JUMEIRA UNIVERSITY جــامعة جـــــميرا

BACHELOR OF COMPUTER SCIENCE (BCS)

- Artificial Intelligence

November 2024

Program Structure

University Requirements (24 Credit Hours)

Core Courses (18 Credit Hours)

Course Code	Course Title	CH	Requisites
GE 101 or *GE 115	Arabic Language Communication1or Basic Arabic Language 1	3	None
GE 103	English Language Communication 1	3	Score 5 in IELTS or equivalent
GE 104	English Language Communication 2	3	Score 5 in IELTS or equivalent
GE 125	Fundamentals of Entrepreneurship & Innovation	3	Score 5 in IELTS or equivalent
GE 142 / GE144	UAE Society / مجتمع الإمارات	3	Score 5 in IELTS or equivalent / None
GE 147 / GE141	Islamic Thought /الثقافة الإسلامية	3	Score 5 in IELTS or equivalent / None
	Total	**18**	**Credit Hours**

Elective Courses (6 Credit Hours)

University Requirements - Elective Courses

Course Code	Course Title	CH	Requisites
GE 102 or *GE116	Arabic Language Communication 2or Basic Arabic Language 2	3	None
GE 114	Principles of Research Skills	3	Score 5 in IELTS or equivalent
GE 123 / GE 107	Personal Management / الإدارة الذاتية	3	Score 5 in IELTS or equivalent / None
GE 131	Critical Thinking	3	Score 5 in IELTS or equivalent TI
GE 145 / GE 140	Islamic Civilization / الحضارة الإسلامية	3	Score 5 in IELTS or equivalent / None
GE 148	UAE Economy and Labour Market	3	Score 5 in IELTS or equivalent
GE 132	Introduction to Programming	3	None
GE 133	Linear Algebra	3	None
	Total	**6**	**Credit Hours**

College Requirements (54 Credit Hours)

Core Courses (45 Credit Hours)

Course Code	Course Title	CH	Requisites
MA 110	Probability and Statistics	3	None
CG 200	Digital Logic Design	3	None
MA 201	Calculus	3	GE 133
MA 202	Discrete Mathematics	3	MA 201
CG 203	Fundamentals of Computer Hardware	3	CG 200
CG 204	Fundamentals of Computer Networks	3	None
CG 205	Fundamentals of Relational Database Management Systems	3	GE 132
CG 300	Advanced/Object Oriented Programming	3	CG 207
CG 206	Database Administration	3	CG 205
CG 207	Introduction to Software Engineering	3	CG 205
CG 301	Introduction to Information Security	3	CG 204
CG 208	Web Engineering	3	GE 132
CG 400	Research Methodology & Project Planning	3	CG 207
CG 490	*CS Internship	3	90 Credits.
CG 499	CS Project	3	96 Credits.
	Total	**45**	**Credit Hours**

College Elective Courses (9 Credit Hours)

Course Code	Course Title	CH	Requisites
CG 401	Scientific Programing	3	CG 300
CG 302	Applied Regression Analysis	3	MA 110
CG 402	Advanced Data Mining	3	CG 205
CG 403	Time Series Analysis	3	MA 110
CG 404	Data Visualization	3	CG 209
CG 405	Advanced Web Engineering	3	CG 208
CG 406	Information Audit and Assurance	3	CG 206
CG 407	Risk Management	3	CG 305
CG 408	Network Administration	3	CG 204
	Total	**9**	**Credit Hours**

Program Requirements (42 Credit Hours)

Core Courses (33 Credit Hours)

Course Code	Course Title	CH	Requisites
CG 209	Algorithms and Data Structure	3	GE 132
CG 303	Operating Systems	3	CG 203
CG 409	Block Chain Technologies	3	CG 209
CG 304	IoT Concepts and Architecture	3	CG 203, CG 204

CG 410	Software Project Management	3	CG 207
	Concentration Courses	18	
	Total	**33**	**Credit Hours**

Program Elective Courses (9 Credit Hours)

Course Code	Course Title	CH	Requisites
CG 411	Network Security & Management	3	CG 301
CG 412	Programming with Python	3	CG 300
CG 413	Software Requirement Specification	3	CG 207
CG 305	Mobile & Cloud Computing	3	CG 204, CG 303
CG 306	Software Development Process	3	CG 207
	Total	**9**	**Credit Hours**

Concentration Courses (18 Credit Hours)

Course Category – Artificial Intelligence Core Courses = 18 CREDITS

Course Code	Course Title	CH	Requisites
AI 210	Introduction to Artificial Intelligence	3	None
AI 307	Artificial Intelligence and Deep learning	3	AI 210
AI 308	Computer Vision	3	AI 210
AI 414	Automata Languages and Computation	3	AI 307
AI 415	Virtual and Augmented Reality	3	AI 308
AI 416	Machine Intelligence Systems	3	AI 307
	Total	**18**	**Credit Hours**