

noc23-ma43	Mathematics	Transform Techniques for Engineers	Prof. Srinivasa Manam	IITM	IITM	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	UG	Core	No		https://onlinenecourses.nptel.ac.in/noc23_ma43	https://onlinenecourses.archive.nptel.ac.in/noc18_ma12	https://nptel.ac.in/courses/111106111	https://onlinenecourses.archive.nptel.ac.in/noc18_ma12	https://nptel.ac.in/courses/111106111
noc23-ma36	Mathematics	Scientific Computing using Matlab	Prof. Mani Mehra Prof. Vivek K. Aggarwal	IITD	IITD	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	UG/PG	Core	Yes		https://onlinenecourses.nptel.ac.in/noc23_ma36	https://onlinenecourses.nptel.ac.in/noc22_ma31	https://nptel.ac.in/courses/111102137	https://onlinenecourses.nptel.ac.in/noc22_ma31	https://nptel.ac.in/courses/111102137
noc23-mg41	Management	Ethics In Engineering Practice	Prof. Susmita Mukhopadhyay	IITKGP	IITKGP	8 Weeks	Rerun	February 20, 2023	April 14, 2023	April 29, 2023	February 20, 2023	UG/PG	Elective	Yes	Faculty Domain - Advanced Faculty Domain - Fundamental	https://onlinenecourses.nptel.ac.in/noc23_mg41	https://onlinenecourses.nptel.ac.in/noc22_mg95	https://nptel.ac.in/courses/110105097	https://onlinenecourses.nptel.ac.in/noc22_mg95	https://nptel.ac.in/courses/110105097
noc23-hs17	humanities and Social Science	Education for Sustainable Development	Prof. Atasi Mohanty	IITKGP	IITKGP	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	UG/PG	Elective	Yes	Faculty Domain - Advanced	https://onlinenecourses.nptel.ac.in/noc23_hs17	https://onlinenecourses.nptel.ac.in/noc22_hs61	https://nptel.ac.in/courses/109105190	https://onlinenecourses.nptel.ac.in/noc22_hs61	https://nptel.ac.in/courses/109105190
noc23-hs15	Humanities and Social Science	Introduction On Intellectual Property To Engineers And Technologists	Prof. Tapas Kumar Bandyopadhyay	IITKGP	IITKGP	8 Weeks	Rerun	February 20, 2023	April 14, 2023	April 29, 2023	February 20, 2023	UG/PG	Elective	Yes	Faculty Domain - Advanced	https://onlinenecourses.nptel.ac.in/noc23_hs15	https://onlinenecourses.nptel.ac.in/noc22_hs49	https://nptel.ac.in/courses/109105112	https://onlinenecourses.nptel.ac.in/noc22_hs49	https://nptel.ac.in/courses/109105112
noc23-hs10	Humanities and Social Science	Soft Skill Development	Prof. Priyadarshi Patnaik Prof. V. N. Giri Prof. D. Suar	IITKGP	IITKGP	8 Weeks	Rerun	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	UG/PG	Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_hs10	https://onlinenecourses.nptel.ac.in/noc22_hs07	https://nptel.ac.in/courses/109105110	https://onlinenecourses.nptel.ac.in/noc22_hs07	https://nptel.ac.in/courses/109105110
noc23-ee53	Electrical Engineering	Deep Learning For Visual Computing	Prof. Debdoot Sheet	IITKGP	IITKGP	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	PG	Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_ee53	https://onlinenecourses.nptel.ac.in/noc22_ee54	https://nptel.ac.in/courses/108105103	https://onlinenecourses.nptel.ac.in/noc22_ee54	https://nptel.ac.in/courses/108105103
noc23-ee41	Electrical and Electronics Engineering, Instrumentation Engineering, Biomedical Engineering, Applied Physics,	Advanced Neural Science for Engineers	Prof. Vikas V	Nimhans Bangalore	IISc	12 Weeks	New	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	UG/PG	Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_ee41		https://nptel.ac.in/courses/108108188	https://nptel.ac.in/courses/108108188	
noc23-ee40	Electrical and Electronics Engineering, Computer Science and Engineering, VLSI Specialization	Design and Analysis of VLSI Subsystems	Prof. Madhav Rao	IIIT Bangalore	IITM	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	UG/PG	Elective	Yes	Visi Design	https://onlinenecourses.nptel.ac.in/noc23_ee40	https://onlinenecourses.nptel.ac.in/noc22_ee44	https://nptel.ac.in/courses/117106149	https://onlinenecourses.nptel.ac.in/noc22_ee44	https://nptel.ac.in/courses/117106149
noc23-ee01	Electrical and Electronics Engineering	Electric Vehicles - Part 1	Prof. Amit Jain	IITD	IITD	4 Weeks	Rerun	January 23, 2023	February 17, 2023	March 26, 2023	January 30, 2023	UG/PG	Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_ee01	https://onlinenecourses.nptel.ac.in/noc22_ee53	https://nptel.ac.in/courses/108102121	https://onlinenecourses.nptel.ac.in/noc22_ee53	https://nptel.ac.in/courses/108102121
noc23-cs27	Computer Science and Engineering	Cloud Computing and Distributed Systems	Prof. Rajiv Misra	IITK	IITK	8 Weeks	Rerun	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	UG/PG	Core/Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_cs27	https://onlinenecourses.nptel.ac.in/noc22_cs18	https://nptel.ac.in/courses/106104182	https://onlinenecourses.nptel.ac.in/noc22_cs18	https://nptel.ac.in/courses/106104182
noc23-ae07	Aerospace Engineering	Satellite Attitude Dynamics And Control	Prof. Manoranjan Sinha	IITKGP	IITKGP	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	UG/PG	Core/Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_ae07	https://onlinenecourses.nptel.ac.in/noc22_ae08	https://nptel.ac.in/courses/101105077	https://onlinenecourses.nptel.ac.in/noc22_ae08	https://nptel.ac.in/courses/101105077
noc23-ag03	Agriculture Engineering	Soil Science And Technology	Prof. Somsubhra Chakraborty	IITKGP	IITKGP	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	UG	Core	No		https://onlinenecourses.nptel.ac.in/noc23_ag03	https://onlinenecourses.nptel.ac.in/noc22_ag02	https://nptel.ac.in/courses/126105016	https://onlinenecourses.nptel.ac.in/noc22_ag02	https://nptel.ac.in/courses/126105016

noc23-ag07	Agriculture Engineering	Soil And Water Conservation Engineering	Prof. Rajendra Singh	IITKGP	IITKGP	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	UG	Core	No		https://onlinenecourses.nptel.ac.in/noc23_ag07	https://onlinenecourses.nptel.ac.in/noc22_ag01	https://nptel.ac.in/courses/126105012	https://onlinenecourses.nptel.ac.in/noc22_ag01	https://nptel.ac.in/courses/126105012
noc23-cs13	Computer Science and Engineering	Privacy and Security in Online Social Media	Prof. Ponnuram Kumaraguru	IIITD	IITM	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	UG/PG	Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_cs13	https://onlinenecourses.nptel.ac.in/noc21_cs28	https://nptel.ac.in/courses/106106146	https://onlinenecourses.nptel.ac.in/noc21_cs28	https://nptel.ac.in/courses/106106146
noc23-cs29	Computer Science and Engineering	Introduction to Database Systems	Prof. Sreenivasa Kumar	IITM	IITM	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	UG	Core	No	Programming Systems	https://onlinenecourses.nptel.ac.in/noc23_cs29	https://onlinenecourses.nptel.ac.in/noc22_cs57	https://nptel.ac.in/courses/106106220	https://onlinenecourses.nptel.ac.in/noc22_cs57	https://nptel.ac.in/courses/106106220
noc23-cs40	Computer Science and Engineering	Introduction To Soft Computing	Prof. Debasis Samanta	IITKGP	IITKGP	8 Weeks	Rerun	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	UG/PG	Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_cs40	https://onlinenecourses.nptel.ac.in/noc22_cs54	https://nptel.ac.in/courses/106105173	https://onlinenecourses.nptel.ac.in/noc22_cs54	https://nptel.ac.in/courses/106105173
noc23-cs45	Computer Science and Engineering	Natural Language Processing	Prof. Pawan Goyal	IITKGP	IITKGP	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	UG/PG	Elective	Yes	Artificial Intelligence Data Science	https://onlinenecourses.nptel.ac.in/noc23_cs45	https://onlinenecourses.nptel.ac.in/noc22_cs58	https://nptel.ac.in/courses/106105158	https://onlinenecourses.nptel.ac.in/noc22_cs58	https://nptel.ac.in/courses/106105158
noc23-cs47	Computer Science and Engineering	Blockchain and its Applications	Prof. Sandip Chakraborty Prof. Shamik Sural	IITKGP	IITKGP	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	UG/PG	Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_cs47	https://onlinenecourses.nptel.ac.in/noc22_cs44	https://nptel.ac.in/courses/106105235	https://onlinenecourses.nptel.ac.in/noc22_cs44	https://nptel.ac.in/courses/106105235
noc23-cs59	Computer Science and Engineering	Hardware Security	Prof. Debdip Mukhopadhyay	IITKGP	IITKGP	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	PG	Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_cs59	https://onlinenecourses.nptel.ac.in/noc22_cs48	https://nptel.ac.in/courses/106105194	https://onlinenecourses.nptel.ac.in/noc22_cs48	https://nptel.ac.in/courses/106105194
noc23-ee78	Electrical and Electronics Engineering	Modern Computer Vision	Prof. A. N. Rajagopalan	IITM	IITM	12 Weeks	New	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	UG/PG	Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_ee78		https://nptel.ac.in/courses/108106189	https://onlinenecourses.nptel.ac.in/noc23_ee78	https://nptel.ac.in/courses/108106189
noc23-ee74	Electronics and Communication Engineering	Analog Circuits And Systems Through SPICE Simulation	Prof. Mrigank Sharad	IITKGP	IITKGP	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	UG	Elective	yes		https://onlinenecourses.nptel.ac.in/noc23_ee74	https://onlinenecourses.nptel.ac.in/noc20_ee30	https://nptel.ac.in/courses/117105147	https://onlinenecourses.nptel.ac.in/noc20_ee30	https://nptel.ac.in/courses/117105147
noc23-hs43	Humanities and Social Sciences	Patent Drafting for Beginners	Prof. Feroz Ali	IITM	IITM	4 Weeks	Rerun	January 23, 2023	February 17, 2023	March 26, 2023	January 30, 2023	UG/PG	Elective	Yes	Faculty Domain - Advanced Patents And Intellectual Property Rights	https://onlinenecourses.nptel.ac.in/noc23_hs43	https://onlinenecourses.nptel.ac.in/noc22_hs74	https://nptel.ac.in/courses/109106128	https://onlinenecourses.nptel.ac.in/noc22_hs74	https://nptel.ac.in/courses/109106128
noc23-hs26	Humanities and Social Sciences	Patent Law for Engineers and Scientists	Prof. Feroz Ali	IITM	IITM	12 Weeks	Rerun	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	UG/PG	Elective	Yes	Faculty Domain - Advanced Patents And Intellectual Property Rights	https://onlinenecourses.nptel.ac.in/noc23_hs26	https://onlinenecourses.nptel.ac.in/noc22_hs87	https://nptel.ac.in/courses/110106081	https://onlinenecourses.nptel.ac.in/noc22_hs87	https://nptel.ac.in/courses/110106081
noc23-ma31	Mathematics	Applied Linear Algebra in AI and ML	Prof. Swanand Khare	IITKGP	IITKGP	12 Weeks	New	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	UG/PG	Elective	Yes		https://onlinenecourses.nptel.ac.in/noc23_ma31		https://nptel.ac.in/courses/111105165	https://onlinenecourses.nptel.ac.in/noc23_ma31	https://nptel.ac.in/courses/111105165

Table 1. List of certifiable courses approved for earning the extra crs

Sem	Course code	Course Title	Credits	ame on Sp	Course link	Duration
3	noc23-ee17	Fundamentals of semiconductor devices	3		https://nptel.ac.in/courses/108108122	12 Weeks
3	noc23-ee74	Analog Circuits And Systems Through SPICE Simulation	3		https://nptel.ac.in/courses/117105147	12 Weeks

4	noc23-cs54	Embedded Systems Design	3		https://nptel.ac.in/course/s/106105159	12 Weeks
4	noc23-cs07	Advanced Computer Architecture	3		https://nptel.ac.in/course/s/106102229	12 Weeks
5	noc23-cs20	The Joy of Computing using Python	3		https://nptel.ac.in/course/s/106106182	12 Weeks
5	noc23-ee39	Computer Vision and Image Processing - Fundamentals and Applications	3		https://nptel.ac.in/course/s/108103174	12 Weeks
6	noc23-ee44	VLSI Signal Processing	2		https://nptel.ac.in/course/s/108105157	8 Weeks
6	noc23-ee46	Evolution Of Air Interface Towards 5G	2		https://nptel.ac.in/course/s/108105134	8 Weeks
7	noc23-ee40	Design and Analysis of VLSI Subsystems	3		https://nptel.ac.in/course/s/117106149	12 Weeks
7	noc23-ee70	Fundamentals Of MIMO Wireless Communication	2		https://nptel.ac.in/course/s/117105132	8 Weeks

edit under type **Interdisciplinary**