

Computer Application Exam. 2025-26**B.A./B.Com./B.Sc.****(Optional Course)****(NEP-2020 Based Curriculum and Examination Scheme)****Faculty of Arts, Commerce & Science**

	Serial Number, Code & Nomenclature of Course			Duration of Exam	Teaching Hrs/ Week & Credit			Distribution of Marks			Min Pass	
Year/Sem.	Course Code	Course Type	Nomenclature		L	P	C	Internal Assess.	Sem. Assess.	Total	Internal Assess.	Sem. Assess.
I Year I Sem.		DCC	Introduction to Information Technology	3 Hrs.	4	..	4	30	70	100	12	28
		DCC	Lab on Information Technology	2 Hrs.	..	4	2	15	35	50	8	18
I Year II Sem.		DCC	PC Software Packages	3 Hrs.	4	..	4	30	70	100	12	28
		DCC	Lab on PC Software Packages	2 Hrs.	..	4	2	15	35	50	8	18
II Year III Sem.		DCC	Database Management System	3 Hrs.	4	..	4	30	70	100	12	28
		DCC	Lab on Database Management System	2 Hrs.	..	4	2	15	35	50	8	18
II Year IV Sem.		DCC	Web Technology	3 Hrs.	4	..	4	30	70	100	12	28
		DCC	Lab on Web Technology	2 Hrs.	..	4	2	15	35	50	8	18
III Year V Sem.		DCC	Introduction to Cyber security	3 Hrs.	4	..	4	30	70	100	12	28
		DCC	Lab on Cyber security	2 Hrs.	..	4	2	15	35	50	8	18
III Year VI Sem.		DCC	E-commerce	3 Hrs.	4	..	4	30	70	100	12	28
		DCC	Lab on E-commerce	2 Hrs.	..	4	2	15	35	50	8	18

Semester – I

Introduction to Information Technology

Time : 3 Hrs.

Max. Marks: 100

UNIT - I

Credits: 04

Computer Basics: A Simple Model of a Computer: CPU, Memory and I/O units, Characteristics of Computers, Algorithms. Computer Generation & Classifications: First, Second, Third, Fourth and Fifth Generation, Classification of Computers, Development of Indian Supercomputer “PARAM”: history, characteristics, strengths & weaknesses and basic architecture.

UNIT - II

Computer Memory: Memory Cell, Memory Organization, Read Only Memory, Serial Access Memory, Physical Devices Used to Construct Memories, Magnetic Hard Disk, floppy Disk Drives, Compact Disk, Read Only Memory, Magnetic Tape Drives.

UNIT – III

Data Representation: Representation of Characters, Integers, Fractions, Used of Signed Numbers, Hexadecimal Representation of Numbers, Decimal to Binary Conversion. Binary Arithmetic: Binary Addition, Subtraction, Multiplication, Division.

UNIT-IV

Software Concepts: Types of Software, Software: Qualities & Attributes, Programming Languages: types and differences.

UNIT - V

Internet: Network, World Wide Web, Uniform Resource Locator, Web Browsers, IP Address, Domain Name, Web Search Engine, Net Surfing, how to connect with Internet. E-Commerce: An Indian perspective, Digilocker, attendance.gov.in, mygov.in, Swachh Bharat Mission, EHospital, National Scholarship portal, E-Sampark, UID, various modes of Digital payment of govt. of India.

Text / Reference Books

1. “Computer fundamental”, (6th Edition), 2004 By P.K.Sinha BPB Publications.
2. Fundamentals of Computers, V. Rajaraman, (3rd Edition), 2003 PHI Publications
3. Fundamentals of Information Technology, (3rd Edition), 2006, By Deepak Bharihoke, Excel Books.
4. Information Technology by Reena Dadhich and R.C. Poonia, Vardhman Publications, 2009.
5. https://onlinecourses.swayam2.ac.in/nou20_cs04/preview

PRACTICAL

Practical will be based on Basic of Computer structure, Software, Uses of Internet.

Course Outcome: Upon completing this course, students will understand the structure, classification, and evolution of computers, including Indian supercomputers like PARAM. They will gain knowledge of memory types, data representation, and binary arithmetic. The course also covers software types, programming languages, internet technologies, and key Indian e-governance initiatives, enabling practical application in digital environments.

Semester – II

PC Software Packages

Time: 3 Hrs.

Max. Marks: 100

UNIT – I

Credits: 04

DOS: Introduction, history & versions of DOS, DOS basics- Physical structure of disk, drive name, FAT, file & directory structure and naming rules, booting process, DOS system files, DOS commands: internal & external.

UNIT – II

Word Processing: Features, Creating, Saving and Opening Documents in Word, Interface, Toolbars, Ruler, Menus, Keyboard Shortcut, Editing, Previewing, Printing & Formatting a Document, Advanced Features of MS Word, Find & Replace, Using Thesaurus, Using Auto Multiple Functions, Mail Merge, Handling Graphics, Tables & Charts, Converting a word document into various formats like: Text, Rich Text format, Word perfect, HTML etc.

UNIT – III

Worksheet: Worksheet basics, creating worksheet, entering into worksheet, heading information, data, text, dates, alphanumeric values, saving & quitting worksheet, Opening and moving around in an existing worksheet, Toolbars and Menus, Keyboard shortcuts, Working with single and multiple workbook.

UNIT-IV

Working with formulae & cell referencing, Auto sum, Copying formulae, Absolute & relative addressing, Worksheet with ranges, formatting of worksheet, Previewing & Printing worksheet, Graphs and charts, Database, Creating and Using macros, Multiple worksheets- concepts, creating and using.

UNIT – V

Introduction to Power Point: Creating slide show with animations, Designing Presentations. Case study of web editing tool and DBMS tool such as Front Page & Ms-Access: Creating & using databases in Access. Basic introduction of open source software.

Text / Reference Books

1. Introduction to Computers by P.K. Sinha & Priti Sinha, BPB Publication, 1992.
2. Microsoft 2008 in 1 day by Joe Habraken, PHI
3. Window XP Complete Reference, BPB Publication.
4. Ms Office XP Computer, BPB Publications, (2002–2004).
5. <https://nsktu.ac.in/storage/2022/11/CDOE-Study-PRAK-Sastri-Paper.10-Introduction-to-MS-Office.pdf>

PRACTICAL :

Practical will be based on P C Software Packages .

Course Outcome : After completing this course, students will have a solid grasp of DOS commands and file system structure. They will be proficient in using MS Word, Excel (including formulas, charts, and macros), PowerPoint, and MS Access for document, spreadsheet, presentation, and database tasks. The course also introduces web editing tools and open-source software.

Semester – III

Database Management System

Time: 3 Hrs.

Max. Marks: 100

UNIT – 1

Credits : 04

Categorization of DBMS system: Network, Hierarchical and relational database, Application of DBMS systems. Relational database management systems: Why to use them and where, Data Description language, Data Manipulation Language and Data control Language.

UNIT – 2

Working with MS Access. Security consideration in database management systems, Performance improvement in database.

UNIT – 3

Relational database- advanced concepts, Introduction to ORACLE or a similar RDBMS on a multi user environment.

UNIT – 4

Introduction to Relation Algebra, Structured Query language, Form design through an advanced RDBMS, Report generator, query by example and Report by form, Accessing RDBMS using programming language, RDBMS menu, RDBMS network.

UNIT – 5

System management, User management, Security consideration.

Reading / Reference Books

1. An Introduction to Database Systems (8th Edition), 2003 By C.J. Date Publisher: Addison-Wesley
2. Database Management System Concepts (6th Edition), 2010 By Henry F. Korth, Abraham Silber Schatz, MC Graw Hill
3. Fundamentals of Database Systems (7th Edition), 2016 By Ramez Elmasri & Shamkant B. Navathe
4. https://onlinecourses.nptel.ac.in/noc22_cs91/preview
5. https://onlinecourses.swayam2.ac.in/cec25_ma16/preview

PRACTICAL

Practical will be based on Database Management System.

Course Outcome : Upon completing this course, students will understand various database models, including hierarchical, network, and relational databases. They will gain hands-on experience with RDBMS tools like MS Access and Oracle, learning database design, queries, and report generation. The course also covers SQL, relational algebra, database access via programming languages, and concepts of system management, security, and performance optimization.

Semester – IV

Web Technology

Time: 3 Hrs.

Max. Marks: 100

Unit I

Credits : 04

Introduction to Basics of Internet: Concepts of Internet: Domain, IP Addressing, Resolving Domain Names, Overview of TCP/IP and its Services, WWW.

Unit II

Designing Pages with HTML Introduction to HTML, Essential Tags, Deprecated Tags, Tags and Attributes, Text Styles and Text Arrangements, Text, Effects, Exposure to Various Tags (DIV, MARQUEE, NOBR, DFN, HR, LISTING, Comment, IMG), Color and Background of Web Pages, Lists and their Types, Attributes of Image Tag.

Unit III

Hypertext, Hyperlink and Hypermedia, Links, Anchors and URLs, concept of navigation, Different Section of a Page and Graphics, Footnote and e-Mailing, Creating Table, Frame, Form and Style Sheet.

Unit IV

DHTML Dynamic HTML, Document Object Model, Features of DHTML, CSSP (Cascading Style Sheet Positioning) and JSSS (Java Script assisted Style Sheet), Layers of Netscape, The ID Attribute, DHTML Events.

Unit V

Web Designing Tools: Front Page Basics , Web Terminologies, Phases of Planning and Building Web Sites, The FTP, HTTP and WAP, Features, Front Page Views, Adding Pictures, Backgrounds, Links, Relating Front Page to DHTML.

Text / Reference Books:

1. HTML Black Book – Steven Holzner – Dreamtech Press (1st edition) 2000.
2. HTML, Java Script, DHTML, PERL, CGI – Evan Bayross – BPB (4th edition) 2005.
4. Dynamic HTML webMagic/ jet douyer-hayden Development group, 1998.
5. Web Technology and Design" (1st edition) 2003, By Xavier C. Publisher: New Age International
6. https://onlinecourses.swayam2.ac.in/nou24_cs09/preview

PRACTICAL

Practical will be based on Web Technology.

Course Outcome : After completing this course, students will understand core Internet concepts such as domains, IP addressing, and protocols like TCP/IP and HTTP. They will develop practical skills in web design using HTML, DHTML, CSS, and JavaScript. The course also introduces multimedia elements, forms, and frames, along with tools like FrontPage and concepts like FTP, WAP, and website planning.

Semester – V

Cyber Security

Time: 3 Hrs.

Max. Marks: 100

Unit-I

Credits : 04

Cybercrime: Definition and Origins of the Word, Cybercrime and Information Security, Who are Cybercriminals? Classifications of Cybercrimes.

Unit-II

CYBER OFFENSES: HOW CRIMINALS PLAN THEM Introduction, Initiatives taken by Government to prevent cyber crimes.

Unit-III

End Point device and Mobile phone security, Password policy, Security patch management, Data backup.

Unit-IV

Downloading and management of third party software, Device security policy, Cyber Security best practices.

Unit-V

Significance of host firewall and Ant-virus, Management of host firewall and Anti-virus, Wi-Fi security, Configuration of basic security policy and permissions.

Text/Reference Books:

1. Cyber Crime Impact in the New Millennium, by R. C Mishra , Author Press. Edition 2010.
2. Cyber Security Understanding Cyber Crimes, Computer Forensics and Legal Perspectives by Sumit Belapure and Nina Godbole, Wiley India Pvt. Ltd. (First Edition, 2011)
3. Security in the Digital Age: Social Media Security Threats and Vulnerabilities by Henry A. Oliver, Create Space Independent Publishing Platform. (Pearson , 13th November, 2001)
4. "Cyber Security Essentials" (First Edition, 2018) By Charles J. Brooks et al. Publisher: Wiley
5. "Computer Security: Principles and Practice"(5th Edition, 2024) By William Stallings & Lawrie Brown Publisher: Pearson

PRACTICAL

Practical will be based on the syllabus of Cyber security.

Course Outcome : Upon completing this course, students will understand cybercrime types and the importance of information security in preventing cyber threats. They will learn how cybercriminals operate and explore government preventive measures. The course covers endpoint and mobile security, password and patch management, secure data handling, antivirus, firewalls, Wi-Fi security, and basic cybersecurity policies and best practices.

Semester – VI

E-commerce

Time: 3 Hrs.

Max. Marks: 100

Unit-I

Credits : 04

Introduction to e-Commerce: Definition; Perspectives; History of e-Commerce, Categories of e-Commerce, Comparison between traditional and electronic commerce – advantages and disadvantages of e-commerce

Unit-II

E-Commerce Technology: Introduction Electronic Commerce Framework, Electronic Commerce and Media convergence.

Unit-III

Electronic payment system: Problems with traditional payment system, features of e-payment system, Types of e-payment system: e-token, e-cash, e-cheque, Credit cards, Debit cards, Smart cards. Credit Cards based e-Payment system.

Unit-IV

E-commerce security issues, Information Security- Security Threats in e-commerce, Mobile Commerce Risks, Security and Mobile Payment Methods.

Unit-V

Current Trends in the electronic world: e-Waste, e-Surveillance, e-Governance, e-Care. Examples of the types of e-Commerce: Intel; Amazon; e-bay. Introduction to Industry 4.0.

Text/Reference Books:

1. e-Commerce and Mobile Commerce Technologies, Dr. U.S. Pandey, Er. Saurabh Shukla, S. Chand 2015, Revised Edition.
2. Essentials of E-Commerce Technology, V. Rajaraman, PHI Learning Private Limited (1st Edition, 2009)
3. Frontiers of Electronic commerce, Ravi Kalakota and Andrew B. Whinston, Pearson Publication Ltd (2nd Edition, 2000)
4. "Introduction to E-Commerce" (2nd Edition, 2003) By Jeffrey F. Rayport & Bernard J. Jaworski
5. "E-Commerce Concepts, Models, and Strategies" (Second Edition, 2022) By C.S.V. Murthy
6. https://onlinecourses.swayam2.ac.in/imb25_mg70/preview

PRACTICAL

Practical will be based on the syllabus of E-commerce.

Course Outcome : After completing this course, students will understand the fundamentals of e-Commerce, its evolution, categories, and benefits over traditional commerce. They will explore its technological framework, electronic payment systems, and associated security threats with protective measures. The course also covers digital trends like e-Governance, e-Waste, and Industry 4.0, with real-world examples such as Amazon and eBay.