

**ANNEXURE A****FOLLOWING NPTEL COURSES ARE SUGGESTED FOR ELECTRONICS & TELECOMMUNICATION ENGINEERING  
AND ELECTRONICS & COMMUNICATION ENGINEERING REVISED SCHEME (REVISED COURSE 2019-20)  
(July 2022 to December 2022)**

Sr.No	Course Id	Discipline	Course Name	SME Name	Institute	Co-ordinating Institute	Credits	Duration
1	noc22-cs62	Computer Science and Engineering	Computational Number Theory and Algebra	Prof. Nitin Saxena	IITK	IITK	3	12 Weeks
2	noc22-cs65	Computer Science and Engineering	Big Data Computing	Prof. Rajiv Misra	IIT Patna	IITK	2	8 Weeks
3	noc22-cs70	Computer Science and Engineering	Programming, Data Structures And Algorithms Using Python	Prof. Madhavan Mukund	CMI	IITM	2	8 Weeks
4	noc22-cs71	Computer Science and Engineering	Design and analysis of algorithms	Prof. Madhavan Mukund	CMI	IITM	2	8 Weeks
5	noc22-cs74	Computer Science and Engineering	Python for Data Science	Prof. Ragunathan Rengasamy	IITM	IITM	1	4 Weeks
6	noc22-cs76	Computer Science and Engineering	Deep Learning for Computer Vision	Prof. Vineeth N Balasubramanian	IITH	IITM	3	12 Weeks
7	noc22-cs77	Computer Science and Engineering	Introduction to Game Theory and Mechanism Design	Prof. Swaprava Nath	IITB	IITB	3	12 Weeks
8	noc22-cs83	Computer Science and Engineering	Applied Accelerated Artificial Intelligence	Prof. Satyajit Das Prof. Satyadhyan Chickerur Prof. Bharatkumar Sharma Prof. Adesuyi Tosin	IIT Palakkad KLE Technological University NVIDIA	IITM	3	12 Weeks

9	noc22-cs89	Computer Science and Engineering	Computer Vision	Prof. Jayanta Mukhopadhyay	IITKGP	IITKGP	3	12 Weeks
10	noc22-cs94	Computer Science and Engineering	Hardware Modeling Using Verilog	Prof. Indranil Sengupta	IITKGP	IITKGP	2	8 Weeks
11	noc22-cs95	Computer Science and Engineering	Introduction To Industry 4.0 And Industrial Internet Of Things	Prof. Sudip Misra	IITKGP	IITKGP	3	12 Weeks
12	noc22-cs105	Computer Science and Engineering	Scalable Data Science	Prof. Anirban Dasgupta Prof. Sourangshu Bhattacharya	IITKGP	IITKGP	2	8 Weeks
13	noc22-cs107	Computer Science and Engineering	Software Project Management	Prof. Rajib Mall Prof. Durga Prasad Mohapatra	IITKGP	IITKGP	3	12 Weeks
14	noc22-cs109	Computer Science and Engineering	C-Based VLSI Design	Prof. Chandan Karfa	IITG	IITG	3	12 Weeks
15	noc22-cs112	Computer Science and Engineering	Demystifying Networking	Prof. Sridhar Iyer Prof. Kavya Alse	IITB	IITB	1	4 weeks
16	noc22-cs113	Computer Science and Engineering	Secure Computation: Part II	Prof. Ashish Choudhury	IITB	IISC	3	12 Weeks
17	noc22-cs114	Computer Science and Engineering	Introduction to Computer and Network Performance Analysis using Queuing Systems	Prof. Varsha Apte	IITB	IITB	1	4 weeks
18	noc22-cs116	Computer Science and Engineering	Algorithmic Game Theory	Prof. Palash Dey	IITKGP	IITKGP	3	12 Weeks
19	noc22-cs122	Computer Science and Engineering	The Joy of Computing using Python	Prof. Sudarshan Iyengar	IIT Ropar	IITM	3	12 Weeks

20	noc22-cs125	Computer Science and Engineering	Design & Implementation of Human-Computer Interfaces	Prof. Samit Bhattacharya	IITG	IITG	3	12 Weeks
21	noc22-ee71	Electrical and Electronics Engineering	Design of photovoltaic systems	Prof. L Umanand	IISc	IISc	3	12 Weeks
22	noc22-ee72	Electrical and Electronics Engineering	Principles of Signal Estimation for MIMO/ OFDM Wireless Communication	Prof. Aditya K. Jagannatham	IITK	IITK	3	12 Weeks
23	noc22-ee76	Electrical and Electronics Engineering	Fabrication Techniques for MEMs-based sensors : clinical perspective	Prof. Hardik Jeetendra Pandya	IISc	IISc	3	12 Weeks
24	noc22-ee77	Electrical and Electronics Engineering	Electronic Systems for Cancer Diagnosis	Prof. Hardik Jeetendra Pandya	IISc	IISc	3	12 Weeks
25	noc22-ee78	Electrical and Electronics Engineering	Basics of software defined Radios	Prof. Meenakshi Rawat	IITR	IITR	1	4 weeks
26	noc22-ee99	Electrical and Electronics Engineering	Real-Time Digital Signal Processing	Prof. Rathna G N	IISc	IISC	3	12 Weeks
27	noc22-ee102	Electrical and Electronics Engineering	Signal Processing for mm Wave communication for 5G and beyond	Prof. Amit Kumar Dutta	IITKGP	IITKGP	3	12 Weeks
28	noc22-ee104	Electrical and Electronics Engineering	System Design Through VERILOG	Prof. Shaik Rafi Ahamed	IITG	IITG	2	8 Weeks
29	noc22-ee106	Electrical and Electronics Engineering	Introduction to Photonics	Prof. Balaji Srinivasan Prof Shivananju	IITM	IITM	3	12 Weeks

30	noc22-ee119	Electrical and Electronics Engineering	Pattern recognition and Application	Prof. Prabir Kumar Biswas	IITKGP	IITKGP	3	12 Weeks
31	noc22-hs78	Humanities and Social Sciences	Body language: Key to professional Success	Prof. Rashmi Gaur	IITR	IITR	1	4 weeks
32	noc22-hs113	Humanities and Social Sciences	Human Resource Development	Prof. KBL Srivastava	IITKGP	IITKGP	3	12 Weeks
33	noc22-mg57	Management	Marketing Management - I	Prof. Jayanta Chatterjee Prof. Shashi Shekhar	IITK	IITK	2	8 Weeks
34	noc22-mg59	Management	Data Analysis & Decision Making - III	Prof. Raghu Nandan Sengupta	IITK	IITK	3	12 Weeks
35	noc22-mg67	Management	Business Analytics & Data Mining Modeling Using R Part II	Prof. Gaurav Dixit	IITR	IITR	1	4 weeks
36	noc22-mg68	Management	Business Analytics & Text Mining Modeling Using Python	Prof. Gaurav Dixit	IITR	IITR	2	8 Weeks
37	noc22-mg70	Management	Marketing research and analysis	Prof. J.K.Nayak	IITR	IITR	2	8 Weeks
38	noc22-mg72	Management	Services Marketing : Integrating People, Technology, Strategy	Prof. Zillur Rahman	IITR	IITR	2	8 Weeks
39	noc22-mg73	Management	Innovation, Business Models and Entrepreneurship	Prof. Rajat Agarwal Prof. Vinay Sharma	IITR	IITR	2	8 Weeks
40	noc22-mg74	Management	Operations and supply chain management	Prof. G. Srinivasan	IITM	IITM	3	12 Weeks
41	noc22-mg76	Management	Game Theory	Prof.K.S. Mallikarjuna Rao	IITB	IITB	2	8 Weeks

42	noc22-mg77	Management	Strategy: An Introduction to game Theory	Prof. Aditya Jagannatham Prof. Vimal Kumar	IITK	IITK	2	8 Weeks
43	noc22-mg79	Management	The Future of Manufacturing Business: Role of Digital Technologies	Prof. R. K. Amit Prof. U. Chandrasekhar	IITM & Wipro 3D	IITM	2	8 Weeks
44	noc22-mg80	Management	Managerial Skills for Interpersonal Dynamics	Prof. Santosh Rangnekar	IITR	IITR	3	12 Weeks
45	noc22-mg87	Management	Descriptive Statistics With R Software	Prof. Prashant Jha Prof. Shalabh	IITK	IITK	8	8 Weeks
46	noc22-mg88	Management	Strategic Management for Competitive Advantage	Prof. Sanjib Chowdhury	IITKGP	IITKGP	3	12 Weeks
47	noc22-mg90	Management	Automation in Production Systems and Management	Prof. Pradip Kumar Ray	IITKGP	IITKGP	3	12 Weeks
48	noc22-mg93	Management	Customer Relationship Management	Prof. Swagato Chatterjee	IITKGP	IITKGP	2	8 Weeks
49	noc22-mg97	Management	Industrial Safety Engineering	Prof. Jhareswar Maiti	IITKGP	IITKGP	3	12 Weeks
50	noc22-mg100	Management	Management Information System	Prof. Kunal Kanti Ghosh Prof. Saini Das Prof. Surojit Mukherjee	IITKGP	IITKGP	3	12 Weeks
51	noc22-mg103	Management	Principles Of Human Resource Management	Prof. Aradhna Malik	IITKGP	IITKGP	2	8 Weeks
52	noc22-mg105	Management	Soft Skills For Business Negotiations And Marketing Strategies	Prof. Uttam Kumar Banerjee	IITKGP	IITKGP	3	12 Weeks
53	noc22-mg107	Management	Strategic Sales Management	Prof. Sourabh Arora Prof. Kalpak Kulkarni	IITR	IITR	2	8 Weeks

54	noc22-ma54	Mathematics	Introduction to Abstract Group Theory	Prof. Krishna Hanumanthu	CMI	IITM	2	8 Weeks
55	noc22-ma69	Mathematics	Foundations of R Software	Prof. Shalabh	IITK	IITK	3	12 Weeks
56	noc22-ma71	Mathematics	Approximate Reasoning using Fuzzy Set Theory	Prof. Balasubramaniam Jayaram	IIT Hyderabad	IITM	3	12 Weeks
57	noc22-ma78	Mathematics	Introduction To Abstract And Linear Algebra	Prof. Sourav Mukhopadhyay	IITKGP	IITKGP	2	8 Weeks
58	noc22-ma83	Mathematics	Probability –II with Examples Using R	Prof Siva Athreya	ISI bangalore	IITM	3	12 weeks
59	noc22-me77	Mechanical Engineering	Foundations of Cognitive Robotics	Prof. Bishakh Bhattacharya	IITK	IITK	1	4 weeks
60	noc22-me81	Mechanical Engineering	BioMEMS and Microfluidics	Prof. Shantanu Bhattacharya	IITK	IITK	2	8 Weeks
61	noc22-me93	Mechanical Engineering	Mechanics and Control of Robotic Manipulators	Prof. Santhakumar Mohan	IIT Palakkad	IITM	2	8 Weeks
62	noc22-me108	Mechanical Engineering	Mechanism And Robot Kinematics	Prof. Anirvan Dasgupta	IITKGP	IITKGP	2	8 Weeks
63	noc22-ge23	Multidisciplinary	Introduction to Research	Prof. Edamana Prasad Prof. Prathap Haridoss	IITM	IITM	2	8 Weeks
64	noc22-ph25	Physics	Solar Photovoltaics Fundamentals, Technology And Applications	Prof. Soumitra SataPathi	IITR	IITR	2	8 Weeks
65	noc22-ph44	Physics	Physics of Renewable Energy Systems	Prof. Amreesh Chandra	IITKGP	IITKGP	3	12 Weeks
66	noc22-cs87	Computer Science and Engineering	Cloud Computing	Prof. Soumya Kanti Ghosh	IITKGP	IITKGP	3	12 Weeks

67	noc22-ee68	Electrical and Electronics Engineering	Applied Electromagnetics For Engineers	Prof. Pradeep Kumar K	IITK	IITK	3	12 Weeks
68	noc22-ee89	Electrical and Electronics Engineering	Stochastic control and communication	Prof. Ankur A. Kulkarni	IITB	IITB	3	12 Weeks

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