

Curriculum Version 1.00
Master of Science (Data Science)
 (For AY2026-27 onwards)

Credit distribution among baskets (Minimum Credits to be earned = 80)		
Sl. No.	Baskets	Credit Contribution
1	School Core	17
2	Program Core	30
3	Discipline Elective	27
	Common Electives Basket	15
	Specialized Elective Baskets*	12
4	Open Elective	6
TOTAL CREDITS		80

Specialized Elective Baskets*		
Sl.No.	Name of the Basket	Minimum Credit Requirement
1	Artificial Intelligence and Machine Learning	3
2	Cloud Computing	3
3	Data Analytics	3
4	Applied Data Solutions	3
Total*		12

** Remaining Credits, if any, to satisfy Specialized Elective Baskets credit requirement can be taken from any Specialized Elective Basket*

Sl. No.	Course Code	Course Name	T	P	Credits
A. School Core - Minimum Credits to be earned from this basket (A+B+C) =					17
1	CSE5129	Computer Science Fundamentals (Bridge Course) [#]	3	0	3
2	MAT5009	Applied Statistics Using R	2	2	3
3	ENG5004	Technical Proficiency and Career Building	0	2	1
4	CSE6004	Research Paper	0	0	2
5	CSE6002	M.Sc. Dissertation	0	0	4
6	CSE6006	Corporateship	0	0	3
B. Foreign Languages Basket - Min. credits to be earned from this basket =					1
1	FRE1002	Communicative French	0	2	1
2	GER1002	Communicative German	0	2	1
C. Soft Skills Basket (All Courses in this basket are mandatory) - Minimum Credits =					3
1	SSK2002	Being Corporate Ready	0	2	1
2	CSE3050	Programming Skills for Employment	0	2	1
3	SSK3001	Problem Solving through Aptitude	0	2	1
D. Program Core - Minimum Credits to be earned from this basket =					30
1	MAT5007	Mathematics for Data Science	3	2	4
2	CSE5010	Advanced Python	0	4	2
3	CSE5006	Relational Database	2	2	3
4	CSE5046	Data Handling and Visualization	2	2	3
5	CSE5050	Artificial Intelligence and Machine Learning	2	2	3
6	CSE5016	Data Mining and Predictive Modelling	3	0	3
7	CSE5045	Data Analytics using Python	2	2	3
8	CSE5051	Big Data Analytics and Business Intelligence	2	2	3
9	CSE5020	Natural Language Processing Techniques	3	0	3
10	MAT5004	Multivariate Methods	2	2	3
E. Discipline Electives - Minimum Credits to be earned from both Common and Specialized electives baskets (F+G) =					27
F. Common Electives Basket - Minimum Credits to be earned from this basket =					15
1	CSE5031	Optimization Techniques	2	2	3
2	CSE5037	Reinforcement Learning	3	0	3
3	CSE5083	Graph Data Analytics and Representation Learning	2	2	3
4	CSE5061	Soft Computing	2	2	3
5	MAT5006	Time Series Analysis	2	2	3
6	CSE5067	Advanced Data Structures and Algorithms	2	2	3
7	CSE5048	Data Analytics Using R	2	2	3
8	CSE5032	Digital Image Processing	3	0	3
9	CSE5029	Advanced Machine Learning	2	2	3
10	MAT5003	Probability and Distribution	2	2	3
11	CSE5066	Research Methodologies	3	0	3
12	CSE5100	Data Security and Differential Privacy	2	2	3
13	CSE5098	Computer Vision	2	2	3
14	CSE5042	Blockchain Technology and Applications	3	0	3
G. Specialized Electives Baskets - Minimum Credits to be earned from these baskets (H+I+J+K) =					12
H. Artificial Intelligence and Machine Learning Basket - Minimum Credits to be earned from this basket =					3
1	CSE5019	Deep Learning Techniques	2	2	3
2	CSE5022	Image Processing for Artificial Intelligence	2	2	3

3	CSE5063	Cognitive Modelling	3	0	3
4	CSE5038	AI Generative Models	2	2	3
5	CSE5036	Social Network Analysis	3	0	3
I. Cloud Computing Basket - Minimum Credits to be earned from this basket =					3
1	CSE5052	Data Center Operations and Management	3	0	3
2	CSE5053	Cloud Infrastructure, Services and APIs	2	2	3
3	CSE5035	Cloud Computing and Virtualization	3	0	3
4	CSE5034	DevOps Orchestration	2	2	3
5	CSE5055	Cloud Security	3	0	3
6	CSE5056	Cloud Database Management System	3	0	3
7	CSE5057	Edge Computing	3	0	3
J. Data Analytics Basket - Minimum Credits to be earned from this basket =					3
1	CSE5047	Analytics for Social Media	2	2	3
2	CSE5080	Quantitative Text Analysis	2	2	3
3	CSE5081	Computational Data Science	3	0	3
4	MAT5008	Bayesian Data Analysis	3	0	3
K. Applied Data Solutions Basket - Minimum Credits to be earned from this basket =					3
1	MGT5103	Finance and Marketing Analytics	2	2	3
2	CSE5101	Social Media and Web Analytics	2	2	3
3	CSE5102	Data-driven Security Analytics	2	2	3
4	CSE5103	Geospatial Analytics	2	2	3
5	CSE5104	Healthcare Analytics	2	2	3
6	CSE5105	Legal Text Analytics	2	2	3
7	CSE5106	Smart City Data Analytics	2	2	3
Open Elective basket - Minimum Credits to be earned from this basket =					6
Any course from another 'eligible' curriculum					
Any unused Discipline Elective from his/ her 'own' curriculum					
Any stand-alone course declared as "Open Elective" by School for a specific 'eligible' degree program					
School approved NPTEL/ Swayam courses for a maximum of 3-credits					
#	For non-CS background UG students admitted to PG programs; Credits and grades obtained in a bridge course are counted for the CGPA calculation, but the credits will not be counted towards the minimum credit requirement for the completion of the program.				