

Information Technology Infrastructure					
Credit Hours:	2	Course Code:	INFT-2112	Prerequisites:	None
Course Learning Outcomes (CLOs):					
At the end of the course, the students will be able to:				Domain	BT Level*
1. <i>Understand</i> the history and current developments of major technology components.				C	1
2. <i>Describe</i> the capabilities of various types of enterprise systems, managerial-support systems, and e-business systems.				C	2
3. <i>Analyze</i> methodologies for custom-developed and purchased software.				C	3
4. <i>Configure</i> an IT infrastructure solution for a small organization.				C	4
* BT= Bloom's Taxonomy, C=Cognitive Domain, P=Psychomotor Domain, A=Affective Domain					
Course Contents:					
Definition of IT Infrastructure, Nonfunctional Attributes: Availability, Performance, Security, Datacenters: Structure, Power, Availability, Servers: Availability, Performance, Security, Networking: Building Blocks, OSI Model, Availability, Performance, Security, Storage Systems: RAID, SAN, NAS, Backup & Recovery, Virtualization: Concepts, Availability, Performance, Security, Operating Systems: Components, Availability, Performance, Security, IT Infrastructure Management: Service Delivery & Support, Cloud Infrastructure and Services Architecture, Edge Computing and IoT Infrastructure Challenges, AI and Machine Learning in Infrastructure Management, Infrastructure as Code (IaC) and Automation Tools, Zero Trust Security Models, Sustainability and Green IT Considerations.					
Teaching Methodology:					
Lectures, Written Assignments, Practical labs, Semester Project, Presentations.					
Course Assessment:					
Mid Term Exams, Final Term Exams, Assignments, Quizzes, Project, Presentations, Practical Exam					
Reference Material:					
1. IT Infrastructure Architecture: Infrastructure building blocks and concepts by Sjaak Laan, 4 th Edition, Year 2023, ISBN-13: 978-1447780939 2. IT Infrastructure and Management by Surendra Keshari, Narendra Kumar, Year 2013, ISBN-13: 978-9381141991 3. IT Infrastructure and Management: For the GBTU and MMTU by Manoj Kumar Choubey, ISBN-13: 978-8131767214					