SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 47.0104
SEMESTER: Departmental Syllabus
COURSE TITLE: Advanced NOS Administration for Server+
COURSE NUMBER: CRTE0217
CREDIT HOURS: 2
INSTRUCTOR: Departmental Syllabus
OFFICE LOCATION: Departmental Syllabus
OFFICE HOURS: Departmental Syllabus
TELEPHONE: Departmental Syllabus
EMAIL: KCKCC issued email accounts are the official means for electronically communicating with our students.

PREREQUISITE(S): CRT-0215 Linux Administration for Server+

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckcebookstore.com/, for the required texts for your particular class.

COURSE DESCRIPTION: This course will cover the types of backups that can be done. In addition, the student will learn how to map a drive in order to provide users with access to information stored on network servers. Monitoring the system is a required task that allows the administrator to keep track of resources, including disk management, CPU usage, and memory usage. This course also covers the key concepts of analyzing and optimizing the network. With this information, problem-solving guidelines can be implemented in the troubleshooting process.

METHOD OF INSTRUCTION: A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.
COURSE OUTLINE:

I. Backups
   A. Overview of backup methods

II. Drive Mapping
   A. What is drive mapping?
   B. Mapping drives in Windows networks
   C. Mapping drives in Linux networks

III. Partition and Process Management
   A. Using fdisk, mkfs, and fsck
   B. Managing system processes with Cron jobs
   C. Core dumps
   D. Assigning permissions for processes

IV. Monitoring Resources
   A. Disk management
   B. Memory usage
   C. CPU usage
   D. Reviewing daily logs
   E. Checking resource usage on Windows 2000 and Windows XP
   F. Checking resource usage on Linux

V. Analyzing and Optimizing Network Performance
   A. Key concepts in analyzing and optimizing network performance
   B. Bottleneck
   C. Baselines
   D. Determining Internet connection speed
   E. Network monitoring software
   F. Network management software
   G. Management software for small and medium-sized networks
H. Management Service Provider (MSP)
I. SNMP concepts and components
J. SNMP structure and functions

EXPECTED LEARNER OUTCOMES:

A. The student will be able to describe backups.
B. The student will be able to describe drive mapping
C. The student will be able to describe partition and process management.
D. The student will be able to describe monitoring resources.
E. The student will be able to describe Analyzing and Optimizing Network Performance.

COURSE COMPETENCIES:
Upon successful completion of this course:

The student will be able to describe backups.
1. The student will be able to describe backup methods.
2. The student will be able to describe drive mapping.
3. The student will be able to describe what drive mapping is.
4. The student will be able to describe how to map drives in a Windows network.
5. The student will be able to describe how to map drives in a Linux network.
6. The student will be able to describe partition and process management.
7. The student will be able to demonstrate the ability to use fdisk, mkfs and fsck.
8. The student will be able to describe managing system processes with Cron jobs.
9. The student will be able to describe core dumps.
10. The student will be able to describe how to assign permissions for processes.
11. The student will be able to describe monitoring resources.
12. The student will be able to describe disk management.
13. The student will be able to describe memory usage.
14. The student will be able to describe CPU usage.
15. The student will be able to describe how to review daily logs.
16. The student will be able to demonstrate the ability to check resources on Windows 2000 and Windows XP.
17. The student will be able to demonstrate the ability to check resources on Linux.
18. The student will be able to describe Analyzing and Optimizing Network Performance.
19. The student will be able to describe key concepts in analyzing and optimizing network performance.
20. The student will be able to describe bottlenecks.
21. The student will be able to demonstrate the ability to do a baseline analysis.
18. The student will be able to demonstrate the ability to determine internet connection speed.
19. The student will be able to demonstrate the ability to use network monitoring software.
20. The student will be able to describe network management software.
21. The student will be able to describe management software for small and medium sized networks.
22. The student will be able to describe management service provider (MSP).
23. The student will be able to describe SNMP concepts and components.
24. The student will be able to describe SNMP structure and functions.

**ASSESSMENT OF LEARNER OUTCOMES:**
Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

**SPECIAL NOTES:**
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

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