River Valley Community College
1 College Drive
Claremont, NH 03743-9707

Cybersecurity and Healthcare IT Program
Course Title**: Fundamentals of Computer Networking**

Jeff Schall, 3 Credit(s), Spring 2014

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Office Location: WMCC - Berlin, Room 116

Office Hours: By appointment. **Office Phone: 603-342-3088**

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Class Hours: None – 100% On-line

Course Pre- or Co-requisite(s): None

Course Objectives

This course introduces the concepts and principles that underlie computer networking using the Open Systems Interconnection (OSI) model and the TCP/IP protocol suite. Students will learn the key concepts associated with computer networks in a practical manner.

It presents an overview of networking terminology, examines different networking topologies and architectures, discusses the physical components of computer networks and reviews the principles of network connectivity. It also examines the implementation through design and installation of simple Ethernet networks.

Course Competencies:
1. Identify the layers of the OSI model, the basic functions of each layer, the protocol data units at those layers and the physical components that operate at the layers.
2. Identify the physical and logical network topologies currently being utilized in the industry.
3. Identify proper LAN installation procedures.
4. Make UTP cables: patch, cross-connect, rollover.
5. Use a punch down tool.
6. Connect systems into a network through a hub or a cross-connect cable.
7. Configure TCP/IP in Windows.
8. Work with IP addressing including sub-netting.
9. Design and document the structured cabling for a basic network.
10. Convert between binary, decimal, and hexadecimal numbers.
11. Utilize network support software such as management tools and protocol analyzers.

Topics Covered:
- Introduction to Networking
- OSI and TCP/IP Models
- Media
- Network Addressing
- Protocols
- Network Devices
- LAN Technologies
- WAN Technologies
- Basic Network Security
- Network Access Security
- Network Management
- Network Troubleshooting

Method(s) of Instruction and Grading:

Tests, quizzes, project and homework

Grading*:*

A	94-100
A-	90-93
B+	86-89
B	83-85
B-	80-82
C+	76-79
C	73-75
C-	70-72 (Non-transferable)
D	60-69 (Essentially an F)
F	59 and below

Quizzes	60%
Labs	20%
Final	20%
Total	**100%**

Textbook(s) & Supplies:
   Required
  Introduction to Networking with Networking +. 5ed. Pintello, ISBN: 9780470487327
   Optional
LabSim for network Pro (N10-005) 9781935080435

Course Procedures/Rules of Conduct:

Please refer to the *Student Handbook* for clarification of academic honesty.
The computer technology program has a very specific code of conduct. Lying, cheating, stealing or tolerating those in the program who, do is not acceptable.

Intellectual Property Rights:

Students enrolled in this course that choose to continue past the course drop date with full refund (see page 34 of the student handbook) have chosen to opt in to the conditions of this course. Any and all work completed by the students, as part of this course, is the property of River Valley Community College and may be used by the faculty or staff in any way to better the academic community at RVCC. Students will receive appropriate acknowledgement or credit for such usage.

Accommodations for Students with Learning Disabilities:

This college provides reasonable accommodations for students with learning disabilities. Students who require course accommodations due to documented disabilities must share their college Accommodation Plans with me. Please contact the Disability Coordinator in Room 234 or at 542-7744, extension 2271 if you do not have a college plan or would like more information about disability services.

Student Support Services:

All students are invited to visit the Department of Instructional Services (Room 234) for information on how to access tutoring, Writing Center, PLATO, personal computers, related academic workshops, and disability support services.

Attendance:

Attendance is not required since this course is delivered 100% on-line. However, staying engaged and participating weekly is a very important element to course success. Please act responsibly.

- *Due to Federal Financial Aid regulations attendance is periodically reported to the Registrar.*

Classroom Safety:

Not an issue since this course is delivered 100% on-line.

CAVEAT:

This syllabus is subject to change at any time.