

## **Invitation for SMEs from associate partner institutions preparing a course under NPTEL**

Criteria for faculty interested in preparing courses under NPTEL:

- PhD from a recognized university with experience in teaching the course for a minimum period of three years- an authorization is required from the institute head.
- Provide course syllabus in the required template. [Click on the template to download](#)
- Nominate five faculty members with at least two from the partner institution (IITs and IISc) for the review of course syllabus. Nominating referees from the host institute of the faculty may be avoided as far as possible.

Kindly submit an authorisation letter from the Head of the institute permitting your participation, complete the syllabus template along with contact details of five referees (Name, Department, Institute, email id and phone no) to [mangal@iitm.ac.in](mailto:mangal@iitm.ac.in). A copy may be marked to [npTEL@iitm.ac.in](mailto:npTEL@iitm.ac.in)

Final approval will be subject to NPTEL-PIC's recommendations.

Detailed terms and conditions can be obtained by sending a mail to [npTEL@iitm.ac.in](mailto:npTEL@iitm.ac.in)

Choose course(s) only from the list provided here:

<b>DisciplineName</b>	<b>SubjectName</b>
Aerospace Engineering	Advanced CFD
Aerospace Engineering	Aero acoustics
Aerospace Engineering	Aerodynamics -Low Speed
Aerospace Engineering	Aerospace Structural Dynamics
Aerospace Engineering	Aerospace Structures
Aerospace Engineering	Air transportation
Aerospace Engineering	Aircraft Control Theory
Aerospace Engineering	Avionics
Aerospace Engineering	Experimental Stress Analysis
Aerospace Engineering	FEM
Aerospace Engineering	Fluid Mechanics / Introduction to A/D
Aerospace Engineering	Fracture mechanics

Aerospace Engineering	Helicopter A/D
Aerospace Engineering	Hydrodynamic stability
Aerospace Engineering	Introduction to AE
Aerospace Engineering	Particle methods for fluid flow
Aerospace Engineering	Plates and shells
Aerospace Engineering	Reactive flow
Aerospace Engineering	Smart structures
Aerospace Engineering	Spaceflight navigation and guidance
Aerospace Engineering	Turbulence
Architecture	Theory Of Architectural Design
Biotechnology	Analytical Biochemistry
Biotechnology	Animal Biotechnology
Biotechnology	Biochemistry
Biotechnology	Bioinformatics
Biotechnology	Biological Thermodynamics and Kinetics
Biotechnology	Environment Biotechnology
Biotechnology	Enzyme Engineering & Technology
Biotechnology	Genetic Engineering
Biotechnology	Genetics
Biotechnology	Human Physiology
Biotechnology	Instrumental methods in Biotechnology
Biotechnology	Metabolic Engineering
Biotechnology	Metabolism and Bioenergetics
Biotechnology	Microb Technology
Biotechnology	Molecular Immunology
Biotechnology	Structural Biology
Biotechnology	Vaccine development and Products
Chemical Engineering	Membrane Separation Processes
Chemical Engineering	Process Modelling and Simulation
Chemistry and Biochemistry	Bio-inorganic chemistry
Chemistry and Biochemistry	Introductory Organic chemistry
Chemistry and Biochemistry	Macromolecular Crystallography
Chemistry and Biochemistry	Science and technology of MEMS/NEMS
Chemistry and Biochemistry	Solid State Chemistry
Civil Engineering	Advanced Geotechnical Engineering
Civil Engineering	Engineering Fluid Mechanics
Civil Engineering	Engineering Mechanics
Civil Engineering	Fundamentals of Environmental Geotechnology
Civil Engineering	Hydraulics Of Open And Closed Conduit Flow
Computer Science and Engineering	ANN
Computer Science and Engineering	Compilers
Computer Science and Engineering	Data Warehousing And Data Mining
Computer Science and Engineering	Digital Video Processing
Computer Science and Engineering	Introduction to programming (C++)
Computer Science and Engineering	Knowledge Representation
Computer Science and Engineering	Machine Learning
Computer Science and Engineering	MCCS (MFCS)

Computer Science and Engineering	Mobile Adhoc Computing
Computer Science and Engineering	OS
Computer Science and Engineering	Percolation Th
Computer Science and Engineering	Problem Solving and Programming in C
Computer Science and Engineering	System Level Modeling and Design
Electronics & Communication Engineering	Basics of VLSI
Electronics & Communication Engineering	Digital Communications
Electronics & Communication Engineering	Microwave Theory and Techniques
Electronics & Communication Engineering	VLSI Design
Electronics & Communication Engineering	Wireless Networks
Engineering Design	Design Methodology
Engineering Design	Design Theory
Engineering Design	New product Design (NPD) and Design intelligence systems
Humanities and Social Sciences	Contemporary World History
Humanities and Social Sciences	Foundations of Social Thought
Humanities and Social Sciences	History of Economic Thought
Humanities and Social Sciences	Human Development
Humanities and Social Sciences	Indian Economy
Humanities and Social Sciences	Indian Literature
Humanities and Social Sciences	Introduction to Environment and Development
Humanities and Social Sciences	Introduction to International Relations
Humanities and Social Sciences	Introduction to Philosophy
Humanities and Social Sciences	Modern Indian History
Humanities and Social Sciences	Organizational behavior
Humanities and Social Sciences	Psychopathology
Humanities and Social Sciences	Quantitative Techniques
Humanities and Social Sciences	Social Movements
Humanities and Social Sciences	Urbanization and Development Studies
Management	Derivatives
Management	Entrepreneurship and Management of Small & Medium Enterprises
Management	Financial Engineering
Management	Financial Modelling
Management	Infrastructure Project Systems Management
Management	Intellectual Property Rights
Management	Management Information and Decision Support Systems
Management	Management of Risk in Financial Systems
Management	Productivity, Safety and Quality Management
Management	Research Methodology
Management	Valuation & Real Options
Mathematics	Abstract Algebra II
Mathematics	Advanced Engineering Mathematics
Mathematics	Algebraic Topology
Mathematics	C.F.D
Mathematics	Combinatorics
Mathematics	Continuum Mechanics

Mathematics	Cryptography
Mathematics	Diff. Geometry
Mathematics	Formal Languages and Automata
Mathematics	Fourier Analysis
Mathematics	Information and Coding Theory
Mathematics	Introduction to Probability
Mathematics	Measure Theory
Mathematics	Nonlinear Programming
Mathematics	Number Theory
Mathematics	ODE and Applications
Mathematics	Operator Theory
Mathematics	PDE and Applications
Mathematics	Real Analysis II
Mathematics	Regression Analysis
Mathematics	Representation Theory of Finite Groups
Mechanical Engineering	A/C Steam Turbines
Mechanical Engineering	Advanced Machining Processes
Mechanical Engineering	Automation
Mechanical Engineering	Automobile Engineering
Mechanical Engineering	Boiler Technology
Mechanical Engineering	Computing techniques in Applied Mechanics
Mechanical Engineering	Continuum Mechanics
Mechanical Engineering	Design of Pressure Vessel Piping
Mechanical Engineering	Engineering Plasticity
Mechanical Engineering	Fluid Power Automation
Mechanical Engineering	Fracture Mechanics
Mechanical Engineering	Fuels and Combustion
Mechanical Engineering	Gas & Steam turbines
Mechanical Engineering	Heat exchange design
Mechanical Engineering	Human Body Mechanics
Mechanical Engineering	I C Engine Design
Mechanical Engineering	Image Process in Manufacturing
Mechanical Engineering	Intro to Turbulance
Mechanical Engineering	Mechatronics
Mechanical Engineering	Metal Cutting
Mechanical Engineering	Metrology
Mechanical Engineering	Micro fluids and microcode heat transfer
Mechanical Engineering	Precision Engineering
Mechanical Engineering	Rotating Machinery - Dynamics, fault diagnostics and condition monitoring
Mechanical Engineering	soft Computing
Mechanical Engineering	Theory of Elasticity
Mechanical Engineering	Therory of Plates and Shells
Mechanical Engineering	Tool Design
Mechanical Engineering	Turbomachinery and Gas Dynamics
Metallurgy and Material Science	Computational Approach to Materials Science and Engineering
Metallurgy and Material Science	Dislocation Theory

Metallurgy and Material Science	Impact of Materials and Processing on Environment
Metallurgy and Material Science	Iron Making
Metallurgy and Material Science	Kinetics of Processes
Metallurgy and Material Science	Manufacturing Process - II
Metallurgy and Material Science	Manufacturing Process - I
Metallurgy and Material Science	Materials Selection and Design
Metallurgy and Material Science	Nano and Micro Composites
Metallurgy and Material Science	Nonferrous Extraction
Metallurgy and Material Science	Particulate Technology
Metallurgy and Material Science	Phase Equilibria
Metallurgy and Material Science	Process Modeling and Simulation
Metallurgy and Material Science	Semiconductor Materials and Devices
Metallurgy and Material Science	Thermodynamics of Materials
Nanotechnology	Environmental and health issues of nanotechnology
Nanotechnology	Modeling and simulation of nanomaterials
Nanotechnology	Natural products
Nanotechnology	Physics and application of semi-conductor nanostructures (semiconductor nano devices)
Ocean Engineering	Materials for ships and offshore structures
Ocean Engineering	Reservoir Engineering
Physics	Electro Dynamics
Physics	Optics
Textile Engineering	Chemistry and Practice of Textile finishing
Textile Engineering	Fabric Manufacture - I
Textile Engineering	High Performance and Specialty Fibres
Textile Engineering	Manufactured Fibre Technology
Textile Engineering	Mechanics of Textile Machinery
Textile Engineering	Nonwoven Technology
Textile Engineering	Pretreatment Processing of Textiles
Textile Engineering	Statistical Quality Control in Textiles
Textile Engineering	Structure and Properties of Fibres
Textile Engineering	Textile Fibres
Textile Engineering	Yarn Manufacture - I
Textile Engineering	Yarn Manufacture - II