7. GENERAL EDUCATION COURSES

Course Title	**Introduction to Information and Communication Technologies**
Course Code	**GE-161**
Credit Hours	2
Category	General Education
Prerequisite	None
Co-Requisite	None
Follow Up	None
Course Description	**Computers:** Importance and History of Computers. Types of Computers. Computer Elements, Processor, Memory, Hardware, Software. **Application Software its Uses and Limitations:** Word Processing, Spreadsheet, Database Management System, etc. **System Software its Importance:** MS-DOS, Windows, and Linux. **Computer-Based Information System (CBIS):** Methods of Input, Storage and Processing, Terminal (Dump, Smart, Intelligent), Data Storage Units, RAID and Backup System, Dedicated Data Entry, SDA (Source Data Automation). Organizing Computer Facility, Centralized Computing Facility, Distributed Computing Facility. **Data Communications:** Data Communication Model, Data Transmission, Digital and Analog Transmission, Modems, Asynchronous, and Synchronous Transmission, Simplex. Half Duplex, Full Duplex Transmission, Communication Medias (Cables, Wireless), Protocols, Network Topologies (Star, Bus, Ring), LAN, WAN, MAN. **Internet and World Wide Web (WWW):** A Brief History of the Internet and WWW, ARPANet, Internet Services provider and Online Services Providers, Web Link, Browser, Function, and Features of Browser, Search Engines. Common Services are available on the Internet. Multimedia Website Design. Business on Web: E-Commerce, E-Commerce business models, B2C, C2C, B2G, and Types of E-Commerce Websites. Information Security and Privacy: Significance of Information Security and Privacy in the Information Age. Computer Sabotage, Computer Virus, and Malware, DoS Attack. Online Data, Information, and Identity theft, Online Frauds, Internet Scam, Phishing and Pharming, Privacy and Security Issues in Social Media.
Text Book(s)	Deborah Morley and Charles S. Parker, Understanding Computers: Today and Tomorrow, 16th edition, Cengage Learning, 2016, ISBN-13: 978-1337251853
Reference Material	Livesley, Robert Kenneth. An introduction to automatic digital computers. Cambridge University Press, 2017. Zawacki-Richter, Olaf, and Colin Latchem. "Exploring four decades of research in Computers & Education." Computers & Education 122 (2018): 136-152. Sinha, Pradeep K., and Priti Sinha. Computer fundamentals. BPB publications, 2010. Goel, Anita. Computer fundamentals. Pearson Education India, 2010.