

Network + Syllabus Kennewick High School Marc Long

Course Description

Students in this course receive classroom training preparing them to be a network administrator. Students will learn about the components that make up a Local Area Network. Students will learn about the OSI model that all networks are built upon. They will work on a variety of hardware projects including configuring switches, setting up a wireless router, wiring a patch panel, and setting up a server. Students will learn about the Ethernet topology down to how data is transmitted in a packet across the network. They will explore the protocols and commands that help a network administrator do their job.

Required Text:

All-in-One Network+ Certification Exam Guide, 3rd Ed.,
by Michael Meyers
Osborne McGraw-Hill, October, 2004

Required Video:

CompTIA Network+ ® Certification (2009) Video Series
by Michael Meyers
LearnKey, 2009

Course Objectives

See the attached document (Network+ Objectives.doc).

Grading and Assessment

The following grading scale will be used:

A	90-100
B	80-89
C	70-79
D	55-69
F	Below 55

Students will be graded on a weighted point system. Scores will be marked with points earned over points possible (giving the traditional % score). Each activity will be weighted relative to the other activities given during the quarter. Students will receive a grade print out in the middle and end of each nine weeks.

Student grades will consist of the following components:

<i>Network+ Weighting of Grades</i>	
<i>Daily Class Work</i>	25%
<i>Lab Assignments</i>	25%
<i>Quizzes & Tests</i>	35%
<i>Notebooks</i>	15%

Instructional Methods

Students in Network+ will receive a majority of their instruction by viewing interactive videos, DVD videos, reading the textbook, filling out worksheets, researching information on the Internet for a presentation, and working with fellow students doing a project.

These students will spend a good amount of time working on our experimental network where they will experience the skills of a network technician. This hands-on type of experience is undoubtedly where many students digest the most new knowledge.

Tech Prep/Direct Credit (if applicable)

Not at this time

Student Leadership

Students in Network+ will refine their decision-making skills as they troubleshoot network related issues. Students will demonstrate that they can isolate a network issue that occurs on our experimental network. Students will learn critical thinking skills as they solve these problems. They will learn that their actions may have a direct impact upon all users in our network.

Students will learn to be effective at communicating in an oral fashion with fellow students. They will create class presentations and effectively articulate their points. Each student will create a personal journal tracking their daily work. This will help the student keep me apprised of their work.

Students will be responsible to man an exhibit booth and prepare a presentation for Lockheed Martin's IT Day. Students must demonstrate their knowledge and critical thinking skills on a topic. They will present themselves in a professional manner. Students looking for summer employment will be encouraged to bring a resume to share with businesses as they form new networks at the conference.

All Network+ students will be members of the Robotics, Computers And Technology (RTAC) organization. Network+ students will be responsible to host either a LAN party or set up for Lion Adventure Day. This will give experienced RTAC members the opportunity to train other students, instill organization rules and expectations. RTAC meetings will provide an environment for students to demonstrate a working knowledge regarding how an organization functions.

Employability

Students in Network+ manage in-class projects where they learn to identify, organize, plan and allocate resources as they analyze our current network and look at the feasibility of updating it. Students will look at the cost for new hardware, wiring new ports, retraining issues, long-term maintenance of a network, etc. Students will create a three-year plan to complete the update.

Network+ students will job shadow someone in the field of networking. This experience will help students to get a feel for the type of day-to-day things they do.

Students will be able to choose the right tools for a given network task. This may mean using a tone tracer to locate a lost wire or using the "ping" command to analyze a network connection. Students will administer a Windows server creating user accounts, setting file and folder privileges, installing applications, and updating the operating system. VB Scripts will be created to create new accounts, locate users, and delete profiles, etc. in an effort to better manage the network. Students will constantly be watching for ways to improve the network and its security.

Network+ students will demonstrate good interpersonal skills as they work to solve network jobs in our building. They will learn to fill out a help desk ticket and learn how the district IT organization functions. They will be responsible to communicate solutions to the client. As Network+ students become proficient they will train less experienced students the skills they have acquired. Students will develop team skills as they help other students in the classroom.