

CCA (Certificate in Computer Applications) Programme offered By IMS Ghaziabad in Collaboration with CSC Academy New Delhi

1. Course Overview

The certificate course focuses on computer fundamentals. The course provides a comprehensive introduction to Fundamentals of Information Technology; Internet & Communication Technologies.

2. Program structure:

S. No	Course Code	Course Name	Course Hours	Credit	Assessment Scheme			
					Quiz	Term Assignment	End Term	Total
1	CCA-101	Fundamentals of I.T & Programming	20	3	10	30	60	100
2	CCA-102	Data Communications	20	3	10	30	60	100
3	CCA-103	Communications & Soft Skills	10	2	5	15	30	50
4	CCA-104	Web Technologies	10	3	10	30	60	100

3. Grading &Assessment Methodology

3.1. Grading Methodology: Grading is a way for educators to evaluate each individual student's performance and learning. Grading can include letter grades (A+, A, B+,B, C+,C), percentages and even a simple pass/fail. Grades will be awardedbased on writing assignments, Quiz, and end term examination. Students will be graded in each subject on the basis of marks obtained in each subjectand will be awarded grades on the basis of following criteria:

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Grading Criteria		
S. No	Marks Obtained	Grade
1	Marks $\geq 90\%$	A+
2	$80\% \leq \text{Marks} < 90\%$	A
3	$70\% \leq \text{Marks} < 80\%$	B+
4	$60\% \leq \text{Marks} < 70\%$	B
5	$50\% \leq \text{Marks} < 60\%$	C+
6	Marks $< 50\%$	C (Fail)

Overall programme grade will be awarded based on same criteria as mentioned above in the table.

3.2. Assessment Methodology: Using assessment as a ruler to measure student learning often includes analyzing grades. Grades should be a “major source of data” when evaluating student progress; however, assessment goes beyond grades. Following are the tools of assessment of programme:

1. Quiz

Number of Quiz:01

Duration of Quiz:25 minutes

Pattern of Quiz:MCQ/(T/F)/Fill in the blanks

Number of Questions:10

Marks:10

2. Term Assignment

Number of Assignment:03

Pattern of Assignment:Subjective/Objective based on course covered till date

Schedule for release of assignments:

Assignment No.	Release schedule of assignment
1	After completion of 7 th session of the course
2	After completion of 14 th session of the course
3	After completion of 20 th session of the course

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Submission Timeline: on or before 7 days from release of assignment

Marks per assignment: 10

3. End Term

Pattern of End Term:MCQ

Duration of End Term:60 Minutes

Number of Questions:30

Marks:60

3.3. Passing Criteria:A candidate will be declared passed if he/she scores minimum 40% in each course and 50% in aggregate of all courses (C+ grade calculated as per criteria mentioned in “**Grading Criteria**” table).

3.4. Minimum Eligibility: 10+2 or its equivalent from a recognized Board or University. Candidates who are studying in 10+2 are provisionally given admission in this course after the student submits an undertaking for the same. No prior knowledge of Programming language/Computer exposure is required.

3.5. Minimum Duration: 3 month

3.6. Maximum Duration: 2 more re-attempts in the concerned course within 1 year of enrolment (Re-attempt fee may apply).

3.7. Eligibility for advanced level programmes: After successful completion of this programme(CCA), the candidate will be eligible to take admission directly in advanced level programmes (DCA).

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4. Course Wise Detailed Curriculum

4.1 COMMUNICATIONS & SOFT SKILLS

Course Code: CCA-101

Course Name: COMMUNICATION & SOFT SKILLS

Total No. of Hours: 10

Course Objective: The course is aimed at endowing the students with the necessary techniques and skills of communication to make them perform as per the expected corporate guidelines. The main aim is to make the students familiar with the nuances of effective communication along with the significance of oral, written, visual and audio-visual forms of communication. The purpose of the course is also to enable students for effective business correspondence and get familiar with some basic business etiquettes too.

Learning Outcomes: After the completion of this course, the students will be able to:

- i. Describe the basics of communication skills as well as inculcating these skills in them.
- ii. They will be able to enlist the nuances of effective body language, gestures and postures.
- iii. They will be able to explain the features of good business letters and emails.
- iv. They will demonstrate impeccable skills of effective business correspondence.
- v. They will calculate the pros and cons of their personality and will learn basic business etiquettes.
- vi. They will also be able to report effectively about the issues discussed in meetings and would prepare good notices, agendas and the minutes of the meetings.
- vii. They will be able to compare their employability skills with the corporate expectations and thus they will develop their employability skills for good placement.
- viii. The students will also be able to analyze the qualities of effective LSRW skills and would improve their performance.

Course Outline:

S. No	Topic	No of hours
1	Basics of Communication Skills: Importance and objectives of communication, Process of communication, Dos and don'ts of communication, Forms of Communication – Formal & Informal	1 hr

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2	Basics of Managerial Communication: Levels/Channels of Communication, Barriers to Communication.	1 hr
3	Four Pillars of Effective Communication: Role of Listening, Speaking, Reading, Writing in communication.	1 hr
4	Nonverbal Communication: Body Language, Gestures, Postures.	1hr
5	Ingredients of Professional Communication: 7C's of Written Communication, Email Writing	1hr
6	Ingredients of Professional Communication: Notice, Agenda, Minutes of Meeting	1hr
7	Business Letters : AIDA approach to writing business letters, types of business letters, standard format of a business letter	1hr
8	Résumé Writing : Résumé V/s CV, Chronological and Functional Résumé, Preparing a résumé	1hr
9	Personal Grooming and Business Etiquettes : Personal Grooming, Video Call Etiquettes, Net Etiquettes.	1hr
10	Employability Skills : Group Discussion and Interview	1hr

Essential Readings:

1. Rizvi, M. Ashraf. Effective Technical Communication, McGraw Hill, Chennai
2. Kumar, Sanjay & Lata, Pushp. Communication Skills, Oxford University Press, India
3. Lowndes, Leil. How to Talk to Anyone, McGraw Hill, India

Suggested Readings:

1. Ludlow, R. & Panton, F. The Essence of Effective Communication. PHI.
2. Munter Mary, Guide to Managerial communication, PHI.
3. Smeltzer, Managerial Communication. McGraw Hill.
4. Chhabra T.N. Business Communication: Concepts and Skills, Sun India Publications

4.2 DATA COMMUNICATIONS

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Course Code: CCA-102

Course Name: Data Communications

Total Number of Hours: 20

Course Objective: The objective of the course is to help the students to get conceptual knowledge of all the networking basics along with various techniques used for communication between networks.

Learning Outcome: After the completion of this course, the students will be able to:

- i. Recognize and Describe about the working of Data Communications & Computer Networks.
- ii. Illustrate reference models with layers, protocols and interfaces.
- iii. Summarize functionalities of different Layers.
- iv. Combine and distinguish functionalities of different Layers.
- v. Model the LAN and WAN configuration using different media.
- vi. Use emails and their working and operational features

Course outline:

S. No	Topic	No of hours
1	Introduction to data communication: DCS, Message Components in communication,	2
2	Network connecting devices: Hub, Switch, Bridge, Routers, Gateways	2
3	Basics of Computer Networks: Local Area Network (LAN), Wide Area Network (WAN)	2
4	Concept of Internet, Intranet	2
5	Basics of Internet Architecture: OSI & TCP/IP reference model	1
6	Services on Internet	1
7	World Wide Web	1

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8	Communication on Internet	1
9	Preparing Computer for Internet Access: ISPs and examples (Broadband/Dialup/WiFi), Internet Access Techniques	2
10	Basics of E-mail: What is an Electronic Mail, Email Addressing, Configuring Email Client, Using E-mails: Opening Email Client, Mailbox: Inbox and Outbox, Creating and Sending a new E-mail, Replying to an E-mail message, Forwarding an E-mail message, Sorting and Searching emails Advance email features: Sending document by E-mail, Activating Spell checking, Using Address book, Sending Softcopy as attachment, Handling SPAM	6

Essential Readings:

1. Behnouz A. Forouzan, “Data Communication and networking”, Latest Ed. Tata McGraw Hills.

Suggested Readings:

1. James F. Kurose and Keith W. Ross, “Computer Networking: A Top down Approach” Latest Edition, Pearson Publications
2. Shirley Taylor, “Model Business Letters, Emails and Other Business Documents” 7th Edition, Kindle Edition, Pearson Publications

4.3 FUNDAMENTALS OF I.T & PROGRAMMING

Course Code: CCA-103

Course Name: Fundamentals of I.T & Programming

Total No. of Hours: 20

Course Objective: This subject aims to introduce skills relating to basic concepts and terminology of information technology & programming. It is designed to cover the application of computer in business, education and society.

Learning Outcome: After the completion of this course, the students will be able to:

- i. Understand basic concepts of I.T.
- ii. Have a basic understanding of personal computers and their operations.
- iii. Use MS office tools.
- iv. Able to create personal, professional, academic and business documents.
- v. Understand basics of Programming.

Course Outline:

S. No	Topic	No of hours
	Unit I: Introduction	
1	Introduction to computers: Definition, evolution	1
2	Characteristics, Organization of a Computer	1
3	Classifications, Distributed Computers, Parallel Computers	1
4	Computer Memory: Random Access Memory (RAM), Read Only Memory (ROM), External Memory (Secondary Memory), Compact Disk Read Only Memory, Magnetic Storage Drives, USB	1
5	Software: Types of S/W - System Software: Operating System, Utility Programs Application Software, Overview of proprietary software, Overview of open source technology	1
	Unit II: Introduction to MS Word	
6	MS Word Processing basics, Menu Bar, Using The Icons Below Menu Bar; Opening and closing Documents: Save and Save as	1

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7	Page Setup, Print Preview; Text Creation and manipulation: Document Creation, Editing Text, Text Selection, Cut, Copy and Paste	1
8	Spell check; Formatting the Text: Font and Size selection, Alignment of Text, Paragraph Indenting, Bullets and Numbering,	1
9	Changing case; Formatting a document: Set page margin, paragraphs and sections within a document, Adjust indents and hanging indents;	1
10	Table Manipulation: Draw Table, Changing cell width and height, Alignment of Text in cell, Delete / Insertion of row and column Border and shading, Table Formula	1
UNIT III: Spreadsheets and Presentations		
11	Spread Sheet: Opening of Spread Sheet, Addressing of Cells, Printing of Spread Sheet, Saving Workbooks; Manipulation of Cells: Entering Text, Numbers and Dates	1
12	Creating Text, Number and Date Series, Editing Worksheet Data, Inserting and Deleting Rows, Column, Changing Cell	1
13	Height and Width; Formulas and Function: Using Formulas, Function, basic mathematical operators, using AutoSum etc., using formulas with multiple cell references	1
14	Presentation - Basic Concepts of presentation: Using PowerPoint, Opening A Power Point Presentation, Saving A Presentation; Creation of Presentation using a Template, Creating a Blank Presentation	1
15	Entering and Editing Text, Inserting And Deleting Slides in a Presentation; Preparation of Slides: Inserting Word Table or An Excel Worksheet, Inserting Other Objects	1
UNIT IV: Introduction to Programming		
16	Programming Language: Machine Language, Assembly Language, High Level Language their advantages & disadvantages	1
17	Basic concepts – data types and its representation in programming	1
18	Basic arithmetic operations – addition, multiplication, division, modulus	1
19	Conditional checks, relational and comparisons	1
20	Loops: while, for, do-while	1

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Suggested Readings:

1. Behl, Ramesh, "Information Technology for Management", McGraw Hill, New Delhi
2. Alexis & Mathews: "Fundamentals of Information Technology", Vikas Publication
3. P K Sinha , "Computer Fundamentals", , B P B Publications,
4. Henry Lucas, "Information Technology For Management", TMH
5. Peter Weverka, "Microsoft Office 2016 All-In-One for Dummies", Wiley

4.4. WEB TECHNOLOGIES

Course Code: CCA-104

Course Name: Web Technology

Total No. of Hours: 20

Course Objective: To get familiar with basics of the Internet Programming and acquire knowledge and skills for creation of web site considering both client and server side programming. It emphasizes to gain ability to develop responsive web applications.

Learning Outcome:

- i. Implement interactive web page(s) using HTML, CSS and JavaScript.
- ii. Design a responsive web site using HTML5 and CSS3.
- iii. Demonstrate Rich Internet Application.
- iv. Build Dynamic web site using server side PHP Programming and Database connectivity.
- v. Describe and differentiate different Web Extensions and Web Services.

Course Outline:

S. No	Topic	No of hours
1.	Designing and Planning Web Pages	1
2.	Basic Elements of HTML	1
3.	HTML Lists, tables, Links	2
4.	Cascading Style Sheets	2
5.	Web Graphics, Copyright Law and Graphics on the Web : Images	1
6.	Texts, Navigation & Menu	1
7.	Client Side Scripting: JavaScript	3
8.	Validation & Authoring Software's.	1
9.	Server Side Scripting	1
10.	Pre-processor Hypertext (PHP)	3

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11.	MYSQL	1
12.	PHP & MYSQL	3

Essential Readings:

1. Jeffrey C. Jackson, "Web Technologies--A Computer Science Perspective", Pearson Education, 2006.
2. Web Technologies, Black Book, Dreamtech Press

Suggested Readings:

1. Web Applications : Concepts and Real World Design, Knuckles, Wiley-India
2. Internet and World Wide Web How to program, P.J. Deitel & H.M. Deitel Pearson.
3. Learning PHP, MySQL, and JavaScript, by Robin Nixon, O'Reilly