

College of Information Technology
Bachelor of Science in Information Technology – Major in Artificial Intelligence

COURSE NO.	UNIVERSITY REQUIREMENTS (30 CREDIT HOURS)	PREREQUISITE	CO-REQUISITE	CH
COMM 103	Language and Communication	None	None	3
HIST 103	History of Qatar	None	None	3
LAWC 305	Governance	None	None	3
SOCI 102	Islamic and World Cultures	None	None	3
UNIV 101	University Success	None	None	3
UNIV 201	Leadership, Entrepreneurship, and Innovation	None	None	3
ENGL 114	English Composition I	None	None	3
ENGL 115	English Composition II	ENGL 114	None	3
STDE 201	Sustainable Development	None	None	3
Foreign Language	Foreign Language Requirement	None	None	3

COURSE No.	COLLEGE REQUIREMENTS (48 CREDIT HOURS)	PREREQUISITE	CO-REQUISITE	CH
ITCC 102	Discrete Mathematics	None	None	3
ITCC 204	Computer Programming Computer Programming Lab	None	None	3
ITCC 105	Calculus	None	None	3
ITCC 101	Linear Algebra *	ITCC 105	ITCC 105	3
ITCC 250	Object-Oriented Programming Object-Oriented Programming Lab	ITCC 204	None	3
ITCC 201	Data Structures *	ITCC 250	ITCC 250	3
STAT 201	Probability and Statistics *	ITCC 105	ITCC 105	3
ITCC 104	Fundamentals of Information Technology	None	None	3
ITCC 103	Algorithms and Problem Solving *	ITCC 201	ITCC 201	3
ITCC 106	Ethics and Professional Responsibilities	None	None	3



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COURSE No.	Major Requirements (33 Credit Hours)	Prerequisite	CO-REQUISITE	CH
ITAI 311	Internet of Things *	ITAI 201	ITAI 201	3
ITAI 460	Knowledge-Based systems *	ITAI 201	ITAI 201	3
ITAI 304	Robotics and Intelligent Systems *	ITAI 306	ITAI 306	3
ITAI 301	Machine Learning *	ITAI 201	ITAI 201	3
ITAI 306	Intelligent Embedded Systems *	ITCC 201 & ITAI 201	ITCC 201 & ITAI 201	3
ITAI 405	Natural Language Processing *	ITAI 201	ITAI 201	3
ITAI 380	Cognitive Computing *	ITAI 201	ITAI 201	3
ITAI 406	Advanced Artificial Intelligence *	ITAI 201	ITAI 201	3
ITAI 403	Computer Vision and Visualization *	ITAI 301	ITAI 301	3
ITAI 350	Neural Networks *	ITAI 301	ITAI 301	3
ITAI 202	Artificial Intelligence programming * Artificial Intelligence Programming Lab	ITCC 204	None	3

ITCC 306	Database Systems * Database Systems Lab	ITCC 250	ITCC 250	3
ITCC 307	Software Engineering	ITCC 250	ITCC 250	3
ITCS 303	Networks * Networks lab	ITCC 104	ITCC 104	3
ITAI 201	Introduction to Artificial Intelligence *	ITCC 204	ITCC 204	3
ITCC 400	Practical Training	ITCC 307, and should pass at least 75 CH	None	3
ITCC 403	Graduation Project	ITCC307, and should pass at least 81 CH	None	3
Course No.	Major Elective Courses (9 Credit Hours)	Prerequisite	CO-REQUISITE	CH
ITAI 390	Special Topics in AI	None	None	3
ITEC 303	Data Analytics *	ITAI 201	ITAI 201	3
ITEC 304	Cloud Computing *	ITCS 303	ITCS 303	3
ITEC 402	Data Governance *	None	None	3
ITEC 403	Mobile Applications Development *	ITCC 250	None	3
ITEC 404	Autonomous Systems	None	None	3
ITEC 405	Big Data	ITAI 301	None	3
ITEC 406	Bioinformatics	ITEC 307	None	3



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ITEC 305	IT Project Management and Entrepreneurship	None	None	3
ITEC 307	Data Mining	ITCC 306	None	3

(*) The student can request to register for the course concurrently with the pre-requisite.

Program Plan

Academic Year 1 (30)					
Semester 1 - Fall Semester			Semester 2 - Spring Semester		
Course no	Course Title	CH	Course no	Course Title	CH
ITCC 105	Calculus	3	ITCC 250	Object-Oriented Programming	3
ITCC 204	Computer Programming	3	ITCC 250	Object-Oriented Programming Lab	0
ITCC 204	Computer Programming Lab	0	ITCC 101	Linear Algebra	3
ITCC 102	Discrete Mathematics	3	ITCC 104	Fundamentals of Information Technology	3
HIST 103	History of Qatar	3	UNIV 101	University Success	3
ENGL 114	English Composition I	3	ENGL 115	English Composition II	3
Total Credit Hours = 15			Total Credit Hours = 15		

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Academic Year 2 (30)					
Semester 1 - Fall Semester			Semester 2 - Spring Semester		
Course no	Course Title	CH	Course no	Course Title	CH
ITCC 201	Data Structures	3	ITCC 103	Algorithms & Problem Solving	3
ITAI 202	Artificial Intelligence Programming	3	ITCC 306	Database Systems	3
ITAI 202	Artificial Intelligence Programming Lab	0	ITCC 306	Database Systems Lab	0
STAT 201	Probability and Statistics	3	ITAI 201	Introduction to Artificial Intelligence	3
ITCC 106	Ethics & Professional Responsibilities	3	UNIV 201	Leadership, Entrepreneurship & Innovation	3
COMM 105	Language & Communication	3	STDE 201	Sustainable Development	3
Total Credit Hours = 15			Total Credit Hours = 15		

Academic Year 3 (30)					
Semester 1 - Fall Semester			Semester 2 - Spring Semester		
Course no	Course Title	CH	Course no	Course Title	CH
ITCS 303	Networks	3	ITAI 304	Robotics & Intelligent Systems	3
ITCS 303	Networks Lab	0	ITAI 311	Internet of Things	3
ITCC 307	Software Engineering	3	ITAI 350	Neural Networks	3
ITAI 306	Intelligent Embedded Systems	3	Major Elective	Major Elective	3
ITAI 380	Cognitive Computing	3	Foreign Language	Foreign Language Requirement	3
ITAI 301	Machine Learning	3			
Total Credit Hours = 15			Total Credit Hours = 15		

ITCC 400 Practical Training Total Credit Hours =3					
Academic Year 4 (30)					
Semester 1 - Fall Semester			Semester 2 - Spring Semester		
Course no	Course Title	CH	Course no	Course Title	CH
ITCC 403	Graduation Project	3	ITAI 460	Knowledge-Based Systems	3
ITAI 403	Computer Vision & Visualization	3	ITAI 406	Advanced Artificial Intelligence	3
ITAI 405	Natural Language Processing	3	Major Elective	Major Elective	3
Major Elective	Major Elective	3	SOCI 102	Islamic & World Culture	3
LAW 305	Governance	3			
Total Credit Hours = 15			Total Credit Hours = 12		

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Equivalence Table for AI:

Deleted Course ID	Deleted Course Title	Equivalent Course ID	Equivalent Course Title
Free Elective	Free Elective	ITCC 105	Calculus
ITCC 205	Digital Design	ITCC 104	Fundamentals of Information Technology
ITCC 110	Fourth Industrial Revolution	ITAI 202	Artificial Intelligence Programming
ITCC 301	Operating Systems		Networks
ITCC 303	IT Innovation and Entrepreneurship	ITCC 307	Software Engineering
ITCC 401	Graduation Project I	ITCC 400	Practical Training
ITCC 402	Graduation Project II	ITCC 403	Graduation Project
ITGM 309	Computer Graphics	ITAI 311	Internet of Things
ITAI 353	Architecture of Intelligent Systems	ITAI 460	Knowledge-Based Systems
ITAI 201	Introduction to Artificial Intelligence	ITAI 201	College Core Course