

# Bachelor of Science in Computer Science (Artificial Intelligence)

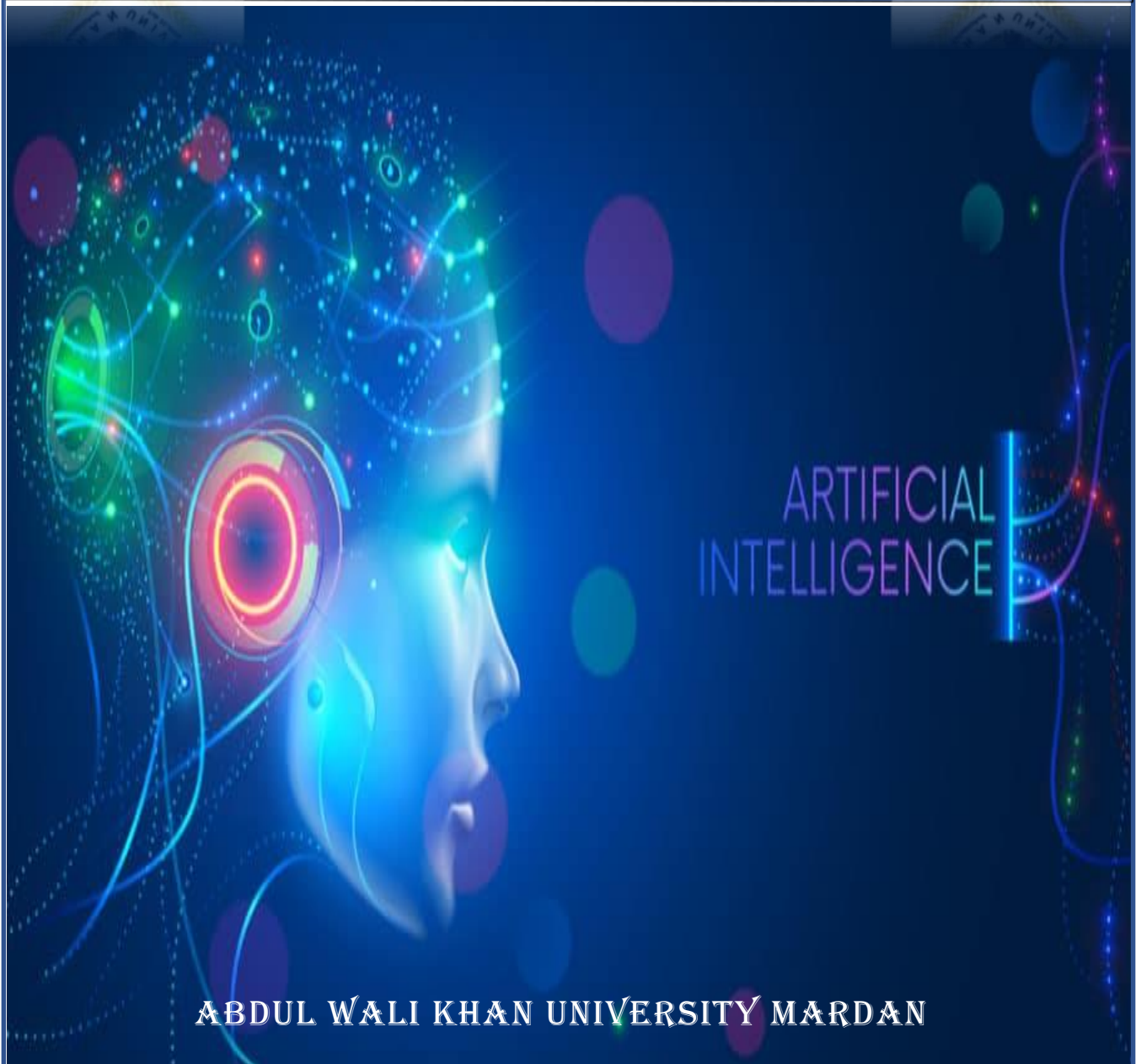


## CURRICULUM

BS (Hons) Artificial Intelligence

DEPARTMENT OF COMPUTER SCIENCE

FACULTY OF PHYSICAL AND NUMERICAL SCIENCES



ABDUL WALI KHAN UNIVERSITY MARDAN

## 1. BS in AI – Semester-wise Breakdown

	Course Code	Course Title	Lec. Hrs	Lab. Hrs	CH	Pre-req	Total
<b>1<sup>st</sup> Semester</b>	GEC-312	Islamic Studies	2	0	2	None	<b>15</b>
	GEC-311	English Composition and Comprehension	3	0	3	None	
	MSC-311	Calculus and Analytical Geometry	3	0	3	None	
	CC-312	Programming Fundamentals (Python)	3	0	3	None	
	GEC-313	Introduction to Info & comm. Technologies	2	0	2	None	
	CC311L	Programming Fundamentals (Python) Lab	0	3	1	None	
	GEC-313L	Introduction to Info & comm. Technologies Lab	0	3	1	None	
<b>2<sup>nd</sup> Semester</b>	GEC-322	Pak Studies	2	0	2	None	<b>18</b>
	GEC-321	Communication Skills	3	0	3	GEC-311	
	MSC-441	Probability and Statistics	3	0	3	None	
	CSC-	Digital Logic and Design	3	0	3	None	
	MSC-431	Multivariate Calculus	3	0	3	CSC-311	
	CC-321	Object Oriented Programming (Python)	3	0	3	CC-311	
	CC-321L	Object Oriented Programming Lab	0	3	1	None	
<b>3<sup>rd</sup> Semester</b>	CC-	Information Security	3	0	3	None	<b>18</b>
	GEC-431	Technical and Business Writing	3	0	3	GEC-321	
	CC-431	Discrete Structures	3	0	3	None	
	CC-432	Data Structure and Algorithms	3	0	3	CC-311	
	CSC-	Artificial Intelligence	3	0	3	CC-321	
	L	Digital Logic and Design Lab	0	3	1	None	
	L	Artificial Intelligence Lab	0	3	1	None	
	CC-432L	Data Structure and Algorithms Lab	0	3	1	None	
<b>4<sup>th</sup> Semester</b>	AIC-511	Programming for Artificial Intelligence	2	0	2	AI	<b>17</b>
	CC-444	Database Systems	3	0	3	None	
	CSC-	Analysis of Algorithms	3	0	3	CC-432	
	CC-441	Operating Systems	3	0	3	CC-432	
	MSC-442	Linear Algebra and Differential Equations	3	0	3	CSC-311	
	AIC-511L	Programming for Artificial Intelligence Lab	0	3	1	None	
	CC-444L	Database Systems Lab	0	3	1	None	
	CC-441L	Operating Systems Lab	0	3	1	None	

	Course Code	Course Title	Lec. Hrs	Lab. Hrs	CH	Pre-req	Total
5 <sup>th</sup> Semester	CC-442	Introduction to Software Engineering	3	0	3	None	17
	CC-551	Computer Networks	3	0	3	None	
	AIC-512	Knowledge Representation and Reasoning	3	0	3	AIC-511	
	CSC-	Computer Organization and Assembly Language	3	0	3	DLD	
		AI Elective-I	3	0	3	None	
	CC-551L	Computer Networks Lab	0	3	1	None	
L	Computer Organization and Assembly Language Lab	0	3	1	None		
6 <sup>th</sup> Semester	AIC-611	Artificial Neural Network	2	0	2	AIC-511	18
	CSC-	Parallel and Distributed Computing	2	0	2	CC-321, CC441	
		University Elective-I	3	0	3	ES202	
		AI Elective-II	3	0	3	CS221	
		AI Elective-III	3	0	3	None	
		Data Analysis	2	0	2	None	
	AIC-611L	Artificial Neural Network Lab	0	3	1	None	
	L	Parallel and Distributed Computing Lab	0	3	1	AI301	
L	Data Analysis Lab	0	3	1	None		
7 <sup>th</sup> Semester		AI Elective – IV	3	0	3	**	15
	AIC-622	Computer Vision	2	0	2	AIC-611	
	AIC-621	Machine learning	2	0	2	AIC-511	
		University Elective-II	3	0	3	None	
	CC-671	Senior Design Project (Part-I)	3	0	3	None	
	AIC-622L	Computer Vision Lab	0	3	1	None	
	AIC-621L	Machine learning Lab	0	3	1	None	
8 <sup>th</sup> Semester		University Elective – III	3	0	3	**	15
		University Elective – IV	3	0	3	**	
	GEC-610	Professional Practices	3	0	3	None	
	AIC-623	Natural Language Processing	3		3	AIC-611	
	CC-681	Senior Design Project (Part-II)	0	9	3	CC-671	
<b>Total Credit Hours</b>							<b>133</b>