

**List of Elective courses to be run by the departments during the Pre-Registration of Odd Semester AY 2019-20**

S No.	Department	Elective	Course Code	Course Name	Credits	Course Coordinator
1	Centre for Energy and Environment	Open Elective	RET601	Photovoltaics and Fuel Cell systems	3	Dr. Amartya Chowdhury
2	Centre for Energy and Environment	Open Elective	RET603	Wind and hydro energy systems	3	Dr. Kapil Pareek
3	Centre for Energy and Environment	Open Elective	RET604	Energy and Environmental policies	3	Dr. Vivekanand Vivekanand
4	Centre for Energy and Environment	Open Elective	RET611	Management and modelling of environmental systems	3	Dr. Parul Mathuria
5	Centre for Energy and Environment	Open Elective	RET612	Instrumentation and control of energy systems	3	Dr. Aneesh Prabhakar
6	Centre for Energy and Environment	Open Elective	RET613	Industrial Energy Management	3	Dr. Sunanda Sinha
7	Chemical Engineering	Open Elective	CHT321	Petroleum, Petrochemicals & Natural Gas Engineering	3	Dr. Shiv Om Meena
8	Chemical Engineering	Open Elective	CHT419	Fuel Cell	3	Dr. U. K. Arun Kumar
9	Chemical Engineering	Program Elective-I	CHT403	Modelling and Simulation	3	Dr. Vikas Kumar Sangal
10	Chemical Engineering	Program Elective-I	CHT405	Introduction to Plastic Materials	3	Prof. Alok Gupta
11	Chemical Engineering	Program Elective-I	CHT409	Operation Research	3	Dr. Md Oayes Midda
12	Chemical Engineering	Program Elective-II	CHT413	Bioprocess Engineering	3	Dr. U. K. Arun Kumar
13	Chemical Engineering	Program Elective-II	CHT415	Non-Conventional Energy Sources	3	Dr. Neetu Kumari
14	Chemical Engineering	Program Elective-II	CHT417	Mechanical Design of Process Equipment	3	Dr. Rohidas Gangaram Bhoi
15	Chemistry	Open Elective	CYT639	Corrosion Chemistry	4	Jyoti Joshi
16	Chemistry	Open Elective	CYT641	Environmental Chemistry	4	Biman Bandyopadhyay
17	Civil Engineering	Open Elective	CET431	Introduction to Remote Sensing & GIS	3	Rohit Goyal
18	Civil Engineering	Program Elective-I	CET409	Traffic Engineering and Transport Planning	3	Jinendra Kumar Jain
19	Civil Engineering	Program Elective-I	CET411	Construction Project Management	3	Sandeep Shrivastava
20	Civil Engineering	Program Elective-II	CET402	Design of Hydraulic Structures	3	Ajay Singh Jethoo
21	Civil Engineering	Program Elective-II	CET403	Ground Improvement Techniques	3	Neha Shrivastava
22	Computer Science & Engineering	Open Elective	CST203	Data Structures & Algorithms	4	Jyoti Grover
23	Computer Science & Engineering	Program Elective-I	CST437	Neural Network	4	Yogesh Kumar Meena
24	Computer Science & Engineering	Program Elective-I	CST461	Machine Learning	4	Neeta Nain
25	Computer Science & Engineering	Program Elective-II	CST455	Digital Image Processing	4	Santosh Kumar Vipparthi
26	Computer Science & Engineering	Program Elective-II	CST459	Topics in Computing	4	Emanuel S Pilli
27	Electrical Engineering	Program Elective-I	EET409	Computer Architecture Organization	4	Dr. P. K. Agrawal
28	Electrical Engineering	Program Elective-I	EET425	Intelligent Systems And Controls	4	Prof. Rajesh Kumar
29	Electrical Engineering	Program Elective-II	EET417	Power System Planning And Reliability	4	Dr. Purna Jain
30	Electrical Engineering	Program Elective-II	EET419	Computer Aided Power System Analysis	4	Prof. Manoj Fozdar
31	Electrical Engineering	Program Elective-III	EET411	Advanced Electrical Machines	4	Prof. Vikas Gupta
32	Electrical Engineering	Program Elective-III	EET423	Power System Operation in Restructured Markets	4	Dr. Rohit Bhakar
33	Electrical Engineering	Open Elective	EET307	Control System Engineering	4	Dr. Satyanarayan Neeli
34	Electronics & Communication Engineering	Advance Elective-I	ECT603	CAD Algorithms for Synthesis of Digital Systems	3	Prof. Lava Bhargava
35	Electronics & Communication Engineering	Advance Elective-I	ECT670	Satellite Communication & Radar Engg	3	Prof. M. M. Sharma
36	Electronics & Communication Engineering	Open Elective	ECT456	Semiconductor Opto-Electronics	3	Prof. V. Janyani

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37	Electronics & Communication Engineering	Open Elective (All branches except Electrical Engg)	ECT303	Digital Communication Systems	3	Prof. R. P. Yadav
38	Electronics & Communication Engineering	Program Elective-I	ECT413	Computer Networks	3	Sh. R. Bairathi
39	Electronics & Communication Engineering	Program Elective-I	ECT688	EMI/EMC	3	Dr. R. Mitharwal
40	Electronics & Communication Engineering	Program Elective-II	ECT456	Semiconductor Opto-Electronics	3	Prof. G. Singh
41	Electronics & Communication Engineering	Program Elective-II	ECT481	System Design Using FPGAs	3	Dr. Amit M. Joshi
42	Electronics & Communication Engineering	Program Elective-III	ECT462	Artificial Intelligence & Expert System	3	Dr. S. J. Nanda
43	Electronics & Communication Engineering	Program Elective-III	ECT614	VLSI Technology	3	Dr. C. Periasamy
44	Humanities & Social Sciences	Open Elective	HST401	Introduction to Sociology	3	Dr. V. S. Shekhawat
45	Humanities & Social Sciences	Open Elective	HST406	Indian Economic Problems & Policies	3	Dr. Nidhi Sharma
46	Humanities & Social Sciences	Open Elective	HST407	Indian Constitution & Polity	3	Dr. V. S. Shekhawat
47	Humanities & Social Sciences	Open Elective	HST604	Indian Constitution, Democracy & World affairs	3	Dr. V. S. Shekhawat
48	Material Research Centre	Open Elective	MST603	Synthesis of Materials	3	Prof. Ragini Gupta
49	Material Research Centre	Open Elective	MST609	Electrical, Optical, Magnetic and Thermal properties of Materials	3	Prof. Kanupriya Sachdev
50	Material Research Centre	Open Elective	MST613	Structural characterization of Materials	3	Prof. Kanupriya Sachdev
51	Material Research Centre	Open Elective	MST602	Nanomaterials Technology	3	Dr. Bhagwati Sharma
52	Material Research Centre	Open Elective	MST604	Advanced theory of phase transformation	3	Prof. M.K.Banerjee
53	Material Research Centre	Open Elective	MST606	Computational materials engineering	3	Prof. M.K.Banerjee
54	Material Research Centre	Open Elective	MST630	Design of Materials	3	Dr. Amit Singh
55	Mechanical Engineering	Program Elective-I	MET408	Supply Chain Management	4	Rakesh Jain
56	Mechanical Engineering	Program Elective-II	MET413	Design of Mechanisms	4	Himanshu Choudhary
57	Mechanical Engineering	Program Elective-III	MET426	Mechatronics Design	4	H S Mali
58	Mechanical Engineering	Program Elective-IV	MET406	Project Management	4	Mukesh Kumar
59	Mechanical Engineering	Program Elective-V	MET411	Finite Element Methods	4	T C Gupta
60	Mechanical Engineering	Program Elective-VI	MET402	Air Conditioning System Design	4	G D Agarwal
61	Mechanical Engineering	Open Elective	MET432	Science, Technology and Society - An Integral Perspective	3	Nirupam Rastogi
62	Metallurgical & Materials Engineering	Program Elective-I	MTT407	Composite Materials	4	Dr. A. K. Pradhan
63	Metallurgical & Materials Engineering	Program Elective-II	MTT415	Automotive Materials	4	Dr. A. K. Pradhan
64	Metallurgical & Materials Engineering	Program Elective-III	MTT417	Surface Coating	4	Dr. R. K. Duchaniya
65	Metallurgical & Materials Engineering	Open Elective	MTT216	Introduction to Nano Materials and Technology	4	Dr. Sreekumar V M
66	Physics	Open Elective	PHT413	Introduction to Biophysics	3	Dr. K. Awasthi
67	Physics	Open Elective	PHT415	Introduction to Theory of Relativity & Cosmology	3	Dr. K. V. Kamma