

**JOLIET JUNIOR COLLEGE  
DEPARTMENT OF COMPUTER INFORMATION  
AND OFFICE SYSTEMS**

**COURSE SYLLABUS**

<b>Course Prefix and Number</b>	CNT 102
<b>Course Title</b>	Routing Protocols and Concepts
<b>Curriculum</b>	Computer Information Systems
<b>Semester Hours</b>	4
<b>Lecture</b>	4
<b>Lab</b>	0
<b>Prerequisites</b>	CNT 101 with a grade of C or better

Catalog Description

This course is the second of four classes approved by Cisco Systems Inc., which prepares students for the Cisco Certified Network Associate (CCNA) exam. It concentrates on router configuration and how remote networks are established and connections maintained. Topics include the basics of configuring a router through the command line interface, TCP/IP concepts used in routing and an introduction to both routing mechanisms distance vector and link state.

Course Objectives: See attached

Prepared by:

Reviewed by:

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4/00

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Revised 7/05  
Revised 8/02  
Updated 12/00

Ram Raghuraman  
Department Chairperson

Date

## STUDENT MATERIALS

### A. Textbook:

#### **REQUIRED**

Title: CCNA Portable Companion Guide

Author: Graziani & Johnson

Publisher: Cisco Press Prentice Hall

#### **OPTIONAL**

Title: Routing Protocols and Concepts, CCNA Exploration Companion Guide

Author: Graziani & Johnson

Publisher: Cisco Press Prentice Hall

### B. Other Required Materials

#### Student Evaluation (Type of Grading)

Router configuration; Routing Protocol configuration with RIPv1, RIPv2, EIGRP, OSPF, a journal, online exams, and an online final.

Week	Unit, Topic, Class Activity (Indicate approximate time allotment for each topic/unit)	Comments
1	Introduction to Routing and Packet Forwarding	
2	Static Routing	
3	Introduction to Dynamic Routing Protocols	
4	Distance Vector Routing Protocols	
5	Routing Information Protocol v1	
6	Variable Length Subnet Mask and Classless Inter-domain Routing	
7	Routing Information Protocol v2	
8	The Routing Table: A closer look	
9	Enhanced Interior Gateway Routing Protocol	
10	Link State Routing Protocols	
11	Troubleshooting Mechanisms	
12	Classless Routing	
13	Enhanced Interior Gateway Routing Advanced Topic	
14	Open Shortest Path First	
15	Open Shortest Path First Advanced Topics	

## OBJECTIVES

Upon completion of the course, the student will be able to:

1. Master Basic Content: Routing Theory, Router Components, Router Setup and Startup, Router Configuration, IOS, TCP/IP, IP Addressing, Routing Protocols.
2. Master Lab Skills: Router Configuration, Associated Hardware.
3. Master Documentation Skills: Maintaining Engineering Journal.