

# Uttarakhand Sanskrit University

## Haridwar



## SYLLABUS

### FOR

**Acharya (M.A.) – I & IV Semester**

**OC (Open Course)**

**Subject - Computer Science (OC-01 & OC-02)**

**(Effective from the Year 2024)**

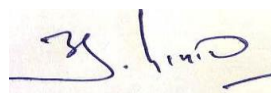
## Uttarakhand Sanskrit University, Haridwar

### Acharya (M.A.) – I & IV Semester

### OC (Open Course)

### Subject - Computer Science (OC-01 & OC-02)

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|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Objective of Syllabus</b> | The syllabus is designed to equip a student to use computers for professional as well as day to day use. It provides theoretical background as well as knowledge of Computer Fundamental, Software/Hardware, Multimedia, ICT, Internet, and Computer tools for Sanskrit, latest trends of information technology, e-Resources and cyber security.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Syllabus Outcomes</b>     | <p>After completing the Syllabus the students will be digitally literate and will be able to:</p> <ul style="list-style-type: none"><li>• Explore and understand the concept of Computer and components of a computer system.</li><li>• Get familiar with various input, output, memory and storage devices.</li><li>• Get familiar with various types of software, utilities used for computer and mobile apps.</li><li>• Understand the concept of computer number system and codes.</li><li>• Understand the basic concepts of Multimedia.</li><li>• Explore and understand the concept of computer network and Internet Technology.</li><li>• Practice and use the various internet services, email, search Engines, chatbots, etc.</li><li>• Get familiar with the concept of ICT, DigiLocker and ABC.</li><li>• Explore and learn the various online resources, platform, portal and tools for Sanskrit.</li><li>• Understand the basic concepts related to E-Commerce and e-Governance services.</li><li>• Practice and use the various digital payments tools and application of day-to-day use.</li><li>• Understand the basic concepts related to AI, Cyber-crime, and Cyber security.</li></ul> |
| <b>Medium of Instruction</b> | Hindi / English                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Program Passing Rules</b> | As per norms of University.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |



**Uttarakhand Sanskrit University, Haridwar**  
**OC (Open Course)**  
**Acharya (M.A.) – I Semester**  
**Subject: Computer Science (OC-01)**  
**Paper Name: Computer Fundamental**

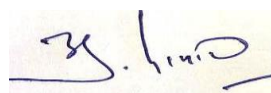
**Time: 03 Hours**

**Total Marks: 100**

| Unit | Syllabus - OC-01 (Computer Fundamental)                                                                                                                                                                               |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>Computer:</b> Introduction to Computer, Characteristics of Computers, Types of Computer, Parts of Computer System, CPU, Input and Output devices, Computer Memory, Types of Memory, Storage Devices;               |
| 2    | <b>Computer Number System:</b> Introduction, Binary number system, Binary to Decimal Conversion, Decimal to Binary Conversion, ASCII Code, Unicode.                                                                   |
| 3    | <b>Computer Software:</b> System Software, Operating System, Compiler, Application Software, Low Level and High Level Languages, Names of some High Level Languages, Free Domain Software, Typing Tools and Software. |
| 4    | <b>Multimedia:</b> What is Multimedia, Text, Graphics, Animation, Audio, Images, Video; Multimedia Application in Education, Entertainment, Marketing; Names of common multimedia file formats.                       |

**Reference Books:**

- 1) *P. K.Sinha, P. Sinha*, Fundamentals of Computers, BPB Publishers.
- 2) *A. Goel*, Computer Fundamentals, Pearson Education.
- 3) *P. Aksoy, L. DeNardis*, Introduction to Information Technology, Cengage Learning.
- 4) Computer Fundamentals (Hindi) By P.K. Sinha, BPB Publications.
- 5) Parekh Ranjan, “Principles of Multimedia”, Tata McGraw-Hill.



**Uttarakhand Sanskrit University, Haridwar**

**OC (Open Course)**

**Acharya (M.A.) – IV Semester**

**Subject: Computer Science (OC-02)**

**Paper Name: Internet Technology**

**Time: 03 Hours**

**Total Marks: 100**

| Unit | Syllabus - OC-02 (Internet Technology)                                                                                                                                                                                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>Internet Technology:</b> Introduction to computer network, LAN, MAN, WAN, Introduction to Internet, Internet Applications & Services, ISP, Modes of Connecting Internet, WWW, URL, HTTP & HTTPS, IP, FTP, Web Browsers, Search Engines, Chatbots, E-mail Concepts, Social Networking, Goggle Docs.                                                |
| 2    | <b>E-learning:</b> Introduction, Exploring Online Learning resources, On-line methods (Swayam, Swayamprabha, MOOCs etc.), Interactive Sanskrit Learning Tools, Sanskrit websites, E- Sanskrit Resources and Sanskrit Portal, Introduction to various Tools (Sanskrit Heritage and other usefull tools and Apps, Samsaadhanii, etc.)                  |
| 3    | <b>Information and Communication Technology (ICT):</b> Introduction, Application of ICT, Modern and ICT based Teaching Support System; Academic Bank of Credit (ABC), DigiLocker;<br><b>e- Commerce &amp; Governance Services:</b> Basics of E-Commerce, Basics of E-Governance, Accessing various e-Governance Services; Basics of Mobile Commerce; |
| 4    | <b>Electronic Payment System:</b> Online Payment Systems, OTP, QR Code, Credit Card, Debit Card, eWallet, UPI, AEPS, Online Payment Apps, Internet Banking;<br>Introduction to Artificial Intelligence (AI), Application of AI, AI Tools; Introduction to Cyber Crimes and Cyber Security, Cyber Security Need;                                      |

**Reference Books:**

1. A. Goel, Computer Fundamentals, Pearson Education.
2. P. K. Sinha, P. Sinha, Fundamentals of Computers, BPB Publishers.
3. Computer Fundamentals (Hindi) By P.K. Sinha, BPB Publications.
4. Turban, Efraim, and David King, "Electronic Commerce: A Managerial Perspective", Pearson Education Asia, Delhi.
5. Whiteley D, "E - Commerce: Strategy, Technologies and Applications", Tata McGraw Hill.
6. Dr. Dheeraj Mehrotra "Basics of Artificial Intelligence and Machine Learning".
7. Cyber Crime Impact in the New Millennium, by R. C Mishra, Auther Press.