



CIS 233: Routing and Router Configuration

This course provides an in-depth examination of routing and router configuration as used on WANs and, specifically, the Internet. The course covers layers 2, 3, and 4 of the OSI Model. Students gain the basic knowledge to plan, implement, and control routers connecting several networks using a variety of protocols. TCP/IP and the protocols used to run and manage today's routers is covered in depth as well as commands used to implement, configure, and manage these protocols. Prerequisite: CIS 134 with a C or better or permission of the instructor. Four hours of lecture per week. Instructional Support Fee applies. Gen. Ed. Competencies Met: Information Literacy.

Course Student Learning Outcomes

1. Describe the basic structure of a routing table including summary and default routes and how these are used to determine the best path to forward a packet.
2. Describe the relationship between router interfaces, directly connected networks, and the routing table.
3. Describe the role of dynamic routing protocols metrics and which metric types are used by several dynamic routing protocols.
4. Devise, compute and apply subnetting schemes using CIDR and VLSM standard in making efficient use of scarce IPv4 addresses.
5. Describe the designate router and backup designated backup router process in multi-access networks.

Credits: 4

Program: Computer Information Systems