MSc in Data Science and Machine Learning (MDSML)
COURSE LIST for AY2025 & AY2026 Intake

Course Code and Title		No. of Units	Remarks[#]
Core Courses - Students must complete five core courses (total 20units)			
DSA5101	Introduction to Big Data for Industry	4	
DSA5103	Optimization Algorithms for Data Modelling	4	
DSA5104	Principles of Data Management and Retrieval	4	
DSA5105	Principles of Machine Learning	4	
DSA5106	Deep Learning: Foundations and Techniques	4	
Elective Courses - Students are required to complete five courses from the following list (total 20units)			
Courses offered by the Department of Mathematics			
DSA5201	DSML Industry Consulting and Applications Project	4	
DSA5202	Advanced Topics in Machine Learning	4	
DSA5203	Visual Data Processing and Interpretation *(TGS-2020502798)*	4	SSG subsidised
DSA5205	Data Science in Quantitative Finance	4	
DSA5206	Advanced Topics in Data Science	4	
DSA5207	Text Processing & Interpretation with Machine Learning	4	
DSA5208	Scalable Distributed Computing for Data Science	4	
DSA5209	Stochastic Methods and Inferences for Big Data	4	
DSA5210	AI for Mathematics NEW	4	
MA4230	Matrix Computation	4	
MA5232	Modelling and Numerical Simulations	4	
MA5270	Game Theory and Applications	4	
QF5204	Numerical Methods in Quantitative Finance	4	
Courses offered by other departments			
CS4248	Natural Language Processing *(TGS-2021008669)*	4	SSG subsidised
CS5224	Cloud Computing	4	
CS5228	Knowledge Discovery and Data Mining	4	
CS5344	Big-Data Analytics Technology *(TGS-2021008668)*	4	SSG subsidised
ST5201	Statistical Foundations of Data Science	4	
ST5202	Applied Regression Analysis	4	
ST5225	Statistical Analysis of Networks *(TGS-2020507587)*	4	SSG subsidised

[#]SSG funding for courses is limited in duration and subject to availability. Students are advised to plan their finances based on the full unsubsidised programme fees, unless otherwise confirmed by the University in writing.

NOTE:

a) **Enrollment in the courses from other departments will be subjected to the specific quotas from the corresponding department.**

b) **As the course list could be updated from time to time, please check back on a regular basis to ensure that you are referring to the most updated version.**

Updated on 2 July 2026