Study & Evaluation Scheme

Of

Bachelor of Computer Application in AI (B.C.A.-AI)

[Applicable w.e.f. Academic Session 2024-25]

Approved by Academic Council

FUTURE UNIVERSITY

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(Established under Govt. of U. P. Act No. 12, 2024)

Study & Evaluation Scheme
of
Bachelor of Computer Application in AI
SUMMARY

Programme	:	Bachelor of Computer Application in AI B.C.A.-AI
Duration	:	Four years full time (Eight Semesters)
Medium	:	English
Minimum Required Attendance	:	75 percent
Credit		
Maximum Credit	:	**170**
Minimum credit required for the degree	:	**160**

Assessment (Theory) :

Internal	External	Total
30%	70%	100%

Assessment (Practical) :

Internal	External	Total
50%	50%	100%

Internal Evaluation (Theory Papers)

Class Test I	Class Test II	Assignment(s)	Other Activity (including attendance)	Total
10 Marks	10 Marks	5 Marks	5 Marks	30 Marks

Internal Evaluation (Practical Papers)

Experiment File Viva	Exam	Attendance	Total
10 Marks	30 Marks	10 Marks	50 Marks

		External	Internal
Duration of Examination (Theory)	:	3 hrs.	1 ½ hrs

Duration of Examination (Practical) : As per the requirement of the practical paper.

To qualify the course a student is required to secure a minimum of 40% marks in aggregate including the semester end examination and teachers' continuous evaluation. (i.e. both internal and external).
A candidate who secures less than of 40% of marks in a course shall be deemed to have failed in that course. The student should have at least 50% marks in aggregate to clear the semester. In case a student has more than 40% in each course, but less than 50% overall in a semester, he/she shall re-appear in courses where the marks are less than 50% to achieve the required aggregate percentage of 50% in the semester.

Question Paper Structure

1. ***The question paper shall consist of six questions. Out of which first question shall be of short answer type (not exceeding 50 words) and will be compulsory. Question No. 1 shall contain 8 parts representing all units of the syllabus and students shall have to answer any five (weight age 4 marks each).***
2. ***Out of the rest five questions, students shall be required to attempt all five questions, but there will be an internal choice of A or B. Each question will be from one unit of the syllabus. The weight age of Question No. 2 to 6 shall be 10 marks each.***

Department of Computer Application
Bachelor of Computer Application in Artificial Intelligence
Evaluation Scheme

Credit Framework for the BCA (AI) -NEP-2020									
Sem.	Major (Core)	Minor Stream	Multidisciplinary	Ability Enhancement Course	Skill Enhancement Course	Value Added Courses Common	Summer Internship	Research Project/ Dissertation	Total Credit
1	13	4	1		2	2			22
2	14	4	2						20
Students exiting the programme after securing 40 credits will be awarded UG Certificate in the relevant Discipline / Subject provided they secure 4 credits in work based vocational courses offered during summer term or internship / Apprenticeship in addition to 6 credits from skill-based courses earned during first and second semester									
3	8	3	2	2	2	3			20
4	12	3			2	3			20
Students exiting the programme after securing 80 credits will be awarded UG Diploma in the relevant Discipline / Subject provided they secure 4 credits in skill based vocational courses offered during first year or second year summer term.									
5	10	3	2			3		4	22
6	7			2		3		10	22
Students who want to undertake 3-year UG Programme will be awarded UG Degree in the relevant Discipline/ Subject Upon securing 120 credits									
7	10	3				3		6	22
8	4	3				3		12	22
Students will be awarded UG Degree(Honors) with Research in the relevant Discipline/ Subject provided they secure 160 credits									

Total = 170 Credit

Future University									
BCA in Artificial Intelligence (Undergraduate Regular)									
Course Structure/ Degree Award Checklist 2024-2028									
Program Name:	**BCA-AI**						**Program Code: 04**		
Total Credit of Program: 170									

Semester-I

		Theory	Week			Evaluation Scheme		Total	Credit
SN.	**Course Category**	**Course Title**	**L**	**T**	**P**	**CA**	**EE**		
1	Major Core Course	Computer Fundamental & Emerging Technology	4	0	0	30	70	100	4
2	Major Core Course	Artificial Intelligence	3	0	0	30	70	100	3
3	Major Core Course	Principle of Problem-Solving using Python	4	0	0	30	70	100	4
4	Minor Course	Mathematical Foundation for AI	4	0	0	30	70	100	4
5	Skill Enhancement Course	Professional Communication	2	0	0	0	50	50	2
6	Value Added Course	Cyber Security	2	0	0	30	70	100	2
7	Multidisciplinary	IKS-I (Indian Knowledge System - I)	1	0	0	50	0	50	1
1	Major Core Course	Office Automation Lab	0	0	2	25	50	75	1
2	Major Core Course	Programming in Python Lab	0	0	2	25	50	75	1
		TOTAL	**20**	**0**	**4**	**250**	**500**	**750**	**22**

Semester -II									
		Theory	Week			Evaluation Scheme		Total	Credit
SN.	Course Category	Course Title	L	T	P	CA	EE		
1	Minor Course	Discrete Mathematics	4	0	0	30	70	100	4
2	Major Core Course	Advance Python Programming	4	0	0	50	100	150	4
3	Major Core Course	Software Engineering	4	0	0	30	70	100	4
4	Major Core Course	Advance Database Management System	4	0	0	30	70	100	4
5	Multidisciplinary Course	Environmental Science	2	0	0	50	50	100	2
6	Skill Enhancement Course	LSM-I (Life Skills & Mentoring – I)	0	0	0	0	0	0	0
1	Major Core Course	DBMS Lab	0	0	2	50	50	100	1
2	Major Core Course	Advanced Python Programming Lab	0	0	2	50	50	100	1
		TOTAL	**18**	**0**	**4**	**290**	**460**	**750**	**20**

Semester -III									
		Theory	Week			Evaluation Scheme		Total	Credit
SN.	Course Category	Course Title	L	T	P	CA	EE		
1	Multidisciplinary	E-commerce & Digital Marketing	2	0	0	30	70	100	2
2	Major Core Course	Operating System and Unix Shell programming	3	0	0	30	70	100	3
3	Major Core Course	Web Technologies services using Python	3	0	0	30	70	100	3
4	Minor Courses	Mathematics-III	3	0	0	30	70	100	3
5	Skill Enhancement Course	AI for Everyone	2	0	0	30	70	100	2
6	Ability Enhancement Course	Foreign language (French/German)	2	0	0	30	70	100	2
7	Value Added Course	**MOOC-I**	Self-Paced Learning					100	3
1	Major Core Course	OS and Shell programming LAB	0	0	2	50	50	100	1
2	Major Core Course	Web Technologies services using Python LAB	0	0	2	50	50	100	1
		TOTAL	**15**	**0**	**4**	**280**	**520**	**900**	**20**

Note: In the second semester, Mathematics-III will be a compulsory subject from the list of papers for those students who did not have Mathematics in Intermediate (12th) class.

Semester-IV									
		Theory	**Week**			**Evaluation Scheme**			
SN.	**Course Category**	**Course Title**	**L**	**T**	**P**	**CA**	**EE**	**Total**	**Credit**
1	Major Core Course	OOPs concept with Java	3	0	0	30	70	100	3
2	Major Core Course	Introduction to Internet of Things	3	0	0	30	70	100	3
3	Major Core Course	Machine Learning Technology	3	1	0	30	70	100	4
4	Value Added Course	**MOOC-II**	Self-Paced Learning					100	3
5	Minor Course	**Elective-I**	3	0	0	30	70	100	3
6	Skill Enhancement Course	AI for Developers	2	0	0	30	70	100	2
1	Major Core Course	OOPs concept with Java LAB	0	0	2	50	50	100	1
2	Major Core Course	Machine learning technology LAB	0	0	2	50	50	100	1
		TOTAL	**14**	**1**	**4**	**250**	**450**	**800**	**20**

Semester -V									
		Theory	**Week**			**Evaluation Scheme**			
SN.	**Course Category**	**Course Title**	**L**	**T**	**P**	**CA**	**EE**	**Total**	**Credit**
1	Major Core Course	Data Structures and Algorithms using Java	3	1	0	30	70	100	4
2	Major Core Course	Data Science and Analytic	3	1	0	30	70	100	4
3	Law (Interdisciplinary)	Intellectual Property Rights (IPR)	2	0	0	30	70	100	2
4	Minor Course	**Elective-II**	3	0	0	30	70	100	3
5	Value Added Course	**MOOC-III**	Self-Paced Learning					100	3
1	Major Core Course	Data Structures and Algorithms using Java LAB	0	0	2	50	50	100	1
2	Major Core Course	Data Science and Analytic LAB	0	0	2	50	50	100	1
3	Research Project/ Dissertation	Minor Project	0	0	8	100		100	4
		TOTAL	**11**	**2**	**12**	**320**	**380**	**800**	**22**

Semester-VI									
		Theory	**Week**		**Evaluation Scheme**				
SN.	**Course Category**	**Course Title**	**L**	**T**	**P**	**CA**	**EE**	**Total**	**Credit**
1	Major Core Course	Artificial Neural Networks	3	1	0	30	70	100	4
2	Major Core Course	Artificial Intelligence in Business	3	0	0	30	70	100	3
3	Value-added Course	**MOOC-IV**	Self-Paced Learning					100	3
4	Ability Enhancement Course	Personality Development and Decision-making Skills	2	0	0	30	70	100	2
1	Research Project/ Dissertation	Major Project	0	0	20	200	300	500	10
		TOTAL	**8**	**1**	**20**	**290**	**510**	**900**	**22**

Semester-VII									
		Theory	**Week**			**Evaluation Scheme**			
SN.		**Course Title**	**L**	**T**	**P**	**CA**	**EE**	**Total**	**Credit**
1	Major Core Course	Introduction to Research Methodology	3	1	0	30	70	100	4
2	Major Core Course	Android Applications Development	3	1	0	30	70	100	4
3	Value Added Course	**MOOC-V**	Self-Paced Learning					100	3
4	Minor Course	**Elective-III**	3	0	0	30	70	100	3
1	Major Core Course	Android Applications Development LAB	0	0	2	50	50	100	1
2	Major Core Course	Research Methodology Lab	0	0	2	50	50	100	1
3	Research Project/ Dissertation	Minor Dissertation	0	0	12	100	100	200	6
		TOTAL	**9**	**2**	**16**	**290**	**410**	**800**	**22**

Semester-VIII									
		Theory	**Week**			**Evaluation Scheme**			
SN.		**Course Title**	**L**	**T**	**P**	**CA**	**EE**	**Total**	**Credit**
1	Major Core Course	Augmented Reality (AR) and Virtual Reality (VR)	3	0	0	30	70	100	3
2	Minor Course	**Elective-IV**	3	0	0	30	70	100	3
3	Value Added Course	**MOOC-VI**	Self-Paced Learning					100	3
1	Major Core Course	AR and VR Lab	0	0	2	50	50	100	1
2	Research Project/ Dissertation	Major Dissertation	0	0	24	200	300	500	12
		TOTAL	**6**	**0**	**26**	**310**	**490**	**900**	**22**

Sr.N	Course Category
1	Major(Core)
2	Minor Stream
3	Multidisciplinary
4	Ability Enhancement Course
5	Skill Enhancement Course
6	Value Added Courses Common for All UG
7	Summer Internship
8	Research Project/ Dissertation

List of Elective Courses	
SN.	**ELECTIVE-I:**
1	Introduction to AI and ML and Data Science (EL)
2	Data Warehousing and Data Mining (EL)
3	Social Media Analytics (EL)
4	Big Data Analytics (EL)
5	Computer Architecture (EL)
SN.	**ELECTIVE-II:**
1	Introduction to Blockchain Technology (EL)
2	Natural Language Processing (EL)
3	Soft Computing (EL)
4	Information Security and Cyber Laws (EL)

SN.	**ELECTIVE-III:**
1	Computer Vision (EL)
2	Fundamentals of Data Privacy (EL)
3	Storage Area Network (EL)
4	Mobile Computing (EL)
SN.	**ELECTIVE-IV:**
1	Cloud Computing (EL)
2	Digital Image Processing (EL)
3	Cyber Analytics (EL)
4	Deep Learning (EL)