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

MASTER SYLLABUS

CITA 175 – COMPUTER CONCEPTS AND OPERATING SYSTEMS LAB

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CANINO SCHOOL OF ENGINEERING TECHNOLOGY
DECISION SYSTEMS
FALL 2018

A.   **TITLE**: Computer Concepts and Operating Systems Lab

B.   **COURSE NUMBER:** CITA 175

C.   **CREDIT HOURS: (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity)**

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

   Course Length: 15 **Weeks**

D.   **WRITING INTENSIVE COURSE**: No

E.   **GER CATEGORY:** None

F.   **SEMESTER(S) OFFERED:** Fall/Spring

G.   **COURSE DESCRIPTION:** This laboratory course is to accompany the lectures of CITA 170 Computer Concepts and Operating Systems course. Students will disassemble and reassemble PCs, become familiar with hardware components, learn to collect information about the computer system, install and configure system software, and test and troubleshoot the system to apply the various concepts covered in the course.

H.   **PRE-REQUISITES/CO-REQUISITES:**

   a. Pre-requisite(s): none
   b. Co-requisite(s): CITA 170 Computer Concepts and Operating Systems
   c. Pre- or co-requisite(s): none

I.   **STUDENT LEARNING OUTCOMES:**

By the end of this course and CITA 175 Computer Concepts and Operating Systems Lab course, the student will be able to:

Course Student Learning Outcome [SLO]	*PSLO*	*ISLO*
a. Describe basic computer hardware architecture and hardware components	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
b. Install and configure computer operating systems	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
c. Manage basic computer system assembly	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
d. Describe the function of typical computer peripherals	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
e. Install typical computer peripherals	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5

f. Use basic troubleshooting techniques to isolate faults in hardware/software	4. Apply problem solving and troubleshooting skills	2[CA] 5
g. Work in teams to troubleshoot and repair computer equipment	2. Identify issues and collaborate on solutions concerning IT in an effective and professional manner	4[T] 5

J.   **APPLIED LEARNING COMPONENT:**   Yes__X___   No_____
- Classroom/Lab

K.   **TEXTS:**
- A+ Essentials 220-701. Testout.
- A+ Practical Application 220-702. Testout.

L.   **REFERENCES:** Internet resources selected by the instructor

M.   **EQUIPMENT:** Set of computers connected to the network, set of computers not connected to the network for assembly/disassembly, various peripherals, and some tools and measurement devices.

N.   **GRADING METHOD:** A-F

O.   **SUGGESTED MEASUREMENT CRITERIA/METHODS:**
- Lab reports

P.   **DETAILED COURSE OUTLINE:** N/A

Q.   **LABORATORY OUTLINE:**

LABORATORY	TOPIC
1	Identification of PC parts and gathering of system information with OS tools
2	Assembly and disassembly of a computer system
3	Study of the boot process; reading system resource allocation

4	Form factors and using multimeters
5	Motherboards – components identification methods
6	Flash BIOS/Motherboard upgrades
7	Using third party software to gather system info
8	Computer Diagnostic/Management Tools – system & third party
9	Using research tools to find information for a chosen part, such as Kingston website for RAM
10	Installing and configuring an OS – Windows
11	Installing and configuring an OS – Linux
12	Installing application software
13	Troubleshooting Windows
14	Troubleshooting common computer system problems