Department from time to time shall be taken as elective with the consent of course co-ordinator/faculty.



Department of Electronics & Communication Engineering

M. Tech. in Signal Processing

Semester 1

S.No	Code	Title	L	T	P/S	C
1	EC6401	Linear Systems Theory	4	0	0	4
2	EC6303	Information Theory	4	0	0	4
3	EC6402	Multirate Signal processing	3	0	0	3
4	EC6301	Random Processes	4	0	0	4
5	EC6403	Signal Processing Lab I	0	0	3	2
		Elective 1	3	0	0	3
Total credits			20			

Semester 2

S.No	Code	Title	L	T	P/S	C
1	EC6404	Adaptive Signal Processing	4	0	0	4
2	EC6307	Estimation & Detection Theory	4	0	0	4
3	EC6405	Signal Processing Lab II	0	0	3	2
4	EC6406	Seminar	0	0	2	1
		Elective 1	3	0	0	3
		Elective 2	3	0	0	3
		Elective 3	3	0	0	3
Total credits			20			

Semester 3

S.No	Code	Title	L	T	P/S	C
1	EC7401	Project Work	-	-	-	8

Semester 4

S.No.	Code	Title	L	T	P/S	C
1	EC7402	Project Work	-	-	-	12

Minimum Requirements - 1. Minimum number of credits to be earned by a student is 60



List Of Electives

S.No.	Code	Title	Credit
1	EC6421	Image & Video Processing	3
2	EC6422	Linear & Nonlinear Optimization	3
3	EC6423	Signal Compression - Theory and Methods	3
4	EC6424	Multidimensional Signal Processing	3
5	EC6425	Wavelets: Theory & Construction	3
6	EC6426	Transform Theory	3
7	EC6427	Array Signal Processing	3
8	EC6428	Speech & Audio Processing	3
9	EC6429	Biomedical Signal Processing	3
10	EC6430	Pattern Recognition and Analysis	3
11	EC6431	DSP Algorithms and Architecture	3
12	EC6432	Spectrum Analysis	3

- Any other subject (core/elective) offered by the Department from time to time shall be taken as elective with the consent of course co-ordinator/faculty.



Department of Electronics & Communication Engineering

M. Tech. - Telecommunication

Semester 1

S.No	Code	Title	L	T	P/S	C
1	EC6301	Random Processes	4	0	0	4
2	EC6302	Digital Communication Techniques	4	0	0	4
3	EC6303	Information Theory	4	0	0	4
4	EC6304	Communication Networks	3	0	0	3
5	EC6305	Telecommunication Lab I	0	0	3	2
6		Elective 1	3	0	0	3
		Total credits				20

Semester 2

S.No	Code	Title	L	T	P/S	C
1	EC6306	Theory of Error Control Coding	4	0	0	4
2	EC6307	Estimation & Detection Theory	4	0	0	4
3	EC6308	Telecommunication Lab II	0	0	3	2
4	EC6309	Seminar	0	0	2	1
5		Elective 1	3	0	0	3
6		Elective 2	3	0	0	3
7		Elective 3	3	0	0	3
		Total credits				20

Semester 3

S.No	Code	Title	L	T	P/S	C
1	EC7301	Project Work	0	0	40	8
		Total credits				8

Semester 4

S.No.	Code	Title	L	T	P/S	C
1	EC7302	Project Work	0	0	40	12
		Total credits				12

Minimum Requirements: Minimum number of credits to be earned by a student is 60



List Of Electives

S.No.	Code	Title	Credit
1	EC6321	Wireless Communication	3
2	EC6322	Secure Communication	3
3	EC6323	Optical Communication	3
4	EC6324	Selected Topics in Networks	3
5	EC6325	MIMO Communication Systems	3
6	EC6326	Markov Modeling & Theory of Ques	3
7	EC6327	Spread Spectrum & CDMA Systems	3
8	EC6328	Communication Switching & Multiplexing	3
9	EC6329	Selected Topics in Communication	3
10	EC6330	Network Security	3



Department of Mechanical Engineering

M. Tech. - Industrial Engineering and Management

Semester 1

Code	Title of Course	L	T	P/S	C
ME6101	Decision Modeling - I	3	--	--	3
ME6102	Inventory and Supply Chain Management	3	--	--	3
ME6103	Accounting and Finance for Management	3	--	--	3
ME6104	Marketing Management	3	--	--	3
	Elective-I	3	--	--	3
	Elective-II	3	--	--	3
ME6191	Industrial Engineering Laboratory	--	--	3	1
ME6192	Seminar	--	--	3	1
	Total	20			

Semester 2

Code	Title of Course	L	T	P/S	C
ME6111	Decision Modeling – II	3	--	--	3
ME6112	Facilities Layout Planning	3	--	--	3
ME6113	Manufacturing Planning and Control	3	--	--	3
ME6114	Human Resource Management	3	--	--	3
	Elective-III	3	--	--	3
	Elective-IV	3	--	--	3
ME6193	Computational Laboratory-II	--	--	3	1
ME6194	Term Paper/ Mini Project/Industrial Training	--	--	3	1
	Total	20			

Semester 3

Code	Title of Course	L	T	P/S	C
ME7195	Project work	--	--	--	8
	Total	8			

Semester 4

Code	Title of Course	L	T	P/S	C
ME7196	Project work	--	--	--	12
	Total	12			

Total Credits: 60

Stipulations:

1. A minimum of 60 credits have to be earned for the award of M. Tech. degree in this programme.
2. Students have to credit a minimum of eight core courses and four electives during the programme; however they have option to credit two electives in the Third Semester, drawing one each from First and Second Semesters.
3. Students may undergo Industrial Training during May-June.



List of Electives

Sl. No.	Code	Title	Credits
1	ME6121	Statistics for Management	3
2	ME6122	Work System Design	3
3	ME6123	Management of Technology and Innovation	3
4	ME6124	Strategic Management	3
5	ME6125	Management Information Systems	3
6	ME6126	Group Technology and FMS	3
7	ME6127	Reliability Engineering and Management	3
8	ME6128	Product Management	3
9	ME6129	Project Management	3
10	ME6130	Technical Entrepreneurship	3
11	ME6131	Business Ethics	3
12	ME6132	Computer Methods in Management	3
13	ME6133	Organizational Behaviour	3
14	ME6134	Consumer Behaviour	3
15	ME6135	Soft Computing Techniques	3
16	ME6136	Risk Management and Insurance	3
17	ME6137	Financial Management	3
18	ME6138	Decision Support and Expert System	3
19	ME6139	System Modelling and Simulation	3
20	ME6140	Data Base Management	3
21	ME6141	Enterprise Resource Planning	3
22	ME6142	Industrial Scheduling	3
23	ME6143	Lean Production Management	3
24	ME6144	Investment Management	3
25	ME6145	Takeovers and Corporate Restructuring	3
26	ME6146	Forecasting Techniques	3
27	ME6147	Managerial Economics	3
28	ME6148	Computer Integrated Manufacturing	3
29	ME6312	Quality Engineering & Management	3
30	ME6329	Design of Experiments	3

Note: Students may choose any course offered in the Institute with the approval from the Programme Coordinator.



Department of Mechanical Engineering

M. Tech. - Thermal Sciences

Semester 1

Code	Title of Course	L/T	P/S	C
MA6001	Mathematical Methods	3	-	3
ME6201	Advanced Fluid Mechanics	3	-	3
ME6202	Advanced Chemical Thermodynamics	3	-	3
ME6203	Analytic Methods in Heat Transfer I	3	-	3
	Elective-I	3	-	3
	Elective- II	3	-	3
ME6291	Computational Laboratory	--	3	1
ME6292	Seminar	--	3	1
	Total		20	

Semester 2

Code	Title of Course	L/T	P/S	C
ME6211	Analytical Methods in Heat Transfer II	3	-	3
ME6212	Advanced Computational Methods in Fluid Flow and Heat Transfer	3	-	3
ME6213	Analysis of Thermal Power Plant Cycles and systems	3	-	3
ME6214	Cryogenic Engineering	3	-	3
	Elective-III	3	-	3
	Elective-IV	3	-	3
ME6293	Thermal Science Laboratory	--	3	1
ME6294	Term Paper/ Mini Project/Industrial Training	--	3	1
	Total		20	

Semester 3

Code	Title of Course	L/T	P/S	C
ME7295	Project work	--	-	8
	Total		8	

Semester 4

Code	Title of Course	L/T	P/S	C
ME7296	Project work	--	-	12
	Total		12	

Total Credits: 60

Stipulations:

1. A minimum of 60 credits have to be earned for the award of M. Tech. degree in this programme.
2. Students have to credit a minimum of eight core courses and four electives during the programme; however they have option to credit two electives in the Third Semester, drawing one each from First and Second Semesters.
3. Students may undergo Industrial Training during May-June.



List of Electives

Sl. No.	Code	Title	Credit
1	ME6221	Thermal Environmental Engineering	3
2	ME6222	Design of Heat Transfer Equipment	3
3	ME6223	Principle and Analysis of Turbo machines	3
4	ME6224	Aerodynamics	3
5	ME6225	Statistical Thermodynamics	3
6	ME6226	Theoretical Hydrodynamics	3
7	ME6227	I. C. Engine Systems, Combustion and Performance Analysis	3
8	ME6228	Multiphase Flow	3
9	ME6229	Industrial Food Preservation	3
10	ME6230	Introduction to Turbulence	3
11	ME6231	Postulational Thermodynamics	3
12	ME6232	Advanced Instrumentation Systems	3
13	ME6233	Theory and applications of heat pipes	3
14	ME6234	Thermodynamic property relations and exergy analysis	3
15	ME6235	Transport phenomena	3
16	ME6402	Renewable energy technology	3
17	ME6412	Design and analysis of energy systems	3
18	ME6413	Energy conservation in thermal systems	3
19	ME6414	Energy and Environment	3
20	ME6424	Fluidized bed systems	3
21	ME6425	Heat pump technology	3
22	ME6322	Computer Graphics	3

Note: Students may choose any course offered in the Institute with the approval from the Programme Coordinator.



Department of Mechanical Engineering

M.Tech. - Manufacturing Technology

Semester 1

Code	Title of Course	L/T	P/S	C
MA6001	Mathematical Methods	3	-	3
ME6301	Advanced Machining Science	3	-	3
ME6302	Metal Forming	3	-	3
ME6303	Advanced Metrology & Computer Aided Inspection	3	-	3
	Elective-I	3	-	3
	Elective-II	3	-	3
ME6391	Manufacturing Technology Laboratory	-	3	1
ME6392	Seminar	-	3	1
	Total		20	

Semester 2

Code	Title of Course	L/T	P/S	C
ME6311	Industrial Automation & Robotics	3	-	3
ME6312	Quality Engineering & Management	3	-	3
ME6313	Machine Tool Design & Computer Numerical Control	3	-	3
ME6513	Metal Casting and Joining	3	-	3
	Elective-III	3	-	3
	Elective-IV	3	-	3
ME6393	CAD/CAM Laboratory	-	3	1
ME6394	Term Paper/Mini Project/Industrial Training	-	3	1
	Total		20	

Semester 3

Code	Title of Course	L/T	P/S	C
ME7395	Project work	--	--	8
	Total		8	

Semester 4

Code	Title of Course	L/T	P/S	C
ME7396	Project work	--	--	12
	Total		12	

Total Credits: 60

Stipulations:

1. A minimum of 60 credits have to be earned for the award of M. Tech. degree in this programme.
2. Students have to credit a minimum of eight core courses and four electives during the programme; however they have option to credit two electives in the Third Semester, drawing one each from First and Second Semesters.
3. Students may undergo Industrial Training during May-June.



List of Electives

Sl. No.	Code	Title	Credit
1	ME6321	Mechatronics	3
2	ME6322	Computer Graphics	3
3	ME6323	Six Sigma	3
4	ME6324	Modern Machining Processes	3
5	ME6325	Finite Element Methods and Applications	3
6	ME6326	Industrial Machine Vision	3
7	ME6327	Micro Fabrication	3
8	ME6328	Tool Engineering & Design	3
9	ME6329	Design of Experiments	3
10	ME6330	Industrial Tribology	3
11	ME6331	Hydraulic and pneumatic control systems	3
12	ME6332	Vibration and Noise in Machine Tools and Machinery	3
13	ME6333	Fracture Mechanics and Failure Analysis	3
14	ME6334	Experimental Stress Analysis	3
15	ME6501	Mechanical Behaviour of Materials	3
16	ME6511	Composite Materials: Mechanics, Manufacturing and Design	3
17	ME6112	Facilities Planning	3
18	ME6127	Reliability Engineering and Management	3
19	ME6139	System Modelling and Simulation	3

Note: Students may choose any course offered in the Institute with the approval from the Programme Coordinator.



Department of Mechanical Engineering
M. Tech. - Energy Engineering & Management

Semester 1

Code	Title of Course	L/T	P/S	C
MA6001	Mathematical methods	3	--	3
ME6401	Advanced energy conversion systems	3	--	3
ME6402	Renewable energy technology	3	--	3
EE6001	Electrical energy systems and management	3	--	3
	Elective-I	3	--	3
	Elective-II	3	--	3
ME6491	Computational Laboratory	--	3	1
ME6492	Seminar	--	3	1
	Total		20	

Semester 2

Code	Title of Course	L/T	P/S	C
ME6411	Fluid flow and heat transfer in energy systems	3	--	3
ME6412	Design and analysis of energy systems	3	--	3
ME6413	Energy conservation in thermal systems	3	--	3
ME6414	Energy and Environment	3	--	3
	Elective-III	3	--	3
	Elective-IV	3	--	3
ME6493	Energy Engineering Laboratory	--	3	1
ME6494	Term Paper/Mini Project/Industrial Training	--	3	1
	Total		20	

Semester 3

Code	Title of Course	L/T	P/S	C
ME7495	Project work	--	--	8
	Total		8	

Semester 4

Code	Title of Course	L/T	P/S	C
ME7496	Project work	--	--	12
	Total		12	

Total Credits: 60

Stipulations:

1. A minimum of 60 credits have to be earned for the award of M. Tech. degree in this programme.
2. Students have to credit a minimum of eight core courses and four electives during the programme; however they have option to credit two electives in the Third Semester, drawing one each from First and Second Semesters.
3. Students may undergo Industrial Training during May-June.



List of Electives

Sl. No.	Code	Title	Credit
1	ME6421	Direct energy conversion systems	3
2	ME6422	Optimal design of heat exchangers	3
3	ME6423	Energy policies for sustainable development	3
4	ME6424	Fluidized bed systems	3
5	ME6425	Heat pump technology	3
6	ME6426	Micro-channel flow and mixing analysis	3
7	ME6427	Energy efficient buildings	3
8	ME6428	Integrated energy systems	3
9	ME6429	Theory of combustion	3
10	ME6430	Advanced air breathing propulsion	3
11	ME6431	Cryogenic rocket propulsion systems	3
12	ME6432	Environmental engineering and pollution control	3
13	ME6433	Emerging trends in refrigeration systems	3
14	ME6434	Hydrogen production, storage and transportation	3
15	ME6435	Hydrogen energy conversion technology	3
16	ME6436	Energy modeling, economics and project management	3
17	ME6437	Hydropower Systems	3
18	ME6438	Information technology in Energy Management	3
19	ME6439	Recent Advances in Refrigerants	3
20	ME6103	Accounting and Finance for Management	3
21	ME6212	Advanced Computational Methods in Fluid Flow and Heat Transfer	3
22	ME6214	Cryogenic Engineering	3
23	ME6221	Thermal Environmental Engineering	3
24	ME6229	Multiphase Flow	3
25	ME6230	Industrial Food Preservation	3
26	ME6232	Advanced Instrumentation Systems	3
27	ME9401	Research methodology	3

Note: Students may choose any course offered in the Institute with the approval from the Programme Coordinator.



Department of Mechanical Engineering
M. Tech. - Materials Science and Technology

Semester 1

Code	Title of Course	L/T	P/S	C
ME6501	Mechanical Behaviour of Materials	3	-	3
ME6502	Ferrous and Non-Ferrous Metallurgy	3	-	3
MA6001	Mathematical methods	3	-	3
PH6001	Physics of Materials	3	-	3
	Elective I	3	-	3
	Elective-II	3	-	3
ME6591	Materials Science Lab I	-	3	1
ME6592	Seminar I	-	3	1
	Total		20	

Semester 2

Code	Title of Course	L/T	P/S	C
ME6511	Composite Materials: Mechanics, Manufacturing and Design	3	-	3
ME6512	Ceramic Science and Technology	3	-	3
ME6513	Metal Casting and Joining	3	-	3
CY6001	Polymer Science and Engineering	3	-	3
	Elective III	3	-	3
	Elective IV	3	-	3
ME6593	Materials Science Lab II	-	3	1
ME6594	Term Paper/Mini Project/Industrial Training	-	3	1
	Total		20	

Semester 3

Code	Title of Course	L/T	P/S	C
ME7595	Project work	-	-	8
	Total		8	

Semester 4

Code	Title of Course	L/T	P/S	C
ME7596	Project work	-	-	12
	Total		12	

Total Credits: 60

Stipulations:

1. A minimum of 60 credits have to be earned for the award of M. Tech. degree in this programme.
2. Students have to credit a minimum of eight core courses and four electives during the programme; however they have option to credit two electives in the Third Semester, drawing one each from First and Second Semesters.
3. Students may undergo Industrial Training during May-June.



List of Electives

Sl. No.	Code	Title of Course	Credit
1	ME6521	Thermodynamics of Materials	3
2	ME6522	Powder and Sintered parts	3
3	ME6523	Nuclear Metallurgy	3
4	ME6524	Science of solidification process	3
5	ME6525	Characterisation of Materials	3
6	ME6526	Corrosion Science and Technology	3
7	ME6527	Heat treatment Technology	3
8	ME6212	Advanced Computational Methods in Fluid Flow and Heat Transfer	3
9	ME6302	Metal Forming	3
10	ME6303	Metrology & Computer Aided Inspection	3
11	ME6312	Quality Engineering & Management	3
12	ME6322	Computer Graphics	3
13	ME6323	Six Sigma	3
14	ME6325	Finite Element Methods and Applications	3
15	ME6329	Design of Experiments	3
16	ME6330	Industrial Tribology	3

Note: Students may choose course offered in the Institute with the approval from the Programme Coordinator



School of Nano Science and Technology

MTech - Nanotechnology

Semester 1

Sl.No	Code	Title	L	T	P/S	C
1	NS6101	Structure of Nanomaterials	3	0	0	3
2	NS6102	Microscale and Nanoscale Heat Transfer	3	0	0	3
3	MA6001	Mathematical Methods	3	1	0	3
4	PH6001	Physics of Materials	3	0	0	3
5		Elective-I	3	0	0	3
6		Elective-II	3	0	0	3
7	NS6191	Nanoscience and Technology Lab-I	0	0	3	1
8	NS6192	Seminar I	0	0	0	1
Total Credits			18	0	3	20

Semester 2

Sl.No	Code	Title	L	T	P/S	C
1	NS6111	Nanosized Structures	3	0	0	3
2	NS6112	Experimental Techniques in Nanotechnology	3	0	0	3
3	NS6113	Micro Electro Mechanical Systems and applications	3	0	0	3
4	NS6114	Thermodynamics of Nano Materials and Systems	3	0	0	3
5		Elective III	3	0	0	3
6		Elective IV	3	0	0	3
7	NS6193	Nanoscience and Technology Lab-II	0	0	3	1
8	NS6194	Seminar II	0	0	3	1
Total Credits			18	0	6	20

Semester 3

Sl.No	Code	Title	L	T	P/S	C
1	NS7198	Project	-	-	-	8
Total Credits			-	-	-	8

Semester 4

S.No	Code	Title	L	T	P/S	C
1	NS7199	Project	-	-	-	12
Total Credits						12

Total Credits = 60

Minimum Credit Requirements:

(i) Core Courses	: 24
(ii) Elective Courses	: 12
(iii) Laboratory Courses	: 04
(iv) Project	: 20
Total	: 60



List Of Electives

Sl. No.	Code	Title of Course
1	NS6121	Mechanics of Finite Size Elements
2	MA6005	Optimization Techniques
3	ME6212	Computational Methods in Fluid flow and Heat Transfer
4	NS6122	Nano Materials for Energy and Environment
5	NS6123	Management of Technology and Innovation
6	EE6121	Data Acquisition and Signal Conditioning
7	NS6124	Computational Nanotechnology
8	ME6325	Finite Element Methods and Applications
9	NS6125	Carbon Nanotube Science and Technology
10	ME6511	Composite Materials: Mechanics, Manufacturing and Design
11	NS6126	Combustion and Nanoparticle Fuel-Additives
12	NS6127	Polymer Chemistry
13	NS6128	Chemistry of Materials
14	NS6129	Nanofabrication

*** Any other subject offered in the Institute with the approval from the Programme Coordinator**



SCHOOL OF MANAGEMENT STUDIES

MASTER OF BUSINESS ADMINISTRATION (MBA)

First Year								
Trimester 1	Code	Cr	Trimester 2	Code	Cr	Trimester 3	Code	Cr.
Principles of Management	MSA601	3	Management Accounting: Application and Process	MSA608	3	Legal Aspects in Business	MSA615	3
Financial Accounting: Concepts and Fundamentals	MSA602	3	Operations Research in Management	MSA609	3	Financial Management	MSA616	3
Managerial Economics	MSA603	3	Organizational Process: Structure and Design	MSA610	3	Business and Economic Environment	MSA617	3
Organizational Behavior	MSA604	3	Marketing Management: Application and Process	MSA611	3	Business Research Methodology	MSA618	3
Marketing Management: Concepts and Fundamentals	MSA605	3	Production and Operations Management	MSA612	3	Human Resource Management	MSA619	3
Quantitative Methods and Business Statistics for Decision Making	MSA606	3	Strategic Management – I	MSA613	3	Supply Chain Management	MSA620	3
Managerial Communication, Etiquette and Manners	MSA607	3	Information Technology for Managing Corporations	MSA614	3	Business Ethics, Indian Society and Transformation	MSA621	3
Total Credits		21	Total Credits		21	Total Credits		21
Second Year								
Strategic Management – II	MSA701	3	Environmental Management and Natural Resources	MSA703	3	Elective – 8		3
Principle and Process in Business, Government and Society	MSA702	3	Management of Technology and Innovation	MSA704	3	Elective – 9		3
Elective – 1		3	Elective – 5		3	Elective – 10		3
Elective – 2		3	Elective – 6		3	Business Research Project	MSA790	6
Elective – 3		3	Elective – 7		3			
Elective – 4		3						
Total Credits		18	Total Credits		15	Total Credits		15



List of Electives

Business Analytics: Research and Systems	Code	Credit
Principles and Processes of Business Analytics and Research	MSA730	3
Business Intelligence	MSA731	3
Enterprise Resources Planning (ERP)	MSA732	3
Data Driven Market Analysis	MSA733	3
Demographics and Economics of Marketing	MSA734	3
System Analysis and Simulation	MSA735	3
E-Commerce	MSA736	3
Knowledge Management	MSA737	3
Object Oriented Data Base Management System	MSA738	3
Data Warehousing and Data Mining	MSA739	3
Finance		
Risk and Insurance Management	MSA740	3
International Finance and Investment Banking	MSA741	3
Managing Financial Institutions	MSA742	3
Managing Financial Services	MSA743	3
Investment Analysis and Portfolio Management	MSA744	3
Corporate Tax Planning and Taxation	MSA745	3
Options, Futures and Derivatives	MSA746	3
Human Resource		
Capacity Building and Performance Management	MSA750	3
Management of Change: Design and Implementation	MSA751	3
Recruitment, Selection and Compensation Management	MSA752	3
Transforming Personality and Interpersonal Development	MSA753	3
Strategic Human Resources Management	MSA754	3
Industrial Disputes and Labour Laws	MSA 755	3
Marketing		
Retail and Mall Management	MSA760	3
Consumer Behaviour	MSA761	3
Advertising and Sales Promotion	MSA762	3
Product and Brand Management	MSA763	3
Marketing of Services	MSA764	3
Customer Relationship Management	MSA765	3



Product Rejuvenation and Development	MSA766	3
International Marketing	MSA767	3
Production and Operations		
Lean Manufacturing Management	MSA770	3
Group Technology	MSA771	3
Infrastructure and Development Management	MSA772	3
Total Quality Management	MSA773	3
Project Management	MSA774	
Maintenance Management, Safety and Control	MSA775	3
Aviation and Airport Services Management	MSA776	3
Shipping, Ports and Maritime Infrastructure Management	MSA777	3
Strategy		
Environmental Disaster Management	MSA780	3
Business Disaster Recovery and Continuity Management	MSA781	3
Strategic Financial Management	MSA782	3



Department of Physics

M.Sc. in Physics

Semester 1

Sl. No.	Course Code	Courses	L	T	P/S	Credits
1	PH6201	Mathematical Physics – I	03			03
2	PH6202	Classical Mechanics	03			03
3	PH6203	Electromagnetic Theory	03			03
4	PH6204	Electronics - I	03			03
5	PH6281	Electronics Lab			03	02
6	PH6282	General Physics Lab			03	02
7	PH 6285	Numerical & Computational Physics Lab	01		03	03
		Total	13		09	19

Semester 2

Sl No.	Course Code	Courses	L	T	P/S	Credits
1	PH6205	Mathematical Physics – II	03			03
2	PH6206	Quantum Mechanics – I	03			03
3	PH6207	Statistical Mechanics	03			03
4	PH6209	Modern Optics	03			03
5	PH6211	Condensed Matter Physics - I	03			03
6	PH6284	Optics Lab			03	02
7	PH6294	Solid State Physics Lab			03	02
8	PH6296	Electromagnetics Lab	01		03	03
		Total	16		09	22

Semester 3

Sl. No.	Course Code	Courses	L	T	P/S	Credits
1	PH7210	Quantum Mechanics – II	03			03
2	PH7213	Atomic and Molecular Physics	03			03
3	PH 7218	Nuclear and Particle Physics	03			03
4		Elective I	03			03
5		Elective II	03			03
6		Elective III (Lab)	01		03	03
7	PH7286	Seminar			01	01
		Total	16		04	19

Semester 4

Sl. No.	Course Code	Courses	L	T	P/S	Credits
1	PH7290	Project			15	10
		Total			15	10

TOTAL CREDITS = 19+22+19+10 = 70; AVERAGE CREDITS PER SEM = 17.5



List Of Electives

Sl. No.	Course Code	Courses	L	T	P/S	Credits
1	PH7260	General Theory of Relativity	03			03
2	PH7261	Experimental Techniques	03			03
3	PH7262	Physics of Climate	03			03
4	PH7263	Atmospheric Dynamics	03			03
5	PH7270	Electronics - II	03			03
6	PH7271	Solid State Devices	03			03
7	PH7272	Communication Theory	03			03
8	PH7275	Condensed Matter Physics - II	03			03
9	PH7276	Phase Transitions & Critical Phenomena	03			03
10	PH7277	Organic Electronics	03			03
11	PH7278	Magnetic Resonance	03			03
12	PH7279	Topics in Condensed Matter Theory	03			03
13	PH7281	Laser Physics	03			03
14	PH7282	Optoelectronics	03			03
15	PH7283	Fiber & Integrated Optics	03			03
16	PH7284	Photonic Band Gap Structures	03			03
17	PH7292	Advanced Electronics Lab	01		03	03
18	PH7293	Advanced Solid State Physics Lab	01		03	03
19	PH7294	Advanced Optics Lab	01		03	03



Department of Chemistry

M.Sc. - Chemistry

Semester 1

Sl. No	Code	Title	L	T	P/S	C
1	CY6201	Basic Concept of Inorganic Chemistry and Main Group Elements	3	-	-	3
2	CY6202	Aromaticity, Stereochemistry and Reaction Mechanism	3	-	-	3
3	CY6203	Chemical and Statistical Thermodynamics	3	-	-	3
4	CY6204	Mathematical and Computational Methods in Chemistry	2	-	2	3
5	CY6205	Analytical Chemistry	3	-	-	3
6	CY6281	Inorganic Chemistry Lab-I	-	-	3	2
7	CY6282	Organic Chemistry Lab-I	-	-	3	2
		Total credits	14	-	8	19

Semester 2

Sl. No	Code	Title	L	T	P/S	C
1	CY6211	Coordination and Organometallic Chemistry	3	-	-	3
2	CY6212	Organic Chemistry of Multiple Bonds	3	-	-	3
3	CY6213	Chemical Kinetics and Surface Chemistry	3	-	-	3
4	CY6214	Quantum Chemistry	3	-	-	3
5	CY6215	Group Theory and Theoretical Spectroscopy	3	-	-	3
6	CY6291	Inorganic Chemistry Lab-II	-	-	3	2
7	CY6292	Physical Chemistry Lab	-	-	3	2
		Total credits	15	-	6	19

Semester 3

Sl. No	Code	Title	L	T	P/S	C
1	CY7201	Inorganic Materials and Bioinorganic Chemistry	3	-	-	3
2	CY7202	Synthetic Methodology and Heterocyclic Chemistry	3	-	-	3
3	CY7203	Electrochemistry	3	-	-	3
4	CY7204	Solid State Chemistry	3	-	-	3
5	CY7205	Application of Spectroscopic Techniques	3	-	-	3
6	CY7281	Organic Chemistry Lab-II	-	-	3	2
7.	CY7282	Instrumentation Lab	-	-	3	2
8.	CY7291	Seminar	-	-	1	1
		Total credits	15	-	7	20



Semester 4

Sl. No	Code	Title	L	T	P/S	C
1	CY72xx	Elective I	3	-	-	3
2	CY72xx	Elective II	3	-	-	3
3	CY7292	Project	-	-	9	6
		Total	9	-	-	12

Total Credits = 70

List of Electives

1. CY7251 Metal Based Drugs
2. CY7252 Porphyrins and Metalloporphyrins
3. CY7253 Introduction to Computational Chemistry
4. CY7254 Advanced Materials
5. CY7255 Lubricant Technology
6. CY7256 Supramolecular Chemistry
7. CY7257 Art of Total Synthesis
8. CY7258 Polymer Chemistry
9. CY7259 Liquid Crystals
10. CY7260 Surfactants and Their Interfacial Phenomena
11. CY7261 Introduction to Green Chemistry
12. CY7262 Chemical Binding
13. CY7263 Advanced Quantum Mechanics
14. CY7264 Introduction to Medicinal Chemistry
15. CY7265 Basic Biochemistry
16. CY7266 Stereoselective Synthesis



Department of Mathematics

M.Sc. - Mathematics

Semester 1

S.No	Code	Title	L	T	P/S	C
1	MA6201	Real Analysis	3	1	0	3
2	MA6202	Linear Algebra	3	1	0	3
3	MA6203	Numerical Analysis	3	1	0	3
4	MA6204	Ordinary Differential Equations	3	1	0	3
5	MA6205	Topology	3	1	0	3
6	MA6206	Computer Programming I	2	0	3	4
		Total	17	5	3	19

Semester 2

S.No	Code	Title	L	T	P/S	C
1	MA6221	Operations Research	3	1	0	3
2	MA6222	Complex Analysis	3	1	0	3
3	MA6223	Measure and Probability	3	1	0	3
4	MA6224	Graph Theory and Combinatorics	3	1	0	3
5	MA6225	Abstract Algebra	3	1	0	3
6	MA6226	Computer Programming II	2	0	3	4
		Total	17	5	3	19

Semester 3

S.No	Code	Title	L	T	P/S	C
1	MA7201	Partial Differential Equations	3	1	0	3
2	MA7202	Functional Analysis	3	1	0	3
3	MA7203	Statistical Methods	3	1	0	3
4	MA7204	Methods of Applied Mathematics	3	1	0	3
5	-----	Elective I	3	1	0	3
6	MA7292	Seminar				1
		Total	15	5	0	16

Semester 4

S.No	Code	Title	L	T	P/S	C
1	-----	Elective II	3	1	0	3
2	-----	Elective III	3	1	0	3
3	MA7291	Project				10
		Total	6	2	0	16

- Total Credits: 70 (minimum credits required 70).
- The DCC may permit a student to register for two additional courses in the III semester itself so that on successful completion of the course work, the student can be allowed to do the major project in another reputed institution.

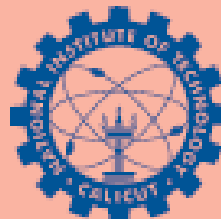


LIST OF ELECTIVES

1	MA7251	Theory of Numbers
2	MA7252	Knot Theory
3	MA7253	Fluid Dynamics
4	MA7254	Advanced Complex Analysis
5	MA7255	Stochastic Models in Operations Research
6	MA7256	Advanced topics in graph theory
7	MA7257	Differential Geometry
8	MA7258	Advanced Operations Research
9	MA7259	Advanced Topology
10	MA7260	Simulation and Modelling
11	MA7261	Multi-variate Statistical Analysis
12	MA7262	Decision Theory
13	MA7263	Regression Analysis
14	MA7264	Algebraic Topology
15	MA7265	Statistical Digital Signal Processing
16	MA7266	Statistical Methods for Quality Management
17	MA7267	Generalized Set Theory
18	MA7268	Fourier Analysis
19	MA7269	Fuzzy Set Theory and Applications
20	MA7270	Stochastic Processes
21	MA7271	Coding Theory
22	MA7272	Reliability of Systems
23	MA7273	Operator Theory
24	MA7274	Wavelets Theory
25	MA7275	Queueing Theory
26	MA7276	Numerical Solutions for ODE
27	MA7277	Numerical Solutions for PDE
28	MA7278	Spectral Theory of Hilbert Space Operators
29	MA7279	Numerical Linear Algebra

Note: Students may also take PG level electives offered by other departments.

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