

B.Sc.(Computer Science)
FOURTH SEMESTER – COMPULSORY 1

24BCS4C1: Digital Fluency

| | |
|-------------------------|---|
| Course Code: 24BCS4C1 | Course Title: Digital Fluency |
| Course Credits: 02 | Hours/Week: Theory -01 hour + 02 hours practical demonstration in classroom |
| Total Contact Hours: 32 | Internal Assessment: 10 |
| Exam Duration: 02 hours | Semester end Exam Marks: 40 |

Course Objectives

This course aims to:

- Develop confidence in the effective use of digital technologies
- Enhance information, media, and data literacy skills
- Promote safe, ethical, and responsible digital practices
- Enable collaboration and communication using digital platforms
- Create awareness of emerging digital technologies and careers

| Content | Hours |
|--|-------|
| Unit - I | |
| Concept of digital fluency vs digital literacy, Evolution of digital technologies, Overview of computer systems- Hardware components and Software types (system and application software), Operating systems and file management, examples of operating systems: MS-DOS, Windows, Mac OS, Linux, Solaris, Android. Digital devices: smartphones, tablets, IoT devices, Basics of the Internet and web technologies, Internet of Things (IoT) overview, Cloud computing concepts, Digital payments technologies, E-governance and Digital India initiatives | 8 |
| Unit - II | |
| Introduction to Computer Networks: Evolution of Networking, types of networks, Network devices - Modem, ethernet card, RJ45, Repeater, Hub, Switch, Router, and Gateways, Identification of Nodes in a Networked Communication, Internet, Web and the Internet of Things, Domain Name Systems. Security Aspects - Threats and Prevention, Malware - virus, Worms, Ransomware, Trojan, spyware, adware, key loggers, Modes of Malware distribution, Antivirus, Firewall, Cookies, Hackers and Crackers | 8 |
| Unit - III | |

| | |
|---|-----------|
| <p>Introduction to e-learning platforms such as Swayam, and MOOC. Virtual Meet: Technical Requirements, Scheduling a meeting, joining virtual meet, recording the meeting, Online Forms: Creating questionnaire, Publishing Questionnaire, conducting online responses, Analysing the responses, copying graphics into PowerPoint, Downloading the response to spreadsheet. Introduction to societal impacts, Digital Foot prints, Digital Society and Netizen, Data Protection, E-waste, Impact on Health.</p> | <p>4</p> |
| <p>Unit - III</p> <p>Identifying the configuration of a computer system, laptop, and a mobile phone, Identifying the version and the configuration of the operating system of a computer, laptop, and a mobile phone, Identifying the network components like patch cord, switch, RJ 45 Jack, Socket, and wireless router, creating a hotspot from a mobile phone, and allowing others to use the hotspot, creating a Google form, and send it to five users, scheduling a Google meet and invite three people to join the Google meet, record the Google Meet, creating a one minute video of your choice in your native tongue, and upload the video to YouTube.</p> | <p>12</p> |

Web Resources:

1. Operating Systems - https://ftms.edu.my/v2/wp-content/uploads/2019/02/csca0101_ch06.pdf
2. Database Concepts - <https://ncert.nic.in/textbook/pdf/keip107.pdf>
3. Computer Networks - <https://ncert.nic.in/textbook/pdf/lacs110.pdf>
4. Security Aspects - <https://ncert.nic.in/textbook/pdf/lacs112.pdf>
5. Offences and Penalties Under IT Act 2000 - <https://taxguru.in/corporate-law/offences-penaltiesinformation-technology-act-2000.html>
6. Societal Impact - <https://ncert.nic.in/textbook/pdf/leip106.pdf>
7. Google Meet Tutorial - <https://edvance.hawaii.hawaii.edu/wp-content/uploads/Google-Meet-Tutorial-Getting-Started-and-Recording-a-Lecture.pdf>
8. [Tutorial-Getting-Started-and-Recording-a-Lecture.pdf](https://edvance.hawaii.hawaii.edu/wp-content/uploads/Google-Meet-Tutorial-Getting-Started-and-Recording-a-Lecture.pdf)
9. Google Forms - https://pdst.ie/sites/default/files/Google%20Drive_1.pdf