

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	4	
DSA5103	4	
DSA5104	4	
DSA5105	4	
DSA5106	4	
Elective Courses - Students are required to complete five courses from the following list (total 20units)		
<u>Courses offered by the Department of Mathematics</u>		
DSA5201	4	
DSA5202	4	
DSA5203	4	SSG subsidised
DSA5205	4	
DSA5206	4	
DSA5207	4	
DSA5208	4	
DSA5209	4	
DSA5210	4	
MA4230	4	
MA5232	4	
MA5270	4	
QF5204	4	
<u>Courses offered by other departments</u>		
CS4248	4	SSG subsidised
CS5224	4	
CS5228	4	
CS5344	4	SSG subsidised
ST5201	4	
ST5202	4	
ST5225	4	SSG subsidised

[#]SSG funding for courses is limited in duration and subject to availability.

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.

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COURSE LIST for AY2024 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	
DSA5201	DSML Industry Consulting and Applications Project	4	
Elective Courses - Students are required to complete five courses from the following list (total 20units)			
<u>Courses offered by the Department of Mathematics</u>			
DSA5202	Advanced Topics in Machine Learning	4	
DSA5203	Visual Data Processing and Interpretation (TGS-2020502798)	4	SSG subsidised
DSA5204	Deep Learning and Applications (TGS-2020502799)	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	
MA4235	Topics in Graph Theory	4	
MA5232	Modelling and Numerical Simulations	4	
MA5270	Game Theory and Applications	4	
QF5204	Numerical Methods in Quantitative Finance	4	
<u>Courses offered by other departments</u>			
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

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COURSE LIST for AY2022 & AY2023 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	
DSA5201	DSML Industry Consulting and Applications Project	4	
Elective Courses - Students are required to complete five courses from the following list (total 20units)			
<u>Courses offered by the Department of Mathematics</u>			
DSA5202	Advanced Topics in Machine Learning	4	
DSA5203	Visual Data Processing and Interpretation (TGS-2020502798)	4	SSG subsidised
DSA5204	Deep Learning and Applications (TGS-2020502799)	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	
DSE4212	Data Science in FinTech	4	
MA4230	Matrix Computation	4	
MA4235	Topics in Graph Theory	4	
MA5232	Modelling and Numerical Simulations	4	
QF5204	Numerical Methods in Quantitative Finance	4	
<u>Courses offered by other departments**</u>			
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
SPH5104	Analytics for Better Health (TGS-2020507482)	4	SSG subsidised
SPH5411	Information Technology in Healthcare (TGS-2024047638)	4	SSG subsidised

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