i^2 Data Sciences (Semesters 5 – 10)

Core – Mathematics
Mathematical Statistics
Scientific Computing
Optimization Techniques
Discrete Mathematics
Statistical Modelling
Stochastic Processes

Core – Data Science
Machine Learning – 1
Data Science Lab – 1
Machine Learning – 2
Data Science Lab – 2
Data Warehousing and Business Intelligence
Artificial Intelligence
Data Analysis and Visualization
Big Data Analytics

Core – Computer Science
Advanced Data Structures
Computer Organization and Operating System
Design and Analysis of Algorithms
Database Management System
Parallel and Distributed Computing

Electives – Thematic
Data Science in Chemistry
Quantum Information Theory
Internet of Things and Cloud Computing
Big Data in Ecology and Environmental Sciences
Text Mining and Natural Language Processing
Clinical Data Analysis
Bioinformatics
Probabilistic Machine Learning
Statistical Simulation and Computation
Data Science for Finance
Machine Learning for Material Science
Particle Physics Data Processing
Data science in Chemistry
Computer Vision

Electives - Open
Systems Biology
Advanced Genetics and Genomics
Computational Fluid Dynamics
Computational Chemical Biology
Modelling Materials

General Courses
Communication Skills + Technical Writing
Intellectual Property Rights
Languages
Economics
Psychology

Research
Full time research project + project management, presentation and entrepreneurial skills.

Research Internships