

Pellissippi State Community College
Master Syllabus

**NETWORKING FUNDAMENTALS
CSIT 1730**

Class Hours: 3.0
Credit Hours: 4.0
Laboratory Hours: 3.0
Date Revised: December 2011

Instructor:
Office:
Phone:
Email:

Catalog Course Description:

This course is designed to prepare students for the Network+ exam of CompTIA. Topics include network technologies, network media and topologies, network devices and tools, network management and troubleshooting techniques and network security.

Entry Level Standards:

The student MUST be familiar with the architecture and operations of standard PCs (personal computers). The student must be able to use Microsoft Windows to run application programs, create directories and to copy, move, rename, and delete directories and files. The student must have math, writing, verbal and English language skills at the college entry level.

Prerequisites: None

Corequisites: None

Textbook(s) and Other Course Materials:

Managing and Troubleshooting Networks by Mike Meyers, 2nd Edition, McGraw Hill, ISBN: 978-007-1614832.

Managing and Troubleshooting Networks – Lab Manual by Mike Meyers, 2nd Edition, McGraw Hill, ISBN: 978-007-1615266

I. Week/Unit/Topic Basis:

Week	Chapter	Topic
1	2	Introduction to Networking and OSI model
2	3	Network Topologies and Cabling
3	4, 5	Ethernet Standards and Network Devices
4	6	Structured Cabling System
5	7, 13	IPv4 and IPv6 Addressing
6	7	IPv4 Subnetting
7	8	Routing
8	9	Network Protocols and Applications
9	10	Network Naming Services
10	11, 17	Security Standards and Network Threats
11	12	Logical Topologies and Multilayer Switches
12	14	Wide Area Networks
13	16	Wireless Standards and Networks
14	15, 18	Network Troubleshooting and Management
15	-	Comprehensive Final Exam

II. Course Goals*:

The course will

- A. Enhance student's knowledge of networking technologies, models, protocols, and devices. (II, III)
- B. Guide students to understand working of LAN, VLANs and WANs. (II, VI)
- C. Expand student's understanding of network communication hardware and software. (I, III, IV)
- D. Extend effective use of network troubleshooting, design and management tools. (I, II, VI)
- E. Guide students to understand network security and authentication concepts. (II, III, IV)

III. Expected Student Learning Outcomes*:

Students will be able to:

- 1. Describe OSI model, topologies, cabling standards and Ethernet standards. (A, B)*
- 2. Perform IP addressing and subnetting activities. (A, B, C, D)*
- 3. Define network security threats and classify authentication techniques. (C, E)
- 4. Use network design concepts and tools to implement, test and troubleshoot networks. B, C, D)
- 5. Define and explain routing, switching and wireless networking concepts. (A, B, D)
- 6. Explain working of networking devices such as hubs, switches, and routers. (A, B, C)

* Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

IV. Evaluation:

A. Testing Procedures: 50 % of grade

Three tests are recommended for the course. Final exam will be comprehensive. There will be no make-up tests unless prior arrangements have been made with the instructor. Failure to make a passing test average may result in a grade of F for the course.

B. Laboratory Expectations: 40 % of grade

Several lab assignments will be given during the course of the semester. Lab attendance is required. In addition, students may be assigned a team project. Laboratory assignments and team project must be completed and handed in on the due date and time. Failure to make a passing average in lab assignments and team project may result in a grade of F for the course.

C. Field Work: N/A

D. Other Evaluation Methods: 10 % of grade

Homework assignments and/or quizzes.

E. Grading Scale:

93 – 100	A
88 – 92	B+
83 – 87	B
78 – 82	C+
73 – 77	C
65 – 72	D
Below 65	F

V. Policies:

A. Attendance Policy:

Pellissippi State Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. [NOTE: No differentiation is noted for excused/unexcused absences. These will be treated as an absence.] (Pellissippi State Catalog, <http://www.pstcc.edu/catalog>)

B. Academic Dishonesty:

Plagiarism, cheating, and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions which may be imposed through the regular Pellissippi State procedures as a result of academic misconduct, the instructor has the authority to assign an F or a zero for the exercise or examination or to assign an F in the course. (Pellissippi State Catalog, <http://www.pstcc.edu/catalog>)

C. Accommodations for disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at www.pstcc.edu/departments/swd/.

D. Computer usage guidelines:

College-owned or –operated computing resources are provided for use by students of Pellissippi State. All students are responsible for the usage of Pellissippi State’s computing resources in an effective, efficient, ethical and lawful manner. (Pellissippi State Catalog, <http://www.pstcc.edu/catalog>)