FACULTY OF ENGINEERING & TECHNOLOGY

BATCH FROM YEAR 2025 TO YEAR 2026

CERTIFICATE IN COMPUTER APPLICATIONS (FULL TIME)

SEMESTER – I-II

(Credit Based Grading System)

GURU NANAK DEV UNIVERSITY, AMRITSAR

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS) SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SCHEME

SEMESTER – I

Subject Code	Paper Name	Credits			Theory/ Practical	M. Marks
		L	T	P		
	Information Technology and Operating System (Theory)	3	1	0	Theory: 100	200
	Information Technology and Operating System (Practical)	0	0	4	Practical: 100	
	PC Computing–I (Theory)	3	1	0	Theory: 100	200
	PC Computing–I (Practical)	0	0	4	Practical: 100	
	Sub Total	**6**	**2**	**8**		
	Grand Total	**16**				**400**

SEMESTER – II

Subject Code	Paper Name	Credits			Theory/ Practical	M. Marks
		L	T	P		
	Database Management System	3	1	0	Theory: 100	200
	Database Management System (Practical)	0	0	4	Practical: 100	
	PC Computing–II	3	1	0	Theory: 100	200
	PC Computing–II (Practical)	0	0	4	Practical: 100	
	Sub Total	**6**	**2**	**8**	**400**	
	Grand Total	**16**				**400**

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS)
SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SEMESTER–I
Information Technology and Operating System

Time : 3 Hours		**Credits**
Max. Marks: 200		**L T P**
Theory: 100		
Practical:100		**3 1 4**

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION–A

Information Concepts and Processing
   Evolution of Information Processing
   Data Information Language
   Communication and Network
   Client Server Systems
   Computer Networks
   LAN & WAN

SECTION–B

Internet
   Understanding the Internet
   E–mail Basics
   Browsing the Web
   Finding Stuff on the Web and Net

Elements of a Computer Processing System
   Hardware – CPU
   Storage Devices and Media
   VDU
   Input – Output

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS)
SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SEMESTER–I

SECTION–C

Data Communication Equipment
Software–System Software, Application Software

Programming Languages
>   Classification
>   Machine Code
>   Assembly Language
>   Higher Level Languages
>   Fourth Generation languages

SECTION–D

Operating System
>   What is Operating System–Evolution of OS
>   Types of Operating System
>   A)   Single User Systems
>   B)   Multi User Systems : Unix, XENIX, VAX/VMS

Booting a System

Recommended Book:

V.K. Jain : Fundamentals of Information Technology

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS)
SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SEMESTER–I

Information Technology and Operating System

Based on Theory Paper

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS)
SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SEMESTER–I

PC Computing–I

Time : 3 Hours	**Credits**
Max. Marks : 200	**L T P**
Theory: 100	
Practical:100	**3 1 4**

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION–A

Introduction to windows
 1.1 Origin of windows

 a) **Parts of Windows Screen (Definition)**
 - The Desktop, the taskbar
 - Start Menu
 - The windows
 - Icons
 b) **Types of windows**
 - Application Windows
 - Document Windows
 c) **Anatomy of a window**
 - The title bar
 - Minimize and Maximize buttons
 - The control box
 - Scroll bars, scroll buttons and scroll boxes
 - About my computer icon
 - About the networking neighbourhood icon
 - Recycle bin
 - Folders – creation and definition
 - Windows explorer (definition)
 - Shortcut icons with creation and definition

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS)
SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SEMESTER–I

SECTION–B

Introduction to MS–Office
Introduction to Word (Word for Windows)
1. Introduction to Word
2. Introduction to Parts of a Word Window (Title bar, Menu bar, Tool bar, the Ruler, Status area)
3. Creating new document
4. Opening an existing document
5. To insert a second document into an open document
6. Editing a document
7. Deleting text, replacing text, moving and copying text
8. Page setup
9. Margins and gutters
10. Changing fonts and front size
11. To make text bold, italic or underline
12. Line spacing
13. Centering, right alignment and left alignment
14. Page breaks

SECTION–C

15. Headers and footers
16. Putting page numbers in headers and footers
17. Saving documents
    - naming word document
    - saving in different formats
    - saving on different disks
18. Spell checker
19. Printing
20. Creating a table using the table menu
    - entering and editing text in tables
    - selecting in tables
    - adding rows
    - changing row heights
    - deleting rows
    - inserting columns
    - changing columns and cell width
21. Borders and shading
22. Templates and wizards
23. Working the graphics
24. Drawing objects
25. Using frames, position objects
26. Mail merge
27. Using word and word documents with other applications

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS)
SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SEMESTER–I

SECTION–D

MS–POWER POINT
1. Introduction to Ms Power Point
2. Power Point Elements
   - Templates
   - Wizards
   - Views
   - Color Schemes
3. Exploring Power Point Menu
   - Opening and Closing Menus
   - Working with Dialog Boxes
4. Adding text, adding title, moving text area, resizing text boxes, adding art.
5. Starting a new slide
6. Starting a Slide show
7. Saving Presentation
8. Printing Slides
9. Views
   – Slide View, Slide sorter view, notes view, outline view
10. Formatting and enhancing text formatting
    a) Formatting
    - Changing format with a new layout
    - Using a pick look wizards to change format
    - Alignment of Text
    - Working with text spacing
    b) Enhancing
    - Using Bullets
    - Changing text font and size
    - Selecting text style, effect and color
    - Picking up and applying styles
11. Creating Graphs
12. Displaying slide show and adding multi–media

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS)
SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SEMESTER–I

PC Computing–I

Based on Theory Paper

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS)
SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SEMESTER–II

Database Management System

Time : 3 Hours		**Credits**	
Max. Marks : 200	**L**	**T**	**P**
Theory : 100			
Practical: 100	**3**	**1**	**4**

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION–A
Introduction to Database Management System, Components of DBMS, E.R. Diagrams, Data Models, Hierarchical Model, Network Model and Relational Model.

SECTION–B
Concept of Database Security, Protection, Integrity, Recovery, Concurrency. Idea of Distributed Databases, Knowledge Base/Expert Systems
ORACLE 10g:
SQI. *PLUS
        Introduction to Oracle **10g**
        SQL– DOL, DML, DCL

SECTION–C

ORACLE 10g:
SQI. *PLUS
        Join methods & Sub query, Union, Intersection, Minus, Tree Walking
        Built in Functions, Views, Security amongst users, Sequences, Indexing Object
        Oriented Features of Oracle **10g**

SECTION–D
PL/SQL
        Introduction to PL/SQL
        Cursors– Implicit & Explicit
        Procedures, Functions & Packages
        Database Triggers

Recommended Book :

C.J. Date : Data Base Management Systems

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS)
SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SEMESTER–II

Database Management System

Based on Theory Paper

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS)
SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SEMESTER–II

PC Computing–II

Time : 3 Hours		**Credits**
Max. Marks : 200		**L T P**
Theory: 100		
Practical: 100		**3 1 4**

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION–A
MS–EXCEL
        a)   Introduction to Worksheet/Spreadsheets
        b)   Creating a simple Worksheet
        c)   Computations in a Worksheet

SECTION–B
MS–EXCEL
        a)   Printing the Worksheet
        b)   Graphs
        c)   What if Analysis (Data Sort, Fill, Query, Filter)

SECTION–C
MS Access
        Introduction, Understanding Databases, Creating Tables, Queries.

SECTION–D
MS Access
        Forms Reports, Adding graphs to your report.

CERTIFICATE IN COMPUTER APPLICATIONS (FULLTIME) (CBGS)
SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

SEMESTER–II

PC Computing–II

Based on Theory Paper