

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



MASTER SYLLABUS

CITA 441 – NETWORK MANAGEMENT LAB

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**CANINO SCHOOL OF ENGINEERING TECHNOLOGY
DECISION SYSTEMS
FALL 2018**

- A. **TITLE:** Network Management Lab
- B. **COURSE NUMBER:** CITA 441
- C. **CREDIT HOURS:** (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity)

Credit Hours: 1
 # Lecture Hours: per week
 # Lab Hours: 2 per week
 Other: per week

Course Length: 15 Weeks

- D. **WRITING INTENSIVE COURSE:** No
- E. **GER CATEGORY:** None
- F. **SEMESTER(S) OFFERED:** Fall
- G. **COURSE DESCRIPTION:** This laboratory course is to accompany the lectures of CITA 440 Network Management course. Students obtain hands-on experience on various network management tools, protocols, applications, and systems throughout this course.
- H. **PRE-REQUISITES/CO-REQUISITES:**
- a. Pre-requisite(s): CITA 221 Data Communications and Network Technology Lab
 - b. Co-requisite(s): none
 - c. Pre- or co-requisite(s): none

I. **STUDENT LEARNING OUTCOMES:**

By the end of this course, the student will be able to:

<u>Course Student Learning Outcome /SLO/</u>	<u>PSLO</u>	<u>ISLO</u>
a. Illustrate centralized log management	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
b. Illustrate graphical network management	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
c. Manipulate SNMP configurations	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
d. Interpret RIP, OSPF, ACL, and IPSEC VPN	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
e. Recognize basic wireless network management features	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5

- J. **APPLIED LEARNING COMPONENT:** Yes X No
- Classroom/Lab

K. TEXTS: N/A

L. REFERENCES: N/A

M. EQUIPMENT: Computer networking lab

N. GRADING METHOD: A-F

O. SUGGESTED MEASUREMENT CRITERIA/METHODS:

- Lab projects
- Participation

P. DETAILED COURSE OUTLINE: N/A

Q. LABORATORY OUTLINE:

- I. Centralized log management using syslog
- II. Graphical network management utilizing SNMP and MRTG
- III. A lab review of static routes and RIP
- IV. Lab introduction to Open Shortest Path First (OSPF)
- V. Configuring Standard Access Control Lists
- VI. Configuring Extended Access Control Lists
- VII. Remote network access utilizing an IPSEC VPN client
- VIII. Site to site secure communications utilizing IPSEC VPN tunnels
- IX. Lab introduction to standalone wireless access points
- X. Setting up point to point wireless bridges