

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

NPTEL Video Course - Aerospace Engineering - NOC:Stability and control of aircraft

Subject Co-ordinator - Dr. A.K. Ghosh

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Introduction  
Lecture 2 - Introduction to Static Stability  
Lecture 3 - Stability and Trim  
Lecture 4 - Stability  
Lecture 5 - Stability  
Lecture 6 - Problems  
Lecture 7 - Problems  
Lecture 8 - Neutral Point and Fuselage Contribution Completed  
Lecture 9 - Longitudinal Control Completed  
Lecture 10 - Longitudinal Control (Continued...)  
Lecture 11 - Control  
Lecture 12 - CL\_trim Vs  $\alpha_{trim}$   
Lecture 13 - Neutral Point  
Lecture 14 - Contribution of Engine towards Stability  
Lecture 15 - Revision  
Lecture 16 - Trim  
Lecture 17 - Trim  
Lecture 18 - Maneuvering Point  
Lecture 19 - Numerical  
Lecture 20 - Revision (Lecture20)  
Lecture 21 - Directional Stability  
Lecture 22 - Directional Control  
Lecture 23 - Lateral Stability and Control  
Lecture 24 - Numericals  
Lecture 25 - Lecture - 25 Revision  
Lecture 26 - Stick Free Stability  
Lecture 27 - Stick Free Stability (Continued...)  
Lecture 28 - Hinge Moment and Hinge Moment Derivative  
Lecture 29 - Aircraft Handling Qualities

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- Lecture 30 - Aircraft Handling Qualities (Continued...)
- Lecture 31 - Reversible Control
- Lecture 32 - Numericals
- Lecture 33 - Numericals
- Lecture 34 - Handling Qualities
- Lecture 35 - Determination of Neutral Point and Maneuvering Point by Flight Experiment
- Lecture 36 - Ponit Mass Equation of Motion
- Lecture 37 - Forces and Moments
- Lecture 38 - Aircraft Equations of Motion
- Lecture 39 - Six Degrees of Freedom of an Aircraft
- Lecture 40 - 6 DoF
- Lecture 41 - Vector in a Rotating Frame
- Lecture 42 - Euler Angles
- Lecture 43 - Small Perturbation Theory
- Lecture 44 - Small Perturbation Theory (Continued...)
- Lecture 45 - Perturbed Equations of Motion
- Lecture 46 - Perturbed Force
- Lecture 47 - Perturbed Force
- Lecture 48 - Perturbed Pitching Moment
- Lecture 49 - Longitudinal Dimensional Stability Derivatives
- Lecture 50 - Dynamic Stability
- Lecture 51 - Longitudinal Modes
- Lecture 52 - Short Period and Phugoid Approximations
- Lecture 53 - Pure Pitching Motion
- Lecture 54 - Stability Augmentation System (SAS)
- Lecture 55 - Lateral-Directional Motion
- Lecture 56 - Tutorial - 1
- Lecture 57 - Tutorial - 2
- Lecture 58 - Tutorial - 3
- Lecture 59 - Tutorial - 4
- Lecture 60 - History of Aviation