M.Tech. (AI) – Curriculum

The curriculum of the two-year M.Tech. (AI) program comprises a total of 64 credits of which 43 credits account for course work and 21 credits for project work. The course work is organized into:
- Pool A Courses (19 Credits) (Hardcore)
- Pool B Courses (Minimum 12 Credits) (Softcore)
- Recommended Electives (up to 12 Credits)

Pool A Courses: 19 credits

E0 251   3:1   Data Structures and Algorithms

E1 222   3:0   Stochastic Models and Applications **OR** E2 202 Random Processes

E1 2XX   3:1   Computational Linear Algebra

E0 230   3:1   Computational Methods of Optimization

E1 213   3:1   Pattern Recognition and Neural Networks **OR** E0270   3:1 Machine Learning

Pool B Courses: (Minimum of 12 Credits)

E1 277   3:1   Reinforcement Learning

E1 216   3:1   Computer Vision

E9 241   2:1   Digital Image Processing

E9 261   3:1   Speech Information Processing

E1 254   3:1   Game Theory

E1 241   3:0   Dynamics of Linear Systems

E0 259   3:1   Data Analytics

E2 231   3:0   Topics in Statistical Methods

E9 206   3:0   Digital Video: Perception and Algorithms

Project : 21 Credits

E1 299   0:21   Dissertation Project

Recommended Electives: Upto 12 Credits

(In addition to the courses listed below, Pool B courses can also be taken as recommended electives. Courses not listed here can be taken as well with the approval of the faculty advisor).

E0 265   3:1   Convex Optimization and Applications

E0 334   3:1   Deep Learning for Natural Language Processing

E0 268   3:1   Practical Data Science

DS 256   3:1   Scalable Systems for Data Science

E9 205   3:1   Machine Learning for Signal Processing

DS 222   3:1   Machine Learning with Large Data sets

DS 265   3:1   Deep Learning for Computer Vision

E0 306   3:1   Deep Learning: Theory and Practice

E0 249   3:1   Approximation Algorithms

E0 235   3:1   Cryptography

E0 238   3:1   Intelligent Agents

E2 201   3:0   Information Theory

E1 245   3:0   Online Prediction and Learning

E2 336   3:0   Foundations of Machine Learning

E2 207   3:0   Concentration Inequalities

E1 244   3:0   Detection and Estimation Theory

E1 396   3:0   Topics in Stochastic Approximation Algorithms

E2 230   3:0   Network Science and Modelling

E1 246   3:1   Natural Language Understanding

E9 253   3:0   Neural Networks and Learning Systems