

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

NPTEL Video Course - Mathematics - Advanced Matrix Theory and Linear Algebra for Engineers

Subject Co-ordinator - Prof. Vittal Rao

Co-ordinating Institute - IISc - Bangalore

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

Lecture 1 - Prologue - Part 1  
Lecture 2 - Prologue - Part 2  
Lecture 3 - Prologue - Part 3  
Lecture 4 - Linear Systems - Part 1  
Lecture 5 - Linear Systems - Part 2  
Lecture 6 - Linear Systems - Part 3  
Lecture 7 - Linear Systems - Part 4  
Lecture 8 - Vector Spaces - Part 1  
Lecture 9 - Vector Spaces - Part 2  
Lecture 10 - Linear Independence and Subspaces - Part 1  
Lecture 11 - Linear Independence and Subspaces - Part 2  
Lecture 12 - Linear Independence and Subspaces - Part 3  
Lecture 13 - Linear Independence and Subspaces - Part 4  
Lecture 14 - Basis - Part 1  
Lecture 15 - Basis - Part 2  
Lecture 16 - Basis - Part 3  
Lecture 17 - Linear Transformations - Part 1  
Lecture 18 - Linear Transformations - Part 2  
Lecture 19 - Linear Transformations - Part 3  
Lecture 20 - Linear Transformations - Part 4  
Lecture 21 - Linear Transformations - Part 5  
Lecture 22 - Inner Product and Orthogonality - Part 1  
Lecture 23 - Inner Product and Orthogonality - Part 2  
Lecture 24 - Inner Product and Orthogonality - Part 3  
Lecture 25 - Inner Product and Orthogonality - Part 4  
Lecture 26 - Inner Product and Orthogonality - Part 5  
Lecture 27 - Inner Product and Orthogonality - Part 6  
Lecture 28 - Diagonalization - Part 1  
Lecture 29 - Diagonalization - Part 2

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- Lecture 30 - Diagonalization - Part 3
- Lecture 31 - Diagonalization - Part 4
- Lecture 32 - Hermitian and Symmetric matrices - Part 1
- Lecture 33 - Hermitian and Symmetric matrices - Part 2
- Lecture 34 - Hermitian and Symmetric matrices - Part 3
- Lecture 35 - Hermitian and Symmetric matrices - Part 4
- Lecture 36 - Singular Value Decomposition (SVD) - Part 1
- Lecture 37 - Singular Value Decomposition (SVD) - Part 2
- Lecture 38 - Back To Linear Systems - Part 1
- Lecture 39 - Back To Linear Systems - Part 2
- Lecture 40 - Epilogue