Tentative Course Structure for Executive M. Tech. AI

Credit Distribution		
1	Program Core	18 credits
2	Program Electives	18 credits
3	Open Electives	6 credits
4	Project	16 credits
5	Non-graded	4 credits
	Total	62 credits

List of Compulsory Courses

1. Bridge Course on DSA
2. Optimization for Data Science (2 credit)
3. Artificial Intelligence (3 credit)
4. Advanced Data Structures and Algorithms (2 credit)
5. Machine Learning (3 credit)
6. ML-Ops (1 credit)
7. Deep Learning (3 credit)
8. DL-Ops (1 credit)
9. Core Bucket (Advanced Artificial Intelligence / Autonomous Systems) (3 credit)
10. Technical Communication (Non-graded) (1 credit)
11. Ethics and Professional Life (Non-graded) (1 credit)
12. System Engineering and Project Management (Non-graded) (1 credit)
13. Intellectual Property (Non-graded) (1 credit)
14. Major project (16 credit)

List of Elective Courses

Please refer to the list below for the elective courses which may be offered by IIT Jodhpur. A total 6 program electives (18 credits) and 2 open electives need to be completed.

Courses offered by Department of Computer Science and Engineering	
Animation Advanced Artificial Intelligence Advanced Computer Graphics Advanced ML Advanced Biometrics Advancements in Computer Vision Advanced Human-Machine Interaction Algorithms for Big Data Bio-image computing Bioimaging Blockchain Cryptography Computer Graphics Computer Vision Computational Learning Theory Computer Architecture Crowd-sourcing and Human Computing Data Visualization Dependable AI Digital Image Analysis Edge and Fog Computing Ethics, Policy, Law and Regulation in AI Embedded Systems GPU Programming Graph Theory and Applications Graph Theoretic Algorithms	Health Informatics Information Retrieval Introduction to AR and VR Machine Learning with Big Data Medical Image Analysis Natural Language Processing Neuromorphic Computing and Design Principles of Biological Vision Autonomous Systems Reliability Engineering and Life Testing Resource Constrained Artificial Intelligence Scalable Machine Learning Selected Topics in AI - I/II/III Selected Topics in CS - I/II/III Selected Topics in ML - 1/2/3 Social Network Analysis Social Networks (700) Software and Data Engineering Security and its Applications Speech Understanding Stream Analytics Vehicular Ad-hoc Networks Visual Perception Virtualization and Cloud Computing Advanced Data Structures and Algorithms (Fractal 3)

Courses offered by Department of Electrical Engineering	
Adaptive Signal Processing Advanced Digital Signal Processing Compressive Sensing Computational Imaging Digital Signal Processing and Applications Data Compression Cyber Physical System Modelling and Simulation lab	Digital Video Processing Introduction to Haptics Introduction to Cyber-Physical Systems Machine Learning for Communication Introduction to Smart Grid Speech and Audio Signal Processing Statistical Decision Theory Wavelets
Courses offered by Department of Mechanical Engineering	
Robotics	Planning and Decision Making for Robots
Courses offered by Department of Bioscience and Bioengineering	
Bioinformatics	Computational Biology
Courses offered by Department of Mathematics	
Advanced Topics in Computational PDE AI for Finance	Linear Algebra with Data Linear Algebra for Data Science

Computational finance Computational Game Theory Evolutionary Optimization Data Engineering Introduction to Data Science	Statistics for Data Science Stochastic Processes Mathematical modeling and simulations Markov Models Time Series Analysis
Courses offered by Department of Physics	
Quantum Information Processing	Quantum Cryptography and Coding
Courses offered by IDRP Digital Humanities	
Analysis of Social Media Networks Human Factors in Interaction Design Digital Methods and Tools	Fundamentals of Digital Humanities: Fractal - 2 (Data and Knowledge representations)
Courses offered by School of AIDE	
Cognitive Architectures Introduction to Financial Engineering Computational Neuroscience Connectomics Computational Cognition & Behavior Modelling	Differential Geometry Introduction to Game Theory Machine Learning for Epidemiology Nonlinear Dynamics and Chaos Optimization in ML Special Topics in Data Science - 1/2/3
Courses offered by School of Management and Entrepreneurship	
AI for Risk Analysis	Risk Management Analytics Stochastic Modelling