NPTEL Video Course - Aerospace Engineering - NOC:UAV Design - Part II

Subject Co-ordinator - Prof. Saderla Subrahmanyam

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Introduction to Design Algorithms
Lecture 2 - Thrust Generation and Power Required
Lecture 3 - Lift and Drag for Infinite Wing
Lecture 4 - Lift and Drag for an Infinite Wing (Continued...)
Lecture 5 - Relation between Aerodynamic center and Center of Pressure
Lecture 6 - Aerodynamic Characteristics of Wing
Lecture 7 - Stability and Criteria for Longitudinal Static Stability
Lecture 8 - Numericals
Lecture 9 - Longitudinal Static Stability - Wing Contribution
Lecture 10 - Flight Demonstration of Flat Plate
Lecture 11 - Numericals (Continued...)
Lecture 12 - Example Problems for Wing alone Configuration
Lecture 13 - Wing-Tail Contribution and Neutral Point
Lecture 14 - Example problems of wing and tail combination
Lecture 15 - Example problems of wing and tail combination (Continued...)
Lecture 16 - Flight demonstration of same wing and tail combination
Lecture 17 - Matlab Tutorial
Lecture 18 - Trim Requirements of UAV
Lecture 19 - Example on performance analysis of UAV
Lecture 20 - Weight Estimation and wing Sizing with Example
Lecture 21 - Power Plant Selection with Example
Lecture 22 - Subroutine for takeoff performance (Powerplant selection)
Lecture 23 - Subroutine for Climb Performance (Powerplant Selection)
Lecture 24 - Subroutine for Weight Estimation
Lecture 25 - Subroutine for Planform Geometry Selection
Lecture 26 - Subroutine for Airfoil Selection

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

www.digimat.in