M.Sc. in Data Science and Fintech Curriculum#

School of Digital Sciences

Kerala University of Digital Sciences, Innovation and Technology (KUDSIT)
Technopark Phase IV, Mangalapuram, Thiruvananthapuram, India

-2026-

M.Sc. in Data Science and Fintech
CURRICULUM 2026

Bridge Courses					
Course Code	**Type**	**Title of the Course**	**Level**	**Credit Split Le-La-S-P**	**Credits**
M0220051	NC	Linear Algebra and Probability	200	1-2-0-0	P/F
M0220052	NC	Computational Thinking for Problem Solving	200	1-2-0-0	P/F
		Total Credits			-

NC: Non-credit Course
Le-La-S-P: Lecture-Lab-Seminar- Project

Semester 1					
Course Code	**Type**	**Title of the Course**	**Level**	**Credit Split Le-La-S-P**	**Credits**
M5220013	UC	Digital Access for Community Empowerment	500	0-0-2-1	5
M4220159	PC	Financial Markets and Strategy	400	2-0-2-0	4
M4220153	PC	Data Analytics and Visualization	400	1-2-0-1	4
M4220160	PC	Financial Econometrics	400	1-2-0-1	4
	PE	Elective-I	400		3/4
		Total Credits*			**20-21**

UC: University Core, **PC**: Programme Core, **PE**: Program Elective
Le-La-S-P: Lecture-Lab-Seminar- Project

Semester 2					
Course Code	**Type**	**Title of the Course**	**Level**	**Credit Split Le-La-S-P**	**Credits**
M5220252	PC	Deep learning and MLOps	500	1-1-0-1	3
M5220251	PC	Predictive Analytics	500	1-1-0-1	3
M4220256	PC	Derivative Pricing	400	1-1-0-1	3
	PE	Elective -II	400		3
	OE	Elective-III	400		3
	OE	Elective-IV	500		3
	PE	Mini Project/Industry Readiness	500	0-0-0-2	2
		Total Credits*			**20**

PC: Programme Core, **PE**: Program Elective, **OE**: Open elective
Le-La-S-P: Lecture-Lab-Seminar- Project

Semester 3					
Course Code	**Type**	**Title of the Course**	**Level**	**Credit Split Le-La-S-P**	**Credits**
M4220258	PC	Generative AI	500	1-1-1-1	4
	PE	Elective -V	500		3
	PE	Elective -VI	500		3
	PE	Mini Project/ Industry Readiness Program	500		4
	OE	Elective -VII	500		3
	OE	Elective-VIII	500		3
		Total Credits*			**20**

PC: Programme Core, **PE**: Program Elective, **OE**: Open elective
Le-La-S-P: Lecture-Lab-Seminar- Project
*The total credits earned in a semester may vary depending on the electives chosen by the student.

Semester 4					
Course Code	**Type**	**Title of the Course**	**Level**	**Credit Split Le-La-S-P**	**Credits**
M5224451	CP	Project/Internship	500	0-0-0-20	20
		Total Credits			**20**

CP: Capstone Project
Le-La-S-P: Lecture-Lab-Seminar- Project

	Elective			
Course Code	**Title of the Course**	**Level**	**Credit Split Le-La-S-P**	**Credits**
M4220152	Database Architecture and Analytic	400	3-1-0-0	4
M4221151	Python Programming for Data Analytics	400	2-1-0-0	3
M5221368	Stochastic Processes and Models	500	1-1-0-1	3
M4221253	Data Structures and Algorithms	400	2-1-0-0	3
M5221363	Computational Finance	500	1-1-0-1	3
M4221258	Portfolio Management	400	1-1-0-1	3
M4221259	Risk Management	400	1-1-0-1	3
M4221260	Financial Technology Services and Management	400	2-0-1-0	3
M5221351	Anomaly Detection and Fraud Analytics	500	1-1-0-1	3
M5221365	Big Data Technologies and Cloud Computing	500	1-1-0-1	3
M5221351	Natural Language Processing and Information Retrieval	500	1-1-0-1	3
M5221369	Optimization Techniques	500	1-1-0-1	3
M5221372	Reinforcement Learning	500	1-1-0-1	3
M5221373	Algorithmic Trading	500	1-1-0-1	3

[#] Subject to rectification at the next meeting of the Board of Studies