

ROCK VALLEY COLLEGE
BUSINESS/COMPUTERS AND INFORMATION SYSTEMS DIVISION

Spring 2016

Instructor : Chuck Konkol

Title: Associate Professor

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Office Hours:

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PCT 110 – Network Essentials

PCS: 1.2

IAI: None

Course Description:

Network Essentials is a course providing an introduction to Local Area Networks (LANs). The course is useful for LAN managers, supervisors of LAN managers, users of LANs, or those considering the purchase and installation of a Local Area Network. Topics include needs analysis, methods to evaluate and determine specifications of hardware and software for purchase, installation, management, and troubleshooting of a Local Area Network system. Microcomputer-based Local Area Networks will be emphasized. Advantages and disadvantages of links to a mainframe or minicomputer will be discussed. Students will install a Local Area Network as part of the course.

PREREQUISITE: PCT 101 or CIS 102 or equivalent computer experience.

Credits: 3 semester hours

Lecture: 3

Lab: 0

	<input type="checkbox"/>	Communicate effectively.
	<input type="checkbox"/>	Integrate technology into all fields of knowledge and expression.
X	<input checked="" type="checkbox"/>	Demonstrate competency in critical thinking.
	<input type="checkbox"/>	Respect and work effectively with persons of diverse backgrounds and abilities.
	<input type="checkbox"/>	Demonstrate the behaviors of ethical and socially responsible citizens.
	<input type="checkbox"/>	Demonstrate personal wellness

GENERAL EDUCATION LEARNING OUTCOMES

This course addresses the following general education learning outcome(s):

COURSE OBJECTIVES:

Upon successful completion of the course, the learner will be able to:

1. To understand the fundamental concepts of communication and data networks.
2. To gain the necessary knowledge and skills to work effectively with network engineers and administrators.
3. To learn how to research and communicate network and related IT issues by reading relevant industry information.
4. To understand the basic technologies and steps required for setting up and managing a small Local Area Network.

TOPICS COVERED

1. Fundamentals of Networking Technologies
2. OSI Model
3. Physical Layer
4. Data Link Layer
5. Local Area Networks
6. Wireless Local Area Networks
7. Network, Transport Layers TCP/IP
8. Backbone Networks
9. Wide Area Networks
10. Application Layer
11. The Internet
12. Network Design
13. Network Management and Network Troubleshooting
14. Network Security
15. Voice over IP

Grading Rationale:

Students will be evaluated according to performance in the following categories:

1. Three exams
2. Quizzes at the instructor's discretion
3. Lab activities and hands-on performance tests
4. In-class assignments, homework, and class participation
5. A research paper and oral presentation

REQUIRED READINGS (AND SUPPLIES)

Faculty Provided

Flash drive or other portable storage device

NOTIFICATION OF SERVICES FOR STUDENTS WITH DISABILITIES

"If you have a documented disability and would like to request accommodation and/or academic adjustments, contact the Disability Support Services Coordinator. You should contact the coordinator as soon as a need for accommodation is known so that implementation can occur as soon as possible. The coordinator's office is G87 in the ERC. The telephone number for this office is 921-2356."

DISCLAIMER

Circumstances may require some changes to this syllabus.

DATE SUBMITTED

Spring, 2016; C.Konkol