Blackhawk School District

CURRICULUM

Course Title:	**Information Technology 4**
Course Number:	**1063**
Grade Level(s):	**11 – 12**
Length of Period:	**45 minutes**
Length of Course:	**1 semester**
Faculty Author(s):	**Cox**
Credits:	**.5**
Date:	**1/19/09; Revised May '09**

COURSE DESCRIPTION: The Information Technology IV class is structured around the Linux+ certification exam. Students will gain hands on experience with the Linux operating system and how it fits into a network infrastructure.   Topics include Linux system administration, shell commands, software packages, network configuration, and security.

PA Standard	Description
3.7.10.C	Apply basic computer operations and concepts.
3.7.10.D	Utilize computer software to solve specific problems.
3.7.10.E	Apply basic computer communications systems.
3.7.12.C	Evaluate computer operations and concepts as to their effectiveness to solve specific problems.
3.7.12.D	Evaluate the effectiveness of computer software to solve specific problems.
3.7.12.E	Assess the effectiveness of computer communications systems.

Class Resources
Linux+ Guide to Linux Certification, 2nd Ed., by Jason Eckert and M. John Schitka
Sun xVM VirtualBox
Fedora Linux 10

Course Topic	Proposed Time	Topic Reflection
Introduction to Linux	**6 Days**	
* Linux Features *** Linux Distributions** *** Uses of Linux in Industry**		

Course Topic	Proposed Time	Topic Reflection
Linux File Systems	**8 Days**	
* Linux Shells * Linux Shell Commands		

Course Topic	Proposed Time	Topic Reflection
Linux File System Management	**9 Days**	
* File System Hierarchy * Linux Management Commands * File Permissions * Modify File and Directory Ownership		

Course Topic	Proposed Time	Topic Reflection
Linux File System Administration	**8 Days**	
* Partitions * File System Types * /dev Directory		

Course Topic	Proposed Time	Topic Reflection
BASH Shell	**9 Days**	
* Redirect Input and Output * Shell Environment Variables		

Course Topic	Proposed Time	Topic Reflection
Linux Graphical Interfaces	**7 Days**	
* Configuring Boot Loaders * Dual Boot Environment * Run Levels * Startup Daemons		

Course Topic	Proposed Time	Topic Reflection
Linux Processes	**6 Days**	
*** Kill Signals** *** Script Execution** *** Background Processes**		

Course Topic	Proposed Time	Topic Reflection
Administrative Tasks	**8 Days**	
*** Linux Printing** *** Log Files** *** Group Accounts**		

Course Topic	Proposed Time	Topic Reflection
Compression & Software Installation	**7 Days**	
*** Compression Utilities** *** System Backups** *** Extracting Files** *** Software Packages**		

Course Topic	Proposed Time	Topic Reflection
Network Configuration	**12 Days**	
*** TCP/IP Configuration** *** Protocols** *** Configuring a NIC Interface** *** Name Resolution**		

Course Topic	Proposed Time	Topic Reflection
Network Services and Security	**9 Days**	
*** Network Services** *** Routing and Firewalls** *** Linux Security**		