TECNIA INSTITUTE OF ADVANCED STUDIES

NAAC GRADE "A" INSTITUTE (CYCLE-2)
Approved by AICTE, Ministry of Education Govt. of India,
Affiliated to G.G.S.I.P. University & Recognized Under Sec. 2(f) of UGC Act 1956.
INSTITUTIONAL AREA, MADHUBAN CHOWK, ROHINI, DELHI-110085

DEPARTMENT OF INFORMATION COMMUNICATION AND TECHNOLOGY
(Academic Session: 2025-26)

Ref No. TIAS/DICT/2025-26/BCA/MP/06 **Dated: 10/01/2026**

Major Project Guidelines and Schedule for BCA-308

OBJECTIVE

The objective of this major project is to foster innovation and problem-solving within key technological domains, including Information Technology, Software Development, Networking, Data Science, IoT, Cyber Security and other guide-approved fields. Conducted as a mandatory curriculum component, the project culminates in a written, working report for submission to GGSIP University at the semester's end. This academic circular aims to standardise the report's submission format and establish clear, uniform guidelines for the project's execution, ensuring consistency and quality across all student submissions for a streamlined evaluation process.

.

University Scheme for Project

As per the syllabi of BCA 2021-22 (Paper code: BCA 308), students have to submit a project report comprising 12 credits. The project report has two components, viz.

Evaluation scheme as per the criteria

(a) External: **Project** (60 Marks), where a written report is to be submitted. It involves an external viva and presentation.
(b) Internal: **Project** (40 Marks), which includes continuous evaluation from idea generation to final presentation.

Scope of the Project

Students share the responsibility of selecting a relevant project topic in consultation with their faculty guide. The project must involve developing an original application using a programming language or platform the student has previously studied or is proficient with, ensuring it is an in-house development. Each student is required to undertake this work independently and submit an individual report. It is strictly mandated that any submission of previous work or a borrowed report will be rejected outright. In such cases of rejection, the student must completely restart and resubmit

HOD-MCA & ...
Dept. of Information, Comm. & Tec.
Tecnia Institute of Advanced Studies
Rohini, Delhi

a new, original project to fulfil the academic requirement.

Proposal

The project proposal should be about 10-15 pages long and must be submitted in writing to your respective guide. The format of the proposal is attached as **Appendix A. All students are required to submit the proposal as per the schedule.**

Final Report

The Guidelines for methodology to be adopted for conducting the project are attached as **Appendix B.** The format of the project report is attached as **Appendix C. All students are to adhere to these guidelines.**

HoD-MCA & BCA
Dept. of Information, Comm. & Tech
Tecnia Institute of Advanced Studies
Rohini, Delhi

Appendix-A.

FORMAT OF THE PROJECT PROPOSAL/SYNOPSIS

1. **Title of the Project:**
   The title of the project is to be meaningful and must convey the tools/ platform used, e.g., *"Speech Recognition System in ASP.NET"*
   While selecting the language/platform for development, students are advised to select one where they have a strength.

2. **Problem Definition:**
   Students are required to give a brief description of the system that is proposed to be computerized (e.g., in case of a Speech Recognition System, your understanding of this system must be explained in brief). In addition, students are required to give the exact outcome of the system. i.e., what/which part of the system is proposed to be computerized in the schedule and available expertise?

3. **Objectives & Scope:** Explain the objectives and the scope of the project.

4. **Methodology:**
   (a) Explain the methodology for data collection.
   (b) Explain the technique(s) & tools/platform proposed to be used for systems analysis, design, testing, and development of software.
5. **Nature of Research:** If you are writing the dissertation based on a literature survey, give details of the literature to be surveyed. Explain whether the nature of the research is exploratory or original thought process is being pursued.

NOTE:ONCE THE TITLE,LANGUAGE/PLATFORMAREFIXED THEY CANNOT BE CHANGED.

HoD-MCA & BCA
Dept. of Information, Comm. & Tech
Tecnia Institute of Advanced Studies
Rohini, Delhi

Appendix-B

METHODOLOGY FOR PROJECT WORK/DISSERTATION

Chapter-1:Introduction/ProblemDefinition

1. The following aspects need to be covered in the first chapter:

(a) **Brief Description of the Organisation**: If the project work is being done outside the Institute, describe the organisation, its nature of business, products, turnover, market position, etc.

(b) **General Description of the System under Study**: Briefly explain how the existing information system achieves the task that is under study.

(c) **User Requirements**: Explain in non-technical terms why the existing information system is not able to meet the current tasks against the objectives/standards/benchmarks of the organization. Problems faced by the existing system.

(d) **Establish the Need for the New System:**

(i) Give justification, how, & Why the new system user requirements cannot be fulfilled.
(ii) How will the proposed solution enhance the efficiency, effectiveness, control, security, and achievement of objectives/standards/benchmarks?

(e) **Objectives of the Project**: Keeping in view the user requirements and needs, available time and expertise, lay down the objectives of the project. Clearly spell out what is proposed to be done in the project.

(f) **Methodology**: SDLC, Structured Analysis & Design, Object Oriented Design method, or Prototype method. You may follow a mixed methodology and tools; however, you should clearly mention the steps and tools, and techniques that you are going to follow in the current project with a brief justification.

(g) **Data required & Data Collection Method**: You should establish the requirement of data and the methodology/technique of data collection, e.g., interview, questionnaire, document analysis. If a questionnaire is developed, attach a copy of the questionnaire as an appendix.

HoD-MCA & BCA
Dept. of Information, Comm. & Tech
Tecnia Institute of Advanced Studies
Rohini, Delhi

Chapter 2: Systems Requirement Analysis

2. In this chapter, students are required to establish the user requirements by doing the systems analysis of the existing system in vogue and by interacting with the management/staff of the organization. In every organisation, a system does exist in some rudimentary or manual form, if not computerised. The activities that are required to be carried out and to be described in the project are:

(a) Identify the process (es).

(b) Identify the Input to and Output of each process. e.g., for the Rail Reservation System input is the form and the output is a ticket.

(c) Identify the data elements (fields) in each input and output.

(d) Identify the procedures/rules/mathematical relationships used for converting input into output.

(e) Identify the controls (for I/O & access), security needs, validation rules, and codes used for data elements.

(f) Identify deficiencies in the existing system.

9.Having collected the data on the above aspects, analyse it and interact with the management for any process changes (es), input, output, procedures, access and control rights, security needs, and your suggestions for removing the deficiencies.

Chapter-3:SystemsDesign

4. **Physical Design**: Explain relationship between various components(processes, input, output & entities) of the system. Draw DFDs and other diagrams.

5. **Explain Processing Logic**: Using Programmed Flow Charts, Algorithm, Decision Table/Tree, or Pseudo codes.

6. **Interface Design:**

(a) **Output Design**: Screen & Print layouts, i.e., the format and contents (fields)to be included – along with the file to which it is linked.

(b) **Input (Form or Screen) Design**: For keying in data. Give fields, format, codes to be used, validation (error detection) requirements &the file to which it is linked.

HoD-MCA & BCA
Dept. of Information, Comm. & Tech
Tecnia Institute of Advanced Studies
Rohini, Delhi

7. **Database &File Design:**

(a) **Database Files/Tables Design**: Depending on the DBMS/RDBMS package used, give contents of each file, including Field Name, Type, Size &Description.

(b) **Programme Files or Query Design:** Give the purpose and detailed working of each programme file or a Query and link it to the processing logic and Process/Input/Output.

(c) **Compose Data Element Dictionary**: List all the fields in all the files in alphabetical order in a tabular form and serially number them.

Data Element S No	FIELD NAME	YPE& SIZE	FIELD DESCRIPTION	FILE NAME/No	PROCESS NAME/No

Chapter 4: Systems Development

8. **Purpose**: To carry out the activities of writing actual programs, their debugging, testing, and validation. The following activities are to be carried out:

(a) **Program Development**: Explain the language or package used for developing the programmes (both back-end and front-end).

(b) **Testing & Debugging**: Use *Past Data* to check whether the programmes work as intended by

(i) **Module Testing**: Individual program testing.

(ii) **System Testing**: Integrated module Testing for the entire system.

(You may like to include the test reports in the project to show the errors, if any, and a write-up on their rectification.)

(c) **Validation**: Check the system with real-time data for input, output, computational processing & controls.

9. Attach program codes, input and output designs, and outputs using the real data in this chapter. Codes may be attached as an appendix.

HoD-MCA & BCA
Dept. of Information, Comm. & Tech
Tecnia Institute of Advanced Studies
Rohini, Delhi

Chapter 5: Systems Implementation

10. The following activities are required to be conducted:

(a) **Acquisition**: Work out the memory requirement, disk space required for programme (s) and database (s). List out HW, SW, and people resources required and indicate the cost of the system.

(b) **Conversion**:Suggestchangeoverprocedures(Parallel,DirectorPartial Change over) with justification.

(c) **Training Needs**: Establish the training needs of operating personnel, clerical/non-clerical staff, supervisors, and senior staff.

(d) **Documentation**:

(i) IncludeOperationManual(instructionsfor runningprogrammes).

(ii) User Manual-Giving instructions & procedures for end-users (for data entry, output, help, etc).

HOD-MCA & BCA
Dept. of Information, Comm. & Tech
Tecnia Institute of Advanced Studies
Rohini, Delhi

Appendix-C

FORMAT OF THE PROJECT REPORT

Format

1. The format for compilation of the final report is given below:

(a) Title Page
(b) Certificate
(c) Acknowledgements
(d) Synopsis/Executive Summary
(e) Table of Contents
(f) List of Tables
(g) List of Figures
(h) List of Symbols
(j) Body of the Project Report
(k) References/Bibliography
(m) Appendices

TitlePage

2. The format of the title page is attached as **Annexure-I.**

Certificate

3. The format of the certificate is attached as **Annexure-II.** A certificate by the student, guide, and duly authenticated by the Director/HOD is to be attached.

Acknowledgement

4. In the "Acknowledgement" page, the writer recognizes his indebtedness for guidance and assistance from the guide and other members of the faculty. Courtesy demands that he/she also recognizes specific contributions by other persons or institutions, such as libraries and research foundations. Acknowledgements should be expressed simply, tastefully, and tactfully, **duly signed above the name.**

Synopsis/Executive Summary

5. A synopsis is a brief or condensed summary of the project for higher-level management positions. It should be about 3-4 pages in length. It should comprise problem *definition, a brief description of the system, objectives & scope of the project, methodology and tools used, volume of work carried out, limitations, and directions for future development*, if any.

Contents

6. The format of 'Table of Contents 'and list of Tables/Figures/Symbols is attached as **Annexure-III.**

HOD-MCA & BCA
Dept. of Information, Comm. & Tech
Tecnia Institute of Advanced Studies
Rohini, Delhi

Body of the Project Report: Guidelines for Project Report Writing

7. The guidelines for the Body of the Project Report (methodology) are detailed in **Appendix-B**. The following aspects must be adhered to:

(a) Page Size: Good quality white A4-size executive bond paper should be used for typing and duplication.

(b) Chapter/Para Numbering: The chapters are to be numbered as Chapter-1, Chapter-2, etc. The heading/title of the chapter is to appear below the chapter number in uppercase. Paragraphsareto benumberedas1,2,3etcineverychapterseparately. Subparas are to be numberedas1.1,1.2,1.3----,2.1,2.2.2.3etc.Sub-sub paras.are to be numbered as 1.11,1.12,1.13,2.11,2.12,2.13 etc.

(c) Page Specifications:

(i) LeftMargin:1inch
(ii) RightMargin:1inch
(iii) TopMargin:1inch
(iv) BottomMargin:1inch
(v) Gutter:0.50inch

(d) Page Numbers: All text pages starting from the Body of the Project Report, as well as program source code listings, should be numbered at the **bottom centre** of the pages.

(e) Normal Body Text:

(i) **Font Size:** 12, Times New Roman, Double Spacing, Single-Sided Writing.
(ii) **ParagraphsHeadingFontSize:**12,TimesNewRoman,Underlined
(iii) **Page/TitleFontSize:**14

(f) Table and Figure Number: Table and figure numbers are to be written at the bottom of the table/ figure as given below:

(i) **Table No. 1: File Design for Employee Record**
(ii) **FigureNo-1: Data FlowDiagram**

(g) **Binding & Color Code of the Report:**

(i) HardBound Report
(ii) Background of the cover page– **Mahroon**
(iii) Letters in **Golden**

References/Bibliography

8. Examples are given below:

1. D.L.Carney,J.I.Cochran,"The5ESSSwitchingSystem:ArchitecturalOverview," *AT&T Technical Journal*, vol. **64**,no.**6**, July-August 1985, pp. 1339-1356.
2. A.Stevens, *C++ Database Development*, MISPress, NewYork,1992,p.34.
3. J.Martin, *Computer Database Organization*, Prentice-Hall, Englewood Cliffs, NJ, 1977, p. 53.

HoD-MCA & BCA
Dept. of Information, Comm. & Tech.
Tecnia Institute of Advanced Studies
Rohini, Delhi

Title of The Project Report
(Times New Roman, Italic, Font size = 24)

Submitted in partial fulfilment of the requirements for the award of the degree of

Bachelor of Computer Application (BCA)

(Bookman Old Style, 16 point, centre)

to

Guru Gobind Singh Indraprastha University, Delhi

Supervisor:
(Guide Name)
Designation

Submitted by:
(Student Name)
Roll No.:

TECNIA INSTITUTE OF ADVANCED STUDIES
NAAC ACCREDITED GRADE "A" INSTITUTE
Approved by AICTE, Ministry of Education Govt. of India, Affiliated to GGSIP University
Recognized Under Sec. 2(f) of UGC Act 1956
INSTITUTIONAL AREA MADHUBAN CHOWK, ROHINI, DELHI 110085
Tel:91-11-27555121-24, E-Mail : directortias@tecnia.in, Website: www.tiaspg.tecnia.in

Batch(20xx-20xx)
BCA -308

HoD-MCA & BCA
Dept. of Information, Comm. & Tech
Tecnia Institute of Advanced Studies
Rohini, Delhi

Certificate

This is to certify that this project entitled " xxxxxx xxxxx xxxxx xxxx xxxx xxx" submitted in partial fulfilment of the degree of Bachelor of Computer Applications to the "xxxxxxxxxxxxxxxxxxxxxxxxxx" through xxxxxx xxxxx doneby Mr./Ms. ,Roll No. is an authentic work carried out by him/her under my guidance. The matter embodied in this project work has not been submitted earlier for the award of any degree to the best of my knowledge and belief.

Signature of the Student
Date:

Certified that the Project Report (BCA-308) entitled_____"
Done by Mr./Ms._____, Roll No. _____,
is completed under my guidance.

Signature of the Guide
Date:

Name of the Guide:
Designation:
Address:
Tecnia Institute of
Advanced Studies,
Madhuban Chowk, New
Delhi-110085

Countersigned
Director/HoD

HOD-MCA & DCA
Dept. of Information, Comm. & Tech.
Tecnia Institute of Advanced Studies
Rohini, Delhi

SELF CERTIFICATE

This is to certify that the dissertation/project report entitled "……" is done by me is anauthentic work carried out for the partial fulfilment of the requirements for the award of the degree of Bachelor of Computer Applications under the guidance of ----------. The matter embodied in this project work has not been submitted earlier for the award of any degree or diploma to the best of my knowledge and belief.

Signature of the student

Name of the Student

Roll No.

HoD-MCA & BCA
Dept. of Infomation, Comm. & Tech
Tecnia Institute of Advanced Studies
Rohini, Delhi

ACKNOWLEDGEMENT

In the "Acknowledgements" page, the writer recognizes his indebtedness to the guidance and assistance of the thesis adviser and other members of the faculty. Courtesy demands that he also recognise specific contributions by other persons or institutions, such as libraries and research foundations. Acknowledgements should be expressed simply, tastefully, and tactfully, **duly signed above the name.**

(Signature)
Student Name:
StudentRollNo:

HOD-MCA & BCA
Dept. of Information, Comm. & Tec
Jecnia Institute of Advanced Studie
Rohini, Delhi

FORMAT FOR CONTENTS& LIST OF TABLES/FIGURES/SYMBOLS

CONTENTS

HoD-MCA & BCA
Dept. of Information, Comm. & Tech.
Ecnia Institute of Advanced Studies
Rohini, Delhi

LISTOFTABLES/LISTOFFIGURES

Similar tables (as shown above for Contents) are to be drawn for List of Tables and List of Figures on separate pages.

LIST OF SYMBOLS

The body is listed in tabular form given below:

SNo	Symbol	No menclature &Meaning
1	Σ	Sigma(Summation)
2	**kbps**	Kilo bits per second