

LIST OF ONLINE CERTIFICATION COURSES: JULY – NOVEMBER 2017 (TENTATIVE)

NOTE:

- The List of courses provided here is **tentative**. Final List will be published shortly. Please await further announcements. Also the start date (July 2017 or August 2017) for the courses will be announced shortly.
- For Enrolling to the courses: visit <https://onlinecourses.nptel.ac.in/explorer> after May 15, 2017)
- For rerun courses, we have given 2 links – one to see the contents and other to see the statistics relevant to the course such as Enrollments, registrations, performance of the candidates, etc.

Type of course	Number of weeks	Start date of course	End date of course	Enrolment Start Date	Last Date for enrolment	Exam date (We will have 2 shifts per date)
10hrs	4 (July-Aug)	24 July 2017	18 August 2017	15 May 2017	24 July 2017	24 Sep 2017
20hrs	8 (July-Sep)	24 July 2017	15 September 2017	15 May 2017	24 July 2017	24 Sep 2017
30hrs	12 (July-Oct)	24 July 2017	13 October 2017	15 May 2017	24 July 2017	22 Oct 2017
10hrs	4 (Aug-Sep)	21 Aug 2017	15 Sep 2017	15 May 2017	21 Aug 2017	22 Oct 2017
20hrs	8 (Aug-Oct)	21 Aug 2017	13 Oct 2017	15 May 2017	21 Aug 2017	22 Oct 2017

TENTATIVE COURSE LIST:

S. No	Discipline	Course name	Instructor	Inst.	Duration (weeks)	Type of course	Course Link
1	Aerospace Engg	Gas dynamics	Prof. Sameen. A	IITM	12 weeks	Rerun	Link1 Link2
2		Combustion in air breathing aero engines	Prof. Swetaprovo Chaudhuri	IISc	12 weeks	New	
3	Architecture & planning	Role of craft and technology in interior architecture	Prof. Smriti Saraswat	IITR	4 weeks	New	
4		Universal design and accessibility planning	Prof. Gaurav Raheja	IITR	4 weeks	New	
5		Introduction to housing design	Prof. Uttam K. Roy	IITR	4 weeks	New	
6	Biological sciences/ Biotechnology	General and applied micro biology	Prof. Saravanan Mateswaram	IITK	8 weeks	New	
7		Bio separation	Prof. Ashok Kumar	IITK	8 weeks	New	
8		Bio pharmaceuticals	Prof. Ashwini Kumar Thakur	IITK	8 weeks	New	
9		Cell membrane: structure, organization & function	Prof. Anindita Gayen	IITK	8 weeks	New	
10		Biostatistics and design of experiments	Prof. Mukesh Doble	IITM	8 weeks	Rerun	Link1 Link2
11		Biomedical nanotechnology	Prof. P. Gopinath	IITR	4 weeks	New	
12		Mathematics for biologists	Prof. Ranjith Padinhateeri	IITB	12 weeks	New	
13		Introduction to mechanobiology	Prof. Shamik Sen	IITB	4 weeks	New	
14		Introduction to cell mechanics and mechanobiology	Prof. Shamik Sen	IITB	8 weeks	New	
15		Animal physiology	Prof. Mainak Das	IITK	12 weeks	New	
16		Cell culture technologies	Prof. Mainak Das	IITK	8 weeks	New	
17	Forest biometry	Prof. Ankur Awadhiya & Prof. Mainak Das	IITK	8 weeks	New		
18	Chemical engineering	Phase equilibrium thermodynamics	Prof. Gargi Das	IIT Kgp	8 weeks	New	
19		Transport phenomena	Prof. Sunando Dasgupta	IIT Kgp	12 weeks	New	

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20		Trace and ultra-trace analysis of metals using atomic absorption spectrometry	Prof. J. R. Mudakavi	IISc	8 weeks	New		
21		Unit operations of particulate matter	Prof. Shabina Khanam	IITR	4 weeks	New		
22		Introduction to evolutionary dynamics	Prof. Supreet Saini	IITB	8 weeks	New		
23	Chemistry and biochemistry	Organic stereochemistry and stereoselective reactions	Prof. S.Sankararaman	IITM	4 weeks	New		
24		Analytical chemistry	Prof. Debashis Ray	IIT Kgp	12 weeks	New		
25		Co-ordination chemistry (chemistry of transition elements)	Prof. Debashis Ray	IIT Kgp	12 weeks	Re purposed		
26		Stereochemistry	Prof. Amit Basak	IIT Kgp	12 weeks	New		
27		Basics of fluorescence spectroscopy	Prof. Pratik Sen	IITK	8 weeks	New		
28		Laser's- fundamentals and applications	Prof. Manabendra Chandra	IITK	8 weeks	New		
29		Metal mediated synthesis-I	Prof. Debabrata Maiti	IITB	4 Weeks	New		
30		Chemical and biological thermodynamics: principles to applications	Prof. Nand Kishore	IITB	12 weeks	New		
31		Civil engineering	Municipal solid waste management	Prof. Brajesh Kumar Dubey	IIT Kgp	12 weeks	New	
32			Computational hydraulics	Prof. Anirban Dhar	IIT Kgp	12 weeks	New	
33	Design of steel structures		Prof. Damodar Maiti	IIT Kgp	12 weeks	New		
34	Strength of materials		Prof. Sriman Kumar Bhattacharya	IIT Kgp	12 weeks	Re purposed		
35	Design of reinforced concrete structures		Prof. Nirjhar Dhang	IIT Kgp	12 weeks	Re purposed		
36	Concrete bridges		Prof. Nirjhar Dhang	IIT Kgp	4 weeks	New		
37	Structural analysis I		Prof. Amit Shaw	IIT Kgp	12 weeks	New		
38	Principles of surveying		Prof. R. D Garg	IITR	4 weeks	New		
39	Project planning and control		Prof. Koshy Varghese	IITM	8 weeks	Rerun	Link1 Link2	
40	Geotechnical engineering laboratory		Prof. J. N. Mandal	IITB	8 weeks	New		
41	Mechanics of solids		Prof. Priyonko Ghosh	IITK	12 weeks	New		
42	Digital image processing of remote		Prof. Arun K. Saraf	IITR	4 weeks	New		

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		sensing data					
43	Computer science and engineering	Design and analysis of algorithms	Prof. Madhavan Mukund	CMI	8 weeks	Rerun	Link1 Link2
44		Programming, data structures and algorithms using python	Prof. Madhavan Mukund	CMI	8 weeks	Rerun	Link1 Link2
45		Introduction to operating systems	Prof. Chester Robeiro	IITM	8 weeks	Rerun	Link1 Link2
46		AI: search methods for problem solving	Prof. Deepak Khemani	IITM	12 weeks	Rerun	Link1 Link2
47		Privacy and Security in Online Social Media	Prof. Ponnurangam.K	IIITD	8 weeks	Rerun	Link1 Link2
48		Software testing	Prof. Meenakshi D'souza	IIITB	12 weeks	New	
49		Computer architecture and organization	Prof.Indranil Sengupta & Prof. Kamalika Datta	IIT Kgp	12 weeks	New	
50		An introduction to algorithms	Prof. Sourav Mukhopadhyay	IIT Kgp	12 weeks	New	
51		Hardware modeling using verilog	Prof. Indranil Sengupta	IIT Kgp	8 weeks	New	
52		Introduction to internet of things	Prof. Sudip Misra	IIT Kgp	4 weeks	New	
53		Cloud computing	Prof. Soumya Kumar Ghosh	IIT Kgp	8 weeks	New	
54			Software testing	Prof. Rajib Mall	IIT Kgp	4 weeks	Rerun
55		Fundamentals of database systems	Prof. Arnab Bhattacharya	IITK	8 weeks	Rerun	Link1 Link2
56		Theory of computation	Prof. Raghunath Tiwari	IITK	8 weeks	Rerun	Link1 Link2
57		Modern Compilers - Theory and Practice	Prof. V. Krishna Nandivada	IITM	12 Weeks	New	
58	Electrical /Electronics/Communications Engg	Power system analysis	Prof. Debabrata Das	IIT Kgp	12 weeks	New	
59		Industrial instrumentation	Prof. Alok Barua	IIT Kgp	12 weeks	Repurposed	
60		Electrical machines - I	Prof. D Kasta	IIT Kgp	12 weeks	Repurposed	

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61	Electrical /Electronics/Commu nications Engg	Controls engineering	Prof. Ramkrishna.P	IITM	12 weeks	New	
62		Basic electrical circuits	Prof. Nagendra Krishnapura	IITM	12 weeks	Rerun	Link1 Link2
		Analog circuits	Prof. Nagendra Krishnapura	IITM	12 weeks	Rerun	Link1 Link2
63		Networks and systems	Prof. Andrew Thangaraj and Prof.C.S.Ramalingam	IITM	12 weeks	Rerun	Link1 Link2
64		Optimal control	Prof. Barjeev Tyagi	IITR	4 weeks	New	
65		Basics of software-defined radios and practical applications	Prof. Meenakshi Rawat	IITR	4 weeks	New	
		Microwave integrated circuits	Prof. Jayanta Mukherjee	IITB	8 weeks	Rerun	Link1 Link2
66		Principles of communication part II	Prof. Aditya Jagannathan	IITK	8 weeks	New	
67		Speech Signal Processing	Prof. S R M Prasanna	IITG	8 weeks	New	
68		Applied engineering electromagnetics	Prof. Pradeep Kumar	IITK	12 weeks	New	
69	Principles of modern cdma/ mimo/ ofdm wireless communications	Prof. Aditya Jagannathan	IITK	8 weeks	Rerun	Link1 Link2	
70	Design for internet of things	Prof. T V Prabhakar	IISc	8 weeks	New		
71	Enclosure design of electronics equipment	Prof. NV Chalapathi Rao	IISc	12 weeks	New		
	Design of photovoltaic systems	Prof. L Umanand	IISc	12 weeks	New		
72	Analog communication	Prof. KBL Srivastava	IIT Kgp	12 weeks	New		
73	Modern digital communication techniques	Prof. Suvra Sekhar Das	IIT Kgp	12 weeks	New		
74	Digital speech processing	Prof. Shyamal Kumar Das Mandal	IIT Kgp	8 weeks	New		
	Satellite communication	Prof. Kalyan Kumar Bandyopadhyay	IIT Kgp	8 weeks	Rerun	Link1 Link2	
75	Semiconductor devices for integrated circuits	Prof. Mrigank Sharad	IIT Kgp	8 weeks	New		
76	Photonic integrated circuits	Prof. T. Srinivas	IISc	4 weeks	New		
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81	Humanities and Social Sciences	Soft skills	Prof. Binod Mishra	IITR	12 weeks	New		
82		Human resource development	Prof. KBL Srivastava	IIT Kgp	12 weeks	New		
83		Educational leadership	Prof. Atasi Mohanty	IIT Kgp	8 weeks	New		
84		Technical English for engineers	Prof. Aysha Iqbal	IITM	12 weeks	Rerun	Link1 Link2	
85		Literature for competitive exams	Prof. Aysha Iqbal	IITM	12 weeks	New		
86		Applied linguistics	Prof. Rajesh Kumar	IITM	12 weeks	Rerun	Link1 Link2	
87		Culture and communication	Prof. Nagendra Kumar	IITR	4 weeks	New		
88		Cognition, transformation & lives	Prof. Alok Bajpai	IITK	4 weeks	New		
89		Understanding relation between visual perception and art across culture	Prof. Soumik Nandy Majumdar	IITK	4 weeks	New		
90		Introduction to basic cognitive processes	Prof. ARK Verma	IITK	8 weeks	New		
91		Introduction to psychology	Prof. Braj Bhushan	IITK	8 weeks	Rerun	Link1 Link2	
92		Science, Technology and Society	Prof. Sambit Mallick	IITG	12 weeks	New		
93		Gender and Literature	Prof. Avishek Parui	IITG	8 weeks	New		
94		Ecology and Society	Prof. Ngamjahao Kipgen	IITG	12 weeks	New		
95		Management	Total quality management part I	Prof. Raghunandan Sengupta	IITK	8 weeks	New	
96		Gender justice and workplace security	Prof. Dipa Dube	IIT Kgp	4 weeks	New		
97		Operations management	Prof. G.Srinivasan	IITM	12 weeks	Repurposed		
98	Issues of Intellectual property rights in Biotech	Prof. Feroze Ali	IITM	4 weeks	New			
99	IPR for Engineers	Prof. Feroze Ali	IITM	12 weeks	New			
100	Marketing research and analysis	Prof. J.K.Nayak	IITR	8 weeks	New			

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101		IPR: theory to practice	Prof. P. K Gosh Prof. Rajat Agrawal Prof. Vinay Sharma Prof.Ranjana Pathania	IITR	8 weeks	New	
102		Project management for managers	Prof. Mukesh Kumar Barua	IITR	12 weeks	New	
103		Corporate social responsibility	Prof. Aradhna Malik	IIT Kgp	8 weeks	New	
104		Decision modeling	Prof. Biswajit Mohanty	IIT Kgp	8 weeks	New	
105		E-business	Prof. Mamata Jenamani	IIT Kgp	12 weeks	New	
106	Management	Six sigma	Prof. Jitesh J Thakkar	IIT Kgp	12 weeks	Rerun	Link1 Link2
107	Mathematics	Differential equations	Prof. Srinivasa Manam	IITM	12 weeks	New	
108		Calculus of one real variable	Prof. Joydeep Dutta	IITK	8 weeks	New	
109		Advanced numerical methods for solving engineering	Prof. Rama Bhargava	IITR	4 weeks	New	
110		Integral equations, calculus of variations and its applications	Prof. P. N Agarwal Prof. D. N Pandey	IITR	12 weeks	New	
111		Nonlinear programming	Prof. S. K Gupta	IITR	4 weeks	New	
112		Numerical methods	Prof. Ameeya Kumar Nayak	IITR	8 weeks	New	
113		Fourier analysis and its applications	Prof. Gopala Krishna Srinivasan	IITB	4 weeks	New	
114		Measure theory	Prof. Inder Kumar Rana	IITB	12 weeks	New	
115		Calculus for economics, commerce & management	Prof. Inder Kumar Rana	IITB	8 weeks	New	
116		Constrained and unconstrained optimization	Prof. A Goswami & Prof. Debjani Chakraborty	IIT Kgp	12 weeks	New	
117		An introduction to software	Prof. Shalabh	IITK	8 weeks	New	
118		Numerical Analysis	Prof. R. Usha	IITM	12 weeks	New	
119	Mechanical / Industrial / Materials Sciences /	Mechanical measurement systems	Prof. Ravi Kumar	IITR	8 weeks	New	
120		Fundamentals of manufacturing processes	Prof. D K Dwivedi	IITR	12 weeks	New	

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121	Metallurgical Engineering	Fluid dynamics and turbomachines	Prof. Dhiman Chatterjee and Prof. Shamit Bakshi	IITM	8 weeks	Rerun	Link1 Link2
122		Engineering fracture mechanics	Prof. K.Ramesh	IITM	12 weeks	Re purposed	
123		Spur and helical gear cutting	Prof. Asimava Roychoudhury	IIT Kgp	4 weeks	New	
124		Laws of thermodynamics	Prof. S.K.Som & Prof.Suman Chakraborty	IIT Kgp	4 weeks	New	
125		Lasers in manufacturing	Prof. Ashish Kumar Nath	IIT Kgp	12 Weeks	New	
126		Foundation of computational fluid dynamics	Prof. S.Vengadesan	IITM	8 weeks	Rerun	Link1 Link2
127		Micro and nano scale energy transport	Prof. Arvind Pattamatta	IITM	12 weeks	New	
128		Manufacturing of composites	Prof. J. Ramkumar	IITK	8 weeks	New	
129		Ergonomics	Prof. Shantanu Bhattacharya & Prof. A.Gupta	IITK	8 weeks	New	
130		Nature and property of materials	Prof. Bishakh Bhattacharya	IITK	8 weeks	Rerun	Link1 Link2
131		Mathematical methods in engineering & sciences	Prof. Bhaskar Dasgupta	IITK	12 weeks	Re purposed	
132		Transport phenomena in materials	Prof. Gandham Phanikumar	IITM	8 weeks	New	
133		Electron diffraction and imaging	Prof. Sundararaman M	IITM	12 weeks	New	
134		Hydrodynamic machines	Prof. Prof B. K Gandhi	IITR	4 weeks	New	
135		Automatic control	Prof. Anil Kumar	IITR	8 weeks	New	
136		Modelling and simulation of discrete event system	Prof. P. Kumar Jha	IITR	8 weeks	New	
137		Polymer and polymer composites	Prof. Inderdeep Singh	IITR	8 weeks	New	
138		Fundamental of metal casting	Prof. D. Benny Karunakar	IITR	8 weeks	Re purposed	
139		Mechatronics systems	Prof. Manivannan	IITM	8 weeks	New	
140			Iron making	Prof. Govind S. Gupta	IISc	12 weeks	New
141		Heat treatment and surface hardening part II	Prof. Kallol Mondal & Sandeep Sangal	IITK	8 weeks	New	
142		Phase transformation in materials	Prof. Krishanu Biswas	IITK	12 weeks	New	

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143	Multidisciplinary	Biology for engineers and other non-biologists	Prof. G.K.Suraishkumar/ Prof. Madhulika Dixit	IITM	4 weeks	Rerun	Link1 Link2
144		Introduction to research	Prof. Prathap Haridoss	IITM	8 weeks	Rerun	Link1 Link2
145		Health research fundamentals	Multi Faculty	NIE	8 weeks	Rerun	Link1 Link2
146	Physics	Solar photovoltaics: fundamentals, technology and application	Prof. Soumitra Satapathi	IITR	8 weeks	New	
147		Quantum physics	Prof. Dipan Ghosh	IITB	8 weeks	Rerun	Link1 Link2
148		Mathematics methods in physics - I	Prof. Samudra Roy	IIT KGP	12 weeks	New	
149		Classical mechanics: from Newtonian to Lagrangian formulation	Prof. Debmalya Banerjee	IIT KGP	12 weeks	New	
150		Solid state physics	Prof. Amal Kumar Das	IIT KGP	12 weeks	New	