Yardi School of Artificial Intelligence, IIT Delhi

Course List

**Bridge Core**

- Principles of Artificial Intelligence
  *May be waived on the recommendations of the program co-ordinator

**Program Core**

- Mathematical Foundations of MINDS or
- Mathematical Foundations of Computer Technology
- Machine Learning
- Data Mining
- Numerical Optimization
- Optimization for Electrical Engineers
- Ethics of MINDS

**Program Electives (Mathematics)**

- Numerical Optimization
- Multivariate Statistics
- Signal Theory
- Detection and Estimation Theory
- Fuzzy Sets and Applications
- Stochastic Processes and Applications
- Introduction to Algebraic topology
- Introduction to Game theory
- Mathematical Analysis in Learning Theory
- Introduction to the Mathematics of Machine Learning

**Program Electives (Learning)**

- Advanced Machine learning
• Deep Learning
• Reinforcement Learning
• Learning Probabilistic Graphical Models
• Stochastic Control and Reinforcement Learning
• Computational Learning Theory and the Mind
• Neural Systems and Learning Machines
• Swarm Intelligence
• Natural Computing
• Special Topics in Machine Learning – I
• Selected Topics in Machine Learning – II
• Special Topics in Machine Learning

Program Electives (Data Science)
• Information Retrieval and Web Search
• Advanced Data Management
• Querying and Mining Graph Data
• Scalable Data Handling for ML
• Special Topics in Data Mining
• Special Topics in Database Systems
• Special Topics in Data Science

Program Electives (AI Applications)
• Natural Language Processing
• Advanced Artificial Intelligence
• Advanced Functional Brain Imaging
• Statistical Signal Processing
• Computer Vision
• Embedded Intelligence
• Machine Learning for Computational Finance
• Computational Neuroscience
• Computational Linguistics
M.Tech Project

- M.Tech. Project Part I
- M.Tech. Project Part II