Syllabus for COMP 650, Fall 2017
Network Administration and Maintenance

Subject to change; due dates are approximate until the assignment is posted.

		Lecture Topic	***Unix and Linux Administration Handbook***	Assignments
Sep	11	Introduction, Linux and Basic Networking Concepts	**Ch 1, 2**	A0
	18	File System, Access/Process/User Control	**Ch 3, 4, 5, 6**	A0 due, A1
	25	Backups, SW Installation/Mgt/The Kernel	**Ch 9, 11, 12**	A1 due, A2
Oct	02	Syslog, Shell scripts/perl/python basics, Cfg Mgt	**Ch 10, 13, 14**	A2 due, A3
	09	Networking Technology	**Ch 15, 16, 17**	A3 due, A4
	16	DNS, NFS, Web, Email	**Ch 18-24**	A4 due, A5
	23	QOS, Network Security	**Ch 27, Online Topics**	A5 due, A6
	30	Network Security cont'd, Wireless	**Ch 27, Online Topics**	A6 due, A7
Nov	06	Wireless cont'd	**Online Topics**	A7 due, A8
	13	Network Management, Monitoring, Perf Analysis	**Ch 25, Online Topics**	A8 due, **A9**
	20	Perf Analysis cont'd, Network Design	**Online Topics**	**A9 due, Take Home Exam**
	27	Cloud Computing, Containers	**Ch 28, 29, Online Topics**	**A10, Final Project outline due**
Dec	04	Virtualization, Software Defined Networking	**Ch 29, Online Topics**	**A10 due, Take Home Due**
	11	Software Defined Networking cont'd	**Online Topics**	**Final Project Due**

Instructor Information

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Grading:
Semester Take Home Exam: 20%
Semester Final Project: 20%
Class Participation: 10%
Assignments (10; 5 pts each): 50%

Grade Policy

Assignments must be submitted as email attachments where appropriate. Assignments are graded as binary. Best effort will be awarded 100%. Otherwise 0% will be awarded. The semester exam will be in take-home format. It may be emailed or handed in by the due date. Assignments/exams must be turned in by the due date to receive credit.

Semester Project

A project topic involving Network Maintenance and/or Network Administration. The project subject requires instructor approval and should be submitted in one of two formats:

(1) Written project. This project should be a minimum of 3 typed double spaced 10/12 pt. font pages (approximately 1500 words). Additional Illustrations/graphics (pictures) are a plus.

(2) Programming assignment (Perl, python, bash, etc…). The project code should be submitted along with a README file (text, .pdf, or .doc format) of instructions containing the project/program explanation, tests run, and limitations/issues found.

Note: All reference sources used should be listed in bibliographic format.

Reading List

- UNIX and LINUX System Administration Handbook Fifth Edition Prentice Hall, 2017 (Required)

- The Practice of System and Network Administration, 2/E Prentice Hall, 2011 (Optional)

- The Practice of Cloud System Administration: Designing and Operating Large Distributed Systems, Volume 2, 1/E Prentice Hall, 2014 (Optional)

Selected Readings/Assignments

- **Week 1**
  Reading Information:
  (1) Ch1/2 UNIX and Linux System Administration Handbook
  (2) Unix/Linux Gnu/Free SW
  (3) Linux Kernel
  (4) Unix command line

  Assignment 0:

  (1) Install Linux on your PC (if you already have Linux installed skip to step 3)
  (2) If you do not already have Linux setup I suggest using a VM environment. (either VMPlayer or VirtualBox is free).
  (3) Document your install results.