

Application of ICT-Lab					
Credit Hours:	1	Course Code:	CSEC-1205	Prerequisites:	None
Course Learning Outcomes (CLOs):					
At the end of the course, the students will be able to:				Domain	BT Level*
1. Describe and apply basic concepts of contemporary computer technologies				C	1
2. Analyze human and social contexts of technological innovations				C	2
3. Apply the knowledge of various ICT components to create a prototype of a product/service				C	3
* BT= Bloom's Taxonomy, C=Cognitive Domain, P=Psychomotor Domain, A=Affective Domain					
Course Contents:					
Weekly Laboratory Contents Lab 01: ICT Tools and Digital Work Environment - ICT applications in education, business, government and cybersecurity - Computer and peripheral devices - Operating system utilities - Software installation and configuration - Basic troubleshooting Lab 02: Digital File and Information Management - File and folder organization - File formats and extensions - Compression and archiving - Backup and synchronization - File permissions and access management Lab 03: Professional Document Processing - Creating professional documents - Styles, formatting and templates - Tables, images and references - Page numbering and automated table of contents - Technical report preparation Lab 04: Spreadsheet Applications - Data entry and organization - Formulas and functions - Sorting and filtering - Conditional formatting - Charts and basic data visualization Lab 05: Data Analysis Using ICT Tools - Data cleaning - Basic statistical functions - Pivot tables - Data validation - Practical data-analysis tasks Lab 06: Professional Presentations					

- Designing technical presentations
- Charts, diagrams and SmartArt
- Effective visual communication
- Presentation of technical information

Lab 07: Internet Research and Information Retrieval

- Effective web searching
- Search operators
- Academic and professional information sources
- Evaluating credibility of online information
- Avoiding misinformation and plagiarism

Lab 08: Digital Communication and Collaboration

- Professional email
- Email organization and filtering
- Online meetings
- Collaborative documents
- Digital communication etiquette

Lab 09: Cloud Computing Applications

- Cloud storage
- File synchronization
- Online document management
- Sharing and access permissions
- Collaborative work using cloud platforms

Lab 10: Basic Networking Applications

- Network types and components
- IP addressing fundamentals
- Wired and wireless connectivity
- Basic network configuration
- ping, ipconfig/ifconfig and basic troubleshooting

Lab 11: ICT Applications for Cybersecurity

- Password management
- Multi-factor authentication
- Secure browsing
- Phishing identification
- Malware and suspicious-file awareness
- Safe use of removable media

Lab 12: Data Privacy and Protection

- Personal and organizational data
- Privacy settings
- Data backup
- Encryption concepts
- Secure file sharing
- Digital footprint

Lab 13: ICT Applications in Professional Environment

- Online forms and surveys
- Digital record management
- Project/task management tools
- Collaborative workflows
- Digital documentation

Lab 14-15-16**Integrated ICT Mini Project- Final Exam**

Students will develop an ICT-based solution involving:

- Data collection
- Data processing/analysis
- Professional documentation
- Presentation
- Cloud collaboration
- Appropriate cybersecurity and privacy control.

Teaching Methodology:

Lectures, Written Assignments, Practical labs, Semester Project, Presentations.

Course Assessment:

Mid Term Exam, Home Assignments, Quizzes, Project, Presentations, Final Exam.

Reference Material:

4. Introduction to Computers by Peter Norton, McGraw Hill Education; 6th International Edition. (2004). ISBN-10: 0672315327
5. Using Information Technology: A Practical Introduction to Computer & Communications by Williams Sawyer, McGraw Hill Learning Solution; 10th Edition. (2013). ISBN-10:0071317902
6. Computing Essentials 2017 by Timothy O'Leary and Linda O'Leary and Daniel O'Leary, McGraw Hill Education; 1st Edition. (2016). ISBN10: 1259737659