SYLLABUS

DATE OF LAST REVIEW: 02/2013

CIP CODE: 47.0104

SEMESTER: Departmental Syllabus

COURSE TITLE: Troubleshooting the Operating System for Server+

COURSE NUMBER: CRTE0220

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): CRTE0218 Installing and Maintaining Hardware in Linux for Server+

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

COURSE DESCRIPTION:
This course analyzes how experienced system administrators rely on a proven and systematized methodology to solve system problems. How they must be able to recognize common error conditions and know their usual causes. How they must learn to evaluate symptoms in such a way as to isolate their probable origin. Then it is necessary to apply their experience in knowing what sorts of tests to run and avenues to explore in order to verify hypotheses regarding the problem, or to gather more data. They need to know what to do to fix the problem, or where to go to get assistance quickly, then follow through by doing it. They should document what they learn along the way to make it easier to attack any recurrences of the problem. Finally, they need to educate users in a way that will either prevent the problem from occurring again, or at least enable them to provide meaningful feedback if it does.
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. Identifying and Locating Symptoms and Problems
   A. Hardware Problems
   B. Kernel problems
   C. Application software
   D. Configuration
   E. User error
   F. Using system utilities and using system status tools
   G. Unresponsive programs and processes
   H. When to start, stop, or restart a process
   I. Troubleshooting persistent problems
   J. Examining log files
   K. The dmesg command
   L. Troubleshooting problems based on user feedback

II. LILO Boot Errors
   A. Error codes
   B. Booting a Linux system without LILO
   C. Emergency boot system
   D. Using an emergency boot disk in Linux

III. Recognizing Common Errors
   A. Various reasons for package dependency problems
   B. Solutions to package dependency problems
   C. Backup and restore errors
   D. Application failure on Linux servers

IV. Troubleshooting Network Problems
   A. Loss of connectivity
   B. Operator error
   C. Using TCP/IP utilities
   D. Problem-solving guidelines
   E. Windows 2000 diagnostic tools

EXPECTED LEARNER OUTCOMES:
A. The student will be able to describe Identifying and Locating Symptoms and Problems.
B. The student will be able to describe LILO boot Errors.
C. The student will be able to describe Recognizing Common Errors.
D. The student will be able to describe Troubleshooting Network Problems

COURSE COMPETENCIES:
Upon successful completion of this course:

The student will be able to describe Identifying and Locating Symptoms and Problems.
1. The student will be able to describe Hardware Problems
2. The student will be able to describe Kernel problems
3. The student will be able to describe Application software
4. The student will be able to describe Configuration
5. The student will be able to describe User error
6. The student will be able to describe Using system utilities and using system status tools
7. The student will be able to describe Unresponsive programs and processes
8. The student will be able to describe When to start, stop, or restart a process
9. The student will be able to demonstrate the ability to Troubleshooting persistent problems
10. The student will be able to describe Examining log files
11. The student will be able to describe The dmesg command
The student will be able to describe LILO boot Errors.
12. The student will be able to describe Error codes
13. The student will be able to describe Booting a Linux system without LILO
14. The student will be able to describe Emergency boot system
15. The student will be able to describe Using an emergency boot disk in Linux
The student will be able to describe Recognizing Common Errors.
16. The student will be able to describe Various reasons for package dependency problems
17. The student will be able to describe Solutions to package dependency problems
18. The student will be able to describe Backup and restore errors
19. The student will be able to describe Application failure on Linux servers
The student will be able to describe Troubleshooting Network Problems
20. The student will be able to describe loss of connectivity.
21. The student will be able to describe operator error.
22. The student will be able to demonstrate the ability to utilize TCP/IP utilities.
23. The student will be able to describe problem solving guidelines.
24. The student will be able to demonstrate the ability to utilize Windows 2000 diagnostic tools.

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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Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center in Rm. 3354 or call (913) 288-7670.