NORTHERN NEW MEXICO COLLEGE

EECE 440 Advanced Computer Networks

Course Number Course Name	EECE 440 Advanced Computer Networks
Credit Value (Breakdown of theory and lab credits)	(3,2T+1S)
Catalog Course Description	Students will research, design, and implement a variety of WANs considering different technologies and protocols such as Frame Relay and PPP. Students will also implement multimedia applications over WANs, and develop knowledge and expertise in network security and management.
Student Learning Outcomes/Objectives /Competencies of the Course	• Describe, analyze, and deploy advanced network applications over WANs. • Describe, analyze, and deploy WAN serial connections, PPP connections between routers, and Frame Relay connections. • Describe and use Password Authentication Protocol (PAP) and Challenge Handshake Authentication Protocol (CHAP) to protect WANs • Study the impact of single-path and multi-path routing schemes in WANs on network performance. • Apply standard, extended, and complex ACLs to secure networks. • Provide IP addressing services such as BOOTP and DHCP. • Design and deploy scalable networks using NAT. • Apply optimization techniques to computer network. • Implement network management services with Syslog and NetFlow.
College-Wide Student Learning Outcomes	EECE 440 learning objectives align with the following NNMC College Wide Goals: 1. Critical Thought