

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**

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**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		
CCA01001T	Information Technology and Operating System (Theory)	3	1	0	Theory: 100	200
CCA01002L	Information Technology and Operating System (Practical)	0	0	4	Practical: 100	
CCA01003T	PC Computing–I (Theory)	3	1	0	Theory: 100	200
CCA01004L	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		
CCA02001T	Database Management System	3	1	0	Theory: 100	200
CCA02002L	Database Management System	0	0	4	Practical: 100	
CCA02003T	PC Computing–II	3	1	0	Theory: 100	200
CCA02004L	PC Computing–II	0	0	4	Practical: 100	
	Sub Total	6	2	8	400	
	Grand Total	16				400

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SEMESTER-I

**CCA01001T: Information Technology and Operating System
(Theory)**

**Time : 3 Hours
Max. Marks: 100**

Credits		
L	T	P
3	1	0

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

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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

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SEMESTER-I

CCA01002L: Information Technology and Operating System

Max. Marks: 100

Credits		
L	T	P
0	0	4

Practical Based on Theory Paper

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SEMESTER-I

**CCA01003T: PC Computing-I
(Theory)**

Time : 3 Hours
Max. Marks : 100

Credits		
L	T	P
3	1	0

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

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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

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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

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SEMESTER-I

PC Computing-I

Max. Marks : 100

L	T	P
0	0	4

Practical Based on Theory Paper

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SEMESTER-II

**CCA02001T: Database Management System
(Theory)**

**Time : 3 Hours
Max. Marks : 100**

Credits		
L	T	P
3	1	0

Instructions for the Paper Setters:-

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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:

SQL. *PLUS

Introduction to Oracle **10g**
SQL- DOL, DML, DCL

SECTION-C

ORACLE 10g:

SQL. *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

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SEMESTER-II

CCA02002L: Database Management System

Max. Marks : 100

Credits		
L	T	P
0	0	4

Practical Based on Theory Paper

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SEMESTER-II

CCA02003T: PC Computing-II
(Theory)

Time : 3 Hours
Max. Marks : 100

Credits		
L	T	P
3	1	0

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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.

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SEMESTER-II

CCA02004L: PC Computing-II

Max. Marks : 100

Credits		
L	T	P
0	0	4

Practical Based on Theory Paper