

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Aerospace Engineering - Turbomachinery Aerodynamics

Subject Co-ordinator - Prof. Bhaskar Roy, Prof. A M Pradeep

Co-ordinating Institute - IIT - Bombay

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction to Turbo machines Syllabus, References and Schedules
- Lecture 2 - Axial Flow Compressors and Fans
- Lecture 3 - A two dimensional analytical model
- Lecture 4 - 2D losses in Axial flow Compressor Stage
- Lecture 5 - Tutorial 1
- Lecture 6 - 3D Flows in Blade Passages, Secondary Flows, Tip leakage Flow, Scrubbling
- Lecture 7 - Three Dimensional Flow Analysis
- Lecture 8 - Classical Blade Design Laws
- Lecture 9 - Three Dimensional Flow Analysis in Axial Flow Compressor
- Lecture 10 - Tutorial 2
- Lecture 11 - Axial Compressor Characteristics
- Lecture 12 - Instability in Axial Compressors
- Lecture 13 - Inlet Distortion and Rotating Stall, Control of Instability
- Lecture 14 - Transonic Compressors and Shock Structure Models, Transonic Compressor Characteristics
- Lecture 15 - Axial Flow Compressor Design, Inter Spool Duct
- Lecture 16 - Design of Compressor Blades, Aerofoil Design (Subsonic, Transonic, Supersonic Profiles)
- Lecture 17 - Design of Compressor Blade
- Lecture 18 - Noise Problem in Axial Compressors and Fans
- Lecture 19 - Axial Flow Turbines
- Lecture 20 - Axial Flow Turbines
- Lecture 21 - Axial Flow Turbines
- Lecture 22 - Axial Flow Turbines
- Lecture 23 - Tutorial 3
- Lecture 24 - Multi staging and Multi spooling of Turbine
- Lecture 25 - 3D Flow in Turbine
- Lecture 26 - Tutorial 4
- Lecture 27 - Turbine Blade Cooling â Fundamentals of Heat Transfer, Blade Cooling Requirements
- Lecture 28 - Turbine Blade Cooling Technologies
- Lecture 29 - Turbine Blade Design

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- Lecture 30 - Turbine Blade Design
- Lecture 31 - Centrifugal Compressors
- Lecture 32 - Centrifugal Compressors
- Lecture 33 - Tutorial 5
- Lecture 34 - Design of Centrifugal Compressors
- Lecture 35 - Radial Turbines
- Lecture 36 - Tutorial 6
- Lecture 37 - Radial Turbine Characteristics and Design of Radial Turbines
- Lecture 38 - CFD for Turbomachinery
- Lecture 39 - CFD for Turbomachinery
- Lecture 40 - CFD for Turbomachinery