

System and Network Administration					
Credit Hours:	2	Course Code:	INFT-3109	Prerequisites:	None
Course Learning Outcomes (CLOs):					
At the end of the course, the students will be able to:				Domain	BT Level**
1. <i>Acquire essential IT support skills for operating systems, hardware, and networks including installation, configuration, and troubleshooting.</i>				C	1
2. <i>Demonstrate the ability to acquire new skills, independently, in order to keep their skills current.</i>				C	1
3. <i>Apply systems administration skills related to server operating systems, system and network service administration, and directory services administration.</i>				C	1
* BT= Bloom's Taxonomy, C=Cognitive Domain, P=Psychomotor Domain, A=Affective Domain					
Course Contents:					
Introduction To System Administration, Server Environment (Microsoft and Linux), Windows and Linux Command Line Interface, Local Area Network Configuration, Wide Area Network Configuration, Virtual LAN, Access Control Lists, Administer Users and Groups, Managing Network Services, Configuring Servers (FTP, NFS, Samba, DHCP, DNS, Apache), Cloud-based server administration and configuration, Automation of system and network administration with scripting (e.g., Bash, PowerShell), Introduction to cybersecurity fundamentals, Software-defined networking (SDN) basics.					
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. Cloud Computing: A Hands-On Approach by Arshdeep Bahga and Vijay Madiseti, Year 2014, ISBN-13: 978-0996025508 2. Mastering Cloud Computing: Foundations and Applications Programming by Rajkumar Buyya, Christian Vecchiola, and S. Thamarai Selvi, 1st Edition, Year 2013, ISBN-13: 978-0124095397 3. Cloud Computing: Principles and Paradigms by Rajkumar Buyya, James Broberg, and Andrzej M. Goscinski, 1st Edition, Year 2011, ISBN-13: 978-1118124536 4. Computing, Communication and Learning: Third International Conference, CoCoLe 2024, Warangal, India, September 13–15, 2024, Revised Selected Papers (Communications ... Computer and Information Science Book 2317) by Sanjaya Kumar Panda and Rajkumar Buyya, Year 2024, ISBN-13: 978-3031790416					