

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

NPTEL Video Course - Chemical Engineering - Fundamentals of Transport Processes - II

Subject Co-ordinator - Prof. V. Kumaran

Co-ordinating Institute - IISc - Bangalore

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

Lecture 1 - Review of Fundamentals of Transport Processes I

Lecture 2 - Introduction

Lecture 3 - Vectors and Tensors

Lecture 4 - Vector calculus

Lecture 5 - Vector calculus

Lecture 6 - Curvilinear co-ordinates

Lecture 7 - Kinematics

Lecture 8 - Rate of deformation tensor

Lecture 9 - Mass conservation equation

Lecture 10 - Momentum conservation equation

Lecture 11 - Angular momentum conservation equation

Lecture 12 - Boundary conditions

Lecture 13 - Mechanical energy conservation

Lecture 14 - Unidirectional flow

Lecture 15 - Viscous flows

Lecture 16 - Viscous flows

Lecture 17 - Flow around a sphere

Lecture 18 - Force on moving sphere

Lecture 19 - Torque on rotating sphere

Lecture 20 - Effective viscosity of a suspension

Lecture 21 - Flow in a corner

Lecture 22 - Lubrication flow

Lecture 23 - Lubrication flow

Lecture 24 - Inertia of a low Reynolds number

Lecture 25 - Potential flow

Lecture 26 - Potential flow around a sphere

Lecture 27 - Two-dimensional potential flow

Lecture 28 - Two-dimensional potential flow

Lecture 29 - Flow around a cylinder

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

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- Lecture 30 - Conformal transforms in potential flow
- Lecture 31 - Boundary layer theory
- Lecture 32 - Boundary layer past a flat plate
- Lecture 33 - Stagnation point flow
- Lecture 34 - Falkner-Skan Boundary Layer Solutions
- Lecture 35 - Falkner-Skan Boundary Layer Solutions
- Lecture 36 - Vorticity Dynamics
- Lecture 37 - Vorticity Dynamics
- Lecture 38 - Turbulence
- Lecture 39 - Turbulence
- Lecture 40 - Turbulent flow in a channel