

Course Title:	CCNA 2: Routing Protocols and Concepts
Duration:	Ten (10) Days
Class Schedule:	9:00am to 5:00pm
Target Participants:	Government and Private I.T. Personnel, Members of the Academe and College Graduates of Computer Science and I.T. related courses.
Total Hours:	70 Hours
Course Description:	This is course describes the architecture, components, and operation of routers, and explains the principles of 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. Each chapter walks the student through a basic procedural lab, and then presents basic configuration, implementation, and troubleshooting labs. Pocket Tracer (PT) activities reinforce new concepts, and allow students to model and analyze routing processes that may be difficult to visualize or understand.
Prerequisites:	Network Fundamentals
Course Contents:	

- Introduction to Routing and Packet Forwarding
- Inside the router
- CLI configuration and addressing review
- Routing Tables
- Path determination and switching functions
- Router configuration labs
- Static Routes
- Summary and default static routes
- Managing and troubleshooting static routes
- Static route configuration labs
- Dynamic Routing
- Classifying dynamic routing protocols
- Metrics
- Administrative distances
- Routing protocol and subnetting labs
- Distance Vector Routing Protocol
- Network discovery
- Routing table maintenance
- Routing loops
- Basic RIPv1 configuration



UP System Information Technology Foundation, Inc.
Rm. 303 Vidal A. Tan Hall, Quirino Ave.,
cor. Velasquez St., UP Diliman, Q.C.
Tel. 436-2217 | Telefax: 920-2036
upsitf.org | info@upsitf.org

- Verification and troubleshooting
- Automatic summarization
- Default route and RIPv1
- Troubleshooting
- RIPv1 configuration labs
- Classless Routing Protocols, VLSM and CIDR
- Variable - length subnet masking (VLSM)
- Classless interdomain routing (CIDR)
- VLSM and classless routing labs
- Configuring RIPv2
- VLSM and CIDR with RIPv2
- Verifying and troubleshooting RIPv2
- RIPv2 configuration labs
- Routing table structure
- Classless routing behavior
- Equal cost load balancing
- Routing table lab
- EIGRP
- Basic EIGRP configuration
- EIGRP metric calculation
- Features of EIGRP
- Establishing adjacencies
- Diffusing Update Algorithm (DUAL)
- More EIGRP configurations
- Verifying and troubleshooting EIGRP
- EIGRP configuration labs
- Link
- State Routing Protocols
- Concept of link - state process
- OSPF
- Basic OSPF configuration
- OSPF router ID
- OSPF metric calculation
- Establishing adjacencies
- OSPF and multi-access networks
- More OSPF configuration
- Verifying and troubleshooting OSPF
- OSPF lab configuration

