		this group of courses)	Finite Element Modelling	3	
	Total Credits			12	
3	MM6XXX	Thesis		12	1-6
4	MM6XXX	Thesis		12	1-6
Total				48	

Eligibility

B.E./B.Tech. in Mechanical Engineering, Production Engineering, Manufacturing, Metallurgical Engineering and Ceramic Engineering/Technology with GATE qualification.

Qualifying GATE paper: ME/PI/MT/XE

NET/GATE qualification is exempted for industry sponsored candidates with a minimum two years' experience OR for IIT Undergraduates with minimum CGPA of 7.0.

Intake: 10

Senate Resolution on 35.2 (a)-(viii): 2 year M.Tech. programs: in-principle approved. Seats with MHRD Scholarships: 10; It was advised to work on the final curriculum, through discussing mutually both the departments, MSME and MAE.

A-35.2 (b) Increase in number of seats for BTech and B.Des.

Senate Resolution on A-35.2 (b): Approved the following, to be implemented from the next academic session (July 2020):

i. B.Tech. in Chemical Engineering: 40 seats
ii. B.Tech. in Materials Science and Metallurgical Engineering: 30 seats
iii. B.Tech. in Maths and Computing: 20 seats
iv. B. Des.: 20 seats

A-35.3 Department of Engineering Science:

a) Revision of 3rd and 4th-year curriculum for ES2018 and ES2019 Batch 4 year ES program

	Proposed in June 2018	
	Semester 1	15
ID1054	Digital Fabrication	2
ID1303	Introduction to programming	2
CS1310	Discrete Structures I	1
ID1035	Independent Project	1
ID1330	Applied Digital Logic Design	1
MA1110	Calculus-I	1
MA1220	Calculus-II	2
ID1350	Internet of Things (IOT)	1
CY1017	Environmental Chemistry-1	1
EE1350	Signals and Systems	1
LAxxx	Liberal & Creative Arts Electives	1
XXxxxx	Free Elective	1

	Semester 2	17
MS1050	Physics of Solids	1
BO1010	Introduction to Life Sciences	1
CS1353	Introduction to Data Structures	3
ID1140	Thermodynamics - I	1
MA1130	Vector Calculus	1
MA1140	Linear Algebra	1
MA1150	Differential Equations	1
PH1027	EM & Maxwells eqn	1
CY1027	Dynamics of Chemical Systems-1	1
EEXXXX	Introduction to HDL	2
PH2027	Quantum Physics	1
LAxxxx	Liberal & Creative Arts Electives	1
XXxxxx	Free Elective	1
ID1340	Digital Systems Design	1
	Semester 3	17
EE1010	Electric Circuits	1
CY1031	Chemistry Lab	2
PH1017	Classical Physics	1
BM1030	Bio Engineering	1
ID1100	Fluid Mechanics-1	2
EE1140	Semiconductor Fundamentals	1
CS2400	Principles of Programing languagues-I	1
CS2233	Data Structures	3
CH2450	Numerical Methods-1	2
MA2110	Probability	1
LAxxxx	Liberal & Creative Arts Electives	1
EEXXXX	Basic Electronics and Devices	1
	Semester 4	15
MA2140	Statistics	1
MA2130	Complex Variables	1
ME2080	Introduction to Mathematical Modelling	1
CS2443	Algorithms	3
CS2410	Theory of Computation	2
ME1030	Dynamics	2
EE1330	DSP	1
EE2140	Communication Systems	1
EE2240	Basic Control Theory	1
LAxxxx	Liberal & Creative Arts Electives	1
XXxxxx	Free Elective	1

Semesters 1-4		**64**						
Semesters 5 - 8		61		Semesters 5 - 8		61		
		Current existing distribution		Proposed Distribution				

Core Engg Electives		34	min 4D x6cr	Core Engg Electives		38	4CEDx 7	28
Free Electives		9		Free Electives		11		
Liberal & Creative Arts Electives		6		Liberal & Creative Arts Electives		6		
Project		12		Project		6		
Semester 5				**Semester V and VI**				
	ES3305	**Project - I**						
Semester 6				**ES3305 - Project**		6		
	ES3315	**Project - II**		Phase I - 5th Sem	3			
Semester 7				Phase II - 6th Sem	3			
	ES4305	**Project - III**						
Semester 8								
	ES4315	**Project - IV**						

Senate Resolution on A-35.3: Approved.

A-35.4 Department of Electrical Engineering:

a) **New courses** (See Annex.)

1. New Courses

1.1. **Course Title:** Topics in Data Storage and Communications
Course Code: EE6367
Course Credit: 2 credits
Prerequisite: EE2340 (Information sciences) or EE5847(Information theory), and EE5390 (Source coding) or EE6317 (Channel coding)
Course Description: This will be an advanced course on research topics in the theoretical aspects of compression, error correction and security for storage. Topics will be drawn from the following areas: (1) Succinct data structures (2) Data compression with locality (3) Distributed storage (4) Private information retrieval
Suggested Material: There is no prescribed textbook for this course. The material will be taken from research papers.

Some references:

- Nicholson, Patrick K., Venkatesh Raman, and S. Srinivasa Rao. "A survey of data structures in the bitprobe model." In *Space-Efficient Data Structures, Streams, and Algorithms*, pp. 303-318. Springer, Berlin, Heidelberg, 2013.
- Patrascu, Mihai. "Succincter." In *2008 49th Annual IEEE Symposium on Foundations of Computer Science*, pp. 305-313. IEEE, 2008.
- Mazumdar, Arya, Venkat Chandar, and Gregory W. Wornell. "Local recovery in data compression for general sources." In *2015 IEEE International Symposium on Information Theory (ISIT)*, pp. 2984-2988. IEEE, 2015.
- Mazumdar, Arya, and Soumyabrata Pal. "Semisupervised clustering, AND-queries and locally encodable source coding." In *Advances in Neural*