

B.S in Data Science and Artificial Intelligence

Category	Code
Course Component-Foundation	CCF
Course Component- Management	CCM
Course Component - Electives	CCE

Course Curriculum for Semester-1

SL No.	Course Name	Course Category	Course code
1	Statistics-I	Foundation	CCF
2	Mathematics-I	Foundation	CCF
3	Fundamentals of Programming-I	Foundation	CCF
4	Programming Lab-I	Foundation	CCF
5	Basic Data Modelling using Excel	Foundation	CCF
6	Introduction to Data Science and AI	Foundation	CCF
7	Introduction to Philosophy	Management	CCM
8	Yoga	Management	CCM
9	Business Communication I	Management	CCM
10	Micro Economics	Management	CCM

Course Curriculum for Semester-2

SL No.	Course Name	Course Category	Course code
1	Statistics-II	Foundation	CCF
2	Mathematics-II	Foundation	CCF
3	Fundamentals of Programming-II	Foundation	CCF
4	Programming Lab-II	Foundation	CCF
5	Data Structures	Foundation	CCF
6	Foundations of Computing (Infrastructure, OS, Networks)	Foundation	CCF
7	Foundations of Machine Learning	Foundation	CCF
8	Macro Economics	Management	CCM
9	Operations Research	Management	CCM
10	Business Communication II	Management	CCM



Course Curriculum for Semester-3

SL No.	Course Name	Course Category	Course code
1	Statistics-III	Foundation	CCF
2	Mathematics-III	Foundation	CCF
3	Object Oriented Programming	Foundation	CCF
4	Design and Analysis of Algorithms	Foundation	CCF
5	Database Management Systems	Foundation	CCF
6	Fundamentals of Deep Learning and Computer Vision	Foundation	CCF
7	AI Lab	Foundation	CCF
8	Principles of Management	Management	CCM
9	Operations Management	Management	CCM
10	Principles of Marketing	Management	CCM



Course Curriculum for Semester-4

SL No.	Course Name	Course Category	Course code
1	Data Warehousing and Data Mining	Foundation	CCF
2	Text Mining and NLP	Foundation	CCF
3	Data Visualization	Foundation	CCF
4	Predictive Analytics	Foundation	CCF
5	Artificial Neural Networks	Foundation	CCF
6	Cloud Computing	Foundation	CCF
7	Foundations of Information Systems	Foundation	CCF
8	Financial Accounting and Financial Management	Management	CCM
9	Introduction to Philosophy	Management	CCM
10	Simulation Lab	Management	CCM



Course Curriculum for Semester-5

SL No.	Course Name	Course Category	Course code
1	Prescriptive Analytics	Foundation	CCF
2	E-Commerce and Recommender Systems	Foundation	CCF
3	Foundations of Blockchain	Foundation	CCF
4	Fundamentals of Quantum Computing	Foundation	CCF
5	Generative AI and Large Language Models	Foundation	CCF
6	Strategic Management	Management	CCM
7	Human Resource Management	Management	CCM
8	Business Sustainability	Management	CCM
9	Critical and Design Thinking	Management	CCM
10	Econometrics	Management	CCM



Course Curriculum for Semester-6

SL No.	Course Name	Course Category	Course code
1	Social Media and Social Network Analytics	Foundation	CCF
2	Ethical and Responsible AI	Foundation	CCF
3	Big Data Analytics	Foundation	CCF
4	Introduction to Agentic AI	Foundation	CCF
5	Leveraging Value from AI	Management	CCM
6	Supply Chain Management	Management	CCM
7	Business Research Methods	Management	CCM
8	Innovation and Entrepreneurship Lab	Management	CCM
9	Capstone: Integrative Management Project	Management	CCM
10	Managing AI Projects	Management	CCM



Course Curriculum for Semester-7

SL No.	Course Name (Electives Tentative List)	Course Category
1	Operations Analytics	Electives
2	Security Analysis & Portfolio Management	Electives
3	Data Preprocessing & Feature Engineering	Electives
4	Banking and Financial Service	Electives
5	Augmented and Virtual Reality	Electives
6	HR Analytics	Electives
7	Supply Chain Analytics	Electives
8	Revenue & Pricing Analytics	Electives
9	Emerging Technology in Human Resource Management	Electives
10	Advanced Econometrics	Electives
11	Strategy in the era of Big Data	Electives
12	Emerging trends of Analytics and AI in Public Policy	Electives
13	IoT Applications	Electives
14	Pervasive Computing	Electives
15	Information and Cyber Security	Electives
16	Introduction to Digital Twin	Electives

Course Curriculum for Semester-8

SL No.	Course Name
1	Honor's Thesis

