



FUTURE UNIVERSITY

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FUTURE UNIVERSITY, BAREILLY

(Established under the Uttar Pradesh Private Universities (Third Amendment) Act, 2024)

COURSE CURRICULUM

AND

EVALUATION SCHEME

BCA

For the Students Admitted in Academic Session 2026-27

Effective From

Academic Session 2026-27

Prepared By

Board of Studies

Approved By

Academic Council
Future University, Bareilly

Published By {

Office of the Registrar
Future University, Bareilly

Academic Session: 2026-27



(This Curriculum and Evaluation Scheme shall be applicable to all students admitted to the B.A. Programme from the Academic Session _____ onwards and shall remain in force until amended or revised by the Academic Council of Future University, Bareilly.)



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Board of Studies (BCA (AI & ML))

Name of Faculty: Faculty of Computer Application

Attendance Sheet:

No.	Designation	Name	Role in BoS	Signature
	Head of Department	Dr. Jeelani	Chairman	
	One Outside Expert (Nominated by the Vice Chancellor)	Dr. Akhtar Hussain	Member	
	One Industry Expert (Nominated by the Vice Chancellor)	Mr. Sachin Saxena	Member	
4	Three members of the faculty, one each from the categories of Professor, Associate Professor and Assistant Professor of the Department	1. Dr. Abhishek Dean, (Professor)	Member	
5		2. Dr. Shivangi Ghildiyal (Associate Professor)	Member	
6		3. Mr. Udit Kumar Mishra (Assistant Professor)	Member	
7	Two Students (Nominated by the Dean on the recommendation of the Head of the Department)	Ms. Khushi	Member	
8		Ms. Deepa Pandey	Member	



Chairperson



**FUTURE
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Board of Studies (BCA (Digital Marketing))

Name of Faculty: Faculty of Computer Application

Attendance Sheet:

S. No.	Designation	Name	Role in BoS	Signature
1	Head of Department	Dr. Jeelani	Chairman	
2	One Outside Expert (Nominated by the Vice Chancellor)	Dr. Akhtar Hussain	Member	
3	One Industry Expert (Nominated by the Vice Chancellor)	Mr. Sachin Saxena	Member	
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5		2. Dr. Shivangi Ghildiyal (Associate Professor)	Member	
6		3. Mr. Udit Kumar Mishra (Assistant Professor)	Member	
7	Two Students (Nominated by the Dean on the recommendation of the Head of the Department)	Ms. Khushi	Member	
8		Ms. Deepa Pandey	Member	



Chairperson



**FUTURE
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Board of Studies ((MCA))

Name of Faculty: Faculty of Computer Application

Attendance Sheet:

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1	Head of Department	Dr. Jeelani	Chairman	
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3	One Industry Expert (Nominated by the Vice Chancellor)	Mr. Sachin Saxena	Member	
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7	Two Students (Nominated by the Dean on the recommendation of the Head of the Department)	Ms. Khushi	Member	
8		Ms. Deepa Pandey	Member	



Chairperson



**FUTURE
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Board of Studies (BCA))

Name of Faculty: Faculty of Computer Application

Attendance Sheet:

No.	Designation	Name	Role in BoS	Signature
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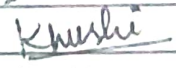
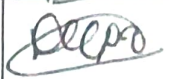


Chairperson

Board of Studies (BCA)

Name of Faculty: Faculty of Computer Application

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Chairperson



**FUTURE
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FACULTY OF COMPUTER APPLICATIONS

Agenda for the 3rd Board of Studies (BoS) Meeting

Date: 23 July 2026 (Thursday)

Time: 11.00 AM onwards

Venue: Conference Room

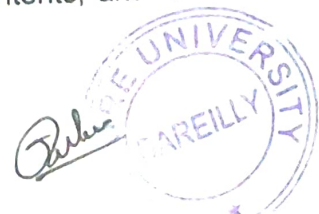
1. To welcome the Hon'ble members of the Board of Studies and outline the objectives of the meeting.
2. To confirm the minutes of the previous Board of Studies meeting and review the Action Taken Report (ATR).
3. To consider and approve the introduction of the Bachelor of Computer Applications (Digital Marketing) programme, including:

- | | |
|---|---------------------------------------|
| • Programme Objectives (POs) | • Semester-wise Scheme of Examination |
| • Programme Specific Outcomes (PSOs) | • Credit Distribution as per NEP-2020 |
| • Programme Educational Objectives (PEOs) | • Course Structure |
| • Curriculum and Syllabus | • Evaluation Scheme |

4. To consider and approve the introduction of Bachelor of Computer Applications (Artificial Intelligence & Machine Learning) Powered by IBM, including:

- | | |
|---|---------------------------------------|
| • Programme Objectives (POs) | • Semester-wise Scheme of Examination |
| • Programme Specific Outcomes (PSOs) | • Credit Distribution as per NEP-2020 |
| • Programme Educational Objectives (PEOs) | • Course Structure |
| • Curriculum and Syllabus | • Evaluation Scheme |

5. To review and approve the revised curriculum, course contents, and course structure of the following programmes:



1. BCA (2024–25)
2. BCA (2025–26)
3. BCA (Artificial Intelligence) (2025–26)
4. MCA (2025–26)
5. MCA (Artificial Intelligence) (2025–26)
6. To consider and approve the revised Ordinances/Academic Regulations for all undergraduate and postgraduate programmes of the Faculty of Computer Applications in accordance with:
 - NEP-2020
 - UGC Guidelines
 - University Academic Regulations
7. To consider and approve the revised semester-wise Course Structure and Credit Distribution for all programmes of the Faculty of Computer Applications.
8. To approve the Scheme of Examination, End Semester Examination, Grading System, SGPA/CGPA calculation, and Credit Framework for all programmes.
9. To approve the Course Outcomes (COs), Programme Outcomes (POs), Programme Specific Outcomes (PSOs), and CO–PO Mapping for all programmes.
10. To consider any other academic matter with the permission of the Chair.
11. The meeting shall conclude with a vote of thanks to the Chair and all the Hon'ble Members.

Per



FACULTY OF COMPUTER APPLICATIONS

Minutes of the 3rd Board of Studies (BoS) Meeting

Date: 23 July 2026 (Thursday)

Time: 11:00 AM onwards

Venue: Conference Room, Future University, Bareilly

1. The Chairperson welcomed all the distinguished members and thanks to them for attending the Third Board of Studies Meeting. The objectives of the meeting were explained.
2. Confirmation of Previous BoS Minutes and Action Taken Report (ATR)
3. The detailed proposal including Programme Objectives (POs), Programme Specific Outcomes (PSOs), Programme Educational Objectives (PEOs), Curriculum, Syllabus, Semester-wise Scheme, Credit Distribution, Course Structure and Evaluation Scheme was presented.

After detailed deliberations, the Board approved the introduction of the Bachelor of Computer Applications (Digital Marketing) programme from the Academic Session 2026–27.

4. The complete curriculum, course structure, credit framework and IBM-supported learning components were discussed.

The Board approved the introduction of BCA (Artificial Intelligence & Machine Learning) Powered by IBM from the Academic Session 2026–27.

5. The revised curriculum and syllabus of the following programmes were placed before the Board:
 - BCA (2024–25)
 - BCA (2025–26)
 - BCA (AI) (2025–26)
 - BCA (AI) (2024–25)
 - MCA (2025–26)
 - MCA (AI) (2025–26)

The Board reviewed the curriculum and approved the revisions after incorporating minor suggestions from the experts.

6. The revised Ordinance was presented in accordance with NEP-2020, UGC Guidelines and University Regulations.

After discussion, the Board approved the revised Ordinance and Academic Regulations for all undergraduate and postgraduate programmes of the Faculty of Computer Applications. The revised Ordinance shall be implemented from the Academic Session 2026–27.

7. The revised semester-wise course structure and credit distribution were discussed. The Board approved the revised Course Structure and Credit Distribution in accordance with NEP-2020.



8. The Board discussed:

- Scheme of Examination
- End Semester Examination Pattern
- Continuous Assessment
- Credit Framework
- SGPA & CGPA Calculation Methodology
- Grading System

The Examination Scheme, Credit Framework, SGPA/CGPA calculation methodology and Grading System were approved.

9. The Course Outcomes, Programme Outcomes, Programme Specific Outcomes and CO–PO Mapping prepared for all programmes were presented.

The Board approved the COs, POs, PSOs and CO–PO Mapping for all programmes.

10. The Chair informed the Board regarding the requirement of strengthening learning resources for the newly introduced and revised programmes.

The following were presented before the Board:

- Programme-wise Text Books
- Reference Books
- E-learning Resources
- NPTEL Online Certification Courses relevant to BCA, MCA, Digital Marketing, Artificial Intelligence & Machine Learning.

After reviewing the proposed list, the Board approved for procurement and implementation from Academic Session 2026–27. The Board also recommended periodic updation of library resources in accordance with emerging technologies.

11. The members appreciated the faculty's efforts in aligning all programmes with:

- NEP-2020
- Outcome Based Education (OBE)
- Industry Requirements
- Skill Development
- Digital Learning
- IBM Industry Collaboration

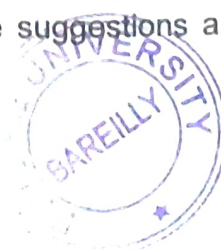
The Board suggested continuous curriculum review every academic session.

12. There being no other business, the meeting concluded with a vote of thanks to the Chair and all distinguished members for their valuable suggestions and active participation.



H.O.D.

Department of Computer Applications





FACULTY OF COMPUTER APPLICATIONS

Agenda for the 3rd Board of Faculty (BoF) Meeting

Date: 23 July 2026 (Thursday)

Time: 02:00 Noon onwards

Venue: Conference Room, Future University, Bareilly

Agenda

1. To welcome the Hon'ble Members of the Board of Faculty and outline the objectives of the meeting.
2. To confirm the Minutes of the previous Board of Faculty Meeting and review the Action Taken Report (ATR).
3. To consider and approve the recommendations of the 3rd Board of Studies (BoS) Meeting held on 23 July 2026.
4. To consider and approve the introduction of the following new programmes from the Academic Session 2026-27:
 - Bachelor of Computer Applications (Digital Marketing)
 - Bachelor of Computer Applications (Artificial Intelligence & Machine Learning) Powered by IBM
5. To consider and approve the revised Curriculum, Syllabus and Course Structure of:
 - BCA (2024-25)
 - BCA (2025-26)
 - BCA (AI) (2024-25)
 - BCA (AI) (2025-26)
 - MCA (2025-26)
 - MCA (AI) (2025-26)
6. To consider and approve the revised Ordinance/Academic Regulations prepared in accordance with NEP-2020, UGC Guidelines and University Regulations.
7. To consider and approve the revised Semester-wise Course Structure, Credit Distribution, Scheme of Examination, Credit Framework, SGPA/CGPA Calculation Methodology and Grading System for all programmes.
8. To consider and approve the Course Outcomes (COs), Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and CO-PO Mapping.
9. To consider and approve the Faculty Library Resources including:
 - Programme-wise Text Books
 - Reference Books
 - E-Resources



- Selected NPTEL Online Certification Courses relevant to BCA, MCA, Digital Marketing and Artificial Intelligence & Machine Learning.

10. To authorize the Dean, Faculty of Computer Applications, to submit the approved recommendations to the Academic Council for further approval.
11. Any other matter with the permission of the Chair.
12. Vote of Thanks.



Dean

Faculty of Computer Applications
Future University, Bareilly





FACULTY OF COMPUTER APPLICATIONS

Minutes of the 3rd Board of Faculty (BoF) Meeting

Date: 23 July 2026 (Thursday)

Time: 02:00 Noon onwards

Venue: Conference Room, Future University, Bareilly

- The Chairperson welcomed all the Hon'ble Members of the Board of Faculty and explained the objectives of the meeting.
- The Minutes of the previous Board of Faculty Meeting and the Action Taken Report were confirmed by the members.
- The recommendations of the 3rd Board of Studies Meeting held on 23 July 2026 were placed before the Board.
- After detailed discussion, the Board unanimously accepted the recommendations made by the Board of Studies.
- The proposal for introducing the following programmes from the Academic Session 2026-27 was presented:
 - BCA (Digital Marketing)
 - BCA (Artificial Intelligence & Machine Learning) Powered by IBM
- After discussion, the Board approved both programmes and recommended them for consideration by the Academic Council.
- The revised Curriculum, Syllabus and Course Structure of the following programmes were presented:

• BCA (2024-25)	• BCA (AI) (2025-26)
• BCA (2025-26)	• MCA (2025-26)
• BCA (AI) (2024-25)	• MCA (AI) (2025-26)
- The Board approved the revised curriculum and recommended its implementation from the Academic Session 2026-27.
- The revised Ordinance and Academic Regulations prepared in accordance with NEP-2020, UGC Guidelines and University Regulations were discussed.
- The Board approved the revised Ordinance and recommended the same to the Academic Council.
- The revised Semester-wise Course Structure, Credit Distribution, Examination Scheme, Credit Framework, SGPA/CGPA Methodology and Grading System were discussed.
- The Board unanimously approved all the proposed revisions.
- The Course Outcomes (COs), Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and CO-PO Mapping were presented.
- The Board approved the same for implementation in all programmes.
- The proposed Faculty Library Resources consisting of:
 - Programme-wise Text Books
 - Reference Books

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- E-Learning Resources
- Selected NPTEL Online Certification Courses

were reviewed.

- The Board approved the procurement and implementation of these resources from the Academic Session 2026-27 and recommended periodic revision of library resources.
- The Board authorized the Dean, Faculty of Computer Applications, to forward all approved recommendations to the Academic Council for final approval and implementation.
- No other matter was raised with the permission of the Chair.
- There being no other business, the meeting concluded with a vote of thanks to the Chair and all the Hon'ble Members for their valuable suggestions and active participation.



Dean
Faculty of Computer Applications
Future University, Bareilly



ORDINANCE FOR BCA PROGRAMME

1.1 ACADEMIC PROGRAMME

The BCA academic Programme comprises of the following disciplines in which the degrees are be offered:

- Bachelor of Computer Application (BCA)
- BCA (Artificial Intelligence)
- BCA (AI & ML)
- BCA (Digital Marketing)

1.2 ADMISSION

1.2.1 Admission to BCA & BCA-AI will be made as per the rules prescribed by the Academic Council of the Future University, Bareilly.

1.3 ELIGIBILITY FOR ADMISSIONS

1.3.1 **Admission Criteria:** Merit shall be calculated by taking percentage of marks in 12th Minimum- 45 % (any Stream) for General and OBC, and minimum 40% (Any Stream) for SC/ST students. If the Candidate have not opted mathematic as subject in 12th level. He has to clear Remedial Mathematics schedule as per study scheme of BCA Programme.

1.3.2 **Qualifying examination:** The eligibility condition for admission to Bachelor of Computer Applications is that the candidate should have passed the qualifying examination FUCET conducted by University.

1.3.3 Direct admission on vacant seats at institution/college level: The eligibility criteria for direct admission on seats remaining vacant in first year after entrance examination counseling shall be such as may be notified from time to time.

1.3.4 The Academic Council shall have power to amend or repeal the eligibility criteria laid down at clause 3.1. & 3.2, as per the guidelines of UGC.

1.4. ATTENDANCE

1.4.1 Every student is required to attend all the lectures, tutorials, practicals and other prescribed curricular and co-curricular activities with minimum of 75% Attendance.

1.4.2 The attendance can be condoned up to 15% on medical grounds or for other genuine reasons beyond the control of students by concern Dean with the approval of Vice Chancellor provided that he/she has been absent with prior permission of the Head of the institution/college for the reasons acceptable to him.

1.4.3 No student will be allowed to appear in the end semester examination if he / she do not satisfy the overall average attendance requirements of Clause Nos. 1.4.1, and

Ordinances of Future University, Bareilly.

1.4.2. and such candidate(s) shall be treated as having failed due to detained and will be further governed by clause no. 1.5.2 & 1.5.3.

1.4.4 In each semester, the attendance shall be counted from the date of admission in the University or start of academic session whichever is later.

1.5 DURATION OF COURSES

1.5.1 Total duration of the BCA & BCA-AI Course shall be 3 years for degree and 4 years for degree with Hons, each year comprising of two semesters. Each semester shall normally have teaching for the 90 working days or as prescribed by UGC from time to time.

1.5.2 The student admitted to 1st year BCA & BCA-AI shall complete the course within a period of Six academic years for 3 years' degree programmes and 8 academic years for degree with Hons programmes from the date of first admission, failing which he/she has to discontinue the course.

1.5.3 A candidate, who has failed twice in first year due to any reason (either due to his/her non- appearance or he/she being not permitted to appear in semester examinations) shall not be allowed to continue his/her studies further. Provided further that if a student wishes to continue third time in first year he/she may be allowed on the terms and conditions laid down by the University for such permission but the maximum time allowed for completing the course will remain the same as in clause 4.2.

1.5.4 The minimum credit requirement for BCA & BCA-AI as approved Bos and Academic council.

1.6 CURRICULUM

1.6.1 The 3-year curriculum has been divided into 6 semesters and 4 years' curriculum in 8 semesters shall include lectures, tutorials, practicals, seminars and projects etc. in addition to industrial training and educational tour etc. and with the value addition of Indian Knowledge System and Life Science Monitoring as defined in the scheme and executive instructions issued by the University from time to time.

1.6.2 The curriculum will also include such other curricular, co-curricular and extracurricular activities as may be prescribed by the University from time to time.

1.7 CHANGE OF BRANCH

1.7.1 As per rules and regulation approved by the Future University

1.8 EXAMINATION

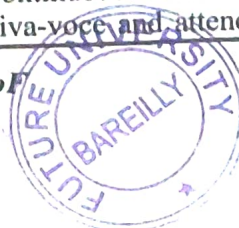
1.8.1 The performance of a student in a semester shall be evaluated through continuous class assessment and end semester examination. The continuous assessment shall be based on class tests, assignments/tutorials, quizzes/viva-voce and attendance. The

Members of Draft Committee

Members of BoS/BoF

Dean/Head

*Future University
Bareilly*



marks for continuous assessment (Sessional marks) shall be awarded at the end of the semester. The end semester examination shall be comprised of written papers, practicals and viva-voce.

1.8.2 The distribution of marks for sessional, end semester theory papers, practicals and other examinations, seminar, project and industrial training shall be as prescribed. The practicals, viva-voce, projects and reports shall be examined/evaluated through internal and external examiners as and when required.

1.8.3 The marks obtained in a subject shall consist of marks allotted in end semester theory paper and Sessional marks

1.9 ELIGIBILITY OF PASSING

1.9.1 The Credit and Grading system will be effective from the academic year 2024-2025 for Faculty of Computer Application. In every course, based on the combined performance in all assessments in a particular semester as per the curriculum/syllabus, the student is awarded a letter grade. These letter grades not only indicate a qualitative assessment of the students' performance but also carry a quantitative (numeric) equivalent called the Grade Point.

1.9.2 A student who obtained Grades O to P shall be considered as passed. If a student secured "F" grade, he /she have to reappear for the examination. It is mandatory for student to earn the required credits as mentioned in each semester.

(a) For a pass in a Theory Course, a student shall secure minimum of 30% of the maximum marks prescribed by the University in the end semester examination and 40% of aggregate marks in the Course including sessional marks. i.e. Minimum Passing Grade is "P".

(b) For a pass in a Practical/Internship/Project/Viva-voce examination, a student shall secure a minimum of 50% of the maximum marks prescribed by the University in the relevant Practical/Internship/Project/Viva-voce examination and 40% of marks in the aggregate in the Practical/Internship/Project/Viva-voce including sessional marks. i.e. Minimum Passing Grade in a course is "P".

(c) For a pass in the Course which has only sessional component and No End semester exam component, such as Seminar, a student shall secure a minimum of 40% of the maximum marks prescribed. i.e. Minimum Passing Grade is "P".

1.9.3 The students who do not satisfy the condition 1.9.2 or the student who remains absent shall be deemed to have failed in that subject and may reappear for the University examination in the subsequent examinations. However, the Sessional marks awarded to the student/s at previous attempt in the concerned subject will be carried forward.

- 1.9.4 A student shall be declared to have completed the program of B.C.A. degree, provided the student has undergone the stipulated course work as per the regulations and has earned total credits prescribed in the curriculum.

1.10 ELIGIBILITY FOR PROMOTION

- 1.10.1 There shall not be any restriction for promotion from an odd semester to the next even semester.
- 1.10.2 For promotion from even semester to the next odd semester (i.e. of the next academic year) the student has secured either of the semester of an academic year is fully cleared or earned the credit greater than or equal to minimum credit of either of the semester.
- 1.10.3 In yearly result, a student shall be declared PASS only if he/ she secures "P" or above grades in all the subjects and minimum Semester Grade Point Average (SGPA) of 5.0, in each semester of an academic year.

1.11 CARRY OVER SYSTEM

- 1.11.1 Following rules shall be followed for carry over papers:

- (a) A candidate who satisfies there requirements of clause 1.9.1 and 32.9.1 will be required to appear in those theory papers / practical during respective end semester exams in which he/she failed.
- (b) A candidate satisfying clause 1.9.3 shall be required to appear in theory papers/practical examination to fulfill the requirements of clause 1.9.2 (a) and (b).
- (c) A candidate shall be required to exercise his/her choice of minimum theory papers in which he/she desires to appear in the examination for improvement of SGPA as per rules made by Future university.
- (d) Candidate appearing for carry over paper in any semester shall be examined with the examination paper of that subject running in that semester.

- 1.11.2 All carryover examinations shall be held only with end semester examination.

1.12 RE-ADMISSION IN THE UNIVERSITY

A candidate may be allowed for re-admission provided he/she satisfies one of the following conditions:

- (a) A candidate is declared fail.
- (b) A candidate did not appear in a semester examination / or he/she was not granted permission to appear in the examination.
- (c) A candidate has been detained by the institute and subsequently has been permitted to take re-admission.

1.13 COURSES

1.13.1 There will be four types of courses.

- (i) Foundation Courses: The Foundation Courses are of two kinds: *Compulsory Foundation* and *Elective foundation*.

“Compulsory Foundation”: These courses are the courses based upon the content that leads to Knowledge enhancement. They are mandatory for all disciplines.

“Foundation Electives”: These are value based courses aimed at man making education.

- (ii) Core Courses: This is the course which is to be compulsorily studied by a student as core requirement to complete the requirements of a program in a said discipline of study.

- (iii) Elective Courses: This is course, which can be chosen from the pool of papers. It may be supportive to the discipline for nurturing student proficiency skills.

- (iv) Mandatory Courses: These courses are mandatory for students joining BCA & BCA-AI. Program and students have to successfully complete these courses before the completion of degree.

- (v) A student shall exercise his option in respect of the electives and register for the same at the beginning of the concerned semester. The student may be permitted to opt for change of elective subject within 15 days from the date of commencement of the semester as per the calendar of the University.

1.14 COMPUTATION OF SGPA, YGPA AND CGPA

As per Appendix I

1.15 CONVERSION OF CGPA INTO PERCENTAGE

Conversion formula for the conversion of CGPA into Percentage is $(CGPA) \times 10 =$ Percentage of marks scored.

1.16 AWARD OF DIVISION AND RANK

- 1.16.1 Division and CGPA shall be awarded only after the eighth and final semester examination based on integrated performance of the candidate for all the eight semesters (six semesters for lateral entry) as per following details.

Members of Draft Committee

Members of BoS/BoF

Faculty of Computer
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Bareilly

Dean/Head

Signature

- (a) After successful completion of 120 credits, a student shall be eligible to get under graduate degree in engineering/technology.
- (b) The student shall be awarded **First division with Distinction** Degree only if he/she secures 7.50 or above CGPA and passed each subject of that degree program in single attempt without any grace marks and without any gap.
- (c) A candidate who qualifies for the award of the degree by securing E or above grades in all subjects of all the semesters (eight semesters/six semesters) as applicable, and secures CGPA less than 7.5 and greater than or equal to 6.5 shall be declared to have passed the examination in **FIRST DIVISION**.
- (d) All other candidates who qualify for the award of degree by securing E or above grades in all subjects of all semesters (eight semesters/six semesters as applicable) and secures CGPA below 6.5 and greater than or equal to 5.0 shall be declared to have passed the examination in **SECOND DIVISION**.

If two students get the same *CGPA*, the tie should be resolved by considering the number of times a student has obtained higher *SGPA*; but, if it is not resolved even at this stage, the number of times a student has obtained higher grades like A⁺, A, B⁺, B etc shall be taken into account in rank ordering of the students in a program.

1.17 SCRUTINY AND RE-EVALUATION

1.17.1 Scrutiny and re-evaluation shall be allowed in only theory papers.

1.17.2 Revaluation of theory/practical papers is permitted only with certain conditions as laid down by university.

1.18 UNFAIR MEANS

Cases of unfair means shall be dealt as per the rules and regulations of the University (**ANNEXURE-II**).

1.19 AWARD OF SESSIONAL MARKS

Sessional marks for theory subjects, practicals and project shall be awarded as prescribed and at present the break-up of sessional marks shall be as follows:

(a) Theory Subjects :

- (i) Class test which will comprise 30 % of total theory marks with two mid-term tests of equal weightage.
- (ii) Teacher Assessment Tutorial/Assignment/ Quizzes/ Attendance comprises 20% of total theory marks.

(a) Practical,

- (i) Two mid-term viva-voce/tests of equal weightage 30% of total Practical marks.
- (ii) Teacher Assessment: Lab, Record/ Attendance 20% of total Practical marks.

Ordinances of Future University, Bareilly.

- (c) Make-up test may be held only for those students who could not appear in any one of mid-term class tests due to genuine reasons for which the prior permission from the Head of Institution/College was taken. Make up test shall ordinarily be held about two weeks before the semester examination. The syllabus for the make-up test shall be the whole syllabus covered by the subject teacher upto that time.

1.20 AWARD OF SEMINAR INDUSTRIAL TRAINING, EDUCATIONAL TOUR MARKS AT UNIVERSITY LEVEL

1.20.1 The marks of Seminar, Industrial Training, Educational tour marks shall be awarded on the following basis:

- 12 Write-up / Report 50%
- 13 Presentation 50%

1.20.2 The marks in Seminar, Industrial Training and Educational Tour shall be awarded by a committee consisting of following members:

- (i) Head of the Department or his/her nominee.
- (ii) Concerned Officer – In charge.
- (iii) Senior Faculty Member of the department nominated by the Head of Department.

1.21 CANCELLATION OF ADMISSION

The admission of a student at any stage of study shall be cancelled if :

- (a) He / She is not found qualified as per Future University / State Government norms and guidelines or the eligibility criteria prescribed by the University. or
- (b) He / She is found unable to complete the course within the stipulated time as prescribed in clause 4.2 or
- (c) He / She is found involved in creating indiscipline in the Institution / College or in the University.
- (d) The Academic Council shall have the power to relax any provision provided in the ordinance in any specific matter/situation subject to the approval of Executive Council of the University.

The Academic Council of Future University shall have the authority to amend, modify, or replace any provision of this Ordinance from time to time in order to ensure compliance with the regulations, guidelines, and directives issued by the statutory and regulatory bodies such as the University Grants Commission (UGC) and other competent authorities.





Board of Studies

*(Including Proceeding, Course Structure, Course Curriculum and
Evaluation Scheme)*

for

Bachelor of Computer Application in Digital Marketing

(Effective from the Session: 2026-27)



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**FUTURE
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Future University										
BCA with Digital Marketing (Undergraduate Regular)										
Course Structure/ Degree Award Checklist 2026-2030										
Program Name:			BCA with specialization in Digital Marketing							Program Code:
Credit of Program: 169										
Semester-I										
Sl. No.	Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme		Total	Credit
				L	T	P	CA	EE		
1	Major Core Course	BCA1101	Computer Fundamentals & Emerging Technology	3	0	0	30	70	100	3
2	Major Core Course	BCA1103	Principles of Problem-Solving using C	3	1	0	30	70	100	4
3	Major Core Course	BCA1108	Digital Marketing Fundamentals	4	0	0	30	70	100	4
4	Minor Course	BCA1109	Business Communication	3	0	0	30	70	100	3
5	Value Added Course	BCA1106	MOOC-I	Self-Paced Learning						
6	Major Core Course	BCA1110	Mathematics for Computing	3	0	0	30	70	100	3
7	Multidisciplinary	UCC1101	IKS-I (Indian Knowledge System - I)	1	0	0	50	0	50	1
Practical										
1	Major Core Course	BCA1171	C Programming Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA1173	Digital Marketing Tools Lab	0	0	2	50	50	100	1
TOTAL				17	1	4	300	450	750	20



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Semester -II										
		Theory	Week			Evaluation Scheme		Total	Credit	
Course Category	Course Code	Course Title	L	T	P	CA	EE			
Major Core Course	BCA1211	Data Structures Using C	4	0	0	30	70	100	4	
Major Core Course	BCA1212	Web Designing using HTML/CSS	3	1	0	30	70	100	4	
Major Core Course	BCA1213	Social Media Marketing	4	0	0	30	70	100	3	
Value Added Course	BCA1210	MOOC-II	Self-Paced Learning							
Major Core Course	BCA1203	Advance Database Management System	3	1	0	30	70	100	4	
Minor Course	BCA1209	Discrete Mathematics	3	0	0	30	70	100	3	
Skill Enhancement Course	LSM1202	LSM-I (Life Skills & Mentoring – I)	0	0	0	0	0	0	0	
Practical										
Major Core Course	BCA1270	ADBMS Lab	0	0	2	50	50	100	1	
Major Core Course	BCA1274	Web Designing Lab	0	0	2	50	50	100	1	
		TOTAL	17	2	4	250	450	700	20	



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Semester -III

Semester -III											
			Theory		Week			Evaluation Scheme		Total	Credit
	Course Category	Course Code	Course Title	L	T	P	CA	EE			
1.	Minor Courses	BCA2303	Principal of Management OR	3	0	0	30	70	100	3	
1		BCA2305	Remedial Mathematics (Theory)								
2	Value Added Course	BCA2306	MOOC-I	Self-Paced Learning							
3	Major Core Course	BCA2310	Object Oriented Programming (OOPs) using Java	3	1	0	30	70	100	4	
4	Major Core Course	BCA2317	SEO & Search Engine Marketing	3	0	0	30	70	100	3	
5	Major Core Course	BCA2316	E-Commerce Technology	3	0	0	30	70	100	3	
6	Major Core Course	BCA2315	Operating Systems	3	1	0	30	70	100	1	
7	Minor Core Course		Elective-1	2	0	0	30	70	100	2	
Practical											
1	Major Core Courses	BCA1272	OOPs concept using JAVA Lab	0	0	2	50	50	100	1	
2	Major Core Course	BCA2378	SEO Tools Lab	0	0	2	50	50	100	1	
			TOTAL	17	2	4	280	520	800	21	



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Semester-IV

SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme			
			Course Title	L	T	P	CA	EE	Total	Credit
1	Major Core Course	BCA2419	Python Programming	4	0	0	30	70	100	4
2	Value Added Course	BCA2408	MOOC-II	Self-Paced Learning						
3	Minor Core Course		Elective-2	3	0	0	30	70	100	3
4	Major Core Course	BCA2420	Audio & Video Editing	4	0	0	30	70	100	4
5	Major Core Course	BCA2421	Computer Networks	3	1	0	30	70	100	4
6	Skill Enhancement Course	BCA2416	Industrial Training-I	0	0	0	50	0	50	2
7	Minor Course	BCA2422	Environmental Studies	3	0	0	30	70	100	3
Practical										
1	Major Core Courses	BCA2479	Python Programming Lab	0	0	2	50	50	100	1
2	Major Core Courses	BCA2480	Audio & Video Editing Lab	0	0	2	50	50	100	1
				17	1	4	300	450	750	22



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Semester –V

Semester - V										
N.	Course Category	Course Code	Theory	Week			Evaluation Scheme			
			Course Title	L	T	P	CA	EE	Total	Credit
1	Value Added Course	BCA3508	MOOC-III	Self-Paced Learning						
2	Major Core Course	BCA3520	PHP & MySQL	3	1	0	30	70	100	4
3	Major Core Course	BCA3521	Web Google Analytics	3	1	0	30	70	100	4
4	Minor Core Course		Elective-3	3	0	0	30	70	100	3
5	Ability Enhancement Course	BCA3523	Soft Skills & Personality Development	3	0	0	30	70	100	3
6	Multidisciplinary	BCA3524	Cyber Laws and Digital Media Laws	2	0	0	0	50	50	2
7	Skill Enhancement Course	BCA3525	Cyber Security	3	0	0	50	0	50	
Practical										
1	Major Core Courses	BCA3578	PHP & MySQL Lab	0	2	2	50	50	100	1
2	Major Core Courses	BCA3579	Web and Google Analytics Lab	0	2	2	50	50	100	1
	Research Project/ Dissertation	BCA3573	Minor Project	0	0	4	50	50	100	2
			TOTAL	17	4	10	320	480	800	22



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Semester-VI

N.	Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme			
				L	T	P	CA	EE	Total	Credit
1	Major Core Courses	BCA3614	Brand Management	3	0	0	30	70	100	3
2	Value-added Courses	BCA3606	MOOC-IV	Self-Paced Learning						
3	Major Core Courses	BCA3615	Influencer & Affiliate Marketing	3	1	0	30	70	100	4
4	Major Core Courses	BCA3616	Email and Mobile Marketing	2	0	0	30	70	100	3
5	Minor Courses		Elective-4	2	0	0	0	50	50	2
6	Skill Enhancement Course	BCA3617	Cloud Computing	0	0	0	50	0	50	2
Practical										
1	Major Core Courses	BCA3674	Email and Mobile Marketing Lab	0	0	2	50	50	100	1
2	Major Core Courses	BCA3671	Major Project Phase-I	0	0	16	100	300	400	8
			TOTAL	10	0	18	290	610	900	23



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**[Semester 7 and Semester 8,
Specially for the Research Oriented Project according
to the current Industry scenario.]**

Semester -VII										
SN.		Course Code	Theory Course Title	Week			Evaluation Scheme			
				L	T	P	CA	EE	Total	Credit
1	Major Core Courses	BCA4703	Introduction to Research Methodology	3	1	0	30	70	100	4
2	Value Added Courses	BCA4708	MOOC-VII	Self-Paced Learning						
3	Major Core Courses	BCA4713	AI in Digital Marketing	3	1	0	30	70	100	4
4	Minor Courses		Elective-5	3	0	0	30	70	100	3
Practical										
1	Major Core Courses	BCA4771	Research Methodology Lab	0	0	2	50	50	100	1
	Research Project/ Dissertation	BCA4772	Minor Dissertation	0	0	12	100	100	200	8
			TOTAL	9	2	14	240	360	600	20



Semester-VIII

Semester-VIII										
		Theory	Week			Evaluation Scheme				
	Course Code	Course Title	L	T	P	CA	EE	Total	Credit	
Value Added Courses	BCA4806	MOOC-VI	Self-Paced Learning							
Major Core Courses	BCA4809	Emerging Trends in Digital Marketing	3	1	0	30	70	100	4	
Minor Courses	BCA4810	Startup & Innovation Management	3	1	0	30	70	100	4	
Practical										
Research Project/ Dissertation	BCA4872	Major Dissertation	0	0	12	200	300	500	12	
Major Core Courses	BCA4873	Viva Voce	0	0	2	50	50	100	1	
		TOTAL	6	2	14	310	490	800	21	

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		
Sr.	Code	Elective List
1	BCA2318	Content Marketing & Copywriting (EL-1)
2	BCA2319	Computer Architecture (EL)
3	BCA2320	Social Media Analytics (EL)
1	BCA2423	Email Marketing & Automation (EL-2)
2	BCA2424	Soft Computing (EL)
3	BCA2425	Mobile Application Development (EL-2)
1	BCA3526	Google Ads & PPC (EL-3)
2	BCA3527	Consumer Behaviors (EL-3)
3	BCA3528	Data Analytics for Marketing (EL-3)
1	BCA3618	Entrepreneurship Development (EL-4)
2	BCA3619	Marketing Analytics using Power BI (EL-4)
3	BCA3620	Fundamentals of Data Privacy (EL-4)
1	BCA4714	Marketing Automation Tools (EL-5)
2	BCA4711	Digital Image Processing (EL-5)
3	BCA4712	Cyber Analytics (EL-5)

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Board of Studies

*(Including Proceeding, Course Structure, Course Curriculum and
Evaluation Scheme)*

for

**Bachelor of Computer Application with
AI & ML powered by IBM**

(Effective from the Session: 2026-27)





**FUTURE
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Future University

BCA with AI and ML powered by IBM (Undergraduate Regular)

Course Structure/ Degree Award Checklist 2025-2029

Program Name:

BCA with specialization in Artificial
Intelligence and Machine Learning powered
by IBM

Program
Code: 04

Total Credit of Program: 168

Semester-I

SN.	Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme		Total	Credit
				L	T	P	CA	EE		
1	Major Core Course	BCA1101	Computer Fundamental & Emerging Technology	3	0	0	30	70	100	3
2	Major Core Course	UCC1102	AI for Everyone	3	0	0	30	70	100	3
3	Major Core Course	BCA1103	Principle of Problem-Solving using C Programming	4	0	0	30	70	100	4
4	Minor Course	BCA1105	Mathematical Foundation for AI	3	0	0	30	70	100	3
5	Value Added Course	BCA1106	MOOC-I	Self-Paced Learning						
6	Industry	BCA1108	Industry Related Course (IRC)	3	0	0	30	70	100	3
7	Multidisciplinary	UCC1101	IKS-I (Indian Knowledge System - I)	1	0	0	50	0	50	1
Practical										
1	Major Core Course	BCA1170	Office Automation Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA1171	Programming in C Lab	0	0	2	50	50	100	1
3	Industry	BCA1175	Industry Related Course (IRC) LAB	0	0	2	50	50	100	1
TOTAL				17	0	6	350	500	850	20



Semester -II

SN.	Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme		Total	Credit
				L	T	P	CA	EE		
1	Minor Course	BCA1209	Discrete Mathematics	3	0	0	30	70	100	3
2	Major Core Course	BCA1207	OOPs concept using JAVA	4	0	0	30	70	100	4
3	Major Core Course	BCA1208	Software Engineering	3	0	0	30	70	100	3
4	Major Core Course	BCA1203	Advance Database Management System	3	0	0	30	70	100	3
5	Multidisciplinary	BCA1206	Environmental Science	2	0	0	50	50	100	2
6	Value Added Course	BCA1210	MOOC-II	Self-Paced Learning						
7	Industry	BCA1112	Industry Related Course (IRC)	3	0	0	30	70	100	3
8	Skill Enhancement Course	LSM1102	LSM-I (Life Skills & Mentoring - I)	0	0	0	0	0	0	0
Practical										
1	Major Core Course	BCA1272	OOPs concept using JAVA Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA1270	ADBMS Lab	0	0	2	50	50	100	1
	Industry	BCA1275	Industry Related Course (IRC) LAB	0	0	2	50	50	100	1
			TOTAL	18	0	6	350	550	900	21



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Semester -III

Semester -III											
Sl. No.	Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme		Total	Credit	
				L	T	P	CA	EE			
1	Minor Courses	BCA2303	Principal of Management OR	3	0	0	30	70	100	3	
		BCA2305	Remedial Mathematics (Theory)								
2	Value Added Course	BCA2306	MOOC-I	Self-Paced Learning							
3	Multidisciplinary	BCA2321	Industry Related Course (IRC)	3	0	0	30	70	100	3	
4	Major Core Course	BCA2308	Operating System and Unix Shell programming	3	0	0	30	70	100	3	
5	Major Core Course	BCA2309	Web Technologies services using Python	3	1	0	30	70	100	4	
6	Major Core Course	BCA2311	Advance Python Programming	3	0	0	30	70	100	3	
7	Major Core Course	BCA2312	Digital Electronics	2	0	0	30	70	100	2	
8	Ability Enhancement Course	BCA2313	Organizational Behaviour	2	0	0	0	50	50	2	
	Skill Enhancement Course	BCA2314	Industrial Training-I	0	0	0	50	0	50		
Practical											
1	Major Core Courses	BCA2375	Digital Electronics LAB	0	0	2	50	50	100	1	
2	Major Core Course	BCA2376	Advance Python Programming LAB	0	0	2	50	50	100	1	
3	Major Core Courses	BCA2374	Web Technologies services using Python LAB	0	0	2	50	50	100	1	
TOTAL				19	0	6	380	620	1000	23	



Semester-IV

Sl. No.	Course Category	Course Code	Theory	Week			Evaluation Scheme			
			Course Title	L	T	P	CA	EE	Total	Credit
1	Major Core Course	BCA2413	Data Science and Analytics	3	0	0	30	70	100	3
2	Value Added Course	BCA2408	MOOC-II	Self-Paced Learning						
3	Major Core Course	BCA2412	Data Structures and Algorithms using Java	3	1	0	30	70	100	4
4	Major Core Course	BCA2410	Introduction to Internet of Things	3	0	0	30	70	100	3
5	Industry	BCA2426	Industry Related Course (IRC)	3	0	0	30	70	100	3
6	Ability Enhancement Course	BCA2415	Organizational Behaviour	2	0	0	0	50	50	2
	Skill Enhancement Course	BCA2416	Industrial Training-I	0	0	0	50	0	50	
7	Minor Course		Elective-I	3	0	0	30	70	100	3
Practical										
1	Major Core Courses	BCA2475	Data Science Lab	0	0	2	50	50	100	1
2	Industry	BCA2481	Industry Related Course (IRC) Lab	0	0	2	50	50	100	1
	Major Core Courses	BCA2477	DSA using Java LAB	17	1	4	300	500	800	20



Signature

Semester –V

Semester –V										
Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme				
			L	T	P	CA	EE	Total	Credit	
Value Added Course	BCA3508	MOOC-III	Self-Paced Learning							
Major Core Course	BCA3516	Artificial Neural Networks	3	0	0	30	70	100	3	
Major Core Course	BCA3506	Natural Language Processing	3	1	0	30	70	100	4	
Industry	BCA3529	Industry Related Course (IRC)	2	0	0	30	70	100	2	
Minor Course		Elective-II	3	0	0	30	70	100	3	
Ability Enhancement Course	BCA3518	Professional Communications	2	0	0	0	50	50	2	
Skill Enhancement Course	BCA3519	Industrial Training-II	0	0	0	50	0	50		
Practical										
1	Research Project/ Dissertation	BCA3573	Minor Project	0	2	4	100	0	100	6
2	Major Core Courses	BCA3576	NLP Lab	0	2	2	50	50	100	1
3	Industry	BCA3580	Industry Related Course (IRC) Lab	0	2	2	50	50	100	1
			TOTAL	13	7	8	370	430	800	22



Semester-VI										
Course Category	Course Code	Theory	Week			Evaluation Scheme				
			L	T	P	CA	EE	Total	Credit	
Major Core Courses	BCA3602	Deep Learning	3	0	0	30	70	100	3	
Value-added Courses	BCA3606	MOOC-IV	Self-Paced Learning							
Industry	BCA3621	Industry Related Course (IRC)	3	0	0	30	70	100	3	
Minor Courses		Elective-III	2	0	0	30	70	100	2	
Ability Enhancement Course	BCA3612	Professional Communications	2	0	0	0	50	50	2	
Skill Enhancement Course	BCA3613	Industrial Training-II	0	0	0	50	0	50		
Practical										
1	Major Core Courses	BCA3672	Deep Learning Lab	0	0	2	50	50	100	1
2	Industry	BCA3673	Industry Related Course (IRC) Lab	0	0	2	50	50	100	1
3	Research Project/ Dissertation	BCA3671	Major Project	0	0	20	100	200	300	10
			TOTAL	10	0	24	340	560	900	22



**[Semester 7 and Semester 8,
Specially for the Research Oriented Project according
to the current Industry scenario.]**

Semester –VII										
Sl. No.		Course Code	Theory Course Title	Week			Evaluation Scheme			
				L	T	P	CA	EE	Total	Credit
1	Major Core Courses	BCA4703	Introduction to Research Methodology	3	1	0	30	70	100	4
2	Value Added Courses	BCA4708	MOOC-V	Self-Paced Learning						
3	Major Core Courses	BCA4709	Android Applications Development	3	1	0	30	70	100	4
4	Minor Courses		Elective-IV	3	0	0	30	70	100	3
Practical										
1	Major Core Courses	BCA3771	Research Methodology Lab	0	0	2	50	50	100	1
2	Research Project/ Dissertation	BCA3772	Minor Dissertation	0	0	12	100	100	200	7
3	Major Core Courses	BCA3773	Android Applications Development LAB	0	0	2	50	50	100	1
			TOTAL	9	2	16	290	410	700	20



Semester-VIII									
		Theory	Week			Evaluation Scheme			
	Course Code	Course Title	L	T	P	CA	EE	Total	Credit
Value Added Courses	BCA3805	MOOC-VI	Self-Paced Learning						
Major Core Courses	BCA3806	Augmented Reality (AR) and Virtual Reality (VR)	3	1	0	30	70	100	4
Minor Courses		Elective-V	3	0	0	30	70	100	3
Practical									
Research Project/ Dissertation	BCA3872	Major Dissertation	0	0	12	200	300	500	12
Major Core Courses	BCA3873	AR and VR Lab	0	0	2	50	50	100	1
		TOTAL	6	1	14	310	490	800	20

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



Signature

List of Elective Courses		
SN.	ELECTIVE-I:	
1	BCA2406	Data Warehousing & Data Mining (EL)
2	BCA2417	Computer Architecture (EL)
3	BCA2418	Social Media Analytics (EL)
SN.	ELECTIVE-II:	
1	BCA3512	Introduction to Blockchain Technology (EL)
2	BCA3514	Information Security & Cyber Laws (EL)
3	BCA3513	Soft Computing (EL)
SN.	ELECTIVE-III:	
1	BCA3609	Data Privacy & Ethics in AI(EL)
2	BCA3610	Mobile Computing (EL)
3	BCA3611	Edge Computing (EL)
SN.	ELECTIVE-IV:	
1	BCA4710	Cloud Computing (EL)
2	BCA4411	Digital Image Processing (EL)
3	BCA4712	Cyber Analytics (EL)
SN.	ELECTIVE-V:	
	BCA4809	DevOps (EL)





Board of Studies

*(Including Proceeding, Course Structure, Course Curriculum and
Evaluation Scheme)*

for

Bachelor of Computer Application

(Effective from the Session: 2025-26)



**FUTURE
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**Department of Computer Application
Bachelor of Computer Application
Evaluation Scheme**

Credit Framework for the BCA -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	10	4	1						18
2	14	3	2	3					22
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	13	3	3	1	1				21
4	16	3		1	1				21
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	14	3		1	1			3	22
6	4	3		1	1			12	21
Students who want to undertake 3-year UG Programme will be awarded UG Degree in the relevant Discipline/ Subject Upon securing 120 credits									
7	11	3						6	20
8	5	3						12	20
Students will be awarded UG Degree(Honors) with Research in the relevant Discipline/ Subject provided they secure 160 credits									

Total = 165 Credit





Future University

Bachelor of Computer Application (BCA) (Hons) (Undergraduate Regular)

Course Structure/ Degree Award Checklist 2025-2029

Program Name:

Bachelor of Computer Application (BCA)
(Hons)

Program
Code: 04

Total Credit of Program: 165

Semester-I

SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Course	BCA1101	Computer Fundamental & Emerging Technology	4	0	0	30	70	100	4
2	Skill Enhancement Course	UCC1102	AI for Everyone	3	0	0	30	70	100	3
3	Major Core Course	BCA1103	Principles of Problem Solving using C	4	0	0	30	70	100	4
4	Minor Course	BCA1105	Mathematical Foundation	4	0	0	30	70	100	4
5	Value Added Course	BCA1106	MOOC-I	Self-Paced Learning						
6	Multidisciplinary	UCC1101	IKS-I (Indian Knowledge System - I)	1	0	0	50	0	50	1
Practical										
1	Major Core Course	BCA1170	Office Automation Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA1171	Principles of Problem-Solving using C Lab	0	0	2	50	50	100	1
			TOTAL	16	0	4	270	380	650	18



Semester -II

SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Course	BCA1201	Python Programming	3	1	0	30	70	100	4
2	Major Core Course	BCA1202	Computer Network	3	1	0	30	70	100	4
3	Major Core Course	BCA1203	Advance Database Management System	3	1	0	30	70	100	4
4	Multidisciplinary	BCA1206	Environmental Science	2	0	0	30	70	100	2
5	Ability Enhancement Course	BCA1205	AI for Developers	3	0	0	30	70	100	3
6	Value Added Course	BCA1210	MOOC-II	Self-Paced Learning						
7	Minor Course	BCA1209	Discrete Mathematics	3	0	0	30	70	100	3
8	Skill Enhancement Course	LSM1202	LSM-I (Life Skills & Mentoring – I)	0	0	0	0	0	0	0
Practical										
1	Major Core Course	BCA1270	ADBMS Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA1273	Python Programming Lab	0	0	2	50	50	100	1
TOTAL				17	3	4	280	520	800	22



Semester -III

Semester -III										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Multidisciplinary	BCA2301	Management Information Systems (MIS)	3	0	0	30	70	100	3
2	Major Core Course	BCA2302	Data Structure Using C	3	0	0	30	70	100	3
3	Minor Course	BCA2303	Principal of Management OR	3	0	0	30	70	100	3
		BCA2305	Remedial Mathematics (Theory)							
4	Major Core Course	BCA2304	Web Development	3	0	0	30	70	100	3
5	Value Added Course	BCA2306	MOOC-I	Self-Paced Learning						
6	Major Core Course	BCA2310	OOPs with JAVA	3	1	0	30	70	100	4
	Ability Enhancement Course	BCA2313	Organizational Behavior	2	0	0	0	50	50	2
	Skill Enhancement Course	BCA2314	Industrial Training-I	0	0	0	50	0	50	
Practical										
1	Major Core Courses	BCA2370	Data Structure Using C Lab	0	0	2	50	50	100	1
2	Major Core Courses	BCA2371	Web Development Lab	0	0	2	50	50	100	1
	Major Core Course	BCA2377	OOPs with JAVA LAB	0	0	2	50	50	100	1
			TOTAL	17	1	6	350	550	900	21



Semester-IV

Semester-IV										
			Theory	Week			Evaluation Scheme			
SN.	Course Category	Course Code	Course Title	L	T	P	CA	EE	Total	Credit
1	Major Core Course	BCA2401	Advance Python Programming	3	1	0	30	70	100	4
2	Major Core Course	BCA2413	Software Engineering	3	0	0	30	70	100	3
3	Major Core Course	BCA2403	Operating Systems	3	0	0	30	70	100	3
4	Major Core Course	BCA2414	Digital Electronics	3	0	0	30	70	100	3
5	Ability Enhancement Course	BCA2415	Organizational Behavior	2	0	0	0	50	50	2
6	Skill Enhancement Course	BCA2416	Industrial Training-I	0	0	0	50	0	50	
5	Minor Course		Elective-I	3	0	0	30	70	100	3
7	Value Added Course	BCA2408	MOOC-II	Self-Paced Learning						
Practical										
1	Major Core Course	BCA2471	Advance Python Programming Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA2472	OS LAB	0	0	2	50	50	100	1
	Major Core Course	BCA2478	Digital Electronics LAB	0	0	2	50	50	100	1
			TOTAL	17	1	6	350	550	900	21



Semester -V										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Course	BCA3501	Machine Learning Fundamental	3	0	0	30	70	100	3
2	Major Core Course	BCA3502	Computer Organization Architecture	3	0	0	30	70	100	3
3	Major Core Course	BCA3515	Cloud Computing	3	0	0	30	70	100	3
4	Major Core Course	BCA3504	Mobile Application Development	3	0	0	30	70	100	3
5	Ability Enhancement Course	BCA3518	Professional Communications	2	0	0	0	50	50	2
	Skill Enhancement Course	BCA3519	Industrial Training-II	0	0	0	50	0	50	
6	Minor Course		Elective-II	3	0	0	30	70	100	3
7	Value Added Course	BCA3508	MOOC-III	Self-Paced Learning						
Practical										
1	Major Core Course	BCA3571	Machine Learning LAB	0	0	2	50	50	100	1
2	Major Core Course	BCA3572	Mobile Application Development LAB	0	0	2	50	50	100	1
3	Research Project/ Dissertation	BCA3573	(Internship)/Minor Project	0	0	6	50	50	100	3
			TOTAL	17	0	10	350	550	900	22



Semester-VI										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Courses	BCA3601	Digital Image Processing	3	1	0	30	70	100	4
	Ability Enhancement Course	BCA3612	Professional Communications	2	0	0	0	50	50	2
	Skill Enhancement Course	BCA3613	Industrial Training-II	0	0	0	50	0	50	
2	Minor Courses		Elective-III	3	0	0	30	70	100	3
3	Value Added Courses	BCA3606	MOOC-IV	Self-Paced Learning						
Practical										
1	Research Project/ Dissertation	BCA3671	Major Project	0	0	24	100	300	400	12
			TOTAL	8	0	24	210	490	700	21



**[Semester 7 and Semester 8,
Specially for the Research Oriented Project
according to the current Industry scenario.]**

Semester -VII										
SN.		Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Courses	BCA4701	Data Mining	3	1	0	30	70	100	4
2	Major Core Courses	BCA4702	Soft Computing	3	0	0	30	70	100	3
3	Major Core Courses	BCA4703	Introduction to Research Methodology	3	0	0	30	70	100	3
4	Minor Courses		Elective-IV	3	0	0	30	70	100	3
5	Value Added Courses	BCA4708	MOOC-V	Self-Paced Learning						
Practical										
1	Major Core Courses	BCA4771	Research Methodology Lab	0	0	2	50	50	100	1
2	Research Project/ Dissertation	BCA4772	Minor Dissertation	0	0	12	100	100	200	6
			TOTAL	12	1	14	270	430	700	20



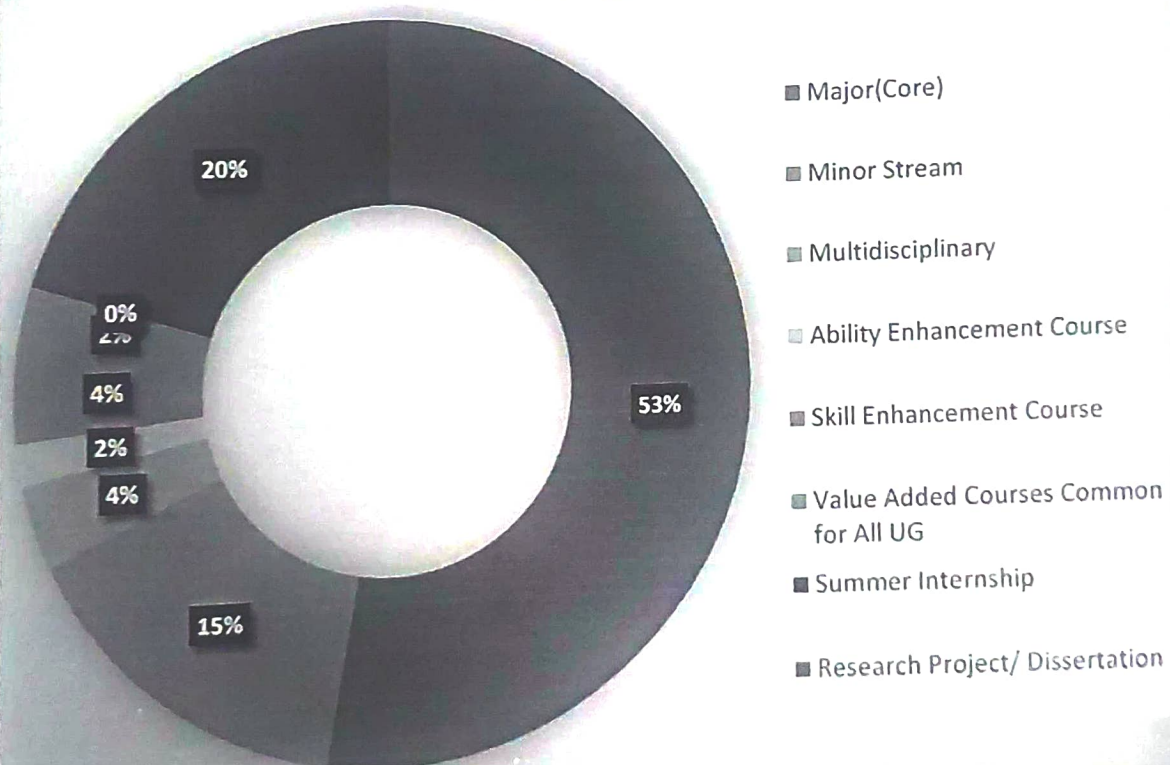
Semester-VIII

Semester-VIII										
			Theory	Week			Evaluation Scheme			
SN.		Course Code	Course Title	L	T	P	CA	EE	Total	Credit
1	Major Core Courses	BCA4801	R Programming	3	1	0	30	70	100	4
2	Minor Courses		Elective-V	3	0	0	30	70	100	3
3	Value Added Courses	BCA4806	MOOC-VI	Self-Paced Learning						
Practical										
1	Major Core Courses	BCA4871	R Programming Lab	0	0	2	50	50	100	1
2	Research Project/ Dissertation	BCA4872	Major Dissertation	0	0	24	200	300	500	12
			TOTAL	6	1	26	310	490	800	20



Sr.N	Course Category	Credit
1	Major(Core)	87
2	Minor Stream	25
3	Multidisciplinary	6
4	Ability Enhancement Course	3
5	Skill Enhancement Course	7
6	Value Added Courses Common for All UG	4
7	Summer Internship	0
8	Research Project/ Dissertation	33

BCA 25-26



List of Elective Courses		
SN.	ELECTIVE-I:	
1	BCA2412	Introduction to AI and ML (EL)
2	BCA2406	Data Warehousing and Data Mining (EL)
3	BCA2407	Data Compression and Multimedia System (EL)
SN.	ELECTIVE-II:	
1	BCA3505	Social Media Analytics (EL)
2	BCA3506	Big Data Analytics (EL)
3	BCA3507	Natural Language Processing (EL)
SN.	ELECTIVE-III:	
1	BCA3602	Deep Learning (EL)
2	BCA3603	Neural Network (EL)
3	BCA3604	Introduction To Internet Of Things (EL)
SN.	ELECTIVE-IV	
1	BCA4704	Mobile Computing (EL)
2	BCA4705	Fundamentals of Data Privacy (EL)
3	BCA4706	Soft Skills And Interpersonal Communications (EL)
SN.	ELECTIVE-V:	
1	BCA4809	DevOps (EL)
2	BCA4804	Cyber Analytics (EL)





Board of Studies

*(Including Proceeding, Course Structure, Course Curriculum and
Evaluation Scheme)*

for

Bachelor of Computer Application in AI

(Effective from the Session: 2025-26)

**Department of Computer Application
Bachelor of Computer Application in AI
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	3	1		3				20
2	12	3	2	3					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	14	3	3	1	1				22
4	15	3		1	1				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	9	3	2	1	1			4	20
6	8	2		1	1			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						8	21
8	5	3						12	20
Students will be awarded UG Degree(Honors) with Research in the relevant Discipline/ Subject provided they secure 160 credits									
Total = 165 Credit									



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Future University

BCA with AI (Undergraduate Regular)

Course Structure/ Degree Award Checklist 2025-2029

Program Name:

BCA with specialization in Artificial
Intelligence

Program
Code: 04

Total Credit of Program: 165

Semester-I

SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Course	BCA1101	Computer Fundamental & Emerging Technology	3	0	0	30	70	100	3
2	Skill Enhancement Course	UCC1102	A I for Everyone	3	0	0	30	70	100	3
3	Major Core Course	BCA1103	Principle of Problem-Solving using C Programming	4	0	0	30	70	100	4
4	Minor Course	BCA1105	Mathematical Foundation for AI	3	0	0	30	70	100	3
5	Value Added Course	BCA1106	MOOC-I	Self-Paced Learning						
6	Major Core Course	BCA1107	Python Programming	3	0	0	30	70	100	3
7	Multidisciplinary	UCC1101	IKS-I (Indian Knowledge System - I)	1	0	0	50	0	50	1
Practical										
1	Major Core Course	BCA1170	Office Automation Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA1171	Programming in C Lab	0	0	2	50	50	100	1
3	Major Core Course	BCA1172	Python Programming LAB	0	0	2	50	50	100	1
			TOTAL	17	0	6	350	500	850	20



Semester -II

SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Course	BCA1203	Advance Database Management System	3	1	0	30	70	100	4
2	Multidisciplinary	BCA1206	Environmental Science	2	0	0	30	70	100	2
3	Ability Enhancement Course	BCA1205	AI for Developers	3	0	0	30	70	100	3
4	Value Added Course	BCA1210	MOOC-II	Self-Paced Learning						
5	Major Core Course	BCA1207	OOPs concept using JAVA	3	0	0	30	70	100	3
6	Major Core Course	BCA1208	Software Engineering	3	0	0	30	70	100	3
7	Minor Course	BCA1209	Discrete Mathematics	3	0	0	30	70	100	3
8	Skill Enhancement Course	LSM1202	LSM-I (Life Skills & Mentoring – I)	0	0	0	0	0	0	0
Practical										
1	Major Core Course	BCA1270	ADBMS Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA1272	OOPs concept using JAVA Lab	0	0	2	50	50	100	1
			TOTAL	17	1	4	300	520	800	20



Semester -III

Semester -III										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Minor Courses	BCA2303	Principal of Management OR	3	0	0	30	70	100	3
		BCA2305	Remedial Mathematics (Theory)							
2	Value Added Course	BCA2306	MOOC-I	Self-Paced Learning						
3	Multidisciplinary	BCA2307	E-commerce & Digital Marketing	3	0	0	30	70	100	3
4	Major Core Course	BCA2308	Operating System and Unix Shell programming	3	0	0	30	70	100	3
5	Major Core Course	BCA2309	Web Technologies services using Python	3	0	0	30	70	100	3
6	Major Core Course	BCA2311	Advance Python Programming	3	0	0	30	70	100	3
7	Major Core Course	BCA2312	Digital Electronics	2	0	0	30	70	100	2
8	Ability Enhancement Course	BCA2313	Organizational Behaviour	2	0	0	0	50	50	2
	Skill Enhancement Course	BCA2314	Industrial Training-I	0	0	0	50	0	50	
Practical										
1	Major Core Courses	BCA2375	Digital Electronics LAB	0	0	2	50	50	100	1
2	Major Core Course	BCA2376	Advance Python Programming LAB	0	0	2	50	50	100	1
3	Major Core Courses	BCA2374	Web Technologies services using Python LAB	0	0	2	50	50	100	1
			TOTAL	19	0	6	380	620	1000	22



Semester-IV										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme			
			Course Title	L	T	P	CA	EE	Total	Credit
1	Major Core Course	BCA2413	Data Science and Analytics	3	0	0	30	70	100	3
2	Value Added Course	BCA2408	MOOC-II	Self-Paced Learning						
3	Major Core Course	BCA2412	Data Structures and Algorithms using Java	3	1	0	30	70	100	4
4	Major Core Course	BCA2410	Introduction to Internet of Things	3	0	0	30	70	100	3
5	Major Core Course	BCA2411	Machine Learning Technology	3	0	0	30	70	100	3
6	Ability Enhancement Course	BCA2415	Organizational Behaviour	2	0	0	0	50	50	2
	Skill Enhancement Course	BCA2416	Industrial Training-I	0	0	0	50	0	50	
7	Minor Course		Elective-I	3	0	0	30	70	100	3
Practical										
1	Major Core Courses	BCA2475	Data Science Lab	0	0	2	50	50	100	1
2	Major Core Courses	BCA2476	Machine Learning Lab	0	0	2	50	50	100	1
	Major Core Courses	BCA2477	DSA using Java LAB	17	1	4	300	500	800	20



Semester -V										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme			
			Course Title	L	T	P	CA	EE	Total	Credit
	Value Added Course	BCA3508	MOOC-III	Self-Paced Learning						
1	Major Core Course	BCA3516	Artificial Neural Networks	3	1	0	30	70	100	4
2	Major Core Course	BCA3506	Natural Language Processing	3	0	0	30	70	100	3
3	Multidisciplinary	BCA3517	Computer Vision	2	0	0	30	70	100	2
4	Minor Course		Elective-II	3	0	0	30	70	100	3
5	Ability Enhancement Course	BCA3518	Professional Communications	2	0	0	0	50	50	2
	Skill Enhancement Course	BCA3519	Industrial Training-II	0	0	0	50	0	50	
Practical										
1	Research Project/ Dissertation	BCA3573	Minor Project	0	2	4	100	0	100	4
2	Major Core Courses	BCA3576	NLP Lab	0	0	2	50	50	100	1
3	Major Core Courses	BCA3577	Computer Vision Lab	0	0	2	50	50	100	1
			TOTAL	13	3	8	370	430	800	20



Semester-VI

Semester-VI										
SN.	Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme			
				L	T	P	CA	EE	Total	Credit
1	Major Core Courses	BCA3602	Deep Learning	3	0	0	30	70	100	3
2	Value-added Courses	BCA3606	MOOC-IV	Self-Paced Learning						
3	Major Core Courses	BCA3607	Artificial Intelligence in Business	3	0	0	30	70	100	3
4	Minor Courses		Elective-III	2	0	0	30	70	100	2
5	Ability Enhancement Course	BCA3612	Professional Communications	2	0	0	0	50	50	2
	Skill Enhancement Course	BCA3613	Industrial Training-II	0	0	0	50	0	50	
Practical										
1	Major Core Courses	BCA3672	Deep Learning Lab	0	0	2	50	50	100	1
2	Major Core Courses	BCA3673	Big Data Lab	0	0	2	50	50	100	1
3	Research Project/ Dissertation	BCA3671	Major Project	0	0	20	100	200	300	10
			TOTAL	10	0	24	340	560	900	22



**[Semester 7 and Semester 8,
Specially for the Research Oriented Project
according to the current Industry scenario.]**

Semester –VII										
SN.		Course Code	Theory	Week			Evaluation Scheme			
			Course Title	L	T	P	CA	EE	Total	Credit
1	Major Core Courses	BCA4703	Introduction to Research Methodology	3	1	0	30	70	100	4
2	Value Added Courses	BCA4708	MOOC-V	Self-Paced Learning						
3	Major Core Courses	BCA4709	Android Applications Development	3	1	0	30	70	100	4
4	Minor Courses		Elective-IV	3	0	0	30	70	100	3
Practical										
1	Major Core Courses	BCA3771	Research Methodology Lab	0	0	2	50	50	100	1
2	Research Project/ Dissertation	BCA3772	Minor Dissertation	0	4	8	100	100	200	8
3	Major Core Courses	BCA3773	Android Applications Development LAB	0	0	2	50	50	100	1
			TOTAL	9	6	12	290	410	700	21

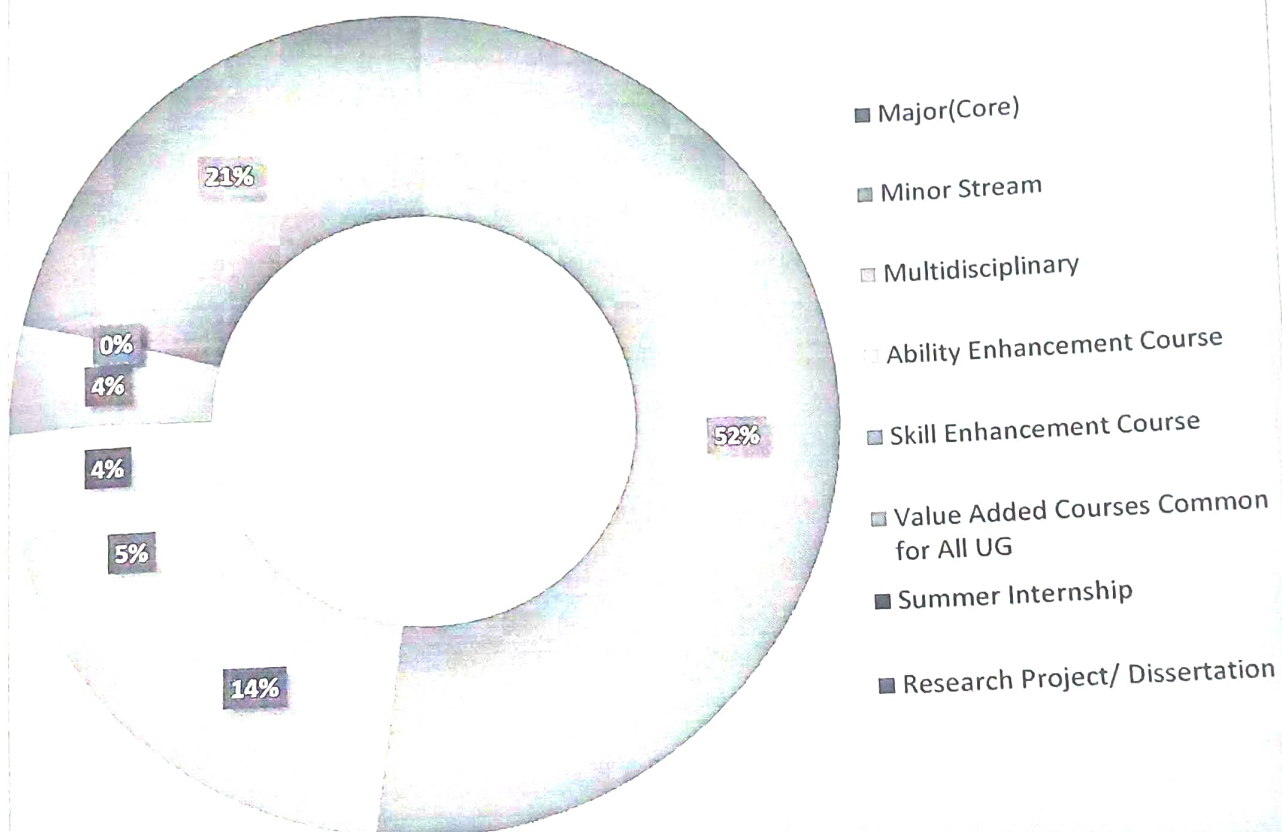


Semester-VIII										
SN.		Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Value Added Courses	BCA3805	MOOC-VI	Self-Paced Learning						
2	Major Core Courses	BCA3806	Augmented Reality (AR) and Virtual Reality (VR)	3	1	0	30	70	100	4
3	Minor Courses		Elective-V	3	0	0	30	70	100	3
Practical										
1	Research Project/ Dissertation	BCA3872	Major Dissertation	0	6	12	200	300	500	12
2	Major Core Courses	BCA3873	AR and VR Lab	0	0	2	50	50	100	1
			TOTAL	6	7	14	310	490	800	20



Sr.N	Course Category	Credit
1	Major(Core)	86
2	Minor Stream	23
3	Multidisciplinary	8
4	Ability Enhancement Course	7
5	Skill Enhancement Course	7
6	Value Added Courses Common for All UG	0
7	Summer Internship	0
8	Research Project/ Dissertation	34

BCA(AI) 25-26



List of Elective Courses		
SN.	ELECTIVE-I:	
1	BCA2406	Data Warehousing & Data Mining (EL)
2	BCA2417	Computer Architecture (EL)
3	BCA2418	Social Media Analytics (EL)
SN.	ELECTIVE-II:	
1	BCA3512	Introduction to Blockchain Technology (EL)
2	BCA3514	Information Security & Cyber Laws (EL)
3	BCA3513	Soft Computing (EL)
SN.	ELECTIVE-III:	
1	BCA3609	Data Privacy & Ethics in AI(EL)
2	BCA3610	Mobile Computing (EL)
3	BCA3611	Edge Computing (EL)
SN.	ELECTIVE-IV:	
1	BCA4710	Cloud Computing (EL)
2	BCA4411	Digital Image Processing (EL)
3	BCA4712	Cyber Analytics (EL)
SN.	ELECTIVE-V:	
	BCA4809	DevOps (EL)





Board of Studies

*(Including Proceeding, Course Structure, Course Curriculum and
Evaluation Scheme)*

for

Bachelor of Computer Application

(Effective from the Session: 2024-25)

Department of Computer Application
Bachelor of Computer Application
Evaluation Scheme

Credit Framework for the BCA -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				20
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	10	3	4		3				20
4	14	3			3			1	21
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	15	3						4	22
6	4	3						14	21
Students who want to undertake 3-year UG Programme will be awarded UG Degree in the relevant Discipline/ Subject Upon securing 120 credits									
7	11	3						6	20
8	5	3						12	20
Students will be awarded UG Degree(Honors) with Research in the relevant Discipline/ Subject provided they secure 160 credits									

Total = 164 Credit





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BCA (Undergraduate Regular)

Course Structure/ Degree Award Checklist 2024-2028

Program Name:

BCA

Program
Code: 04

Total Credit of Program: 164

Semester-I

SN.	Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme		Total	Credit
				L	T	P	CA	EE		
1	Major Core Course	BCA1101	Computer Fundamental & Emerging Technology	4	0	0	30	70	100	4
2	Major Core Course	BCA1102	Software Engineering	3	0	0	30	70	100	3
3	Major Core Course	BCA1103	Principles of Problem-Solving using C	4	0	0	30	70	100	4
4	Minor Course	BCA1105	Mathematical Foundation	4	0	0	30	70	100	4
5	Skill Enhancement Course	BCA1108	Remedial English	2	0	0	30	70	100	2
6	Multidisciplinary	UCC1101	IKS-I (Indian Knowledge System - I)	1	0	0	50	0	50	1
Practical										
1	Major Core Course	BCA1170	Office Automation Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA1171	Principles of Problem Solving using C Lab	0	0	2	50	50	100	1
			TOTAL	18	0	4	300	450	750	20



Semester -II										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Course	BCA1201	Python Programming	4	0	0	30	70	100	4
2	Major Core Course	BCA1202	Computer Network	4	0	0	50	100	150	4
3	Major Core Course	BCA1203	Advance Database Management System	4	0	0	30	70	100	4
4	Multidisciplinary	BCA1206	Environmental Science	2	0	0	50	50	100	2
5	Minor Course	BCA1209	Discrete Mathematics	4	0	0	30	70	100	4
6	Skill Enhancement Course	LMS1202	LSM-I (Life Skills & Mentoring – I)	0	0	0	0	0	0	0
Practical										
1	Major Core Course	BCA1270	ADBMS Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA1271	Python Programming Lab	0	0	2	50	50	100	1
TOTAL				18	0	4	290	460	750	20



Semester -III										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Multidisciplinary	BCA2301	Management Information Systems (MIS)	3	1	0	30	70	100	4
2	Major Core Course	BCA2302	Data Structure Using C	3	1	0	30	70	100	4
3	Minor Course	BCA2303	Principal of Management OR	3	0	0	30	70	100	3
		BCA2305	Remedial Mathematics (Theory)							
4	Major Core Course	BCA2304	Web Development	3	1	0	30	70	100	4
5	Value Added Course	BCA2306	MOOC-I	Self-Paced Learning						
6	Skill Enhancement Course	UCC2302	AI for Everyone	3	0	0	30	70	100	3
Practical										
1	Major Core Courses	BCA2370	Data Structure Using C Lab	0	0	2	50	50	100	1
2	Major Core Courses	BCA2371	Web Development Lab	0	0	2	50	50	100	1
			TOTAL	15	2	4	250	450	700	20

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



Semester-IV										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme			
			Course Title	L	T	P	CA	EE	Total	Credit
1	Major Core Course	BCA2401	Advance Python Programming	3	1	0	30	70	100	4
2	Major Core Course	BCA2402	OOP Concepts using Java	3	1	0	30	70	100	4
3	Major Core Course	BCA2403	Operating Systems	3	1	0	30	70	100	4
4	Skill Enhancement Course	BCA2404	AI for Developers	3	0	0	30	70	100	3
5	Minor Course		Elective-I	3	0	0	30	70	100	3
6	Value Added Course	BCA2408	MOOC-II	Self-Paced Learning						
Practical										
1	Major Core Course	BCA2471	Advance Python Programming Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA2472	OOP using Java Lab	0	0	2	50	50	100	1
3	Research Project/ Dissertation	BCA2474	Minor Project	0	0	2	50	50	100	1
			TOTAL	14	3	6	300	500	800	21



Semester -V										
S.N.	Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme		Total	Credit
				L	T	P	CA	EE		
1	Major Core Course	BCA3501	Machine Learning	3	0	0	30	70	100	3
2	Major Core Course	BCA3502	Digital Electronics	3	0	0	30	70	100	3
3	Major Core Course	BCA3503	Computer Architecture	3	0	0	30	70	100	3
4	Major Core Course	BCA3504	Mobile Application Development	3	1	0	30	70	100	4
5	Minor Course		Elective-II	3	0	0	30	70	100	3
6	Value Added Course	BCA3508	MOOC-III	Self-Paced Learning						
Practical										
1	Major Core Course	BCA3571	Digital Electronics LAB	0	0	2	50	50	100	1
2	Major Core Course	BCA3572	Mobile Application Development LAB	0	0	2	50	50	100	1
3	Research Project/ Dissertation	BCA3573	(Internship)/Minor Project	0	0	8	50	100	150	4
			TOTAL	15	1	12	300	550	850	22



Semester-VI										
S/N.	Course Category	Course Code	Theory	Week		Evaluation Scheme		EE	Total	Credit
			Course Title	L	T	P	CA			
1	Major Core Courses	BCA3601	Digital Image Processing	3	1	0	30	70	100	4
2	Minor Courses		Elective-III	3	0	0	30	70	100	3
3	Value Added Courses	BCA3606	MOOC-IV	Self-Paced Learning						
Practical										
1	Research Project/ Dissertation	BCA3671	Major Project	0	0	24	200	300	500	14
			TOTAL	6	1	24	260	440	700	21



[Semester 7 and Semester 8,
Specially for the Research Oriented Project
according to the current Industry scenario.]

Semester -VII										
SN.		Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Courses	BCA4701	Data Mining	3	1	0	30	70	100	4
2	Major Core Courses	BCA4702	Soft Computing	3	0	0	30	70	100	3
3	Major Core Courses	BCA4703	Introduction to Research Methodology	3	0	0	30	70	100	3
4	Minor Courses		Elective-IV	3	0	0	30	70	100	3
5	Value Added Courses	BCA4708	MOOC-V	Self-Paced Learning						
Practical										
1	Major Core Courses	BCA4771	Research Methodology Lab	0	0	2	50	50	100	1
2	Research Project/ Dissertation	BCA4772	Minor Dissertation	0	0	12	100	100	200	6
			TOTAL	12	1	14	270	430	700	20

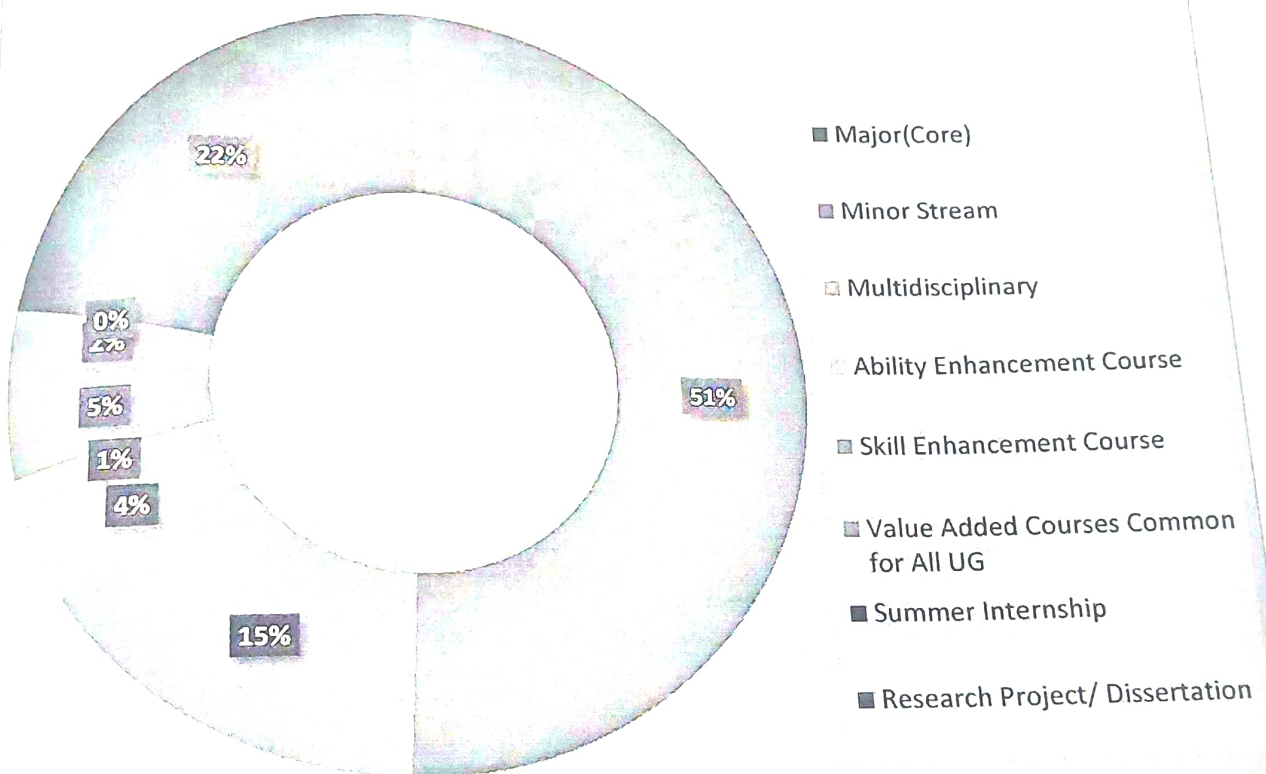


Semester-VIII										
S.N.		Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Courses	BCA4801	R Programming	3	1	0	30	70	100	4
2	Minor Courses		Elective-V	3	0	0	30	70	100	3
3	Value Added Courses	BCA4806	MOOC-VI	Self-Paced Learning						
Practical										
1	Major Core Courses	BCA4871	R Programming Lab	0	0	2	50	50	100	1
2	Research Project/ Dissertation	BCA4872	Major Dissertation	0	0	24	200	300	500	12
			TOTAL	6	1	26	310	490	800	20



Sr.N	Course Category	Credit
1	Major(Core)	86
2	Minor Stream	26
3	Multidisciplinary	7
4	Ability Enhancement Course	2
5	Skill Enhancement Course	8
6	Value Added Courses Common for All UG	4
7	Summer Internship	0
8	Research Project/ Dissertation	37

BCA 24-25



List of Elective Courses

SN.	ELECTIVE-I:	
1	BCA2405	Introduction to AI and ML and Data Science (EL)
2	BCA2406	Data Warehousing and Data Mining (EL)
3	BCA2407	Data Compression and Multimedia System (EL)
SN.	ELECTIVE-II:	
1	BCA3505	Social Media Analytics (EL)
2	BCA3506	Big Data Analytics (EL)
3	BCA3507	Natural Language Processing (EL)
SN.	ELECTIVE-III:	
1	BCA3602	Deep Learning (EL)
2	BCA3603	Neural Network (EL)
3	BCA3604	Introduction To Internet Of Things (EL)
SN.	ELECTIVE-IV	
1	BCA4704	Mobile Computing (EL)
2	BCA4705	Fundamentals of Data Privacy (EL)
3	BCA4706	Soft Skills And Interpersonal Communications (EL)
SN.	ELECTIVE-V:	
1	BCA4802	Cloud Computing (EL)
2	BCA4803	Storage Area Network (EL)
3	BCA4804	Cyber Analytics (EL)





Board of Studies

*(Including Proceeding, Course Structure, Course Curriculum and
Evaluation Scheme)*

for

Bachelor of Computer Application with AI

(Effective from the Session: 2024-25)



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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	11	4	1						
2	14	4	2		2	4			22
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									20
3	10	3	4						
4	14	3			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.									20
5	10	3	3						
6	8			2				4	20
Students who want to undertake 3-year UG Programme will be awarded UG Degree in the relevant Discipline/ Subject Upon securing 120 credits									12
7	10	3							
8	5	3						7	20
Students will be awarded UG Degree(Honors) with Research in the relevant Discipline/ Subject provided they secure 160 credits									14
									22

Total = 166 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: 166

Semester-I

SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Course	BCA1101	Computer Fundamental & Emerging Technology	4	0	0	30	70	100	4
2	Major Core Course	BCA1104	Principle of Problem-Solving using Python	3	0	0	30	70	100	3
3	Minor Course	BCA1105	Mathematical Foundation for AI	4	0	0	30	70	100	4
4	Value Added Course	BCA1107	Cyber Security	4	0	0	30	70	100	4
5	Major Core Course	BCA1109	Artificial Intelligence	2	0	0	30	70	100	2
6	Skill Enhancement Course	BCA1110	Professional Communication	2	0	0	0	50	50	2
7	Multidisciplinary	UCC1101	IKS-I (Indian Knowledge System - I)	1	0	0	50	0	50	1
Practical										
1	Major Core Course	BCA1170	Office Automation Lab	0	0	2	25	50	75	1
2	Major Core Course	BCA1172	Programming in Python Lab	0	0	2	25	50	75	1
			TOTAL	20	0	4	250	500	750	22



Semester -II

SN.	Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme		Total	Credit
				L	T	P	CA	EE		
1	Major Core Course	BCA1203	Advance Database Management System	4	0	0	30	70	100	4
2	Major Core Course	BCA1204	Advance Python Programming	4	0	0	50	100	150	4
3	Multidisciplinary	BCA1206	Environmental Science	2	0	0	30	70	100	2
4	Major Core Course	BCA1208	Software Engineering	4	0	0	30	70	100	4
5	Minor Course	BCA1209	Discrete Mathematics	4	0	0	30	70	100	4
6	Skill Enhancement Course	LSM1202	LSM-I (Life Skills & Mentoring - I)	0	0	0	0	0	0	0
Practical										
1	Major Core Course	BCA1270	ADBMS Lab	0	0	2	50	50	100	1
2	Major Core Course	BCA1272	Advanced Python Programming Lab	0	0	2	50	50	100	1
TOTAL				18	0	4	270	480	750	20



Semester -III										
SN.	Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme		Total	Credit
				L	T	P	CA	EE		
1	Minor Courses	BCA2303	Principal of Management	3	0	0	30	70	100	3
			OR							
1	Value Added Course	BCA2305	Remedial Mathematics (Theory)							
3	Multidisciplinary	BCA2306	MOOC-I	Self-Paced Learning						
4	Major Core Course	BCA2307	E-commerce & Digital Marketing							
5	Major Core Course	BCA2308	Operating System and Unix Shell programming	3	1	0	30	70	100	4
6	Skill Enhancement Course	BCA2309	Web Technologies services using Python	3	1	0	30	70	100	4
		UCC2302	AI for Everyone	3	0	0	30	70	100	3
1	Major Core Courses	BCA2373	OS and Shell programming LAB	Practical						
2	Major Core Courses	BCA2374	Web Technologies services using Python LAB	0	0	2	50	50	100	1
				0	0	2	50	50	100	1
TOTAL				15	3	4	250	450	700	20

Note: In the second semester Rem...

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



Semester-IV										
Sl. No.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Skill Enhancement Course	BCA2404	AI for Developers	3	0	0	30	70	100	3
2	Value Added Course	BCA2408	MOOC-II	Self-Paced Learning						
3	Major Core Course	BCA2409	OOPs concept with Java	3	1	0	30	70	100	4
4	Major Core Course	BCA2410	Introduction to Internet of Things	3	1	0	30	70	100	4
5	Major Core Course	BCA2411	Machine Learning Technology	3	1	0	30	70	100	4
6	Minor Course		Elective-I	3	0	0	30	70	100	3
Practical										
1	Major Core Courses	BCA2472	OOPs concept with Java LAB	0	0	2	50	50	100	1
2	Major Core Courses	BCA2473	Machine learning technology LAB	0	0	2	50	50	100	1
TOTAL				15	3	4	250	450	700	20



Semester -V										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
	Value Added Course	BCA3508	MOOC-III	Self-Paced Learning						
1	Major Core Course	BCA3509	Data Structures and Algorithms using Java	3	1	0	30	70	100	4
2	Major Core Course	BCA3510	Data Science and Analytic	3	1	0	30	70	100	4
3	Multidisciplinary	BCA3511	Intellectual Property Rights (IPR)	2	1	0	30	70	100	3
4	Minor Course		Elective-II	3	0	0	30	70	100	3
5										
Practical										
1	Research Project/ Dissertation	BCA3573	Minor Project	0	2	4	100		100	4
2	Major Core Courses	BCA3574	Data Structures and Algorithms using Java LAB	0	0	2	50	50	100	1
3	Major Core Courses	BCA3575	Data Science and Analytic LAB	0	0	2	50	50	100	1
			TOTAL	11	5	8	320	380	700	20



Semester-VI										
S.N.	Course Category	Course Code	Theory	Week		Evaluation Scheme		EE	Total	Credit
			Course Title	L	T	P	CA			
1	Major Core Courses	BCA3603	Artificial Neural Networks	3	1	0	30	70	100	4
2	Value-added Courses	BCA3606	MOOC-IV	Self-Paced Learning						
3	Major Core Courses	BCA3607	Artificial Intelligence in Business	4	0	0	30	70	100	4
4	Ability Enhancement Course	BCA3608	Personality Development and Decision-making Skills	2	0	0	30	70	100	2
Practical										
1	Research Project/ Dissertation	BCA3671	Major Project	0	0	24	200	300	500	12
			TOTAL	9	1	24	290	510	800	22



**[Semester 7 and Semester 8,
Specially for the Research Oriented Project
according to the current Industry scenario.]**

Semester -VII										
SN.		Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Courses	BCA4703	Introduction to Research Methodology	3	1	0	30	70	100	4
2	Value Added Courses	BCA4708	MOOC-V	Self-Paced Learning						
3	Major Core Courses	BCA4709	Android Applications Development	3	1	0	30	70	100	4
4	Minor Courses		Elective-III	3	0	0	30	70	100	3
Practical										
1	Major Core Courses	BCA3771	Research Methodology Lab	0	0	2	50	50	100	1
2	Research Project/ Dissertation	BCA3772	Minor Dissertation	0	0	14	100	100	200	7
3	Major Core Courses	BCA3773	Android Applications Development LAB	0	0	2	50	50	100	1
			TOTAL	9	2	18	290	410	700	20



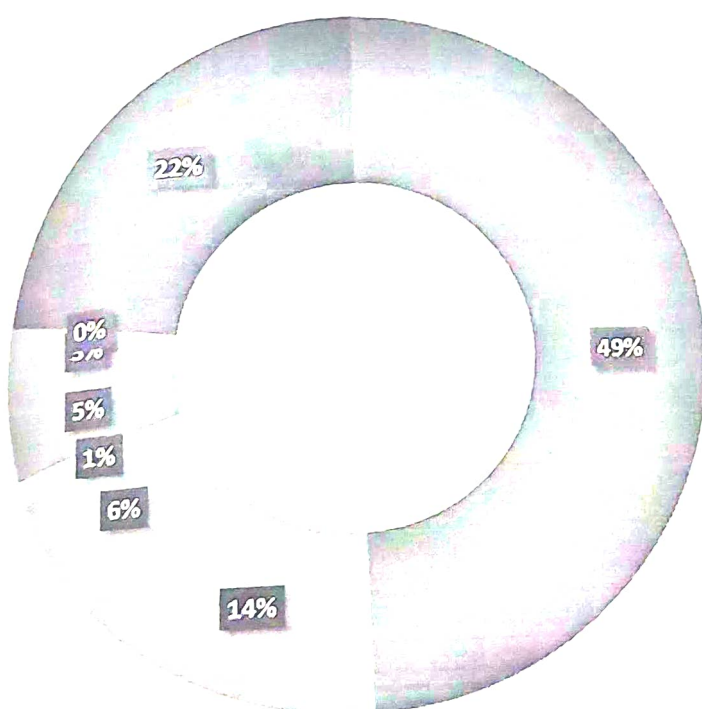
Semester-VIII

Semester-VIII										
SN.		Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Value Added Courses	BCA3805	MOOC-VI	Self-Paced Learning						
2	Major Core Courses	BCA3806	Augmented Reality (AR) and Virtual Reality (VR)	3	1	0	30	70	100	4
3	Minor Courses		Elective-IV	3	0	0	30	70	100	3
Practical										
1	Research Project/ Dissertation	BCA3872	Major Dissertation	0	4	12	200	300	500	14
2	Major Core Courses	BCA3873	AR and VR Lab	0	0	2	50	50	100	1
			TOTAL	6	5	14	310	490	800	22



Sr.N	Course Category	Credit
1	Major(Core)	82
2	Minor Stream	23
3	Multidisciplinary	10
4	Ability Enhancement Course	2
5	Skill Enhancement Course	8
6	Value Added Courses Common for All UG	4
7	Summer Internship	0
8	Research Project/ Dissertation	37

BCA(AI) 24-25



- Major(Core)
- Minor Stream
- Multidisciplinary
- Ability Enhancement Course
- Skill Enhancement Course
- Value Added Courses Common for All UG
- Summer Internship
- Research Project/ Dissertation



List of Elective Courses		
SN.	ELECTIVE-I:	
1	BCA2405	Introduction to AI and ML and Data Science (EL)
2	BCA2506	Data Warehousing and Data Mining (EL)
3	BCA2407/BCA3505	Social Media Analytics (EL)
4	BCA2408/3506	Big Data Analytics (EL)
5	BCA2412	Computer Architecture (EL)
SN.	ELECTIVE-II:	
1	BCA3512	Introduction to Blockchain Technology (EL)
2	BCA3515/3507	Natural Language Processing (EL)
3	BCA3513	Soft Computing (EL)
4	BCA3514	Information Security and Cyber Laws (EL)
SN.	ELECTIVE-III:	
1	BCA4710	Computer Vision (EL)
2	BCA4711/4705	Fundamentals of Data Privacy (EL)
3	BCA4712/4803	Storage Area Network (EL)
4	BCA4713/4704	Mobile Computing (EL)
SN.	ELECTIVE-IV:	
1	BCA4802	Cloud Computing (EL)
2	BCA4807	Digital Image Processing (EL)
3	BCA4804	Cyber Analytics (EL)
4	BCA4808/3602	Deep Learning (EL)

Signature



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Board of Studies

*(Including Proceeding, Course Structure, Course Curriculum and
Evaluation Scheme)*

for

Master of Computer Application

(Effective from the Session: 2025-26)



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**Department of Computer Application
Master of Computer Application
Evaluation Scheme**

Future University											
Master of Computer Application (MCA) (Postgraduate Regular)											
Course Structure/ Degree Award Checklist 2025-2027											
Program Name:			Master of Computer Application (MCA)								Program Code: 05
Total Credit of Program: 85											
Semester-I											
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit	
			Course Title	L	T	P	CA	EE			
1	Major Core Course	MCA5101	Fundamental of Computers & Emerging Technologies	3	0	0	30	70	100	3	
2	Major Core Course	MCA5102	Object Oriented Programming Concepts Using C++	3	1	0	30	70	100	4	
3	Major Core Course	MCA5103	Web Development Technologies	4	0	0	30	70	100	4	
4	Minor Course	MCA5105	Discrete Mathematics	3	0	0	30	70	100	3	
5	Multidisciplinary	UCC1101	IKS-I (Indian Knowledge System - I)	1	0	0	50	0	50	1	
6	Skill Enhancement Course	UCC1102	AI for Everyone	3	0	0	30	70	100	3	
Practical											
1	Major Core Course	MCA5170	Office Automation Lab	0	0	2	50	50	100	1	
2	Major Core Course	MCA5171	OOPs Concepts Using C++ Lab	0	0	2	50	50	100	1	
3	Major Core Course	MCA5172	Web Development Technologies Lab	0	0	2	50	50	100	1	
TOTAL				17	1	6	350	500	850	21	



Semester -II										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Minor Course	MCA5201	Operating Systems	3	0	0	30	70	100	3
2	Major Core Course	MCA5202	Data Structures & Analysis of Algorithms	3	0	0	30	70	100	3
3	Major Core Course	MCA5203	Relational Database Management Systems	3	0	0	30	70	100	3
4	Major Core Course	MCA5204	Introduction Artificial Intelligence	3	0	0	30	70	100	3
5	Minor Course	MCA5205	Computer Based Numerical Techniques	3	0	0	30	70	100	3
6	Ability Enhancement Course	MCA5206	AI for Developers	3	0	0	30	70	100	3
7	Skill Enhancement Course	LSM5202	LSM-I (Life Skills & Mentoring - I)	0	0	0	0	0	0	0
Practical										
1	Major Core Course	MCA5270	Data Structure Using C++ Lab	0	0	2	50	50	100	1
2	Major Core Course	MCA5271	RDBMS Lab	0	0	2	50	50	100	1
3	Major Core Course	MCA5272	A. I. using Python Lab	0	0	2	50	50	100	1
			TOTAL	18	0	6	330	570	900	21



Semester -III										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Course	MCA6311	Computer Networks	3	0	0	30	70	100	3
2	Major Core Course	MCA6312	Software Engineering	3	0	0	30	70	100	3
3	Minor Course		Elective - 1	3	0	0	30	70	100	3
4	Major Core Course	MCA6303	Advance Java Programming	3	0	0	30	70	100	3
5	Minor Course	MCA6313	Remedial Mathematics (Theory) OR	3	0	0	30	70	100	3
		MCA6314	Principal of Management							
6	Minor Course		Elective - 2	3	0	0	30	70	100	3
7	Skill Enhancement Course	MCA6315	Industrial Training-1	0	0	0	0	0	0	0
Practical										
1	Major Core Course	MCA6372	Advance Java Programming Lab	0	0	2	50	50	100	1
2	Research Project/ Dissertation	MCA6374	Mini Project	0	0	4	50	50	100	2
			TOTAL	18	0	6	280	520	800	21

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

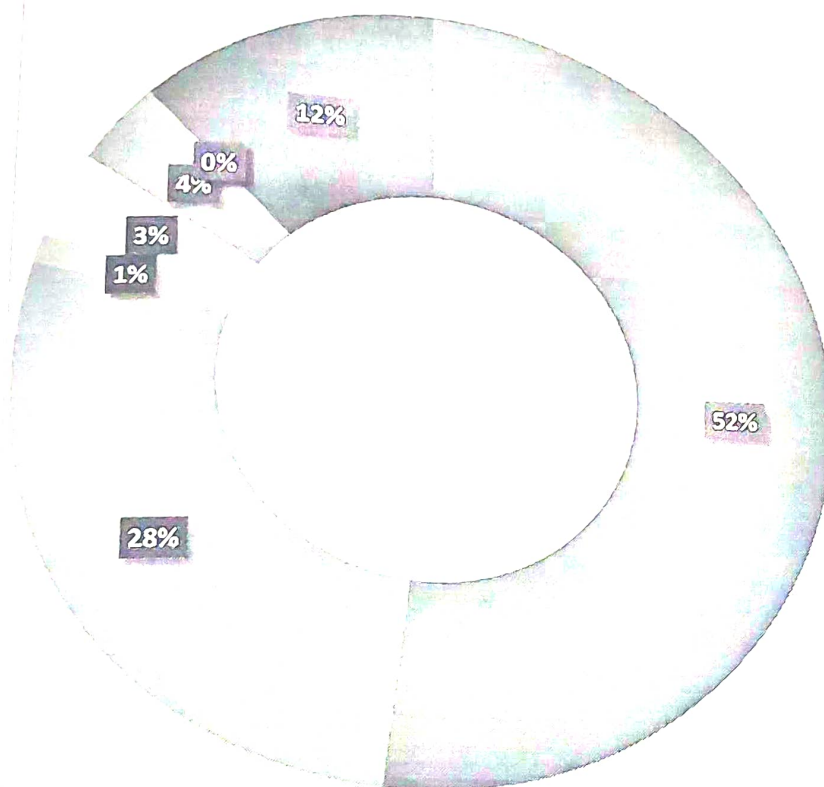


Semester -IV										
Sl. No.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Course	MCA6409	Computer Graphics	3	0	0	30	70	100	3
2	Minor Course		Elective - 3	3	0	0	30	70	100	3
3	Minor Course		Elective - 4	3	0	0	30	70	100	3
4	Major Core Course	MCA6401	Introduction to Research Methodology	0	0	9	30	70	100	3
5	Skill Enhancement Course	MCA6411	Industrial Training-2	0	0	0	0	0	0	0
Practical										
1	Major Core Course	MCA6471	Research Methodology LAB	0	0	2	50	50	100	1
2	Research Project/ Dissertation	MCA6472	Major Project LAB	0	0	16	150	250	400	8
3	Major Core Course	MCA6473	Computer Graphics LAB	0	0	2	50	50	100	1
			TOTAL	12	0	15	370	630	1000	22



Sr.N	Course Category	Credit
1	Major(Core)	44
2	Minor Stream	24
3	Multidisciplinary	1
4	Ability Enhancement Course	3
5	Skill Enhancement Course	3
6	Value Added Courses Common for All PG	0
7	Summer Internship	0
8	Research Project/ Dissertation	10

MCA 25-26



- 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



		ELECTIVE SUBJECTS
		Elective-1
1	MCA6304	Cloud Computing (EI)
1	MCA6307	Cryptography & Network Security (EI)
1	MCA6316	Software Project Management (EI 1)
1	MCA6317	Data Warehousing and Data Mining (EI 1)
		Elective-2
2	MCA6318	Software Testing and Quality Assurance (EI 2)
2	MCA6319	Big Data (EI 2)
2	MCA6320	Web Technology (EI 2)
2	MCA6321	Digital Image Processing (EI 2)
		Elective-3
3	MCA6412	Privacy & Security in Online social media
3	MCA6413	Soft Computing
3	MCA6414	Pattern Recognition
3	MCA6416	Software Quality Engineering
3	MCA6417	Compiler Design
		Elective-4
4	MCA6418	Block chain Architecture
4	MCA6419	Neural Network
4	MCA6407	Internet of Things
4	MCA6421	Wireless and Mobile Computing
4	MCA6422	Computer Vision
		Elective-5
5	MCA6404	Mobile Computing
5	MCA6424	Computer Graphics and Animation
5	MCA6425	Natural Language Processing
5	MCA6426	Machine Learning
5	MCA6427	Quantum Computing





Board of Studies

*(Including Proceeding, Course Structure, Course Curriculum and
Evaluation Scheme)*

for

Master of Computer Application in AI

(Effective from the Session: 2025-26)



**FUTURE
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**Department of Computer Application
Master of Computer Application
Evaluation Scheme**

Future University										
Master of Computer Application (MCA) AI (Postgraduate Regular)										
Program Name:			Course Structure/ Degree Award Checklist 2025-2027							
Total Credit of Program: 87			Master of Computer Application (MCA)							Program Code: 05
			Specialization in AI							
Semester-I										
SN.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Major Core Course	MCA5101	Fundamental of Computers & Emerging Technologies	3	0	0	30	70	100	3
2	Skill Enhancement Course	UCC1102	AI for Everyone	3	0	0	30	70	100	3
3	Major Core Course	MCA5103	Web Development Technologies	3	0	0	30	70	100	3
4	Minor Course	MCA5105	Discrete Mathematics	3	0	0	30	70	100	3
5	Major Core Course	MCA5107	Python Programming	3	0	0	30	70	100	3
6	Major Core Course	MCA5109	Introduction to Cyber Security	3	0	0	30	70	100	3
7	Multidisciplinary	UCC1101	IKS-I (Indian Knowledge System - I)	1	0	0	50	0	50	1
Practical										
1	Major Core Course	MCA5172	Web Development Technologies Lab	0	0	2	50	50	100	1
2	Major Core Course	MCA5173	Python Programming Lab	0	0	2	50	50	100	1
			TOTAL	19	1	4	330	520	850	21



Semester -II										
S.N.	Course Category	Course Code	Theory	Week			Evaluation Scheme		Total	Credit
			Course Title	L	T	P	CA	EE		
1	Minor Course	MCA5201	Operating Systems	3	0	0	30	70	100	3
2	Major Core Course	MCA5202	Data Structures & Analysis of Algorithms	3	0	0	30	70	100	3
3	Major Core Course	MCA5203	Relational Database Management Systems	3	0	0	30	70	100	3
4	Major Core Course	MCA5204	Introduction to Artificial Intelligence	3	0	0	30	70	100	3
5	Minor Course	MCA5205	Computer Based Numerical Techniques	3	0	0	30	70	100	3
6	Ability Enhancement Course	MCA5206	AI for Developers	3	0	0	30	70	100	3
7	Major Core Course	MCA5208	Introduction to Machine Learning	3	0	0	30	70	100	3
8	Skill Enhancement Course	LSM5202	LSM-I (Life Skills & Mentoring – I)	0	0	0	0	0	0	0
Practical										
1	Major Core Course	MCA5274	Data Structure Using Python Lab	0	0	2	50	50	100	1
2	Major Core Course	MCA5271	RDBMS Lab	0	0	2	50	50	100	1
3	Major Core Course	MCA5273	Machine Learning Lab	0	0	2	50	50	100	1
			TOTAL	21	0	6	360	640	1000	24



Semester -III

Sl. No.	Course Category	Course Code	Theory Course Title	Week			Evaluation Scheme		Total	Credit
				L	T	P	CA	EE		
5	Minor Course	MC A6311	Computer Networks	1	0	0	30	70	100	1
6	Minor Course	MC A6312	Software Engineering	1	0	0	30	70	100	1
7	Minor Course	MC A6303	Domain Specific Advance Java Programming	1	0	0	30	70	100	1
8	Minor Course	MC A6313	Remedial Mathematics (Theory) OR	1	0	0	30	70	100	1
9	Minor Course	MCA6314	Principal of Management	1	0	0	30	70	100	1
10	Minor Course		Domain Specific	1	0	0	30	70	100	1
11	Minor Course	MCA6315	Industrial Training-I	0	0	0	0	0	0	0
12	Minor Course		Practical							
13	Minor Course	MCA6372	Advance Java Programming Lab	0	0	2	50	50	100	1
14	Minor Course	MCA6374	Mini Project	0	0	4	50	50	100	2
15	Minor Course									
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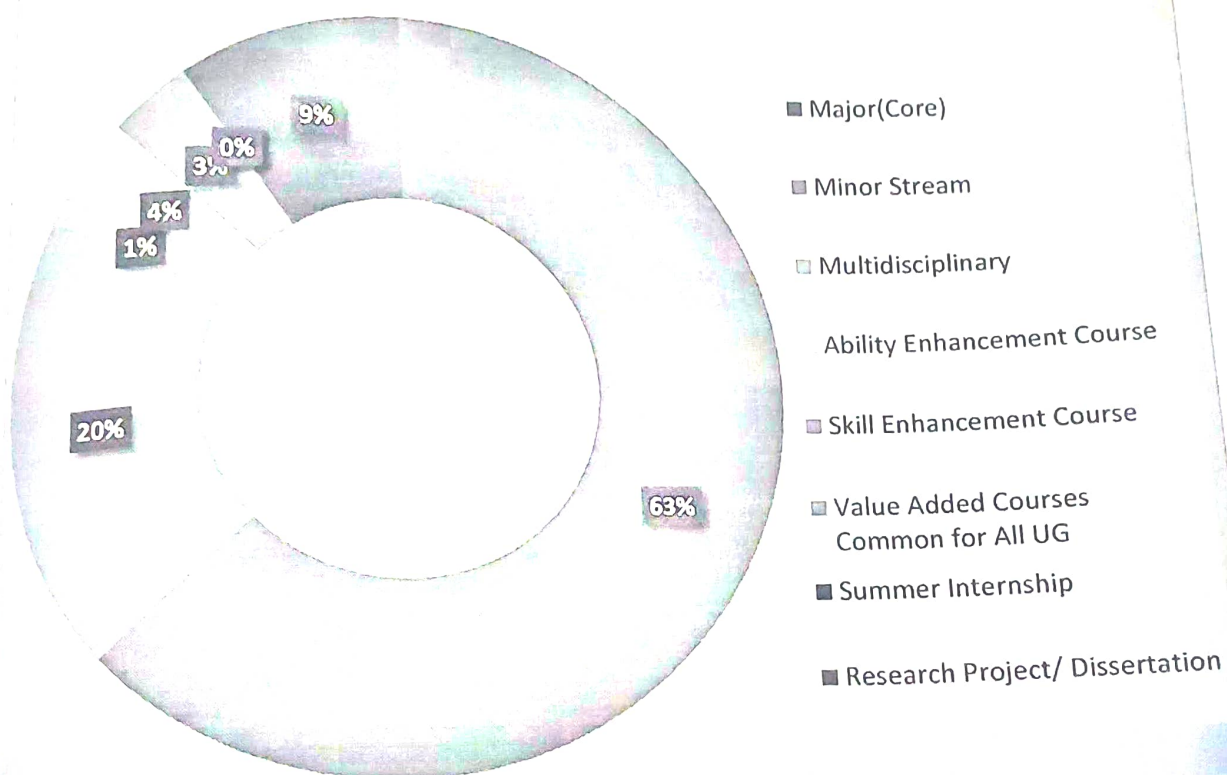
Semester -IV

Course Category	Course Code	Course Title	Theory			Week		Evaluation Scheme		Total	Credit
			L	T	P	CA	EE				
Minor Course	MCA6409	Computer Graphics	3	0	0	30	70	100		1	
Major Core Course		Domain Specific	3	0	0	30	70	100		3	
Major Core Course		Domain Specific	3	0	0	30	70	100		3	
Major Core Course	MCA6401	Research Methodology	3	0		30	70	100		3	
Minor Course	MCA6411	Digital Marketing	2	0	0	30	70	100		2	
Skill Enhancement Course	MCA6411	Industrial Training-2	0	0	0	0	0	0		0	
Practical											
Major Core Course	MCA6473	Computer Graphics Lab	0	0	2	50	50	100		1	
Research Project/Dissertation	MCA6472	Project	0	2	8	100	150	250		6	
TOTAL			15	2	10	300	550	850		21	



Sr.N	Course Category	Credit
1	Major(Core)	55
2	Minor Stream	17
3	Multidisciplinary	1
4	Ability Enhancement Course	3
5	Skill Enhancement Course	3
6	Value Added Courses Common for All PG	0
7	Summer Internship	0
8	Research Project/ Dissertation	8

Chart Title



DOMAIN SPECIFIC ELECTIVES COURSES

S. No.	COURSE CODE	COURSE TITLE		L	T	P	Credits
Domain 1: AI & ML							
1	MCA6322	Neural Networks (EL-11)		3	0	0	3
2	MCA6323	Decision Support Systems (EL-12)		3	0	0	3
3	MCA6428	Fuzzy Logic (EL-13)		3	0	0	3
4	MCA6429	Natural Language Processing (EL-14)		3	0	0	3
Domain 2 – AI & DATA SCIENCE							
1	MCA6324	Big Data (EL-21)		3	0	0	3
2	MCA6325	Python Programming for Data Analytics (EL-22)		3	0	0	3
3	MCA6430	Statistics for Business Analytics (EL-23)		3	0	0	3
4	MCA6431	Data Mining and NoSQL Databases (EL-24)		3	0	0	3



ORDINANCE FOR MCA PROGRAMME

1.1 ACADEMIC PROGRAMME

MCA

1.2 ELIGIBILITY FOR ADMISSIONS TO MCA (FULL TIME) PROGRAM:

1.2.1 Admission to MCA First Year: The minimum qualifications for admission to MCA program will be as per eligibility certain as decided by Academic Council of Future University. Admission will be taken on the basis of Merit Future University Common Entrance Exam (FUCET).

1.2.2 For admission students of General category must secure 50% or above of marks in graduation (in any stream from recognized university) in case of General and OBC category. Relaxation up to 45% Is only of candidate who secure 45 % or above of marks in graduation (in any stream from recognized university)

1.2.3 The Academic Council of University shall have power to amend or repeal the eligibility criteria laid down.

1.3 DIRECT ADMISSION ON VACANT SEATS AT INSTITUTION / COLLEGE LEVEL:

1.3.1 The eligibility criteria for direct admission on seats remaining vacant in first year after entrance examination / counseling shall be such as may be notified from time to time by the University.

1.4 MCA PROGRAM:

MCA (Full Time) is 2 years Program

1.4.1 Curriculum Structure: The University follows a specialized credit based semester system. Every Program will have a specific curriculum for all semesters (Semester 1 to Semester 4 for full time MCA as approved by BoS/Academic Council of Future University.

1.4.2 Curriculum:

A for full time MCA program, the 2-year curriculum is divided into 4 semesters while include lectures, tutorials, practical, seminars, projects etc. in addition to industrial training/internship, educational tour etc. as defined in the scheme and instructions issued by the University from time to time.

B The curriculum will also include such other curricular, co-curricular and extracurricular activities as may be prescribed by the University from time to time.

1.5 DURATION OF COURSE:

1.5.1 Total duration of the full time MCA Course shall be 2 years, each year comprising of two semesters. Each semester shall normally have teaching for the 90 working days or as prescribed by UGC/Future University from time to time.

1.5.2 The maximum time allowed for a candidate admitted in 1st semester for completing the course shall be 4 years for MCA (full time), failing which he/she shall not be allowed to continue his/her MCA. Degree.

1.6 ATTENDANCE:

1.6.1 Every student is required to attend all the lectures, tutorials, practicals and other prescribed curricular and co-curricular activities with minimum of 75% Attendance or specify as by concerned regulatory body.

1.6.2 The attendance can be condoned up to 15% on medical grounds or for other genuine reasons beyond the control of students by Head of Institution/college provided that he/she has been absent with prior permission of the Vice Chancellor of University for the reasons acceptable to him.

1.6.3 No student will be allowed to appear in the end semester examination if he / she do not satisfy the overall average attendance requirements of Clause Nos. 1.6.1, and 1.6.2 and such candidate(s) shall be treated as having failed due to detained and will be further governed by clause no. 1.6.2.

1.6.4 In each semester, the attendance shall be counted from the date of admission in the University or start of academic session whichever is later.

1.6.5 Notwithstanding any of the above provisions, under very special circumstances, the Hon'ble Vice Chancellor in consultation with Deans of the Faculty has the power to amend or condone all or any of the above said clauses or the prescribed percentage in the interest of the academics and the University.

1.7 EXAMINATION:

1.7.1 The performance of a student in a semester shall be evaluated through continuous class assessment and end semester examination. The continuous assessment shall be based on assignments, Activities, Seminars and Internal Exams, quizzes/viva-voce, projects, presentations, attendance, etc. The marks for continuous assessment (Sessional marks) shall be awarded at the end of the semester by the subject teacher and forwarded to University through Head of Department/Head of Institution. The end semester examination shall comprise of written examination, Summer Training / viva voce.

1.7.2 The distribution of marks for sessional, end semester theory papers, Training Report and other examinations, seminar, project, industrial training/internship and general proficiency shall be as prescribed by the University.

- 1.7.3 The marks obtained in a subject shall consist of marks allotted in end semester theory paper, practical examination and sessional work. The grade will be awarded based on marks obtained as per Appendix I. The "F" grade denotes the failure in passing respective subjects and student has to make another attempt to pass the subject as per the provisions of this carry over Ordinance.
- 1.7.4 The minimum pass marks in each subject having sessional marks component shall be 40% (including sessional marks) with a minimum of 30% marks in the end semester examination of respective subject. If there is no provision of sessional marks in any subject, the minimum pass marks in that subject shall be 40% in the end semester examination.
- 1.7.5 Unfair means: Cases of unfair means shall be dealt as per the rules of the University.
- 1.8 EVALUATION**
- 1.8.1 A student who score O to P shall be considered as passed. If a student secured "F" grade, he/she has to reappear for the examination.
- (a) For a Pass in a Project Reports / Viva voce examination / Comprehensive Viva Voce, a student shall secure a minimum of 50 % marks of the maximum marks prescribed by the University Examination in the relevant Practical/ Internship / Project/ Viva voce marks i.e. Minimum Passing Grade is "E"
- 1.8.2 The student who do not satisfy the condition 1.8.1 or the student who remains absent shall be deemed to have failed in that subject and may reappear for the University examination in the subsequent examinations. However, the sessional marks awarded to the student at previous attempt in the concerned subject will be carried forward.
- 1.8.3 The student who passes a course of a semester as per 1.8.1 shall not be allowed to appear for the same again, unless he/ she opts for abandoning of result as per 1.8.4 – 1.8.8.
- 1.8.4 A student may at his/her desire opt to abandon his/her performance of a semester in following manner.
- (a) A student may opt to abandon his/her performance only in university examination of the semester.
- (b) A student may opt to abandon his/her total performance of the semester which includes performance in university examination and sessional marks.
- (c) A student may opt to abandon his/her performance in university examination of any or both semester of the same academic year only.
- (d) A student shall be allowed to abandon the performance only once during the entire course of study.
- (e) Performance of a semester once abandoned cannot be claimed again

- 1.7.3 The marks obtained in a subject shall consist of marks allotted in end semester theory paper, practical examination and sessional work. The grade will be awarded based on marks obtained as per Appendix I. The "F" grade denotes the failure in passing respective subjects and student has to make another attempt to pass the subject as per the provisions of this carry over Ordinance.
- 1.7.4 The minimum pass marks in each subject having sessional marks component shall be 40% (including sessional marks) with a minimum of 30% marks in the end semester examination of respective subject. If there is no provision of sessional marks in any subject, the minimum pass marks in that subject shall be 40% in the end semester examination.
- 1.7.5 Unfair means: Cases of unfair means shall be dealt as per the rules of the University.
- 1.8 **EVALUATION**
- 1.8.1 A student who score O to P shall be considered as passed. If a student secured "F" grade, he/she has to reappear for the examination.
- (a) For a Pass in a Project Reports / Viva voce examination / Comprehensive Viva Voce, a student shall secure a minimum of 50 % marks of the maximum marks prescribed by the University Examination in the relevant Practical/ Internship / Project/ Viva voce marks i.e. Minimum Passing Grade is "E"
- 1.8.2 The student who do not satisfy the condition 1.8.1 or the student who remains absent shall be deemed to have failed in that subject and may reappear for the University examination in the subsequent examinations. However, the sessional marks awarded to the student at previous attempt in the concerned subject will be carried forward.
- 1.8.3 The student who passes a course of a semester as per 1.8.1 shall not be allowed to appear for the same again, unless he/ she opts for abandoning of result as per 1.8.4 – 1.8.8.
- 1.8.4 A student may at his/her desire opt to abandon his/her performance of a semester in following manner.
- (a) A student may opt to abandon his/her performance only in university examination of the semester.
- (b) A student may opt to abandon his/her total performance of the semester which includes performance in university examination and sessional marks.
- (c) A student may opt to abandon his/her performance in university examination of any or both semester of the same academic year only.
- (d) A student shall be allowed to abandon the performance only once during the entire course of study.
- (e) Performance of a semester once abandoned cannot be claimed again

- 1.8.5 The student who opts to abandon the performance of a semester as per clause 1.8.4, shall abandon performance in all the courses of that semester irrespective of the fact whether the student passed or failed in any subject of that semester. However in case of 4th semester performance in project shall not be abandoned.
- 1.8.6 The student, who opts to abandon the total performance of the semester including sessional marks, has to take readmission for the relevant semester. Readmission to the first semester in such cases shall not be considered as fresh admission i.e. the student will continue to have the same University Roll Number, which was allotted earlier.
- 1.8.7 The student, who opted to abandon his / her performance only in the University examination of a semester and does not desire readmission, shall be permitted to re-appear for examination of all the subjects of the semester in the subsequent examination as an Ex Student. However the sessional marks obtained by the student in the abandoned semester shall be retained.
- 1.8.8 Such student who opted to abandon the performance in final year are eligible for the award of Class and Distinction at the MCA degree level, but are not eligible for the award of ranks.
- 1.8.9 A student shall be declared to have completed the program of MCA degree, provided the student has undergone the stipulated course work as per the regulation.
- 1.9 ELIGIBILITY FOR PROMOTION**
- 1.9.1 There shall not be any restriction for promotion from an odd semester to the next even semester.
- 1.9.2 For promotion from first year to II year (III semester) the student has to secure at least 55 % in the first year (combining I and II semester) including theory and practical credits.
- 1.9.3 The result of the semester shall be declared pass only on securing P or above grades in all subjects and minimum semester Grade Point Average (SGPA) is 5.
- 1.10 CARRYOVER EXAMS**
- 1.10.1(a) A candidate who do not satisfy the requirements of clause 1.8.1(a) will be required to reappear in those theory paper/ practical during respective end semester exams in which he/she failed.
- (b) A student shall be required to exercise his/ her choice of minimum theory papers in which he/ she desires to appear in the theory examination for improvement to fulfill the requirement of clause 1.9.3.

1.10.2 All carryover examinations shall be held only with end semester examination.

1.11 READMISSION IN THE UNIVERSITY:

A candidate may be allowed for re- admission provided he/she satisfies one of the following conditions:

1.11.1 A candidate is declared fail.

1.11.2 A candidate did not appear in a semester examination/or he/she was not granted permission to appear in the examination.

1.11.3 A candidate has been detained by the institute and subsequently has been permitted to take re admission.

1.11.4 A candidate as an ex-student passed the examination of the academic year or qualified for carry over system.

1.11.5 A candidate promoted with carry over subject and he/she opted for readmission.

1.12 COURSES:

1.12.1 There will be two type of courses.

- (i) Core Courses: This is the course which is to be compulsorily studied by a students as a core requirement to complete the requirement of a program in a said discipline of study.
- (ii) Elective Course: This is course which can be chosen from the pool of papers .It may be supportive to the discipline/domain /providing extended scope/enabling an exposure to some other discipline /domain/nurturing student proficiency.
- (iii) Mandatory Course
- (iv) Foundation Course

1.12.2 The minimum number of students to be registered for an elective to be offered shall not be less than 20 % of the enrolled students.

1.12.3 The student may be permitted to opt for change of elective subject till 15 days before the date of commencement of the III semester, as per the calendar of the University

1.13 COMPUTATION OF SGPA AND CGPA

As per Appendix I.

1.14 CONVERSION OF GRADE IN TOPER CENTAGE :

Conversion formula for the conversion of GPA into Percentage is $CGPA \text{ Earned} \times 10 = \text{Percentage of marks scored}$. Illustration: $CGPA \text{ earned } 7.15 \times 10 = 71.5 \%$

1.15 AWARD OF DIVISION AND RANKS :

Division and CGPA shall be awarded only after the eighth and final semester examination based on integrated performance of the candidate for all the eight semesters (six semesters for lateral entry) as per following details.

- (a) After successful completion of credits as decided in BoS/Academic Council, a student shall be eligible to get under graduate degree in engineering/technology.
- (b) The student shall be awarded **First division with Distinction** Degree only if he/she secures 7.50 or above CGPA and passed each subject of that degree program in single attempt without any grace marks and without any gap.
- (c) A candidate who qualifies for the award of the degree by securing P or above grades in all subjects of all the semesters (eight semesters/six semesters) as applicable, and secures CGPA less than 7.5 and greater than or equal to 6.5 shall be declared to have passed the examination in **FIRST DIVISION**.
- (d) All other candidates who qualify for the award of degree by securing P or above grades in all subjects of all semesters (eight semesters/six semesters as applicable) and secures CGPA below 6.5 and greater than or equal to 5.0 shall be declared to have passed the examination in **SECOND DIVISION**.

If two students get the same *CGPA*, the tie should be resolved by considering the number of times a student has obtained higher *SGPA*; but, if it is not resolved even at this stage, the number of times a student has obtained higher grades like O, A⁺, A, B⁺, B, C etc shall be taken into account in rank ordering of the students in a program.

The Gold, Silver and any other Medals as decided by the university shall be awarded to students falls in the top ranks of various courses as per university rules.

1.16 SCRUTINY AND REVALUATION

1.16.1 Scrutiny shall be allowed in only theory papers.

1.16.2 Revaluation of theory/practical papers is permitted only with certain conditions as laid down by university.

1.17 AWARD OF SESSIONAL MARKS

Award of Sessional marks for theory subjects, shall be awarded as will be prescribed and at present the break-up of sessional marks shall be as follows:

Members of Draft Committee

Members of BoS/BoF

Dean/Head

Dean
Faculty of Engineering
Applied Sciences
Future University
Barelilly

- (a) Theory Subjects: (i) Class test which will comprise 20 % of total theory marks with two mid-term tests of equal weightage. (ii) Teacher Assessment Tutorial/Assignment/Quizzes/ Attendance comprise 10% of total theory marks.
- (b) Make-up test may be held only for those students who could not appear in any one of midterm class test due to genuine reasons for which the prior permission from the Dean of Faculty was taken. Make up test shall ordinarily be held about two weeks before the semester examination. The syllabus for the make-up test shall be the whole syllabus covered by the subject teacher upto that time.

1.18 AWARD FOR SUMMER TRAINING PROJECT REPORT :

Each student has to successfully complete a following project for the award of MCA degree as approved in BoS.

1.18.1 Summer Training Project Report

- 1. At the end of second semester examination, it is mandatory for every student of MCA undergo on-the-job practical training in any manufacturing, service or financial organization. The training will be of 6 to 8 weeks duration. The college/institute will facilitate this compulsory training for students.
- 2. The student, after the completion of training will submit a report to the College/Institute which will form part of third semester examination. However, the report must be submitted by the end of Semester

1.19 AWARD FOR RESEARCH PROJECT REPORT :

In fourth semester, the candidates will have to submit a Research Project Report on a problem /topic (from the specialization areas) to be assigned by the department MCA under the supervision of a core faculty member of the department.

Note :Both Summer Training Report & Research Project Report shall be treated as project work and remuneration shall be paid as notified by university from time to time respect of project evaluation.

1.20 CANCELLATION OF ADMISSION :

The admission of a student at any stage of study shall be cancelled if:

- (i) He /She is not found qualified as per University/State Government norms and guidelines or the eligibility criteria prescribed by the University.
- (ii) He / She is found unable to complete the course within the stipulated time as prescribed in clause 1.2 or
- (iii) He / She is found involved in creating indiscipline in the Institution /College or in the University.

Ordinances of Future University, Bareilly.

The Academic Council shall have the power to relax any provision provided in the ordinance in any specific matter /situation subject to the approval of Executive Council of the University & such decision(s) shall be reported to the Chancellor of the University.

The Academic Council of Future University shall have the authority to amend, modify, or replace any provision of this Ordinance from time to time in order to ensure compliance with the regulations, guidelines, and directives issued by the statutory and regulatory bodies such as the University Grants Commission (UGC) and other competent authorities.