

**Indus University**  
**Indus Institute of Information and Communication Technology**  
**Department of Computer Science**  
**Bachelor of Science - Computer Science**  
**Specialization in Artificial Intelligence & Machine Learning**

INDUS UNIVERSITY, AHMEDABAD												
B.Sc. IN COMPUTER SCIENCE (AI & ML) SEMESTER-I SYLLABUS W.E.F. YEAR 2020-2021												
Sr. No.	Sub. Code	Name of the subject	CREDIT	Teaching scheme (per week)				Examination Scheme				Total Marks
								Theory		Practical		
				CIE	End Sem	CIE	End Sem	Th.	Th.	Pr.	Pr.	
1	BSCS0101	Logic Building and Problem Solving	4	3	0	2	5	60	40	60	40	200
2	BSCS0102	Introduction to Digital Electronics	4	4	0	0	4	60	40	0	0	100
3	BSCS0103	Communication Skill in English	3	3	0	0	3	60	40	0	0	100
4	BSCS0104	Foundation of Mathematics	5	4	2	0	6	60	40	0	0	100
5	BSCS0105	Introduction to Programming (Practical)	2	0	0	4	4	0	0	60	40	100
6	BSCS0106	Introduction to Command Line Programming	2	0	0	4	4	0	0	60	40	100
7		Open Elective-I	2	2	0	0	2	60	40	0	0	100
		<b>TOTAL</b>	<b>22</b>	<b>16</b>	<b>2</b>	<b>10</b>	<b>28</b>	<b>300</b>	<b>200</b>	<b>180</b>	<b>120</b>	<b>800</b>

INDUS UNIVERSITY, AHMEDABAD												
B.Sc. IN COMPUTER SCIENCE (AI & ML) SEMESTER-II SYLLABUS W.E.F. YEAR 2020-2021												
Sr. No.	Sub. Code	Name of the subject	CREDIT	Teaching scheme (per week)				Examination Scheme				Total Marks
								Theory		Practical		
				CIE	End Sem	CIE	End Sem	Th.	Th.	Pr.	Pr.	
1	BSCS0201	Fundamental of DBMS	5	3	0	4	7	60	40	60	40	200
2	BSCS0202	Introduction to Python Programming	4	3	0	2	5	60	40	60	40	200
3	BSCS0203	Microprocessors	3	3	0	0	3	60	40	0	0	100
4	BSCS0204	Discrete mathematics	4	4	0	0	4	60	40	0	0	100
5	BSCS0205	Environmental Sciences	2	2	0	0	2	60	40	0	0	100
6	BSCS0206	Data Structure	4	3	0	2	5	60	40	60	40	200
		<b>TOTAL</b>	<b>22</b>	<b>18</b>	<b>0</b>	<b>08</b>	<b>26</b>	<b>360</b>	<b>240</b>	<b>180</b>	<b>120</b>	<b>900</b>

**INDUS UNIVERSITY, AHMEDABAD**

**B.Sc. IN COMPUTER SCIENCE (AI & ML) SEMESTER-III SYLLABUS W.E.F. YEAR 2021-22**

Sr. No.	Sub. Code	Name of the subject	CREDIT	Teaching scheme (per week)				Examination Scheme				Total Marks
								Theory		Practical		
				CIE	End Sem	CIE	End Sem	Th.	Th.	Pr.	Pr.	
1	BSCS0301	Object Oriented Technologies	6	Th.	Tut.	Pr.	Total (hr.)	Th.	Th.	Pr.	Pr.	200
2	BSCS0302	Operating Systems	6	4	0	4	8	60	40	60	40	200
3	BSCS0303	Computer Networks	4	4	0	0	4	60	40	0	0	100
4	BSCS0304	Numerical Methods	4	4	0	0	4	60	40	0	0	100
5		Open Elective-II	4	4	0	0	4	60	40	0	0	100
<b>TOTAL</b>			<b>24</b>	<b>20</b>	<b>0</b>	<b>8</b>	<b>28</b>	<b>300</b>	<b>200</b>	<b>120</b>	<b>80</b>	<b>700</b>

**INDUS UNIVERSITY, AHMEDABAD**

**B.Sc. IN COMPUTER SCIENCE (AI & ML) SEMESTER-IV SYLLABUS W.E.F. YEAR 2021-22**

Sr. No.	Sub. Code	Name of the subject	CREDIT	Teaching scheme (per week)				Examination Scheme				Total Marks
								Theory		Practical		
				CIE	End Sem	CIE	End Sem	Th.	Th.	Pr.	Pr.	
1	BSCS0401	Introduction to R Programming	6	Th.	Tut.	Pr.	Total (hr.)	Th.	Th.	Pr.	Pr.	200
2	BSCS0402	Introduction to Web Technologies	6	4	0	4	8	60	40	60	40	200
3	BSCS0403	Introduction to Artificial Intelligence	4	4	0	0	4	60	40	0	0	100
4	BSCS0404	Software Engineering	4	4	0	0	4	60	40	0	0	100
5	BSCS0405	Design and Analysis of Algorithm	4	4	0	0	4	60	40	0	0	100
<b>TOTAL</b>			<b>24</b>	<b>20</b>	<b>0</b>	<b>08</b>	<b>28</b>	<b>300</b>	<b>200</b>	<b>120</b>	<b>80</b>	<b>700</b>

**INDUS UNIVERSITY, AHMEDABAD**

**B.Sc. IN COMPUTER SCIENCE (AI & ML) SEMESTER-V SYLLABUS W.E.F. YEAR 2021-22**

Sr. No.	Sub. Code	Name of the subject	CREDIT	Teaching scheme (per week)				Examination Scheme				Total Marks
								Theory		Practical		
				CIE	End Sem	CIE	End Sem					
				Th.	Th.	Pr.	Pr.					
1	BSCS0501	Big Data Analytics	6	4	0	4	8	60	40	60	40	200
2	BSCS0502	Introduction to Machine Learning	6	4	0	4	8	60	40	60	40	200
3	BSCS0503	Computer Vision	6	4	0	4	8	60	40	60	40	200
4	BSCS0504	IoT with Case Studies	4	3	2	0	5	60	40	0	0	100
		<b>TOTAL</b>	<b>22</b>	<b>15</b>	<b>2</b>	<b>12</b>	<b>29</b>	<b>240</b>	<b>160</b>	<b>180</b>	<b>120</b>	<b>700</b>

**INDUS UNIVERSITY, AHMEDABAD**

**B.Sc. IN COMPUTER SCIENCE (AI & ML) SEMESTER-VI SYLLABUS W.E.F. YEAR 2021-22**

Sr. No.	Sub. Code	Name of the subject	CREDIT	Teaching scheme (per week)				Examination Scheme				Total Marks
								Theory		Practical		
				CIE	End Sem	CIE	End Sem					
				Th.	Th.	Pr.	Pr.					
1	BSCS0601	Deep Learning with TensorFlow	6	4	0	4	8	60	40	60	40	200
2	BSCS0602	Natural Language Processing	4	4	0	0	4	60	40	0	0	100
3		Open Elective-III	4	4	0	0	4	60	40	0	0	100
4	BSCS0604	Major Project	8	0	0	16	16	60	40	0	0	200
		<b>TOTAL</b>	<b>22</b>	<b>12</b>	<b>00</b>	<b>20</b>	<b>32</b>	<b>240</b>	<b>160</b>	<b>60</b>	<b>40</b>	<b>600</b>