

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

NPTEL Video Course - Chemical Engineering - NOC:Introduction to Evolutionary Dynamics

Subject Co-ordinator - Prof. Supreet Saini

Co-ordinating Institute - IIT - Bombay

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

- Lecture 1 - History of the theory of Natural Selection - 1
- Lecture 2 - History of the theory of Natural Selection - 2
- Lecture 3 - Exponential growth models
- Lecture 4 - Logistic Growth Models - 1
- Lecture 5 - Logistic Growth Models - 2
- Lecture 6 - Modelling selection - 1
- Lecture 7 - Modelling Selection - 2
- Lecture 8 - Modelling Selection - 3
- Lecture 9 - Modelling Mutations - 1
- Lecture 10 - Modelling Mutations - 2
- Lecture 11 - Modelling Mutations - 3
- Lecture 12 - Genetic Code and Sequence Spaces
- Lecture 13 - Sequence Spaces as Networks
- Lecture 14 - Sequence Space to Fitness Landscape
- Lecture 15 - Properties of Fitness Landscapes and Quasi-species
- Lecture 16 - Integrating Reproduction, Selection and Mutation
- Lecture 17 - Obtaining Fitness Landscapes Experimentally
- Lecture 18 - NK Model of Fitness Landscape
- Lecture 19 - Modelling Evolution on Fitness Landscapes - 1
- Lecture 20 - Modelling Evolution on Fitness Landscapes - 2
- Lecture 21 - Modelling Evolution on Fitness Landscapes - 3
- Lecture 22 - Role of Randomness in Evolution
- Lecture 23 - Genetic Drift in Evolution of Microbial Populations
- Lecture 24 - Dynamics of a Moran Process without Selection
- Lecture 25 - Dynamics of a Moran Process without Selection
- Lecture 26 - Evolution, Selection, and Genetic Drift
- Lecture 27 - Representing Microbial Evolution
- Lecture 28 - Estimating Timescales of Evolution
- Lecture 29 - Estimating the Speed of Microbial Evolution

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

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- Lecture 30 - Evolutionary Dynamics when Mutations are Rare
- Lecture 31 - Evolutionary Dynamics when Mutations are Rapid - 1
- Lecture 32 - Evolutionary Dynamics when Mutations are Rapid - 2
- Lecture 33 - Evolutionary Dynamics when Mutations are Rapid - 3
- Lecture 34 - Evolutionary Game Theory - 1
- Lecture 35 - Evolutionary Game Theory - 2
- Lecture 36 - Evolutionary Game Theory - 3
- Lecture 37 - Evolutionary Game Theory - 4
- Lecture 38 - Evolutionary Game Theory Applied to Moran Process
- Lecture 39 - Evolutionary Games During Weak Selection
- Lecture 40 - Evolutionary Dynamics of HIV