



# NATIONAL PROGRAMME ON TECHNOLOGY ENHANCED LEARNING

A JOINT VENTURE BY INDIAN INSTITUTES OF TECHNOLOGY &  
INDIAN INSTITUTE OF SCIENCE

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THE MINISTRY OF HUMAN RESOURCE DEVELOPMENT  
GOVERNMENT OF INDIA



सत्यमेव जयते

## LIST OF AVAILABLE COURSES - Dec 2008

Core Sciences and Engineering			
Basic Electronics	Web	IITK	Prof. Y. N. Singh, Prof. Joesph John
Basic Electronics and Lab	Web	IITM	Prof. T. S. Natarajan
Basic Electronics and Lab	Video	IITM	Prof. T. S. Natarajan
Concept of Management and Evolution of Management thought	Video	IISc	Prof K B Akhilesh
Engineering Chemistry I	Web	IITB	Prof. B. L.Tembe, Prof. K. MangalaSunder
Engineering Chemistry I	Video	IITM	Prof. K. Mangala Sunder
Engineering Chemistry III	Web	IITM	Prof. S. Sankararaman, Prof. K.M. Muraleedharan, Prof. Santosh J. Gharpure, Prof. N.Narasim
Engineering Mechanics	Web	IITK	Prof. Manoj K. Harbola
Engineering Mechanics	Video	IITK	Prof. Manoj K. Harbola
Engineering Physics I (Experiment)	Web	IITG	Prof. Alike Khare , Prof. Pratima Agarwal, Prof. S. Ravi
Engineering Physics I (Theory)	Web	IITG	Prof. Alike Khare , Prof. Pratima Agarwal, Prof. S. Ravi
Engineering Physics II	Web	IITB	Prof. D. K. Ghosh
Engineering Physics II	Video	IITK	Prof. V. Ravishankar, Prof. S. Raychaudhuri
Environment and Ecology	Web	IITD	Prof. Anuradha Sharma, Prof. V. B. Upadhyay
Environmental Chemistry and Analysis	Web	IITM	Prof. M. S. Subramanian
Management Science I	Web	IITM	Prof. M. Thenmozhi
Management Science II	Web	IITM	Prof. R. Madhumathi
Mathematics I	Web	IITB	Prof. Inder K. Rana
Mathematics I	Video	IITK	Prof. Swagato K. Ray, Prof. Shobha Madan, Prof. P. Shunmugaraj
Mathematics II	Web	IITK	Prof. P. Chandra, Prof. A. K. Lal, Prof. V. Raghavendra, Prof. G. Santhanam
Mathematics III	Web	IITG	Prof. M. Guru Prem Prasad , Prof. Durga C. Dalal
Numerical Analysis and Computer Programming	Video	IITM	Prof. P. B. Sunil Kumar
Numerical Analysis in Computer Programming	Web	IITK	Prof. Rathish Kumar, Prof. V. Raghavendra, Prof. M. K. Kadalbajoo, Prof. P. B. Sunil Kumar

## Civil Engineering

Advanced Transportation Engineering	Web	IITK	Prof. Partha Chakraborty, Prof. A. Das
Civil Engineering - Building materials and Construction	Video	IITD	Prof. B. Bhattacharjee
Composite Materials	Web	IISc	Prof. P. C. Pandey
Computational Hydraulics	Web	IISc	Prof. M. S. Mohan Kumar
Construction Planning and Management	Web	IITG	Prof. Arbind Kumar Singh
Design of Concrete Structures	Web	IITKgp	Prof. J. N. Bandopadhyay
Design of Steel Structures I	Web	IITM	Prof. A. R. Shantha Kumar, Prof. S. R. Satishkumar
Design of Steel Structures II	Web	IITM	Prof. A. R. Shantha Kumar, Prof. S. R. Satishkumar
Engineering Geology	Video	IITKgp	Prof. Debasis Roy
Environmental Air Pollution	Web	IITD	Prof. Mukesh Khare
Environmental Air Pollution	Video	IITK	Prof. Mukesh Sharma
Fluid Mechanics	Web	IITG	Prof. Subhashisa Dutta, Prof. N. Sahoo
Fluid Mechanics	Video	IITB	Prof. T. I. Eldho
Foundation Engineering	Web	IITB	Prof. Deepankar Choudhury
Hydraulics	Web	IITM	Prof. B. S. Thandaveswara, Prof. B. S. Murthy
Infrastructure Planning and Management	Web	IITM	Prof A. Veeraragavan
Introduction to Transportation Engineering	Video	IITKgp	Prof. K. S. Reddy, Prof. Bhargab Maitra
Materials Science	Web	IISc	Prof. Satish V. Kailas
Mechanics of Solids	Web	IITD	Prof. Y. Nath
Mechanics of solids	Video	IITM	Prof.M.S.Sivakumar
Modern Surveying Techniques	Web	IITK	Prof. Onkar Dikshit
Optimization Methods	Web	IISc	Prof. D. Nagesh Kumar
Pre-stressed Concrete Structures	Web	IITM	Prof. Devdas Menon, Prof. Amlan Kumar Sengupta
Pre-stressed Concrete Structures	Video	IITM	Prof. Devdas Menon, Prof. Amlan Kumar Sengupta
Reliability Engineering	Web	IISc	Prof. G. L. Sivakumar Babu
Soil Mechanics	Web	IITG	Prof. Baleshwar Singh
Soil Mechanics	Video	IITB	Prof. B. V. S. Viswanadham
Strength of Materials	Video	IITKgp	Prof. S. K. Bhattacharyya
Structural Analysis I	Web	IITB	Prof. R. S. Jangid
Structural Analysis II	Web	IITKgp	Prof. L. S. Ramachandra, Prof. Sudhir Kumar Barai
Structural Analysis II	Video	IITB	Prof. P. Banerji
Surveying	Web	IIT R	Prof. J. K. Ghosh
Surveying	Video	IITK	Prof. Bharat Lohani
Transportation Engineering I	Web	IITB	Prof. Tom V. Mathew
Water and Waste Water Engineering	Web	IITK	Prof. P. Bose
Water and Waste Water Engineering	Video	IITM	Prof. Ligy Philip, Prof. C. Venkobachar , Prof. B. S. Murty
Water Resources Engineering	Web	IITKgp	Prof. Dhruvajyoti Sen
Water Resources Engineering	Video	IITK	Prof. Rajesh Srivastava, Prof. P. Mohapatra

## Computer Science and Engineering

Artificial Intelligence	Web	IITKgp	Prof. S. Sarkar, Prof. P. Mitra
Artificial Intelligence	Video	IITKgp	Prof. Anupam Basu, Prof. S. Sarkar
Artificial Intelligence(Prof.P.Dasgupta)	Video	IITKgp	Prof.P.Dasgupta
CAD for VLSI Design I	Web	IITM	Prof. Shankar Balachandran, Prof. V. Kamakoti
CAD for VLSI Design II	Web	IITM	Prof. Shankar Balachandran, Prof. V. Kamakoti
Compiler Design	Web	IITK	Prof. Sanjeev K. Aggarwal
Computer Architecture	Video	IITD	Prof. Anshul Kumar
Computer Graphics	Web	IITD	Prof. Prem K. Kalra
Computer Graphics	Video	IITM	Prof. Sukhendu Das
Computer Graphics	Video	IITD	Prof. Prem K. Kalra
Computer Networks	Video	IITKgp	Prof. Sujoy Ghosh
Computer Networks	Web	IITKgp	Prof. Ajit Pal
Computer Networks	Web	IITM	Prof. Hema A Murthy
Computer Organisation and Architecture	Web	IITK	Prof. Bhaskaran Raman
Computer Organization	Video	IITM	Prof.S.Raman
Computer Organization and Architecture	Web	IITG	Prof. Jatindra Kumar Deka
Data Communication	Video	IITKgp	Prof. Ajit Pal
Data Communications	Web	IISc	Prof. H. S.Jamadagni
Data Structures And Algorithms	Video	IITD	Prof. Naveen Garg
Data Structures and Program Methodology	Web	IITG	Prof. S. V. Rao, Prof. Pradip K. Das
Database Design	Video	IITM	Prof. Srinath Srivasthava(IITB), Prof. D. Janaki Ram
Design and Analysis of Algorithms	Video	IITB	Prof. Abhiram G. Ranade, Prof. Ajit A. Diwan, Prof. Sundar Viswanathan
Design and Analysis of Algorithms	Web	IITB	Prof. Abhiram G. Ranade, Prof. Ajit A. Diwan, Prof. Sundar Viswanathan
Digital Systems	Web	IISc	Prof. N. J. Rao
Discrete Structures	Video	IITM	Prof. Kamala Krithivasan
Internet Technology	Video	IITKgp	Prof. Indranil Sengupta
Introduction to Database Systems and Design	Web	IITM	Prof. P. Sreenivasa Kumar
Introduction to Problem Solving and Programming	Web	IITD	Prof. S. Arun Kumar
Introduction to Problem Solving and Programming	Video	IITK	Prof. D. Gupta
Microprocessors and Microcontrollers	Web	IISc	Prof. Krishna Kumar
Operating Systems	Web	IISc	Prof. P. C. P. Bhatt
Principles of Communication	Web	IITM	Prof. Hema A Murthy
Principles of Programming Languages	Video	IITD	Prof. S. Arun Kumar
Real Time Systems	Web	IITKgp	Prof. Rajib Mall
Software Engineering	Video	IITB	Prof. Rushikesh K. Joshi, Prof. Umesh Bellur, Prof. N. L. Sarda
Software Engineering	Web	IITKgp	Prof. Rajib Mall
System Analysis and Design	Video	IISc	Prof. V. Rajaraman
System Analysis and Design	Web	IISc	Prof. V. Rajaraman
Theory of Automata and Formal Languages	Web	IITG	Prof. Diganta Goswami

## Electronics and Communication Engineering

Basic Electronics	Video	IITG	Prof. Chitralekha Mahanta
Basic Electronics	Web	IIT R	Prof. Pramod Agarwal
Broadband Networks: Concepts and Technology	Video	IITB	Prof. Abhay Karandikar
Communication Networks and Switching	Web	IITKgp	Prof. S.L. Maskara
Digital Circuits	Web	IITG	Prof. Anil Mahanta, Prof. Roy Paily Palanthinkal
Digital Circuits and Systems	Video	IITM	Prof. S. Srinivasan
Digital Communication	Web	IITKgp	Prof. R. V. Rajakumar, Prof. Saswat Chakrabarti
Digital Communication	Video	IITB	Prof. Bikash Kumar Dey
Digital Image Processing	Web	IITK	Prof. Sumana Gupta
Digital Image Processing	Video	IITKgp	Prof. P.K. Biswas
Digital Signal Processing	Video	IITD	Prof. S.C. Dutta Roy
Digital Signal Processing	Web	IITK	Prof. Govind Sharma
Digital Systems Design	Video	IITKgp	Prof. D. Roychoudhury
Digital Voice & Picture Communication	Video	IITKgp	Prof. S. Sengupta
Electromagnetic Fields	Web	IITG	Prof. Ratnajit Bhattacharjee
Electronics for Analog Signal Processing - I	Video	IITM	Prof. K. Radhakrishna Rao
Electronics for Analog Signal Processing - II	Video	IITM	Prof. K. Radhakrishna Rao
High Speed Devices and Circuits	Video	IITM	Prof. K.N. Bhat
High Speed Semiconductor Devices	Web	IITK	Prof. Anjan Ghosh
IC Technology	Web	IITG	Prof. Roy Paily Palanthinkal, Prof. Indrajit Chakraborty
Information Theory and Coding	Web	IISc	Prof. Pavan S Nuggehalli
MEMS and Microsystems	Video	IITKgp	Prof. Santiram Kal
Microcontrollers and Applications	Web	IITK	Prof. S. P. Das
Multimedia processing	Web	IITKgp	Prof. Somnath Sengupta
Optical Communication	Web	IITB	Prof. R.K. Shevgaonkar, Prof. D.K. Ghosh
Principles of Communication	Web	IITM	Prof. V. Venkat Rao
Probability and Random Processes	Web	IITG	Prof. Prabin K. Bora
Probability and Random Processes	Video	IITKgp	Prof. Mrityunjoy Chakraborty
Semiconductor Devices	Web	IITD	Prof. G. S. Vishveshwaran
Signals and Systems	Web	IITB	Prof. V.M. Gadre
Solid State Devices	Video	IITM	Prof. S. Karmalkar
Transmission Lines and EM Waves	Web	IITB	Prof. R.K. Shevgaonkar
Transmission Lines and EM Waves	Video	IITB	Prof. R. K. Shevgaonkar
VLSI Circuits	Video	IITM	Prof. S. Srinivasan
VLSI Design	Web	IITB	Prof. A. N. Chandorkar
Wireless Communication	Video	IITD	Prof. Ranjan Bose

## BioTechnology

BioChemistry I	Video	IITKgp	Prof. S. Dasgupta
Enzyme Science and Engineering	Video	IITD	Prof. Subhash Chand

## Electrical Engineering

Analog ICs	Video	IITM	Prof.K.Radhakrishna Rao
Basic Electrical Technology	Web	IITKgp	Prof. G. D. Roy, Prof. N. K. De, Prof. T. K. Bhattacharya
Basic Electrical Technology	Video	IISc	Prof. L. Umanand
Circuit Theory	Video	IITD	Prof. S. C. Dutta Roy
Control Engineering	Web	IITD	Prof. M Gopal
Control Engineering	Video	IITB	Prof. S. D. Agashe
Digital Integrated Circuits	Video	IITM	Prof.Amitava Dasgupta
Electrical Machines I	Web	IITM	Prof. Krishna Vasudevan, Prof. G. Sridhara Rao, Prof. P. Sasidhara Rao
Electrical Machines II	Web	IITM	Prof. Krishna Vasudevan , Prof. G. Sridhara Rao, Prof. P. Sasidhara Rao
Electromagnetic Fields	Video	IITM	Prof. Harishankar Ramachandarn
Embedded Systems	Video	IITD	Prof. Santanu Chaudhary
Embedded Systems	Web	IITKgp	Prof. Amit Patra, Prof. Rajib Mall, Prof. A. Routray
Energy Resources & Technology	Video	IITKgp	Prof. S. Banerjee
High Voltage Engineering	Web	IITK	Prof. Ravindra Arora
Illumination Engineering	Web	IITKgp	Prof. N. K. Kishore
Illumination Engineering	Video	IITKgp	Prof. N. K. Kishore
Industrial Automation and Control	Web	IITKgp	Prof. S. Mukhopadhyay , Prof. S. Sen
Industrial Automation and Control	Video	IITKgp	Prof. S. Mukhopadhyay , Prof. S. Sen
Industrial Drives	Web	IITD	Prof. K. Rajagopal
Industrial Drives - Power Electronics	Video	IISc	Prof. K. Gopakumar
Industrial Instrumentation	Video	IITKgp	Prof. Alok Barua
Industrial Instrumentation	Web	IITM	Prof. V. Jayashankar
Intelligent Systems and Control	Video	IITK	Prof. Laxmidhar Behra
Networks and Systems	Video	IITM	Prof.V.G.K.Murti
Networks Signals and Systems	Video	IITKgp	Prof. T.K.Basu
Non-Conventional Energy Systems	Web	IISc	Prof. L. Umanand
Numerical Analysis	Web	IISc	Prof. Vittal Rao
Power Electronics	Video	IITB	Prof. B. G. Fernandes, Prof. Kishore Chatterjee
Power Electronics	Web	IITKgp	Prof. D. Kastha, Prof. D. Prasad, Prof. N. K. De, Prof. S. Sengupta
Power System Generation, Transmission and Distribution (Encapsulated from earlier Video)	Video	IITD	Prof.D.P.Kothari
Power System Protection	Web	IITB	Prof. S. A. Soman
Power Systems Analysis	Web	IITK	Prof. Arindam Ghosh
Power Systems Analysis	Video	IITKgp	Prof. A. K. Sinha
Power Systems Operation and Control	Web	IITB	Prof. A. M. Kulkarni
Power Systems Operation and Control	Video	IITK	Prof. S. N. Singh

## Ocean Engineering

Performance of Marine Vehicles at Sea	Video	IITKgp	Prof.S. C. Misra, Prof.D.Sen
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## Mechanical Engineering

Advanced Strength of Materials	Video	IITB	Prof. S. K. Maiti
Applied Thermodynamics	Web	IITM	Prof. T. Sundararajan, Prof. U. S. Premananda Shet, Prof. J. M. Mallikarjuna
Basic Thermodynamics	Web	IISc	Prof. K. Srinivasan, Prof. Pradip Dutta
Basic Thermodynamics	Web	IITK	Prof Y.V.C.Rao , Prof G.Biswas
Computational Methods in Design and Manufacturing	Video	IITM	Dr. R. Krishnakumar
Computer Aided Design and Manufacturing I	Web	IITD	Prof. Anoop Chawla
Computer Aided Design and Manufacturing II	Web	IITD	Prof. P. V. Madhusudan Rao
Design of Machine Elements I	Web	IITKgp	Prof. S. K. Roychowdhury, Prof. B. Maiti, Prof. G. Chakraborty
Design of Machine Elements I	Video	IITKgp	Prof. S. K. Roychowdhury, Prof. B. Maiti, Prof. G. Chakraborty
Dynamics of Machines	Web	IITB	Prof. P. Seshu, Prof. K. Kurien Isaac, Prof. C. Amarnath
Dynamics of Machines	Video	IITK	Prof. Amitabha Ghosh
Engineering Mechanics	Web	IITG	Prof. U. S. Dixit
Finite Element Method	Web	IITK	Prof. P. M. Dixit
Finite Element Method	Video	IITK	Prof. C.S.Uppadhay
Fluid Machinery	Web	IITK	Prof. Gautam Biswas, Prof. S. Sarkar, Prof. S. K. Som (IITKgp)
Fluid Mechanics	Web	IITK	Prof. Gautam Biswas, Prof. S. K. Som (IITKgp)
Heat and Mass Transfer	Web	IISc	Prof. Pradip Dutta
Industrial Engineering	Web	IIT R	Prof. Pradeep Kumar, Prof. H. S. Shan, Prof. P. K. Jain
Introduction to Turbulence	Web	IITK	Prof.G.Biswas
Kinematics	Web	IITD	Prof. Sudipto Mukherjee, Prof. A .K. Mallik (IITK)
Kinematics of Machines	Video	IITK	Prof. Ashok K. Mallik
Machine Design II	Web	IITM	Prof. K. Gopinath, Prof. M. M. Mayuram
Manufacturing Processes I	Web	IIT R	Prof. H. S. Shan, Prof. S. R. Gupta, Prof. Pradeep Kumar
Manufacturing Processes II	Web	IITKgp	Prof. A. K. Chattopadhyay, Prof. A. B. Chattopadhyay, Prof. S. Paul
Manufacturing Processes II	Video	IITKgp	Prof. A. K. Chattopadhyay, Prof. A. B. Chattopadhyay, Prof. S. Paul
Materials Science	Web	IISc	Prof. Satish V. Kailas
Materials Selection and Design	Web	IITK	Prof. Bishakh Bhattacharya
Mechanical Measurements and Metrology	Web	IITM	Prof. S. P. Venkateshan, Prof. M. S. Shanmugam
Mechanical Measurements and Metrology	Video	IITM	Prof. S. P. Venkateshan, Prof. M. S. Shanmugam
Mechanical Vibrations	Web	IITG	Prof. Rajiv Tiwari, Prof. S. K. Dwivedy
Principles of Mechanical Measurements	Video	IITM	Prof.R.Raman
Project and Production Management	Web	IITD	Prof. Arun Kanda, Prof. S. G. Deshmukh
Project and Production Management	Video	IITD	Prof. Arun Kanda
Refrigeration and Air Conditioning	Web	IITKgp	Prof. M. Ramgopal
Refrigeration and Air Conditioning	Video	IITKgp	Prof. R. C. Arora, Prof. M. Ramgopal
Robotics	Web	IITB	Prof. C. Amarnath, Prof. B. Seth, Prof. K. Kurien Issac, Prof. P. S. Gandhi, Prof. P. Sen
Robotics	Video	IITB	Prof. C. Amarnath, Prof. B. Seth, Prof. K. Kurien Issac, Prof. P. S. Gandhi, Prof. P. Sen
Strength of Materials	Web	IITM	Prof. M.S. Sivakumar