



## Bachelor of Science in Mathematics of Data Science Model Study Plan (2024-2025 Cohort onwards)

## For Students Admitted to the University from the Fall Semester Total Degree Credit hours: 120

	Semi	ester	Course Code	Course Title	СН	Course type	Semester	Course Code	Course Title	СН	Course type
Year 1			MATH105	Calculus I	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)	2	MATH110	Calculus II		Major Requirements
	1	L	PHYS105	General Physics I	3	Gen Ed Course (Cluster 3: Area 1: Natural Sciences)		MATH140	Linear Algebra I		Major Requirements
			GEAE101	Academic English for Humanities and STEM	3	Gen Ed Course (Cluster 1: Area 2: English Communication)	(Spring)	STAT210	Probability and Statistics	3	Major Requirements
	(Fa	ıllد	GEIT112	Fourth Industrial Revolution		Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution		CSBP219	Object Oriented Programming		Major Requirements
	(1 0	a111 <i>)</i>	CSBP119	Algorithms and Problem Solving	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)		GEEM105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
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	,		MATH350	Optimization Methods		Major Requirements	4 (Spring)	CENG202			Major Requirements
2		3	MATH240	Applied Linear Algebra	3	Major Requirements		MATH360	Mathematics for Machine Learning		Major Requirements
Œ			MATH290	Computational Mathematics	3	Major Requirements		CSBP224	Introduction to Data Science	3	Major Requirements
ě	/E-		STAT240	Data Exploration and Analysis		Major Requirements		CSBP301	Artificial Intelligence		Major Requirements
	(1 0	211 <i>)</i>	CSBP323	Data Structures and Algorithms	3	Major Requirements	(Spring)	GEIS101	Islamic culture	3	Gen Ed Course (Cluster 2: Area 4: Islamic Culture)
					15					15	
			MATH215	Introduction to Analysis	3	Major Requirements		Elective	Student choice	3	Specialization Electives
က		-	STAT470	Introduction to Statistical Computing	3	Major Requirements	6	Elective	Student choice	3	Supporting Elective
ar	,	,	Elective	Student choice	3	Supporting Elective		CSBP411	Machine Learning	3	Major Requirements
ě	/-		CSBP320	Data Mining		Major Requirements		Elective	Student choice	3	Specialization Electives
	(Fa	all) l	Elective	Student choice		Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)	(Spring)	Elective	Student choice	3	Advanced Math Electives
	•	,	ITBP418	Entrepreneurship in Information Technology	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)	(-  6/				
					18					15	
			Elective	Student choice	3	Advanced Math Electives		MATH497	Research Project II	3	Major Requirements
Year 4	-		Elective	Student choice	3	Supporting Elective	8 (Spring)	MATH501	Internship	6	Internship
	,	,	Elective	Student choice	3	Specialization Electives					
			GESU121	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)					
	(Fa	all) l	PSYC313	Educational Psychology	3	Gen Ed Course (Cluster 2: Area 2: Humanities and Fine Arts)					
	, ,	,	MATH496	Research Project I	3	Major Requirements	(-   6/				
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Bachelor of Science in Mathematics of Data Science Model Study Plan (2025-2026 Cohort onwards)

## For Students Admitted to the University from the Fall Semester Total Degree Credit hours: 120

	Semester	Course Code	Course Title	СН	Course type	Semester	Course Code	Course Title	СН	Course type
			Calculus I		Foundation	2 (Spring)		Calculus II		Foundation
Ţ	1	PHYS105	General Physics I	3	Foundation		MATH140	Linear Algebra I	3	Foundation
ਰ	1	GEAE101	Academic English for Humanities and STEM	3	Gen. Ed. Theme 2: Academic Language Proficiency		STAT210	Probability and Statistics	3	Foundation
e .		CSBP119	Algorithms and Problem Solving	3	Foundation		CSBP219	Object Oriented Programming	3	Foundation
	Fall)	Elective	Student choice	3	Gen. Ed. Theme 6 or 7 or 8 or 9 or 10 or 11		GEEM110	Contemporary Emirati Studies	3	Gen. Ed. Theme 1: UAE National Identity
ш,	. ,						Elective	Student choice	3	Gen. Ed. Theme 6 or 7 or 8 or 9 or 10 or 11
				15					18	
	1		Optimization Methods		Major Requirements	4 (Spring)		Discrete Mathematics		Foundation
2	3		Applied Linear Algebra		Foundation					Major Requirements
g			Computational Mathematics		Major Requirements		CSBP224			Foundation
× (	Fall)		Data Exploration and Analysis		Major Requirements			Artificial Intelligence		Foundation
١.	unj		Data Structures and Algorithms		Foundation		MATH350	Optimization Methods	3	Major Requirements
		GESU121	Sustainability	3	Gen. Ed. Theme 5: Sustainability					
				18					15	
~			Introduction to Analysis		Major Requirements	6 (Spring)		Student choice		Specialization Electives
~	5		Introduction to Statistical Computing		Foundation					Supporting Elective
œ	_		Student choice		Supporting Elective		CSBP411	Machine Learning		Foundation
× /	L~II/		Data Mining		Foundation			Student choice		Specialization Electives
	Fall)	GEIE222	Fundamentals of Innovation and Entrepreneurship	3	Gen. Ed. Theme 4: Entrepreneurship		Elective	Student choice	3	Advanced Math Electives
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				15						
		Elective	Student choice	3	Advanced Math Electives	8 (Spring)	MATH497	Research Project II	3	Major Requirements
4	7	Elective	Student choice	3	Supporting Elective		MATH501	Internship	6	Internship
₹	,	Elective	Student choice	3	Specialization Electives					
ş ,	e - 111	Elective	Student choice	3	Gen. Ed. Theme 6 or 7 or 8 or 9 or 10 or 11					
(	Fall)	MATH496	Research Project I	3	Major Requirements					
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				15					9	