

Artificial Intelligence Program

Course Code	Course Title	Prerequisites	Cr. Hr.	Contact Hrs.				Course Code	Course Title	Prerequisites	Cr. Hr.	Contact Hrs.			
				Lectures	Tutorial	Laboratory	Total Contact					Lectures	Tutorial	Laboratory	Total Contact
Semester 1								Semester 2							
UNR1403	Academic English	-	2	1	3	0	4	UNR2101	Communication and Presentation Skills	UNR1403	2	1	3	0	4
UNR1302	Fundamentals of Business	-	2	2	0	0	2	UNR1407	Academic Writing	UNR1403	2	1	3	0	4
UNRxxxx	University Req. Elective	-	2	2	0	0	2	EBAxxxx	Science Elective		3	2	0	2	4
EBA1203	Calculus I	None or (EBA0201 for science students)	3	2	2	0	4	EBA1204	Calculus II	EBA1203	3	2	2	0	4
EBA1110	Physics	-	3	2	0	2	4	CCS1302	Problem Solving and Programming	CCS1101	3	2	2	2	6
CCS1101	Introduction to Computing	-	3	2	2	0	4	CCS1001	Discrete Structures	CCS1101	3	2	2	0	4
CIS1000	Introduction to Information Systems	-	3	2	2	0	4	CNC1401	Entrepreneurship Skills	10 CR. or more	2	2	0	0	2
¹ EBA0201	Precalculus	-	0	2	2	0	4								
² GLA0001	Remedial English	-	0	2	2	0	4								
Total Hrs			18	13	9	2	24	Total Hrs			18	12	12	4	28
Semester 3								Semester 4							
CCS2102	Digital Logic Design	CCS1101	3	2	2	2	6	CCS2401	Data Structures and Algorithms	CCS2303	3	2	2	0	4
CCS2303	Object- Oriented Programming	CCS1302	3	2	2	2	6	CSE2001	Introduction to Software Engineering	CCS2303 CIS1000	3	2	2	0	4
EBA2204	Linear algebra	EBA 1204	3	2	2	0	4	CCS2304	Advanced Programming Applications	CCS2303	3	2	2	0	4
CCS2201	Introduction to Networks	CCS1302	3	2	2	0	4	CCS2305	Web Programming	CIS2101	3	2	2	0	4
CIS2101	Database Systems	CCS1302	3	2	2	0	4	CCS2103	Introduction to Computer Architecture	CCS2102	3	2	2	0	4
EBA2203	Probability & Statistics	EBA1204	3	2	2	0	4	CCY2001	Introduction to Cybersecurity	CCS2201	3	2	2	0	4
Total Hrs			18	12	12	4	28	Total Hrs			18	12	12	0	24
Semester 5								Semester 6							
CAI3101	Introduction to AI	CCS1001 CCS2401	3	2	2	0	4	CAI3103	Deep Learning	CAI3101	3	2	2	0	4
CAI3401	Fundamentals of Robotics	EBA2204	3	2	2	0	4	CAI3701	Introduction to Data Analytics	CIS2101 EBA2203	3	2	2	0	4
EBA3201	Advanced Statistics	EBA2203	3	2	2	0	4	CCS3403	Computing Algorithms	CCS2401	3	2	2	0	4
CAI3002	Mathematical Foundations for AI	EBA2203 EBA2204	3	2	2	0	4	CAI3105	Advanced Artificial Intelligence	CAI3101	3	2	2	0	4
CCS3203	Operating Systems	CCS2103 CCS2401	3	2	2	2	6	CCS4004	Optimization Techniques	EBA2204 CCS1302	3	2	2	0	4
CIT3200	Professional Training in Mobile Apps Programming	---	0	-	2	-	2	CITxxxx	Professional Training I	---	0	-	2	-	2
Total Hrs			15	12	10	2	24	Total Hrs			15	10	10	0	20
Semester 7								Semester 8							
CCS4505	Digital Image Processing	CCS2401 EBA2204	3	2	2	0	4	CCS4204	Computer System Security	CCS3203 CCY2001	3	2	2	0	4
CAI4201	Natural Language Processing	CAI3103	3	2	2	0	4	CAI4301	Computer Vision	CAI3103 CCS4505	3	2	2	0	4
CAI4901	Project I	GPA>=2.0 & 90 CR or more	3	2	2	0	4	CAI4902	Project II	CAI4901	3	2	2	0	4
CAIxxxx	Major Elective	---	3	2	2	0	4	CAIxxxx	Major Elective	---	3	2	2	0	4
CAIxxxx	Major Elective	---	3	2	2	0	4	CAIxxxx	Major Elective	---	3	2	2	0	4
CITxxxx	Professional Training II	---	0	-	2	-	2	CITxxxx	Professional Training III	---	0	-	2	-	2
Total Hrs			15	10	10	0	20	Total Hrs			15	10	10	0	20

Elective courses

The student chooses 4 elective courses (12 Cr. Hr.).

Semester	Course Code	Course Title	prerequisite	Cr. Hr.	Lectures	Tutorials	Laboratory	Total Contact
7/8	CAI4106	Explainable AI(XAI)	CAI3101	3	2	2	0	4
7/8	CAI4107	Reinforcement Learning and Decision Making	CAI3103	3	2	2	0	4
7/8	CAI4108	Generative Models and Adversarial Networks	CAI3103	3	2	2	0	4
7/8	CAI4202	Natural Language Generation (NLG)	CAI4201	3	2	2	0	4
7/8	CAI4406	Game Theory and AI	CAI3101 EBA1204	3	2	2	0	4
7/8	CAI4602	AI Ethics and Society	CAI3101	3	2	2	0	4
7/8	CAI4501	Human-Robot Interaction	CAI3101 CAI3401	3	2	2	0	4
7/8	CAI4701	AI in Healthcare	CAI3101 EBA2203	3	2	2	0	4
7/8	CAI4702	IoT and AI Integration	CAI3101 CCS2201	3	2	2	0	4
7/8	CAI4703	Evolutionary Algorithms and Swarm Intelligence	CAI3101	3	2	2	0	4
7/8	CAI4109	Federated Learning	CAI3101	3	2	2	0	4
7/8	CAI4704	AI in Bioinformatics	CAI3101 EBA2203	3	2	2	0	4
7/8	CCS4210	High Performance Computing	CCS3203	3	2	2	0	4
7/8	CIS4103	Big data Analytics	EBA2203 CAI3101	3	2	2	0	4
7/8	CCY4303	AI in Cybersecurity	CCY2001 CAI3101	3	2	2	0	4