

GLA UNIVERSITY

MATHURA



Accredited with **A+** Grade by **NAAC**

12-B Status from UGC

Institute of Engineering and Technology

Department of
Computer Engineering & Applications

Bachelor of Technology- CSE
Specialization
AIML
(2023 onwards)

Credits Distributions

Sr. No.	Category	No. of Credits
1	Humanities and Social Sciences (HS)	16
2	Basic Sciences (BS)	21
3	Engineering Sciences (ES)	08
4	Professional Core (PC)	69
5	Professional Elective (PE)	32
6	Open Elective (OE)	16
7	Project Work (PW)	18
8	Mandatory Non-Credit Courses (MNC) (4 Courses)	-
Total		180

First Semester (AIML)

S. NO.	CODE	CAT	SUBJECT	TEACHING SCHEME			CREDITS	CONTACTS HRS/WK
				L	T	P		
1.	BCSC xxxx	PC	PROBLEM SOLVING AND C PROGRAMMING	2	0	0	2	2
2.	BMAS xxxx	BS	Mathematics – I (Linear algebra)	3	1	0	4	4
3.	APFJ xxxx	PW	Project based learning	3	0	0	3	3
4.	BPHS xxxx	BS	Engineering Physics	2	1	0	3	4
5.	BELH xxxx	HS	English Communication I	2	0	0	2	2
6.	BCSE xxxx	PE	Introduction Artificial Intelligence.	3	0	0	3	3
PRACTICALS								
1.	BCSC xxxx	PC	PROBLEM SOLVING AND C PROGRAMMING Lab	0	0	4	2	4
2.	APFJ xxxx	PW	Project based learning lab	0	0	2	1	4
3.	BPHS xxxx	ES	Engineering Physics Lab	0	0	2	1	2
4.	BELH xxxx	HS	English Communication Lab I	0	0	2	1	2
5.	BCSE xxxx	PE	Introduction to Artificial Intelligence Lab	0	0	2	1	2
			TOTAL	15	02	12	23	31

Second Semester (AIML)

S. NO.	CODE	CAT	SUBJECT	TEACHING SCHEME			CREDIT S	CONTACTS HRS/WK
				L	T	P		
1.	BCSC xxxx	PC	Programming in Python	2	0	0	2	2
2.	BCSS xxxx	BS	Mathematics – II Probability and Statistics	3	1	0	4	4
3.	BCSC xxxx	PC	Database Technology	2	0	0	2	3
4.	BCSE xxxx	PE	Data engineering	2	0	0	2	2
5.	BELH xxxx	HS	English Communication – II	2	0	0	2	2
6.	BCSG xxxx	ES	Digital Logic Design	3	0	0	3	3
7.	APFJ xxxx	PW	Project based learning	3	0	0	3	3
PRACTICALS								
1.	BCSC xxxx	PC	Programming in Python Lab	0	0	4	2	4
2.	BCSC xxxx	PC	Database Technology Lab	0	0	4	2	4
3.	BCSE xxxx	PE	Data Engineering Lab	0	0	4	2	4
4.	BELH xxxx	HS	English Language Lab – II	0	0	2	1	2
5.	BCSG xxxx	ES	Digital Logic Design Lab	0	0	2	1	2
6.	BCSE xxxx	PE	Project based learning LAB	0	0	2	1	2
			TOTAL	17	1	18	27	37

Program Core

S. NO.	CODE	SUBJECT	TEACHING SCHEME				CREDITS	CONTACT S HR/WK	PRE- REQUISITES
			L	T	P	J			
THEORY									
1	BCSC 00xx	Web Technology - I	2	0	0	0	2	2	
2.	BCSC 0061	PROBLEM SOLVING AND C PROGRAMMING	2	0	0	0	2	2	
3.	BCSS 0152	Programming in Python	2	0	0	0	2	2	
4.	BCSC 0165	Database Technology	3	0	0	0	3	3	
5.	BCSC 00xx	Data Structures and Algorithms	3	0	0	0	3	3	Programming
6.	BCSC 00xx	Object Oriented Programming	2	0	0	0	2	2	Programming
7.	BCSC 00xx	Web Technology - II	2	0	0	0	2	2	
8.	BCSC 00xx	Algorithms Design & Analysis	4	0	0	0	4	4	Programming, Data Structures
9.	BCSC 00xx	Operating System	3	0	0	0	3	3	
10.	BCSC 00xx	Data Communication & Network System	3	0	0	0	3	3	
11.	BCSC 00xx	Software Engineering and Project Management	3	0	0	0	3	3	
12.	BCSC 00xx	High Performance Computing	3	0	0	0	3	3	
13.	BCSC 00xx	Theory of Computation	4	1	0	0	4	4	
14.	BCSC 00xx	Emerging Technologies and Business Domains	3	0	0	0	3	3	
15.	BCSC 00xx	Introduction to Machine Learning	3	0	0	0	3	3	
16.	BCSC 00xx	Optimization Techniques	3	1	0	0	4	4	
17.	BCSC 00xx	Computer Organization & Microprocessor	3	0	0	0	3	3	
PRACTICALS									
1.	BCSC 0859	Web Technology Lab - I	0	0	4	0	2	4	
2.	BCSC 0858	Computer Programming Lab - I	0	0	4	0	2	4	
3.	BCSC 0760	Computer Programming Lab- II	0	0	4	0	2	4	
4.	BCSC 0861	Database Technology Lab	0	0	2	0	1	2	
5.	BCSC 00xx	Data Structures and Algorithms Lab	0	0	4	0	2	4	Programming Lab
6.	BCSC 00xx	Object Oriented Programming Lab	0	0	4	0	2	4	Programming Lab
7.	BCSC 00xx	Web Technology Lab - II	0	0	4	0	2	4	

8.	BCSC 00xx	Algorithms Design & Analysis Lab	0	0	2	0	1	2	Programming, Data Structures
9.	BCSC 00xx	Operating System Lab	0	0	2	0	1	2	
10.	BCSC 00xx	Data Communication & Network System Lab	0	0	2	0	1	2	
11.	BCSC 00xx	Software Engineering and Project Management Lab	0	0	2	0	1	2	
12.	BCSC 00xx	High Performance Computing Lab	0	0	2	0	1	2	
13.	BCSC 00xx	Neural Network and Deep Learning Lab	0	0	2	0	1	4	
14.	BCSC 00xx	Computer Organization & Microprocessor Lab	0	0	2	0	1	2	
Total			47	1	42	0	69	90	

Mandatory Non-Graded Course

S. NO.	CODE	SUBJECT	TEACHING SCHEME				CREDITS	CONTACTS HR/WK	PRE- REQUISITES
			L	T	P	J			
1.	BCSC 00xx	MNG-I	2	0	0	0	0	2	
2.	BCSC 00xx	MNG-II	2	0	0	0	0	2	
3.	BCSC 00xx	MNG-III	2	0	0	0	0	2	
4.	BCSC 00xx	MNG-IV	2	0	0	0	0	2	
TOTAL			8	0	0	0	0	8	

Humanities and Social Sciences

1.	BELH 0801	English Language Lab – I	0	0	2	0	1	2	
2.	BELH 0808	English Language Lab – II	0	0	2	0	1	2	
3.	BCSC 00xx	Soft Skills – I	0	0	2	0	1	2	
4.	BCSC 00xx	Soft Skills – II	0	0	2	0	1	2	
5.	BCSC 00xx	Soft Skills – III	0	0	4	0	2	8	
6.	BCSC 00xx	Soft Skills – IV	0	0	4	0	2	8	
TOTAL			6	0	20	0	16	32	

Basic Sciences

S. NO.	CODE	SUBJECT	TEACHING SCHEME				CREDITS	CONTACTS	PRE- REQUISITES
			L	T	P	J			
THEORY									
1.	BMAS 0105	Mathematics - I	3	1	0	0	4	4	
2.	BCSS 0152	Mathematics - II	3	1	0	0	4	4	
3.	BCSC 00xx	Mathematics - III	3	1	0	0	4	4	
4.	BCSC 00xx	Mathematics - IV	3	1	0	0	4	4	
5.	BPHS 1004	Engineering Physics	3	1	0	0	4	4	
PRACTICALS									
1.	BPHS 0801	Engineering Physics Lab	0	0	2	0	1	2	
TOTAL			15	5	2	0	21	22	

Engineering Sciences

SNO.	CODE	SUBJECT	TEACHING SCHEME				CREDITS	CONTACTS HR/WK	PRE- REQUISITES
			L	T	P	J			
THEORY									
1.	BCSG 00XX	Introduction to Machine Learning	2	0	0	0	2	2	
2.	BCSG 0153	Digital Logic Design	3	0	0	0	3	3	
PRACTICALS									
1.	BCSG 08XX	Introduction to Machine Learning Lab	0	0	4	0	2	4	

2.	BCSG 0752	Digital System Design Lab	0	0	2	0	1	2	
Total			8	0	6	0	08	11	

Open Electives

S. NO.	CODE	SUBJECT	TEACHING SCHEME				CREDITS	CONTACTS HR/WK	PRE- REQUISITES
			L	T	P	J			
THEORY									
1.	BCSC 00xx	Open Elective-I	4	0	0	0	0	4	
2.	BCSC 00xx	Open Elective -II	4	0	0	0	0	4	
3.	BCSC 00xx	Open Elective -III	4	0	0	0	0	4	
4.	BCSC 00xx	Open Elective -IV	4	0	0	0	0	4	
Total			16	0	0	0	0	16	

Projects

S. NO.	CODE	SUBJECT	TEACHING SCHEME				CREDITS	CONTACT	PRE- REQUISITES
			L	T	P	J			
1.	APFJ 0001	Tiny Project	0	0	0	2	2	0	
2.	BCSJ 0000	Mini- Project-I, II	0	0	0	0	2	0	2 nd Year
3.	BCSC 00xx	Mini- Project-III, IV	0	0	0	0	2	0	3 rd Year
4.	BCSC 00xx	Major Project - I	0	0	0	0	3	0	4 th Year
5.	BCSC 00xx	Major Project - II	0	0	0	0	8	0	
6.	BCSJ0991	Industrial Training	0	0	0	0	2	0	
TOTAL			0	0	0	0	19	0	

List of programme electives

S. NO.	CODE	SUBJECT	TEACHING SCHEME				CREDITS	CONTACT SHR/WK	PRE- REQUISITES
			L	T	P	J			
THEORY									
1.	BCSE xxxx	Introduction to Artificial Intelligence	3	0	0	0	3	3	
2.	BCSE xxxx	Deep learning	3	0	0	0	3	3	
3.	BCSE xxxx	Data Engineering and Visualization	3	0	0	0	3	3	
4.	BCSE xxxx	Computational Linguistics and Natural Language Processing-I	3	0	0	0	3	3	
5.	BCSE xxxx	Applied Natural Language Processing	3	0	0	0	3	3	
6.	BCSE xxxx	Generative AI	3	0	0	0	3	3	
7.	BCSE xxxx	Computer vision	3	0	0	0	3	3	
8	BCSE xxxx	Application of Machine Learning in Industry	3	0	0	0	3	3	
9.	BCSE xxxx	Emerging Technologies-I(CC)	3	0	0	0	3	3	
10.	BCSE xxxx	Emerging Technologies-II(DevOps)	3	0	0	0	3	3	
11.	BCSE xxxx	Emerging Technologies-III(CyberSec)	3	0	0	0	3	3	
12.	BCSE xxxx	Reinforcement learning	3	0	0	0	3	3	
13.	BCSE xxxx	Certifications Microsoft	3	0	0	0	3	3	
PRACTICALS									
1.	BCSE xxxx	Introduction to Artificial Intelligence Lab	0	0	2	0	1	2	
2.	BCSE xxxx	Deep learning Lab	0	0	2	0	1	2	
3.	BCSE xxxx	Data Engineering and Visualization Lab	0	0	2	0	1	2	
4.	BCSE xxxx	Computational Linguistics and Natural Language Processing-I Lab	0	0	2	0	1	2	
5.	BCSE xxxx	Applied Natural Language Processing Lab	0	0	2	0	1	2	
6.	BCSE xxxx	Generative AI Lab	0	0	2	0	1	2	
7.	BCSE xxxx	Computer Vision Lab	0	0	2	0	1	2	
8.	BCSE xxxx	Application of Machine Learning in Industry Lab	0	0	2	0	1	2	
9.	BCSE xxxx	Reinforcement learning Lab	0	0	2	0	1	2	
10.	BCSE xxxx	Deep learning Lab	0	0	2	0	1	2	
11.	BCSE xxxx	Emerging Technologies-I Lab	0	0	2	0	1	2	

12.	BCSE xxxx	Emerging Technologies-II Lab	0	0	2	0	1	2	
13.	BCSE xxxx	Emerging Technologies-III Lab	0	0	2	0	1	2	
14.	BCSE xxxx	Open-Source Technologies Lab	0	0	2	0	1	2	
15.	BCSE xxxx	Project based learning lab	0	0	2	0	1	2	