

**FOLLOWING NPTEL COURSES ARE SUGGESTED FOR ELECTRONICS & TELECOMMUNICATION ENGINEERING  
AND ELECTRONICS & COMMUNICATION ENGINEERING REVISED SCHEME (REVISED COURSE 2019-20)  
(July 2021 to December 2021)**

Sr.	Course Id	Discipline	Course Name	SME Name	Institute	Credit	Duration
1	noc21-cs54	Computer Science and Engineering	Problem solving through Programming In C	Prof. Anupam Basu	IITKGP	3	12 Weeks
2	noc21-cs55	Computer Science and Engineering	Programming in C++	Prof. Partha Pratim Das	IITKGP	2	8 Weeks
3	noc21-cs56	Computer Science and Engineering	Programming in Java	Prof. Debasis Samanta	IITKGP	3	12 Weeks
4	noc21-cs57	Computer Science and Engineering	Object Oriented Analysis and Design	Prof. Partha Pratim Das Prof. Ansuman Banerjee Prof. Kausik Datta	IITKGP	2	8 Weeks
5	noc21-cs60	Computer Science and Engineering	Hardware modeling using verilog	Prof. Indranil Sengupta	IITKGP	2	8 Weeks
6	noc21-cs62	Computer Science and Engineering	Cloud computing	Prof. Soumya Kanti Ghosh	IITKGP	2	8 Weeks
7	noc21-cs63	Computer Science and Engineering	Introduction to internet of things	Prof. Sudip Misra	IITKGP	3	12 Weeks
8	noc21-cs66	Computer Science and Engineering	Introduction to Industry 4.0 and Industrial Internet of Things	Prof. Sudip Misra	IITKGP	3	12 Weeks
9	noc21-cs67	Computer Science and Engineering	Programming, Data Structures And Algorithms Using Python	Prof. Madhavan Mukund	CMI	2	8 Weeks
10	noc21-cs69	Computer Science and Engineering	Data Science for Engineers	Prof. Rangunathan Rengasamy Prof. Shankar Narasimhan	IITM	2	8 Weeks

11	noc21-cs72	Computer Science and Engineering	Introduction to Operating Systems*	Prof. Chester Rebeiro	IITM	2	8 Weeks
12	noc21-cs73	Computer Science and Engineering	Software Testing	Prof. Meenakshi D'souza	IIITB	3	12 Weeks
13	noc21-cs75	Computer Science and Engineering	The Joy of Computing using Python	Prof. Sudarshan Iyengar Prof. Yayati Gupta	IIT Ropar	3	12 Weeks
14	noc21-cs89	Computer Science and Engineering	Introduction to algorithms and analysis	Prof. Sourav Mukhopadhyay	IITKGP	3	12 Weeks
15	noc21-cs95	Computer Science and Engineering	Advanced computer architecture	Prof. Smruti R. Sarangi	IITD	3	12 Weeks
16	noc21-cs98	Computer Science and Engineering	Real-Time Systems	Prof. Rajib Mall Prof. Durga Prasad Mohapatra	IITKGP	3	12 Weeks
17	noc21-ee61	Electrical and Electronics Engineering	Op-Amp Practical Applications: Design, Simulation and Implementation	Prof. Hardik Jeetendra Pandya	IISc	3	12 Weeks
18	noc21-ee62	Electrical and Electronics Engineering	Design of photovoltaic systems	Prof. L Umanand	IISc	3	12 Weeks
19	noc21-ee70	Electrical and Electronics Engineering	Advanced Linear Continuous Control Systems: Applications with MATLAB Programming and Simulink	Prof. Yogesh Vijay Hote	IITR	2	8 Weeks
20	noc21-ee71	Electrical and Electronics Engineering	Electrical Machines - I	Prof. Tapas Kumar Bhattacharya	IITKGP	3	12 Weeks
21	noc21-ee76	Electrical and Electronics Engineering	Millimeter Wave Technology	Prof. Mrinal Kanti Mandal	IITKGP	2	8 Weeks
22	noc21-ee81	Electrical and Electronics Engineering	Optical Engineering	Prof. Shanti Bhattacharya	IITM	3	12 Weeks
23	noc21-ee82	Electrical and Electronics Engineering	Applied Electromagnetics For Engineers	Prof. Pradeep Kumar	IITK	3	12 Weeks

24	noc21-ee87	Electrical and Electronics Engineering	Introduction to Photonics	Prof. Balaji Srinivasan	IITM	3	12 Weeks
25	noc21-ee97	Electrical and Electronics Engineering	System Design Through VERILOG	Prof. Shaik Rafi Ahamed	IITG	2	8 Weeks
26	noc21-ee98	Electrical and Electronics Engineering	Integrated Photonics Devices and Circuits	Prof. Bijoy Krishna Das	IITM	3	12 Weeks
27	noc21-ee95	Electrical and Electronics Engineering	Basics of software defined Radios and Practical Applications	Prof. Meenakshi Rawat	IITR	1	4 Weeks
28	noc21-ee101	Electrical and Electronics Engineering	Introductory Neuroscience & Neuro-Instrumentation	Prof. Mahesh Jayachandra	IISc	3	12 Weeks
29	noc21-ee102	Electrical and Electronics Engineering	Signal Processing for mm Wave communication for 5G and beyond	Prof. Amit Kumar Dutta	IITKGP	3	12 Weeks
30	noc21-ee112	Electrical and Electronics Engineering	Electric vehicles and Renewable energy	Prof. Ashok Jhunjunwala Prof. Prabhiot Kaur	IITM	3	12 Weeks
31	noc21-mg59	Management	Industrial Safety Engineering	Prof. Jhareswar Maiti	IITKGP	3	12 Weeks
32	noc21-mg66	Management	Project management for managers	Prof. Mukesh Kumar Barua	IITR	3	12 Weeks
33	noc21-mg70	Management	Entrepreneurship	Prof. C Bhaktavatsala Rao	IITM	3	12 Weeks
34	noc21-mg71	Management	Project Management	Prof. Raghu Nandan Sengupta	IITK	2	8 Weeks
35	noc21-mg88	Management	Principles of Management	Prof. Susmita Muhopadhyay Prof. S. Srinivasan	IITKGP	3	12 Weeks
36	noc21-mg89	Management	Management Information System	Prof. Kunal Kanti Ghosh Prof. Saini Das Prof. Surojit Mukherjee	IITKGP	3	12 Weeks

37	noc21-ma38	Mathematics	Essential Mathematics for Machine Learning	Prof. Sanjeev Kumar Prof. S.K. Gupta	IITR	3	8 Weeks + 4 Weeks new
38	noc21-ma50	Mathematics	Linear Algebra	Prof. Dilip Patil	IISc	3	12 Weeks
39	noc21-ma62	Mathematics	Operations Research	Prof. Kusumdeep	IITR	2	8 Weeks
40	noc21-ma75	Mathematics	Introduction To R Software	Prof. Shalabh	IITK	2	8 Weeks
41	noc21-ph33	Physics/ Energy Science and Technology	Physics of Renewable Energy Systems	Prof. Amreesh Chandra	IITKGP	3	12 Weeks
42	noc21-me72	Mechanical Engineering	Manufacturing Systems Technology I & II	Prof. Shantanu Bhattacharya	IITK	3	12 Weeks
43	noc21-ge23	Multidisciplinary	Solar Energy Engineering and Technology	Prof. Pankaj Kalita	IITG	3	12 Weeks
44	noc21-bt30	Biotechnology and Bioengineering	Biomedical nanotechnology	Prof. P. Gopinath	IITR	1	4 Weeks
45	noc21-ce61	Civil Engineering	Remote Sensing and GIS	Prof. Rishikesh Bharti	IITG	2	8 Weeks

\*The syllabus is different from that of "ET631 Real Time Operating system"

Note: The credits will be awarded based on the scheme proposed above. The student shall submit all the NPTEL/SWAYAM certificates to university through Heads of Department while applying for the degree.



Dr. H.G.Virani  
BOS Chairman  
ETC/ECE Engineering