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| Course Information: |
| College:  |  Northeast Wisconsin Technical College |
| Course Title:  | IT:Network Linux 3 |
| Course Number:  |  10-150-197 |

**Grading Information**

Grading determined by points.  There is no weighting of work.

|  |  |  |
| --- | --- | --- |
| ***Source*** | ***Pts*** | ***% of points*** |
| Labs (3X200)  | 600 | 25% |
| MidTerm Written Exam  | 500 | 21% |
| MidTerm Lab Exam | 500 | 21% |
| Final Project | 800 | 33% |

Grades based on percentage of total points earned:

|  |  |
| --- | --- |
| **% Points Attained** | **Grade** |
| 90-100 | A |
| 80-89 | B |
| 70-79 | C |
| 60-69 | D |
| 00-59 | F |

**Text/Resources**

All classroom resources including online book, labs and packet tracer activities can be found at <https://www.netacad.com>

**Course Competencies**

Competencies are what learners will be able to do as a result of the learning experience. In this course, the competencies that you must demonstrate are:

| **#** | **Course Competency:** |
| --- | --- |
| 1: | Install the Linux operating system in both a physical and virtual environment. |
| 2: | Modify a functional network by installing and configuring applications packaged for a specific version of Linux. |
| 3: | Modify a functional network by compiling, installing, and configuring applications distributed as source code. |
| 4: | Create an "internal" network separated from an "external" network using a Linux-based NAT/Routing/Firewall server. |
| 5: | Implement a Linux-based DNS solution in your network. |
| 6: | Implement a Linux-based DHCP solution in your network. |
| 7: | Implement a Linux-based NTP solution in your network. |
| 8: | Implement a Linux-based NFS solution in your network. |
| 9: | Implement a Linux-based web solution in your network. |
| 10: | Implement a Linux-based e-mail solution in your network. |
| 11: | Implement a Linux-based SQL-based database solution in your network. |
| 12: | Implement other industry desirable Linux-based applications in your network. |
| 13: | Schedule various administrative tasks to run on a recurring basis. |

**Schedule**

| **Week(s)/ Session:** | **Learning Plan/Description:** | **Targeted Competencies: (#)** | **Assessment Activities, (i.e. Performance Assessment Tasks [PATS], Exam/Quiz, Discussion Board, etc.):** |
| --- | --- | --- | --- |
| 1 | LP1 – Build the Environment and Linux System Needed | 1, 2, 3 | Complete Lab 1 all exercises  |
| 2-3 |  LP2 – Configure firewalls and system access using IP Tables | 4 | Complete lab 2 exercises 1 and 2 |
| 4 | LP3 – Detect and Protect against network intrusion with SNORT | 4 | Complete Lab 2 exercise 3  |
| 5 | LP4 – Install, configure, and working with Virtual Private Networking using Open VPN  | 4 | Complete Lab 2 exercise 4  |
| 6 | Review Week | 1-4 |  |
| 7 | Midterm Exams | 1-4 | Midterm Written Exam (Proprietary)Midterm Lab exam (Proprietary) |
| 8 | LP5 – Install and configure APACHE web server, SSL and Certificates | 7,9 | Complete Lab 3 exercise1 |
| 9 | LP6 Install and troubleshoot SAMBA and NFS | 8,10,11 | Complete lab 3 exercises 2 and 3 |
| 10 | LP7 Install DNS and Configure Bind and Caching name-server | 5,6,10 | Complete lab 3 exercise 4 |
| 11 | LP8 – Install and Configure PBX | 12,13 | Lab review |
| 12 | Verification Week | N/A |  |
| 13-15 | Final Project Begins | N/A | Complete Final Project  |