



Curriculum for the Department of Computer Science (Bologna Process)

Artificial Intelligence Program

FIRST YEAR

1 st Semester										
No.	Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	Clin. (hr/w)	T (hr/w)	ECTS	Units	Type
1	CUE31002	Algorithm Design and Programming	2	3	-	-	-	6.0	3	C
2	CUE31003	Discrete Structure	2	-	-	-	1	5.0	2	C
3	CUE31004	Computer Organization	2	2	-	-	-	6.0	3	C
4	CUE61001	General English	2	-	6	-	-	5.0	5	B
5	CUE31005	Digital Computing	2	2	-	-	-	6.0	3	B
6	CUE66001	Kurdistan Studies	3	-	-	-	-	2.0	3	B
TOTAL: 27 hrs/week			13	7	6	0	1	30.00	19	

2 nd Semester										
No.	Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	Clin. (hr/w)	T (hr/w)	ECTS	Units	Type
1	CUE31011	Programming Language	2	3	-	-	-	6.0	3	C
2	CUE31012	Logic Design	2	2	-	-	-	5.0	3	C
3	CUE67003	Mathematics	2	-	-	-	2	5.0	3	C
4	CUE61002	Academic English	2	-	6	-	-	5.0	5	B
5	CUE82001	Academic Debates	1	-	2	-	-	3.0	2	B
6	CUE31013	IT Fundamentals	2	2	-	-	-	4.0	3	B
7	CUE00011	United Nations Sustainable Development Goals	1	1				2.0	1	B
TOTAL: 30 hrs/week			12	8	8	0	2	30.00	20	



SECOND YEAR

3 rd Semester										
No.	Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	Clin. (hr/w)	T (hr/w)	ECTS	Units	Type
1	CUE31021	Object-Oriented Programming	2	3	-	-	-	6.0	3	C
2	CUE31022	Data Structures	2	3	-	-	-	6.0	3	C
3	CUE31023	Database Systems	2	3	-	-	-	5.0	3	C
4	CUE31024	Software Engineering	2	3	-	-	-	5.0	3	C
5	CUE31025	Numerical Analysis	2	3	-	-	-	5.0	3	S
6	CUE31026	Communication Skills	1	-	2	-	-	3.0	2	S
TOTAL: 28 hrs/week			11	15	2	0	0	30	17	

4 th Semester										
No.	Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	Clin. (hr/w)	T (hr/w)	ECTS	Units	Type
1	CUE31031	Artificial Intelligence	2	3	-	-	-	6.0	3	C
2	CUE31032	Distributed Database Systems	2	3	-	-	-	5.0	3	C
3	CUE31033	Computer Networks	2	3	-	-	-	5.0	3	C
4	CUE31034	Web Design	2	3	-	-	-	5.0	3	C
5	CUE31035	Cybersecurity	2	3	-	-	-	5.0	3	S
6	CUE31036	Probability and Statistics	2	3	-	-	-	4.0	3	S
TOTAL: 30 hrs/week			12	18	0	0	0	30	18	



THIRD YEAR

5 th Semester										
No.	Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	Clin. (hr/w)	T (hr/w)	ECTS	Units	Type
1	CUE31041	Mobile Applications	2	3	-	-	-	6.0	3	C
2	CUE31042	Machine Learning	2	3	-	-	-	5.0	3	C
3	CUE31043	Data Science	2	3	-	-	-	5.0	3	C
4	CUE31044	Knowledge Base Systems	2	-	-	-	1	4.0	2	C
5	CUE31045	Dynamic Web Development	2	3	-	-	-	5.0	3	S
6	CUE31046	Operating Systems (Elective)	2	3	-	-	-	5.0	3	S
TOTAL: 28 hrs/week			12	15	0	0	1	30	17	

6 th Semester										
No.	Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	Clin. (hr/w)	T (hr/w)	ECTS	Units	Type
1	CUE31051	Artificial Neural Networks	2	3	-	-	-	6.0	3	C
2	CUE31052	Data Mining	2	3	-	-	-	6.0	3	C
3	CUE31053	Multi-Platform Mobile Application Development	2	3	-	-	-	5.0	3	C
4	CUE31054	Multimedia Programming (Elective)	2	3	-	-	-	5.0	3	C
5	CUE31055	Computer Vision	2	3	-	-	-	5.0	3	S
6	CUE31056	Research Methods	2	-	-	-	1	3.0	2	S
TOTAL: 28 hrs/week			12	15	0	0	1	30	17	

Summer Internship 120 hrs.



FOURTH YEAR

7 th Semester										
No.	Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	Clin. (hr/w)	T (hr/w)	ECTS	Units	Type
1	CUE31061	Natural Language Processing	2	3	-	-	-	6.0	3	C
2	CUE31062	Bioinformatics and Digital Health (Elective)	2	3	-	-	-	5.0	3	C
3	CUE31063	Intelligent Search Algorithms	2	-	-	-	-	4.0	2	C
4	CUE31064	Big Data Analytics	2	3	-	-	-	5.0	3	C
5	CUE31065	Embedded Systems	2	3	-	-	-	5.0	3	C
6	CUE31066	Cloud Computing	2	3	-	-	-	5.0	3	C
TOTAL: 27 hrs/week			12	15	0	0	0	30	17	

8 th Semester										
No.	Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	Clin. (hr/w)	T (hr/w)	ECTS	Units	Type
1	CUE31071	Deep Learning	2	3	-	-	-	5.0	3	C
2	CUE31072	Robotics and Autonomous Systems	2	3	-	-	-	5.0	3	C
3	CUE31073	Game Development (Elective)	2	3	-	-	-	4.0	3	C
4	CUE31074	Internet of Things	2	3	-	-	-	4.0	3	C
5	CUE31075	Artificial Intelligence In Cybersecurity	2	3	-	-	-	4.0	3	C
6	CUE31076	Artificial Intelligence Ethics (Elective)	2	-	-	-	-	3.0	2	C
7	CUE31080	Graduation Project	-	2	-	-	-	5.0	2	C
TOTAL: 29 hrs/week			12	17	0	0	0	30	19	