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

MASTER SYLLABUS

CYBR/CITA 171 - Operating Systems Use and Administration

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SCHOOL OF SCIENCE, HEALTH AND CRIMINAL JUSTICE
CENTER FOR CRIMINAL JUSTICE, INTELLIGENCE AND CYBERSECURITY
FALL 2022

A. **TITLE**: Operating Systems Use and Administration

B. **COURSE NUMBER:** CYBR/CITA 171

C. **CREDIT HOURS:** 3
- 3 hours of lecture per week

D. **WRITING INTENSIVE COURSE**: No

E. **GER CATEGORY:** None

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

G. **COURSE DESCRIPTION:** This is a project intensive course covering current operating systems. Projects are designed to give students an overview of operating systems, and encompass the major aspects of operating systems. This course may be used as a first step for students wishing to obtain industrial certification for current operating systems.

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

a. Pre-requisite(s): none
b. Co-requisite(s): none
c. Pre- or co-requisite(s): CITA170 Computer Concepts and Operating Systems

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. Explain the architecture of an operating system	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
b. Explain the use of virtual machine technology	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
c. Describe the function of an operating system and its interaction with various hardware components	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
d. Explain the various types of file systems and their directory structures	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
e. Use file management commands from the shell command line	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
f. Apply script files to automate task	3. Demonstrate a solid understanding of the methodologies and foundations of IT	2[CA, PS] 5

J.   <u>**APPLIED LEARNING COMPONENT:**</u>   **Yes** <u>X</u>   **No**_____

- Classroom/Lab

K. **TEXTS:** None

L. **REFERENCES:** Various online resource such as SUNY Canton Library Books24x7 ITPro Book Database

M. **EQUIPMENT:** Computer lab classroom with virtual machine software installed

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

O. **SUGGESTED MEASUREMENT CRITERIA/METHODS:**
- Exams
- Quizzes
- Individual projects

P. **DETAILED COURSE OUTLINE:**

I. Operating System History
   A. Origins
   B. Evolution

II. Installation
   A. Downloading
   B. Distributions
   C. Partitioning
   D. Licensing
   E. Registration
   F. Updating

III. Architecture
   A. Shell
   B. Kernel
   C. File systems

IV. Common User Applications
   A. Office suites
   B. Internet
   C. Tools
   D. Networking
   E. Installing peripherals

V. Server Development and Administration
   A. File
   B. HTTP
   C. Mail
   D. Authentication
   E. Network addressing

Q. **LABORATORY OUTLINE:** N/A