Louisiana Delta Community College
Academic Affairs Master Syllabus

Course Name: INTRODUCTION TO BASIC ROUTERS
Course Number: INCT 2120
Credit Lecture hours: 2   Credit Lab Hours: 2   Contact Hours: 90
Textbook, Author, and Publisher: To be provided by College Campus
Instructor Information: To be provided by College Campus
Class Location: To be provided by College Campus

Course Description: This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. By the end of this course, students will be able to recognize and correct common routing issues and problems.

Prerequisites: INCT 2110
Co-requisites: None

Learning Outcomes:
On completion of this course, the student should be able to perform the following with a proficiency that complies with the minimum standard of industry:

1. Describe the purpose, nature, and operations of a router
2. Explain the critical role routers play in enabling communications across multiple networks
3. Describe the purpose and nature of routing tables
4. Describe how a router determines a path and switches packets
5. Explain the route lookup process and determine the path packets will take in the network
6. Configure and verify basic router operation for a newly installed router
7. Describe the purpose and procedure for configuring static routes
8. Configure and verify static and default routing
9. Describe the role of dynamic routing protocols and place these protocols in the context of modern network design
10. Describe how metrics are used by routing protocols and identify the metric types used by dynamic routing protocols
11. Identify the characteristics of distance vector routing protocols
12. Describe the network discovery process of distance vector routing protocols using Routing Information Protocol (RIP)

Learning Outcomes continued:

13. Describe the functions, characteristics, and operations of the RIPv1 protocol
14. Compare and contrast classful and classless IP addressing
15. Describe classful and classless routing behaviors in routed networks
16. Design and implement a classless IP address scheme for a given network
17. Describe the main features and operations of the Enhanced Interior Gateway Routing Protocol (EIGRP)
18. Use advanced configuration commands with routers implementing EIGRP and OSPF
19. Describe the basis features and concepts of link-state routing protocols
20. Describe the purpose, nature, and operations of the Open Shortest Path First (OSPF) Protocol
21. Configure and verify basic RIPv1, RIPv2, single area OSPF, and EIGRP operations in a small routed network
22. Use router show and debug commands to troubleshoot common errors that occur in small routed networks

Assessment Measures: To be provided by the College Campus.

Library Resource Center:

The Delta Library and Learning Resource Center is committed to providing quality information and learning resources and services, including technology, in supporting the overall mission of Delta Community College and its commitment to lifelong learning.

Special Accommodations:

Louisiana Delta Community College complies with Section 504 of the Rehabilitation Act, as well as the Americans with Disabilities Act. Students with disabilities who attend the Monroe campus may make a request by contacting the Director of Counseling and Disability Services (See College Directory for contact information.) at the beginning of each semester. Reasonable accommodations will be attempted for students with documented disabilities. If an impairment is identified later in the semester, a non-retroactive accommodation plan will be developed. Students at satellite campuses should contact the Coordinator of Student Affairs at their particular campus.

Title IX:

Louisiana Delta Community College is committed to protecting the rights of students, which includes compliance with Title IX requirements. As such, the institution and members of our community will not tolerate the offenses of dating violence, domestic violence, sexual assault, and stalking. Students with Title IX concerns should contact the College's Title IX Coordinator (See College Directory for contact information.) Students are required to complete Sexual Assault Awareness and Prevention Online Training. Access to this online course will be sent out through the Delta email account.

Student Code of Conduct:

Louisiana Delta Community College encourages an environment of academic integrity and mutual respect. Students should read and follow both academic and behavioral expectations identified in the Code of Student Conduct that can be found online at www.ladelta.edu. Students are expected to act with integrity, respect the rights of others, and conduct themselves in a professional manner. The Honor Code prohibits academic misconduct such as cheating, engaging in unauthorized collaboration, and plagiarism. Violations of the Code of Student Conduct may result in disciplinary action as provided in the Code. Incidents are reported through the online Student Conduct system.