



Study Plan for Bachelor's Degree in Data Science & Artificial Intelligence for year 2022-2023

The Bachelor's Degree in Data Science & Artificial Intelligence awarded at Princess Sumaya University for Technology after the successful completion of 132 Credit Hours distributed as follows:-

University Requirements (27 CHs)

1. Compulsory Requirements (18 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
11100	Computer Skills (Remedial)	0			Online
31021	Arabic Language Communication Skills (Remedial)	0			Online
31022	English Language Communication Skills (Remedial)	0			Online
31112	Arabic Language Communication Skills	3	31021		Online
31122	English Language Communication Skills	3	31022		Online
31151	National Education	3			Online
31160	Leadership and Societal Responsibility	0			
31251	Military Science	3			Online
31254	Entrepreneurship and Innovation	3	Finish 60 Credit Hours		Online
31374	Life Skills	3	Finish 60 Credit Hours		Online

2. Elective Requirements (9 CHs)

Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
20251	History of Science	3			Blended
31100	Sports and Health	3			Blended
31130	Foreign languages	3			Blended
31152	Arabic Islamic Civilization	3			Blended
31211	Arabic Literature	3	31112		Blended
31252	Governance and Development	3			Blended
31260	Human Rights	3			Blended
31261	Introduction to Politics and Economic Science	3			Blended
31264	Introduction To Psychology	3			Blended
31272	Development and Environment	3			Blended
31311	Scientific Research Methods	3			Blended
31351	Contemporary Issues in the Arab World	3			Blended
31352	Jerusalem : History and Facts	3			Blended
31362	Philosophy and Critical Thinking	3			Blended

School Requirements (25 CHs)

1. Compulsory Requirements (25 CHs)



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
11102	Introduction to Computer Science	3			
11103	Structured Programming	3	11102		
11151	Structured Programming Lab	1		11103	
20132	Calculus (1)	3			
20133	Calculus (2)	3	20132		
20134	Discrete Mathematics (1)	3			Blended
20200	Technical Writing and Communication Skills	3	31112 , 31122		Blended
20233	Statistical Methods	3			Blended
20234	Linear Algebra	3	20133		

Program Requirements (80 CHs)

1. Compulsory Requirements (68 CHs)



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
11206	Object Oriented Programming	3	11103		
11212	Data Structures and Introduction to Algorithms	3	11206		
11253	Object Oriented Programming Lab	1		11206	Online
11313	Algorithms Design and Analysis *	3	11212		
11323	Database Systems *	3	11212		
11335	Operating Systems *	3	11212		
11354	Database Systems Lab	1		11323	Online
11355	Operating Systems Lab	1		11335	Online
11436	Distributed Systems	3	11335		Blended
11449	Computer and Society *	1	Finish 90 Credit Hours		Online
11464	Information Systems Security *	3	11335		Blended
14140	Introduction to Data Science	3	11102		
14141	Introduction to Data Science lab	1		14140	
14260	Data Engineering *	3	14140		Blended
14261	Data Engineering Lab	1		14260	
14270	Statistics and Probability for Data Science	3	20233		
14271	Statistics and Probability for Data Science lab *	1		14270	
14330	Artificial Intelligence	3	11212		
14331	Artificial Intelligence lab *	1		14330	
14350	Computer Architecture for Machine Learning *	3	14330		
14351	Natural Language Processing *	3	14330		
14362	High Performance Computing for Big Data *	3	14260		
14364	Data Visualization *	3	14362		
14391	Practical Training	3	Finish 90 Credit Hours		Blended
14452	Pattern Recognition *	3	14330		Blended
14465	Data Mining	3	14362		Blended
14466	Business Intelligence *	3	14364		
14492	Graduation Project 1	1	Finish 90 Credit Hours		Blended
14493	Graduation Project 2	2	14492		Blended

2. Elective Requirements (12 CHs)



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Course Number	Course Title	Credit Hours	Prerequisite	Concurrent	Online
11344	Advanced Topics in Internet Programming	3	11323		Blended
11435	Data Communications & Computer Networks *	3	11335		
12348	Multimedia Systems	3	11206		
12446	Digital Image Processing	3	11212		
13432	Software Project Management *	3	13477		
13477	Software Engineering *	3	11323		Blended
14357	Special Topic In Data Science and AI (1)	3			Blended
14455	Information Retrieval *	3	11206		
14456	Robotics Programming *	3	11103		Blended
14458	Computer Vision *	3	12446		Blended
14467	Cloud Computing	3	11335		Blended
14468	Security and Privacy of Big data	3	11464		Blended
14469	Special Topic In Data Science and AI (2)	3			Blended

* is PBL: Project Based Learning course with (20%-30%) weight