

## NPTEL (National Programme on Technology Enhanced Learning)

### List of Video Courses - Phase 2

S.No	D.S.N	Course_ID	Discipline_Name	Course_Name	Professor_Name	Institute
1	1	101101001	Aerospace Engg.	Introduction to Aerospace Propulsion	Prof. A M Pradeep	IIT Bombay
2	2	101101002		Jet Aircraft Propulsion	Prof. Bhaskar Roy	IIT Bombay
3	3	101101058		Turbomachinery Aerodynamics	Prof. A M Pradeep	IIT Bombay
4	4	101104005		Aero elasticity	Prof. C. Venkatesan	IIT Kanpur
5	5	101104013		Foundation of Scientific Computing	Prof. Tapan K. Sengupta	IIT Kanpur
6	6	101104015		Instability and Transition of Fluid Flows	Prof. Tapan K. Sengupta	IIT Kanpur
7	7	101104017		Introduction to Helicopter Aerodynamics and Dynamics	Prof. A.R. Manjunath,	IIT Kanpur
8	8	101104018		Introduction to Propulsion	Dr. D.P. Mishra	IIT Kanpur
9	9	101104061		NOC:Introduction to airplane performance	Dr. A.K. Ghosh, Dr. Deepu Philip	IIT Kanpur
10	10	101105024		High Speed Aero Dynamics	Dr. K.P. Sinhamahapatra	IIT Kharagpur
11	11	101105030		Space Flight Mechanics	Dr. Manoranjan Sinha	IIT Kharagpur
12	12	101105059		Introduction to Aerodynamics	Dr. K.P. Sinhamahapatra	IIT Kharagpur
13	13	101106031		Acoustic Instabilities in Aerospace Propulsion	Prof. R.I. Sujith	IIT Madras
14	14	101106033		Aerospace Propulsion	Dr. P.A. Ramakrishna	IIT Madras
15	15	101106042		Flight Dynamics II (Stability)	Dr. Nandan Kumar Sinha	IIT Madras
16	16	101106044		Gas Dynamics	Dr. T.M. Muruganandam	IIT Madras
17	17	101106045		Introduction to CFD	Prof. M. Ramakrishna	IIT Madras
18	18	101108047		Advanced Control System Design for Aerospace Vehicles	Dr. Radhakant Padhi	IISc Bangalore
19	19	101104019		Jet and Rocket Propulsion	Dr. A. Kushari	IIT Kanpur
20	20	101108057		Optimal Control, Guidance and Estimation.	Dr. Radhakant Padhi	IISc Bangalore
21	1	102101003		Biomathematics	Dr. Ranjith Padinhateeri	IIT Bombay

22	2	102101007	Biotechnology	Proteomics: Principles and Techniques	Prof. Sanjeeva Srivastava	IIT Bombay
23	3	102101049		NOC:Proteins and Gel-Based Proteomics	Prof. Sanjeeva Srivastava	IIT Bombay
24	4	102101050		NOC:Mass spectrometry based proteomics	Prof. Sanjeeva Srivastava	IIT Bombay
25	5	102104042		Animal Physiology	Prof. Mainak Das	IIT Kanpur
26	6	102106022		Downstream Processing	Prof. Mukesh Doble	IIT Madras
27	7	102106026		Thermodynamics	Prof. G.K. Suraishkumar	IIT Madras
28	8	102106048		NOC:Principles of Downstream techniques in Bioprocess	Prof. Mukesh Doble	IIT Madras
29	9	102104043		Bio electricity	Prof. Mainak Das	IIT Kanpur
30	10	102107028		Analytical Technologies in Biotechnology	Dr. Ashwani K. Sharma	IIT Roorkee
31	1	103101001			Advanced Chemical Reaction Engineerin	Prof. H.S. Shankar
32	2	103101003	Advanced Process Control		Prof. Sachin C. Patwardhan	IIT Bombay
33	3	103101008	Chemical Reaction Engineering II		Prof. A.K. Suresh,	IIT Bombay
34	4	103101111	Advanced Numerical Analysis		Prof. Sachin C. Patwardhan	IIT Bombay
35	5	103102012	Heterogeneous Catalysis and Catalytic Processes		Dr. K.K. Pant	IIT Delhi
36	6	103103034	Mass Transfer Operations I		Dr. B. Mandal	IIT Guwahati
37	7	103103039	Process Design Decisions and Project Economics		Dr. Vijay S. Moholkar	IIT Guwahati
38	8	103104044	Fluid Mechanics		Dr. V. Shankar	IIT Kanpur
39	9	103104046	Mass Transfer II		Prof. Nishith Verma	IIT Kanpur

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Chemical Engineering

Plantwide Control of Chemical Processes	Dr. Nitin Kaistha	IIT Kanpur
Biochemical Engineering	Dr. Rintu Banerjee,	IIT Kharagpur
Microscale Transport Processes	Prof. S. Dasgupta	IIT Kharagpur
Multiphase Flow	Prof. Gargi Das, Prof. P.K. Das	IIT Kharagpur
Novel Separation Processes	Prof. S. De	IIT Kharagpur
Process Control and Instrumentation	Dr. D. Sarkar, Dr. A.K. Jana	IIT Kharagpur
Instability and Patterning of Thin Polymer Films	Dr. R. Mukherjee	IIT Kharagpur
Advanced Mathematical Techniques in Chemical Engineering	Prof. S. De	IIT Kharagpur
Chemical Engineering Thermodynamics	Prof. M.S. Ananth	IIT Madras
Computational Fluid Dynamics	Prof. Sreenivas Jayanti	IIT Madras
Computational Techniques	Dr. Niket S.Kaisare	IIT Madras
Particle Characterization (PG)	Dr. R. Nagarajan	IIT Madras
Statistics for Experimentalists	Dr. A. Kannan	IIT Madras
Multiphase flows: Analytical solutions and Stability Analysis	Prof. S.Pushpavanam	IIT Madras
NOC: Introduction to Time-Frequency Analysis and Wavelet Transforms	Dr. Arun K.Tangirala	IIT Madras
Chemical Technology - I	Dr. I.D.Mall	IIT Roorkee

56	26	103107093		Process Integration	Dr. B. Mohanty	IIT Roorkee
57	27	103108097		Chemical Reaction Engineering	Prof. Jayant M Modak	IISc Bangalore
58	28	103108098		Fundamentals of Transport Processes	Prof. V. Kumaran	IISc Bangalore
59	29	103108099		Fundamentals of Transport Processes - I	Prof. V. Kumaran	IISc Bangalore
60	30	103108100		Modern Instrumental Methods of Analysis	Dr. J.R. Mudakavi	IISc Bangalore
61	1	104104011	Chemistry and Biochemistry	Chemistry of Material	Prof. S. Sundar Manoharan	IIT Kanpur
62	2	104104026		Mathematics for Chemistry	Dr. Madhav Ranganathan	IIT Kanpur
63	3	104104066		Advance Analytical Course	Dr. Padma S Vankar	IIT Kanpur
64	4	104105031		Bio-inorganic chemistry	Prof. D. Ray	IIT Kharagpur
65	5	104105033		Co-ordination chemistry (chemistry of transition elements)	Prof. D. Ray	IIT Kharagpur
66	6	104105034		Heterocyclic Chemistry	Prof. D.R. Mal	IIT Kharagpur
67	7	104105038		Organic photochemistry and pericyclic reactions	Dr. N.D. Pradeep Singh	IIT Kharagpur
68	8	104105039		Polymer Chemistry	Dr. D. Dhara	IIT Kharagpur
69	9	104105041		Rate processes	Dr. M. Halder	IIT Kharagpur
70	10	104106048		Principles and Applications of Electron Paramagnetic Resonance Spectroscopy	Prof. Ranjan Das	TIFR
71	11	104106072		NOC:Chemistry - I	Prof. K. Mangala Sunder	IIT Madras
72	12	104108055		Essentials in Immunolgy	Dr. R. Manjunath	IISc Bangalore
73	13	104108056		Eukaryotic Gene Expression - basics and benefits	Prof. P.N. Rangarajan	IISc Bangalore
74	14	104108057		Introductory Quantum Chemistry	Prof. K.L. Sebastian	IISc Bangalore

75	15	104108062	Civil Engineering	Introduction to Organometallic Chemistry	Prof. A.G. Samuelson	IISc Bangalore
76	1	105101005		Soil Dynamics	Dr. Deepankar Choudhury	IIT Bombay
77	2	105101006		Structural Dynamics	Dr. P. Banerji	IIT Bombay
78	3	105101010		Watershed Management	Dr. T.I. Eldho	IIT Bombay
79	4	105101134		Geotechnical Earthquake Engineering	Dr. Deepankar Choudhury	IIT Bombay
80	5	105101143		Geosynthetics Engineering: In Theory and Practice	Prof. J. N. Mandal	IIT Bombay
81	6	105102012		Concrete Technology	Dr. B. Bhattacharjee	IIT Delhi
82	7	105102016		Seismic Analysis of Structures	Dr. Ashok Gupta	IIT Delhi
83	8	105103021		Advanced Hydraulics	Dr. Suresh A Kartha	IIT Guwahati
84	9	105104029		Advanced Hydrology	Dr. Ashu Jain	IIT Kanpur
85	10	105104030		Concrete Engineering and Technology	Dr. Sudhir Misra	IIT Kanpur
86	11	105104131		Geotechnical Measurements & Explorations	Dr. Nihar Ranjan Patra	IIT Kanpur
87	12	105104135		Application of Soil Mechanics	Dr. Nihar Ranjan Patra	IIT Kanpur
88	13	105105039		Advanced Foundation Engineering	Dr. Kousik Deb	IIT Kharagpur
89	14	105105042		Ground Water Hydrology	Dr. Anirban Dhar	IIT Kharagpur
90	15	105105043		Numerical Methods in Civil Engineering	Dr. A. Deb	IIT Kharagpur
91	16	105105045		Probability Methods in Civil Engineering	Dr. Rajib Maity	IIT Kharagpur
92	17	105106050		Advanced Structural Analysis	Prof. Devdas Menon	IIT Madras
93	18	105106051		Finite Element Analysis	Dr. B.N. Rao	IIT Madras

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Geosynthetics and Reinforced Soil Structures	Dr. K. Rajagopal	IIT Madras
Modern Construction Materials	Dr. Ravindra Gettu	IIT Madras
Urban transportation planning	Dr. V. Thamizh Arasan	IIT Madras
NOC:Sustainable River Basin Management	Dr. Franziska Steinbruch	IGCS
Ground Improvement Techniques	Dr. G.L. Sivakumar Babu	IISc Bangalore
Stochastic Hydrology	Prof. P.P. Mujumdar	IISc Bangalore
Stochastic Structural Dynamics	Prof. C.S. Manohar	IISc Bangalore
Water Resources Systems : Modeling Techniques and Analysis	Prof. P.P. Mujumdar	IISc Bangalore
Natural Language Processing	Prof. Pushpak Bhattacharyya	IIT Bombay
Computational Geometry	Prof. Sandeep Sen	IIT Delhi
Logic for CS	Prof. S. Arun Kumar	IIT Delhi
Parallel Computing	Dr. Subodh Kumar	IIT Delhi
Design Verification and Test of Digital VLSI Circuits	Prof. Jatindra Kumar Deka,	IIT Guwahati
Computer Algorithms – 2	Prof. Shashank K. Mehta	IIT Kanpur
Theory of Computation	Prof. Somenath Biswas	IIT Kanpur
Riemann Hypothesis and its Applications	Prof. Manindra Agrawal	IIT Kanpur
Biometrics	Prof. Phalguni Gupta	IIT Kanpur
Parallel Algorithm	Prof. Phalguni Gupta	IIT Kanpur
Computer Architecture	Dr. Mainak Chaudhuri	IIT Kanpur

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Computer Science  
and Engineering

Compiler Design	Prof. Sanjeev K Aggarwal	IIT Kanpur
NOC:Introduction to programming in C	Satyadev Nandakumar	IIT Kanpur
NOC:Fundamentals of Database Systems	Dr. Arnab Bhattacharya	IIT Kanpur
Cryptography and Network Security	Dr. Debdeep Mukhopadhyay	IIT Kharagpur
High Performance Computer Architecture	Prof. Ajit Pal	IIT Kharagpur
Low Power VLSI Circuits & Systems	Prof. Ajit Pal	IIT Kharagpur
Real Time Systems	Prof. Rajib Mall	IIT Kharagpur
Pattern Recognition	Prof. Sukhendu Das	IIT Madras,IISC
Performance Evaluation of Computer Systems	Prof. Krishna Moorthy	IIT Madras
Theory of Automata, Formal Languages and Computation	Prof. Kamala Krithivasan	IIT Madras
Artificial Intelligence	Prof. Deepak Khemani	IIT Madras
NOC:Programming, Data Structures and Algorithms	Prof. Hema A Murthy,	IIT Madras
NOC:Introduction to Information Security I	Prof. V. Kamakoti	IIT Madras
NOC:Programming and Data structures (PDS)	Dr. N S. Narayanaswamy	IIT Madras
NOC:Design and Analysis of Algorithms	Prof. Madhavan Mukund	IIT Madras
NOC:Programming, Data Structures and Algorithms	Dr. N S. Narayanaswamy	IIT Madras

129	28	106106134		NOC:Computer Architecture(Course sponsored by Aricent)	Prof.Madhu Mutyam	IIT Madras
130	29	106106136		NOC:Model Checking	Prof. B. Srivathsan	CMI
131	30	106108051		Combinators	Dr. L. Sunil Chandran	IISc Bangalore
132	31	106108052		Compiler Design	Prof. Y.N. Srikanth	IISc Bangalore
133	32	106108054		Graph Theory	Dr. L. Sunil Chandran	IISc Bangalore
134	33	106108055		High Performance Computing	Prof. Mathew Jacob	IISc Bangalore
135	34	106108056		Numerical Optimization	Dr. Shirish K. Shevade	IISc Bangalore
136	35	106108058		Storage Systems	Dr. K. Gopinath	IISc Bangalore
137	36	106108113		Principles of Compiler Design	Prof. Y.N. Srikanth	IISc Bangalore
138	1	107103004	Engineering Design	Ergonomics for beginners: Industrial design perspective	Prof. Debkumar Chakrabarti	IIT Guwahati
139	2	107106009		Principles of Engineering System Design	Dr. T Asokan	IIT Madras
140	3	107106080		Vehicle Dynamics	Dr. R. Krishnakumar	IIT Madras
141	1	108101002		Nonlinear Dynamical Systems	Prof. Harish K. Pillai,	IIT Bombay
142	2	108101004		Power System Dynamics and Control	Dr. A.M. Kulkarni	IIT Bombay
143	3	108103007		Advanced Control Systems	Prof. S. Majhi	IIT Guwahati
144	4	108104011		Advanced Electric Drives	Dr. S.P. Das	IIT Kanpur
145	5	108104013		High Voltage DC Transmission	Dr. S.N. Singh	IIT Kanpur
146	6	108105017		Electrical Machines -I	Dr. D.Kastha	IIT Kharagpur
147	7	108105019		Optimal Control	Prof.G.D.Ray	IIT Kharagpur



148	8	108106023	Electrical Engineering	Modelling and Analysis of Electric Machines	Dr. Krishna Vasudevan	IIT Madras
149	9	108106083		Probability Foundation for Electrical Engineers	Dr. Krishna Jagannathan	IIT Madras
150	10	108106084		NOC:Analog Circuits	Dr. Nagendra Krishnapura	IIT Madras
151	11	108106085		NOC:Introduction to Non Linear Dynamics	Prof. Gaurav Raina	IIT Madras
152	12	108108031		An Introduction to Electronics Systems Packaging	Prof. G.V. Mahesh	IISc Bangalore
153	13	108108034		Power Electronics and Distributed Generation	Dr. Vinod John	IISc Bangalore
154	14	108108035		Pulse width Modulation for Power Electronic Converters	Dr. G. Narayanan	IISc Bangalore
155	15	108108036		Switched Mode Power Conversion	Prof. L. Umanand,	IISc Bangalore
156	1	109101004		Contemporary Issues in Philosophy of Mind & Cognition	Dr. Ranjan K.Panda,	IIT Bombay
157	2	109101017		Understanding Creativity and Creative Writing	Prof. Neelima Talwar	IIT Bombay
158	3	109103019		Cultural Studies	Dr. Liza Das	IIT Guwahati
159	4	109103020		English Language and Literature	Dr. Krishna Baru	IIT Guwahati
160	5	109103021		Game Theory and Economics	Dr. Debarshi Das	IIT Guwahati
161	6	109104031		Communication Skills	Dr. T. Ravichandran	IIT Kanpur
162	7	109104035		International Economics	Dr. Somesh K. Mathur	IIT Kanpur
163	8	109104040	Introduction to Logic	Dr. A.V. Ravishankar Sarma	IIT Kanpur	
164	9	109104045	Population and Society	Prof. A.K. Sharma	IIT Kanpur	

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183	28	109106086

Humanities and Social  
Sciences

Macro Economics	Prof.Surajit Sinha	IIT Kanpur
Introduction to Sociology	Prof. A.K. Sharma	IIT Kanpur
Money & Banking	Prof.Surajit Sinha	IIT Kanpur
Human Adjustment Processes	Braj Bhushan	IIT Kanpur
Selected Topics in Psychology	Braj Bhushan, Ajit Dalal	IIT Kanpur
NOC:Elements of Visual Representation	Dr. Shatarupa Thakurta Roy	IIT Kanpur
NOC:Practical English: Learning and Teaching(Course sponsored by Aricent)	Dr. Bhaskar Dasgupta	IIT Kanpur
NOC:Brief introduction to Psychology	Braj Bhushan	IIT Kanpur
Aspects of Western Philosophy	Dr. Sreekumar Nellickappilly	IIT Madras
Contemporary Literature	Dr. Aysha Iqbal Viswamohan	IIT Madras
History of Economic Theory	Prof. S.S.SivaKumar	IIT Madras
Indian Philosophy	Dr. Satya Sundar Sethy	IIT Madras
Better Spoken English	Shreesh Chaudhary	IIT Madras
Introduction to Film Studies	Dr. Aysha Iqbal Viswamohan	IIT Madras
Introduction to Modern Linguistics	Prof. Shreesh Chaudhary,	IIT Madras
Principles and Parameters in Natural Language	Prof. Rajesh Kumar	IIT Madras
NOC:Literary Criticism and Literary Theory	Dr. Aysha Iqbal Viswamohan	IIT Madras
NOC:Language and Mind	Prof. Rajesh Kumar	IIT Madras
NOC: Film Appreciation	Dr. Aysha Iqbal Viswamohan	IIT Madras

184	29	109106087		NOC:Appreciating carnatic music	Dr. Lakshmi Sreeram	IIT Madras
185	30	109106089		NOC:Infrastructure Economics	Prof.Nalin Bharti	IIT Patna
186	31	109106092		NOC:Issues in Bioethics	Dr. Sreekumar Nellickappilly	IIT Madras
187	32	109106091		NOC:Language and society	Prof. Rajesh Kumar	IIT Madras
188	1	110101003	Management	Managerial Accounting	Dr. Varadraj Bapat	IIT Bombay
189	2	110101005		Managerial Economics	Dr. Trupti Mishra	IIT Bombay
190	3	110102016		Organisation Management	Prof. Vinayshil Gautam	IIT Delhi
191	4	110102058		Organisation of Engineering Systems and Human Resources Management	Prof. Vinayshil Gautam	IIT Delhi
192	5	110104055		Strategic Marketing - Contemporary Issues	Prof. Jayanta Chatterjee	IIT Kanpur
193	6	110104063		NOC:Strategy: An Introduction to game Theory	Aditya K. Jagannatham	IIT Kanpur
194	7	110104065		NOC:Managing Services(Course sponsored by Aricent)	Prof. Jayanta Chatterjee	IIT Kanpur
195	8	110104066		NOC:Quantitative Finance	Dr. Raghu Nandan Sengupta	IIT Kanpur
196	9	110105030		Econometric Modelling	Dr. Rudra P. Pradhan	IIT Kharagpur
197	10	110105033		Organizational Behaviour	Dr. Susmita Mukhopadhyay	IIT Kharagpur
198	11	110105035		Security Analysis and Portfolio Management	Dr. Chandra Sekhar Mishra,	IIT Kharagpur
199	12	110105039		Six Sigma	Prof. Tapan P. Bagchi	IIT Kharagpur
200	13	110105052		International Business Communication	Prof. A. Malic	IIT Kharagpur
201	14	110105054		Consumer Behaviour	Dr. Sangeeta Sahney	IIT Kharagpur
202	15	110105057		International Finance	Dr. Arun K. Misra	IIT Kharagpur

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Applied Multivariate Statistical Modeling	Dr J Maiti	IIT Kharagpur
Infrastructure Finance	Dr. A. Thillai Rajan	IIT Madras
Manufacturing Systems Management	Prof. G. Srinivasan	IIT Madras
Operations and Supply Chain Management	Prof. G. Srinivasan	IIT Madras
Business Analysis for Engineers	Dr. S. Vaidhyasubramaniam	IIT Madras
NOC:Introduction to Operations Research	Prof. G. Srinivasan	IIT Madras
NOC:Introduction to Data Analytics(Course sponsored by Aricent)	Dr. Nandan Sudarsanam,	IIT Madras
Strategic Management	Prof. R. Srinivasan	IISc Bangalore
Global Supply Chain Management	Prof. N.Viswanadham	IISc Bangalore
Elementary Numerical Analysis	Prof. Rekha P. Kulkarni	IIT Bombay
Measure and Integration	Prof. Inder K Rana	IIT Bombay
Mathematics in India - From Vedic Period to Modern Times	Prof. M.D.Srinivas	IIT Bombay
Stochastic Processes	Dr. S. Dharmaraja	IIT Delhi
Formal Languages and Automata Theory	Dr. Diganta Goswami,	IIT Guwahati
Complex Analysis	Prof. P. A. S. Sree Krishna	IIT Guwahati
Applied Multivariate Analysis	Dr. Amit Mitra,Dr. Sharmishtha	IIT Kanpur

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235	24	111106052
236	25	111106053

Mathematics

Calculus of Variations and Integral Equations	Prof. D. Bahuguna,	IIT Kanpur
Linear programming and Extensions	Prof. Prabha Sharma	IIT Kanpur
Convex Optimization	Dr. Joydeep Dutta	IIT Kanpur
Foundations of Optimization	Dr. Joydeep Dutta	IIT Kanpur
Probability Theory and Applications	Prof. Prabha Sharma	IIT Kanpur
NOC:Basic Calculus for Engineers, Scientists and Economists	Dr. Joydeep Dutta	IIT Kanpur
Advanced Engineering Mathematics	Prof. Somesh Kumar,	IIT Kharagpur
Functional Analysis	Prof. P.D. Srivastava	IIT Kharagpur
Numerical methods of Ordinary and Partial Differential Equations	Dr. G.P. Raja Sekhar	IIT Kharagpur
Optimization	Dr. D.P. Mishra	IIT Kharagpur
Probability and Statistics	Prof. Somesh Kumar	IIT Kharagpur
Regression Analysis	Dr. Soumen Maity	IIT Kharagpur
Statistical Inference	Prof. Somesh Kumar	IIT Kharagpur
A Basic Course in Real Analysis	Prof. P.D. Srivastava	IIT Kharagpur
An Introduction to Riemann Surfaces and Algebraic Curves: Complex 1-Tori and Elliptic Curves	Dr. T.E. Venkata Balaji	IIT Madras
Linear Algebra	Dr. K.C. Sivakumar	IIT Madras
Mathematical Logic	Prof. Arindama Singh	IIT Madras
Real Analysis	Prof. S.H. Kulkarni	IIT Madras

237	26	111106083
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245	4	112103023
246	5	112103025
247	6	112104026
248	7	112104028
249	8	112104029
250	9	112104031

NOC:An invitation to mathematics	Prof. Sankaran Vishwanath	IMS
Advanced Complex Analysis - Part 1:Zeros of Analytic Functions,Analytic continuation, Monodromy, Hyperbolic Geometry and the Reimann Mapping Theorem	Dr. T.E. Venkata Balaji	IIT Madras
Discrete Mathematics	Dr. Aditi Gangopadhyay	IIT Roorkee
Advanced Matrix Theory and Linear Algebra for Engineers	Prof. Vittal Rao	IISc Bangalore
Ordinary Differential Equations and Applications	A. K. Nandakumaran, P. S. Datti,	IISc Bangalore
Convective Heat and Mass Transfer	Prof. A.W. Date	IIT Bombay
Cryogenic Engineering	Prof. M.D. Atrey	IIT Bombay
Tribology	Dr. Harish Hirani	IIT Delhi
Nonlinear Vibration	Prof. S.K. Dwivedy	IIT Guwahati
Theory & Practice of Rotor Dynamics	Prof. Rajiv Tiwari	IIT Guwahati
Acoustics	Prof. Nachiketa Tiwari	IIT Kanpur
Advanced Machining Processes	Prof. Vijay K. Jain	IIT Kanpur
Biomicroelectromechanical systems	Dr. Shantanu Bhattacharya	IIT Kanpur
Computer Aided Engineering Design	Dr. Anupam Saxena	IIT Kanpur

251	10	112104035
252	11	112104162
253	12	112104172
254	13	112104181
255	14	112104188
256	15	112104189
257	16	112105045
258	17	112105048
259	18	112105051
260	19	112105053
261	20	112105055
262	21	112105171
263	22	112105182
264	23	112105183
265	24	112105187
266	25	112106056

Mechanical  
Engineering

Mathematical Methods in Engineering and Science	Dr. Bhaskar Dasgupta	IIT Kanpur
Advanced manufacturing process for micro sytem fabrication	Dr. Shantanu Bhattacharya	IIT Kanpur
Engineering Drawing	Dr. Anupam Saxena	IIT Kanpur
NOC:BioMEMS and Microsystems	Dr. Shantanu Bhattacharya	IIT Kanpur
NOC:Manufacturing Systems Technology	Dr. Shantanu Bhattacharya	IIT Kanpur
NOC:Manufacturing systems technology part II	Dr. Shantanu Bhattacharya	IIT Kanpur
Computational Fluid Dynamics	Prof. S. Chakraborty	IIT Kharagpur
Machinery fault diagnosis and signal processing	Prof. A.R. Mohanty	IIT Kharagpur
Solar Energy Technology	Prof. V.V. Satyamurty	IIT Kharagpur
Technology of Surface Coating	Prof. A.K. Chattopadhyay	IIT Kharagpur
Vibration of Structures	Prof. A. Dasgupta	IIT Kharagpur
Fluid Mechanics	Prof. S.K. Som	IIT Kharagpur
Introduction to Fluid Machines and Compressible Flow	Prof. S.K. Som	IIT Kharagpur
Introduction to Fluid Mechanics and Fluid Engineering	Prof. S. Chakraborty	IIT Kharagpur
Micro fluidics	Prof. S. Chakraborty	IIT Kharagpur
Advanced Gas Dynamics	Dr. Rinku Mukherjee	IIT Madras

267	26	112106064
268	27	112106065
269	28	112106068
270	29	112106073
271	30	112106154
272	31	112106155
273	32	112106166
274	33	112106169
275	34	112106170
276	35	112106177
277	36	112106180
278	37	112106186
279	38	112107078
280	39	112107079
281	40	112107086
282	41	112107087
283	42	112107089
284	43	112108092
285	1	113104006

Design and Optimization of Energy systems	Prof. C. Balaji	IIT Madras
Engineering Fracture Mechanics	Prof. K. Ramesh	IIT Madras
Experimental Stress Analysis	Prof. K. Ramesh	IIT Madras
Rocket Propulsion	Prof. K. Ramamurthi	IIT madras
Spray Theory and Applications	Dr. Paul E. Sojka ,	IIT Madras
Conduction And Radiation	Prof. C. Balaji	IIT Madras
Gas Dynamics and Propulsion	Prof. V. Babu	IIT Madras
Microfluidics	Dr. Ashis Kumar Sen	IIT Madras
Convective Heat Transfer	Dr. Arvind Pattamatta,	IIT Madras
Introduction to Explosions and Explosion Safety	Prof. K. Ramamurthi	IIT Madras
NOC:Engineering Mechanics Statics and Dynamics	Prof. Mahesh Panchagnula	IIT Madras
NOC:Foundation of Computational Fluid Dynamics	Dr.S.Vengadesan	IIT Madras
Advanced Manufacturing Processes	Dr. A.K. Sharma	IIT Roorkee
Computational Fluid Dynamics	Dr. K. M. Singh	IIT Roorkee
Processing of non metals	Dr. Inderdeep Singh	IIT Roorkee
Vibration control	Dr. S. P. Harsha	IIT Roorkee
Welding Engineering	Dr. D. K. Dwivedi	IIT Roorkee
Micro and Smart Systems	Prof. K.N. Bhat,	IISc Bangalore
Electroceramics	Dr. Ashish Garg	IIT Kanpur



286	2	113104008
287	3	113104009
288	4	113104010
289	5	113104012
290	6	113104013
291	7	113104014
292	8	113104061
293	9	113105015
294	10	113105021
295	11	113105024
296	12	113105025
297	13	113105028
298	14	113106031
299	15	113106039
300	16	113106062
301	17	114105002
302	1	114105003

Metallurgy and  
Material Science

Fuels Refractory and Furnaces	Prof. Satish Ch. Koria	IIT Kanpur
Introduction to Biomaterials	Dr. Birkamjit Basu,	IIT Kanpur
Materials and Energy balance in Metallurgical Processes	Prof. Satish Ch. Koria	IIT Kanpur
Optoelectronic Materials and Devices	Prof. Monica Katiyar,	IIT Kanpur
Steel Making	Prof. Dipak Mazumdar,	IIT Kanpur
Structure of Materials	Prof. Sandeep Sangal,	IIT Kanpur
Environmental Degradation of Materials	Dr. Kallol Mondal	IIT Kanpur
Advanced ceramics for strategic applications	Prof. H.S. Maiti	IIT Kharagpur
Non-ferrous Extractive Metallurgy	Prof. H.S. Ray,Mr. L Pugazhenthly	IIT Kharagpur
Principles of Physical Metallurgy	Prof. R.N. Ghosh	IIT Kharagpur
Processing of Semiconducting Materials	Dr. Pallab Banerji	IIT Kharagpur
Science and Technology of Polymers	Prof. B. Adhikari	IIT Kharagpur
Advanced Metallurgical Thermodynamics	Prof. B.S. Murty	IIT Madras
Physics of Materials	Dr. Prathap Haridoss	IIT Madras
Electronic materials, devices, and fabrication	Parasuraman S	IIT Madras
Elements of Ocean Engineering	Dr. Ashoke Bhar	IIT Kharagpur
Hydrostatics and Stability	Dr. Hari V. Warrior	IIT Kharagpur

303	2	114105004
304	3	114105005
305	4	114105006
306	5	114106011
307	6	114106015
308	7	114106017
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316	15	114106038
317	16	114106039
318	1	115101005
319	2	115101011
320	3	115102014

Ocean Engg.

Marine Construction and Welding	Prof. N.R. Mandal	IIT Kharagpur
Marine Hydrodynamics	Dr. T. Sahoo	IIT Kharagpur
Seakeeping & Manoeuvring	Prof. Debabrata Sen	IIT Kharagpur
Design of Offshore Structures	Dr. S. Nallayarasu	IIT Madras
Foundation for Offshore Structures	Dr. S. Nallayarasu	IIT Madras
Health,Safety and Environmental Management in Petroleum	Dr. Srinivasan Chandrasekaran	IIT Madras
Port and Harbour Structures	Prof. R. Sundaravadivelu	IIT Madras
Ship Resistance and Propulsion	Prof. V. Anantha Subramanian,	IIT Madras
Coastal Engineering	Prof. V. Sundar	IIT Madras
Wave Hydrodynamics	Prof. V. Sundar	IIT Madras
Ocean Structures and Materials	Dr. Srinivasan Chandrasekaran	IIT Madras
Dynamics of Ocean Structures	Dr. Srinivasan Chandrasekaran	IIT Madras
Advanced Marine Structures	Dr. Srinivasan Chandrasekaran	IIT Madras
NOC:Dynamics of Ocean Structures	Dr. Srinivasan Chandrasekaran	IIT Madras
NOC:Health, Safety and Environmental Management in Offshore	Dr. Srinivasan Chandrasekaran	IIT Madras
Electromagnetic Theory	Prof. D.K. Ghosh	IIT Bombay
Special Theory of Relativity	Prof. Shiva Prasad	IIT Bombay
Electronics	Prof. D.C. Dube	IIT Delhi

321	4	115102020
322	5	115102022
323	6	115102023
324	7	115102026
325	8	115104043
326	9	115104088
327	10	115105046
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331	14	115106061
332	15	115106065
333	16	115106066
334	17	115106068
335	18	115106085
336	19	115106086

Physics

Plasma Physics: Fundamentals and Applications	Prof. V.K. Tripathi,	IIT Delhi
Quantum Electronics	Prof. K. Thyagarajan	IIT Delhi
Quantum Mechanics and Applications	Prof. Ajoy Ghatak	IIT Delhi
Semiconductor Optoelectronics	Prof. M. R. Shenoy	IIT Delhi
Nuclear Physics: Fundamentals and Applications	Prof. H.C. Verma	IIT Kanpur
NOC:Introduction to Electromagnetism	Prof. Manoj K Harbola	IIT Kanpur
Astrophysics & Cosmology	Prof. S. Bharadwaj	IIT Kharagpur
Special Topics in Atomic Physics	Prof. P.C. Deshmukh	IIT Madras
Classical Field Theory	Prof. Suresh Govindarajan	IIT Madras
Topics in Nonlinear Dynamics	Prof. V. Balakrishnan	IIT Madras
Condensed Matter Physics	Prof. G. Rangarajan	IIT Madras
Quantum Field Theory	Dr. Prasanta Tripathy	IIT Madras
Quantum Mechanics I	Prof. S. Lakshmi Bala	IIT Madras
Special Topics in Classical Mechanics	Prof. P.C. Deshmukh	IIT Madras
Special/Select Topics in the Theory of Atomic Collisions and Spe.	Prof. P.C. Deshmukh	IIT Madras
Selected Topics in Mathematical Physics	Prof. V. Balakrishnan	IIT Madras

337	20	115106087		NUCLEAR REACTORS AND SAFETY- AN INTRODUCTION	Dr.G.Vaidyanathan	SRM University
338	21	115106090		NOC: Mechanics, heat oscillations and waves	Prof. V. Balakrishnan	IIT Madras
339	22	115108074		Relativistic Quantum Mechanics	Prof. Apoorva D Patel	IISc Bangalore
340	1	116102034	Textile Engg.	Theory of Yarn Structures	Prof. Bohuslav Neckar	IIT Delhi
341	2	116104044		Natural Dyes	Dr. Padma S Vankar	IIT Kanpur
342	1	117101001	Electronics & Communication Engineering	Adv. Digital Signal Processing - Multirate and wavelets	Prof. V.M. Gadre	IIT Bombay
343	2	117101002		Advanced Optical Communication	Prof. R.K. Shevgaonkar	IIT Bombay
344	3	117102012		RF Integrated Circuits	Dr. Shouribrata Chatterjee	IIT Delhi
345	4	117104099		Advanced 3G and 4G Wireless Mobile Communications	Prof. Aditya K. Jagannatham	IIT Kanpur
346	5	117104104		Digital Switching	Prof. Yatindra N Singh	IIT Kanpur
347	6	117104115		NOC:Principles of Modern CDMA/ MIMO/ OFDM Wireless Communications	Prof. Aditya K. Jagannatham	IIT Kanpur
348	7	117104117		NOC:Probability and Random Variables/ Processes for Wireless Com.	Prof. Aditya K. Jagannatham	IIT Kanpur
349	8	117105101		Pattern Recognition and Application	Prof. P.K. Biswas	IIT Kharagpur
350	9	117106030		Analog IC Design	Dr. Nagendra Krishnapura	IIT Madras
351	10	117106031		Coding Theory	Dr. Andrew Thangaraj	IIT Madras
352	11	117106033		Semiconductor Device Modeling	Prof. S. Karmalkar	IIT Madras

ENGINEERING

353	12	117106034	VLSI Data Conversion Circuits	Dr. Shanthi Pavan	IIT Madras
354	13	117106101	Basic Electrical Circuits	Dr. Nagendra Krishnapura	IIT Madras
355	14	117106108	NOC:Basic Electrical Circuits	Dr. Nagendra Krishnapura	IIT Madras
356	15	117106109	Advanced Logic Synthesis	Dhiraj Taneja	Broadcom
357	16	117106111	ARM Based Development	S.Chandramouleeswaran	Embedded Prof.
358	17	117106112	Embedded Software Testing	MADHUKESHWARA H M	HCL
359	18	117106113	Linux Programming & Scripting	Anand Iyer	Calypto Design
360	19	117106114	NOC:Digital Circuits and Systems	Prof. Shankar Balachandran	IIT Madras
361	20	117106116	NOC:Networks and Systems(Course sponsored by Aricent)	Prof. V.G.K. Murti,	IIT Madras
362	21	117108038	Circuits for Analog System Design	Prof. M.K. Gunasekaran	IISc Bangalore
363	22	117108040	Digital System design with PLDs and FPGAs	Prof. Kuruvilla Varghese	IISc Bangalore
364	23	117108044	Error Correcting Codes	Prof. P. Vijay Kumar	IISc Bangalore
365	24	117108048	Pattern Recognition	Prof. P.S. Sastry	IISc Bangalore
366	1	118102003	Nano structured materials-synthesis, properties, self assembly	Prof. A.K. Ganguli	IIT Delhi
367	2	118104008	Nanostructures and Nanomaterials: Characterization and Properties	Dr. Kantesh Balani,	IIT Kanpur
368	3	118105009	Economics / Management / Entrepreneurship	Prof. P.K.J. Mohapatra	IIT Kharagpur

369	1	119106008	Atmospheric Science	Introduction to Atmospheric Science	Prof. C. Balaji	IIT Madras
370	2	119108004		Radiation Heat Transfer	Prof. J. Srinivasan	IISc Bangalore
371	3	119108006		The monsoon and its variability	Sulochana Gadgil	IISc Bangalore
372	1	121104005	General	Introduction to Japanese Language and Culture	Mrs.Vatsala Misra	IIT Kanpur
373	2	121106003		Ayurvedic Inheritance of India	Dr M. S. Valiathan	IIT Madras



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