

STUDY PLAN REPORT

Program Name: Bachelor of Science in Data Science

Program Major: Bachelor of Science in Data Science

Course Number	Course Name	Credit Hour	Prerequisite
Semester1			
ENG 101	English I	3	
CIS 101	Computer Fundamentals	3	
ISL 201	Islamic Culture (English)	3	
ISLA 201	Islamic Culture (Arabic)	3	
ST 101	Calculus I	3	
ST 103	Fundamentals of Computer Programming	3	
MTH-001	Pre-Mathematics in English	0	
ORN 111	Orientation	0	
Semester2			
ENG 102	English II	3	ENG 101
BUS 204	Innovation and Entrepreneurship	3	
ST 102	Linear Algebra	3	ST 101
MIS 201	Discrete Mathematics	3	
DSA 105	Data Science Ethics	3	ST 103
Semester3			
DSA 201	Introduction to Data Science	3	ST 103
ST 202	Calculus II	3	ST 102
ST 203	Database Management Systems	3	ST 103
ST 204	Data Structures and Algorithms	3	ST 103
UAE 201	UAE Studies (English)	3	
UAE/A 201	UAE Studies (Arabic)	3	
Semester4			
DSA 202	Data Wrangling and Cleaning	3	DSA 201

Course Number	Course Name	Credit Hour	Prerequisite
DSA 203	Machine Learning Fundamentals	3	DSA 105
ST 205	Networking and Information Security	3	CIS 101
ST 206	Statistical Methods for Data Science	3	DSA 201
ST 208	Probability Theory	3	
Semester5			
DSA 301	Data Warehousing	3	ST 204
DSA 302	Data Mining	3	ST 205
DSA 303	Data Integration	3	DSA 202
ST 305	Advanced Computer Programming	3	ST 103
DSA 305	Data Visualization and Communication	3	DSA 201
Semester6			
DSA E01	Health Informatics (Elective)	3	DSA 201
DSA E02	Commerce Analytics (Elective)	3	DSA 201
DSA 306	Deep Learning and Neural Networks	3	DSA 203
DSA 307	Natural Language Processing (NLP)	3	DSA 203
DSA 308	AI in Business	3	DSA 201
DSA 309	Big Data Analytics	3	DSA 305
Semester7			
DSA E03	IoT Applications in Smart Cities (Elective)	3	DSA 201
DSA E04	Cloud Computing (Elective)	3	DSA 201
DSA 401	Real-Time Data Processing	3	DSA 303
DSA 402	Data Pipeline Development	3	DSA 303
DSA 403	Governance and Accountability in AI	3	DSA 105
DSA 404	Data Privacy and Security	3	DSA 105
Semester8			
DSA E05	Blockchain and Applications (Elective)	3	DSA 201
DSA E06	Healthcare Analytics (Elective)	3	DSA 201

Course Number	Course Name	Credit Hour	Prerequisite
DSA 405	Research in Data Science	3	DSA 203,DSA 306
DSA 406	Web and Social Media Analytics	3	DSA 203
DSA 495	Research Practicum (Internship)	3	
DSA 499	Data Science Capstone	6	