

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	SSG subsidised
DSA5203	4	SSG subsidised
DSA5205	4	SSG subsidised
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.

MSc in Data Science and Machine Learning (MDSML)

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	SSG subsidised
DSA5203	Visual Data Processing and Interpretation	4	SSG subsidised
DSA5204	Deep Learning and Applications	4	SSG subsidised
DSA5205	Data Science in Quantitative Finance	4	SSG subsidised
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	4	SSG subsidised
CS5224	Cloud Computing	4	
CS5228	Knowledge Discovery and Data Mining	4	
CS5344	Big-Data Analytics Technology	4	SSG subsidised
ST5201	Statistical Foundations of Data Science	4	
ST5202	Applied Regression Analysis	4	
ST5225	Statistical Analysis of Networks	4	SSG subsidised

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MSc in Data Science and Machine Learning (MDSML)

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	4	Introduction to Big Data for Industry
DSA5103	4	Optimization Algorithms for Data Modelling
DSA5104	4	Principles of Data Management and Retrieval
DSA5105	4	Principles of Machine Learning
DSA5201	4	DSML Industry Consulting and Applications Project
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	4	Advanced Topics in Machine Learning
DSA5203	4	Visual Data Processing and Interpretation
DSA5204	4	Deep Learning and Applications
DSA5205	4	Data Science in Quantitative Finance
DSA5206	4	Advanced Topics in Data Science
DSA5207	4	Text Processing & Interpretation with Machine Learning
DSA5208	4	Scalable Distributed Computing for Data Science
DSE4212	4	Data Science in FinTech
MA4230	4	Matrix Computation
MA4235	4	Topics in Graph Theory
MA5232	4	Modelling and Numerical Simulations
QF5204	4	Numerical Methods in Quantitative Finance
<u>Courses offered by other departments**</u>		
CS4248	4	Natural Language Processing
CS5224	4	Cloud Computing
CS5228	4	Knowledge Discovery and Data Mining
CS5344	4	Big-Data Analytics Technology
ST5201	4	Statistical Foundations of Data Science
ST5202	4	Applied Regression Analysis
ST5225	4	Statistical Analysis of Networks
SPH5104	4	Analytics for Better Health
SPH5411	4	Information Technology in Healthcare

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NOTE:

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***Graduate Certificate in Deep Learning for Data Scientists**

(offered at Dept. Of Mathematics)

DSA5202	Advanced Topics in Machine Learning	4units	SSG subsidised
DSA5204	Deep Learning and Applications	4units	SSG subsidised

* The issuance of Graduate Certificates (GCs) only applies to Continuing Education and Training (CET) students who fulfilled the GCs' requirements, prior to admission to the MSc DSML programme. This refers to students who read the required courses on a standalone basis via NUS L³ pathway before admission to the MSc DSML programme. There will not be any issuance of GCs to MSc DSML students who completed the courses during the programme.