APPLICATIONS OF INFORMATION AND COMMUNICATION TECHNOLOGIES

Course Code GE-160 **Credit Hours** 3 (2-1)

DESCRIPTION

This course is designed to provide students with an exploration of the practical applications of Information and Communication Technologies (ICT) and software tools in various domains. Students will gain hands-on experience with multiple software applications, learning to leverage ICT to solve daily life problems, enhance productivity, and innovate in different fields. Students will develop proficiency in utilizing software for communication, creativity, and more through individual and interactive exercises and discussions.

COURSE LEARNING OUTCOMES

By the end of this course, students will be able to:

1. Explain the fundamental concepts, components, and scope of information and communication technologies (ICT)
2. Identify uses of various ICT platforms and tools for different purposes.
3. Apply ICT platforms and tools to address daily, academic, and professional life needs.
4. Understand ethical and legal considerations in using ICT platforms and tools.

SYLLABUS

Week 1-2

Introduction to Information and Communication Technologies:

- Components of Information and Communication Technologies (basic hardware, software, ICT platforms, networks, local and cloud data storage, etc.)
- Scope of Information and Communication Technologies (use of ICT in education, business, governance, healthcare, digital media and entertainment, etc.)
- Emerging technologies and future trends.

Week 3-4

Basic ICT Productivity Tools:

- Effective use of popular search engines (e.g., Google, Bing, etc.) to explore the World Wide Web.
- Formal communication tools and etiquette (Gmail, Microsoft Outlook, etc.)
- Microsoft Office Suites (Word, Excel, PowerPoint).
- Google Workspace (Google Docs, Sheets, Slides).
- Dropbox (cloud storage and file sharing), Google Drive (Cloud storage with Google Docs

integration) and Microsoft OneDrive (Cloud storage with Microsoft Integration).

· Evernote (Note-taking and organization applications) and OneNote (Microsoft's digital notebook for capturing and organizing ideas).

· Video conferencing (Google Meet, Microsoft Teams, Zoom, etc.).

· Social media applications (LinkedIn, Facebook, Instagram, etc.).

Week 5-6

ICT in Education

· Working with learning management systems (Moodle, Canvas, Google Classrooms, etc.).

· Sources of online education courses (Coursera, edX, Udemy, Khan Academy, etc.).

· Interactive multimedia and virtual classrooms.

Week 7-8

ICT in Health and Well-being:

· Health and fitness tracking devices and applications (Google Fit, Samsung Health, Apple Health, Xiaomi Mi Band, Runkeeper, etc.).

· Telemedicine and online health consultations (OLADOC, Sehat Kahani, Marham, etc.).

Week 9-10

ICT in Personal Finance and Shopping:

· Online banking and financial management tools (JazzCash, Easypaisa, Zong PayMax, 1Link, MNET, Keenu Wallet, etc.)

Week 11-13

Digital Citizenship and Online Etiquette:

· Digital identity and online reputation.

· Netiquette and respectful online communication.

· Cyberbullying and online harassment.

Week 14-16

Ethical Considerations in the Use of ICT Platforms and Tools:

· Intellectual property and copyright issues.

· Ensuring originality in content creation by avoiding plagiarism and unauthorized use of information sources.

· Content accuracy and integrity (ensuring that the content shared through ICT platforms is free from misinformation, fake news, and manipulation).

PRACTICAL REQUIREMENTS

As part of the overall learning requirements, the course will include:

1. Guided tutorials and exercises to ensure that students are proficient in commonly used software applications such as word processing software (e.g., Microsoft Word), presentation software (e.g., Microsoft PowerPoint), and spreadsheet software (e.g., Microsoft Excel), among other tools. Students may be assigned practical tasks requiring them to create documents, presentations, spreadsheets, etc.

2. Assigning tasks that involve creating, managing, and organizing files and folders on local and cloud storage systems. Students will practice file naming conventions, creating directories, and using cloud storage solutions (e.g., Google Drive, OneDrive).

3. The use of online learning management systems (LMS) where students can access course materials, submit assignments, participate in discussion forums, and take quizzes or tests. This will provide students with practical experience with online platforms commonly used in education and the workplace.

SUGGESTED INSTRUCTIONAL / READING MATERIAL

1. "Discovering Computers" by Vermaat, Shaffer, and Freund.
2. "GO! With Microsoft Office" Series by Gaskin, Vargas, and McLellan. 3. "Exploring Microsoft Office" Series by Grauer and Poatsy.
4. "Computing Essentials" by Morley and Parker.
5. "Technology in Action" by Evans, Martin and Poatsy.