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 or
- (Introduction to Machine Learning)+ (ML Lab - I)
- Data Mining
- Signal Theory
- Numerical Optimization OR
- Numerical Optimization OR
- Optimization for Electrical Engineers
- Machine Learning

Program Electives (Mathematics)

- Numerical Optimization
- Multivariate Statistics
- Signal Theory
- Detection and Estimation Theory
- Numerical Optimization
- 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
- Computer Vision
- Embedded Intelligence
- Machine Learning for Computational Finance
- Computational Neuroscience
- Computational Linguistics