

## Program Structure:

### General Education Courses (6 Courses)

#	Theme	Course Title	Credit Hours
1	Arts and Humanities (6 CHs)	ENG 101 English I	3
		ENG 102 English II	3
2	Social and Behavioral Sciences (9 CHs)	ISL 201 Islamic Studies	3
		BUS 201 Innovation and Entrepreneurship	3
		UAE 201 UAE Studies	3
3	Technological Literacy (3 CHs)	CIS 101 Computer Fundamentals	3
Total Credit Hours			18

### Core and Specialization Courses: (29 Courses)

#	Course Code	Course Title	Credit Hours
1	ST 101	Calculus I	3
2	ST 102	Calculus II	3
3	ST 103	Fundamentals of Computer Programming	3
4	ST 104	Discrete Mathematics	3
5	ST 105	Advanced Computer Programming	3
6	ST 201	Data Structures and Algorithms	3
7	ST 202	Linear Algebra	3
8	ST 203	Probability Theory	3
9	ST 204	Database Management Systems	3
10	ST 205	Statistical Methods for Data Science	3
11	ST 206	Networking and Information Security	3
12	DSA 201	Introduction to Data Science	3
13	DSA 202	Data Wrangling and Cleaning	3
14	DSA 203	Machine Learning Fundamentals	3
15	DSA 301	Data Warehousing	3
16	DSA 302	Data Mining	3
17	DSA 303	Data Integration	3
18	DSA 304	Data Science Ethics	3
19	DSA 305	Data Visualization and Communication	3
20	DSA 306	Deep Learning and Neural Networks	3
21	DSA 307	Natural Language Processing (NLP)	3
22	DSA 308	AI in Business	3
23	DSA 309	Big Data Analytics	3

24	DSA 401	Real-Time Data Processing	3
25	DSA 402	Data Pipeline Development	3
26	DSA 403	Governance and Accountability in AI	3
27	DSA 404	Data Privacy and Security	3
28	DSA 405	Research in Data Science	3
29	DSA 406	Web and Social Media Analytics	3

### **Elective Courses (Students choose 3 of 5 elective courses)**

#	Course Code	Course Title	Credit Hours
1	DSA E01	Health Informatics	3
2	DSA E02	Commerce Analytics	3
3	DSA E03	IoT Applications in Smart Cities	3
4	DSA E04	Cloud Computing	3
5	DSA E05	Blockchain and Applications	3
6	DSA E06	Healthcare Analytics	3
<b>Total Credit Hours</b>			<b>9</b>