

# Course Syllabus: IT 4423 Linux/Unix Administration

## Section 850 and 900

### Southern Polytechnic State University

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Jack Zheng, Fall 2012  
Last updated: Aug 2, 2012

#### **Note**

This syllabus provides a general guideline for the conduct of this course. However, deviations may be necessary and will be notified during the semester.

## Course Description

This course introduces Linux/Unix operating systems. Topics include system administration, file systems and access permissions, regular expression, common tools and utilities, and network service configurations. Lessons will be enhanced using hands-on exercises.

## Course objectives

1. Describe concepts and structure of the Linux/Unix operating system.
2. Use common commands and utilities for general file system operations.
3. Write shell scripts for common shell environment.
4. Perform system administration tasks to manage files, software, storage, users, processes and services.
5. Configure TCP/IP networking and common network/internet services and clients such as SSH, DNS, Apache.

## Course features

1. Hands-on experience with Ubuntu Linux.
2. Learn to install and run Linux on virtual machines (VMWare).
3. Opportunities to allow students to explore their own interests and learn from the unique experience.

## Prerequisites

1. IT 3423 Operating Systems Concepts and Administration.
2. IT 4323 Data Communication and Networks.

## Class meet location and time

CRN 9170 (Section 850): W 4:30PM – 5:45PM, J-266

## Instructor

Jack G. Zheng, Assistant Professor, IT Department

## Contact

Office: J-393A

Phone: 678-915-5036

Email: jackzheng@spsu.edu

## Office hours

In office (J-393A)

|    |               |
|----|---------------|
| W  | 1:00 - 4:00PM |
| TH | 1:00 - 4:00PM |

## **Email Policy**

1. Email is a great way of communication if you write the email subject like this:

**it4423 – your real subject**

2. Per FERPA regulation, please use your university email to communicate with instructors. This can verify your identity and protect privacy. I reserve the right not to reply any email that I cannot verify sender's identity.

**Emails without proper subject line or unverified sender address are likely to be categorized as spam, and are NOT guaranteed to be replied.**

## Teaching Assistant

Yini Hu yhu5@spsu.edu

The teaching assistant will help grade assignments and other student work, and will host tutoring sessions (schedules will be posted later).

## Course Materials and Resources

### Course websites

GeorgiaVIEW Vista <https://spsu.view.usg.edu>

- It's important to know how to use this learning management system for: following learning modules, submitting assignments, checking grades and feedback, downloading files, participating discussion boards, etc.
- Please check GeorgiaVIEW discussion boards regularly for important announcements and other issues.

### Textbook

- Required textbook
  - Linux Administration: A Beginner's Guide, 6th Edition: <http://www.amazon.com/dp/0071767584/>
- Other complementary textbooks
  - Linux Command Line and Shell Scripting Bible: <http://www.amazon.com/dp/1118004426>

### Required software/hardware

- A USB flash drive with at least 8GB size (preferably an external hard drive) – bring this with you to every class.
- Ubuntu Linux, VMWare Player
- Other software: software that can open PDF files and ZIP files.

### Other readings and resources

- Other readings and resources will be suggested and posted. Check the course website regularly.

## Course Conduct

### Course Schedule

The following schedule is only an overview of the course structure. The more detailed and most updated schedule will be posted in GeorgiaView.

| Week | Date   | Learning Module | Module                 | Work Due and Other Reminders |
|------|--------|-----------------|------------------------|------------------------------|
| 1    | Aug 15 |                 | Orientation            |                              |
| 2    | Aug 22 | 1               | Introduction           |                              |
| 3    | Aug 29 | 2               | File System            |                              |
| 4    | Sep 05 | 3               | Shell                  | Assignment 1                 |
| 5    | Sep 12 | 4               | Bash Scripting         |                              |
| 6    | Sep 19 | 5               | Perl Scripting         | Assignment 2                 |
| 7    | Sep 26 |                 | Midterm exam           | Midterm exam                 |
| 8    | Oct 03 |                 | Exam review            | 10/4 withdraw day            |
| 9    | Oct 10 | 6               | User Management        |                              |
| 10   | Oct 17 | 7               | Software Management    |                              |
| 11   | Oct 24 | 8               | Process Management     | Assignment 3                 |
| 12   | Oct 31 | 9               | Network Admin          |                              |
| 13   | Nov 07 | 10              | LAMP Admin             |                              |
| 14   | Nov 14 | 11              | Storage and File Admin | Assignment 4                 |
| 15   | Nov 21 | 12              | More Services          |                              |
| 16   | Nov 28 |                 | Presentation           | Exam 2                       |

## Learning Modules

Each module provides a study guide which details learning objectives, readings, and tasks. It's critical to follow these study guides. The time to complete each module varies. Generally, modules are designed on an average of 5 to 10 hours to complete (for most of the people who have met the prerequisites), depending on individual background and prior experiences. All modules should be completed by the weekend of the assigned week.

## Grading

| Item                       | Points |
|----------------------------|--------|
| Labs (12)                  | 10     |
| Quizzes (12)               | 10     |
| Individual Assignments (4) | 40     |
| Mid-term Exam              | 20     |
| Exam 2 (comprehensive)     | 20     |

| Total | Grade |
|-------|-------|
| =>90  | A     |
| =>80  | B     |
| =>70  | C     |
| =>60  | D     |
| <60   | F     |

- Each learning module has a lab and an online quiz. They are designed to help you learn and practice.
- Each lab is worth 1 point for completion. Your top 10 scored labs will count toward your grade.
- Each quiz is worth 1 point. Your top 10 scored quizzes will count toward your grade.
- The 001/850 section students will take both exams in the classroom, and the 900 section students will take both exams online.

More details about each item will be provided later.

## Participation and attendance

For online sections, please read the "Online Class Guide", a separate supplemental document detailing online course conducts and participation policies. For a hybrid class, a part of the learning is also expected to be conducted online.

Class participation grade (if available) is based on in-class participation as well as online participation.

- Class attendance is expected and anticipated. Some of the discussions and exercises are done and graded in-class so you must attend class to receive these points. All in-class activities are important to your learning and the tests. It's difficult for you to "make up" the experience of a class. There will be no make-up if you missed in-class activities, without prior and proper written notifications.
- Your activities in the GeorgiaVIEW discussion boards reflect your online participation, and somewhat complement in-class participation.

## Student work submission

All assignments will be posted in GeorgiaVIEW. Submission instructions will be given for each individual assignment. Not following these submission instructions will result in point deduction. Check GeorgiaVIEW for the due date of each required submission. Late submission is generally allowed but with up to 20% penalty. Generally, no submission is allowed outside the GeorgiaVIEW system unless explicitly instructed to do so. **Be sure to submit the work well ahead of due time. Excuses like website or computer error will not be accepted after the due date.**

## Grades and re-grading

Grades will be posted in GeorgiaVIEW, generally within a week from the due date. If you think there is an error, make a re-grading request by e-mail within one (1) week of grade posting. Please make a follow-up appointment (via e-mail) to meet the instructor during office hours for review of the results of any reassessment. A request for reassessment will not be granted if more than two weeks have passed since the grade in question was posted. Check your grades in GeorgiaVIEW regularly.

## Bonus points

There may be a maximum of 5 bonus points to your overall grade. Bonus points are offered with assignments and exams. Details will be given in each assignment/exam.

## Curve

The instructor reserves the right to decide if there will be any curving of grades and how much per each grading item.

## **Make-ups**

NO make-ups will be given if you miss a test or an in-class exercise for reasons other than a documented religious observance, a documented illness, or a documented work-related reason.

## **Communication**

The best communication is face to face communication in the classroom and my office. We can also use emails, discussion boards, office phone, and GeorgiaVIEW Chat when we cannot meet face to face.

## **Announcement**

Important announcements will be made to the class electronically through the GeorgiaVIEW "Discussion Board" as well as in class sessions. It is important that you check your GeorgiaVIEW account regularly for announcements, new assignments, grade postings, and other discussions.

## **University Policies**

### **Academic Honesty**

"A faculty member reserves the right to remove any student from his or her course if the student's behavior is of a disruptive nature or if there is evidence of academic dishonesty." (*SPSU Catalog*)

### **Disability Statement:**

"A student at Southern Polytechnic State University who has a disabling condition and needs academic accommodations has a responsibility to voluntarily identify him/herself as having a disability by scheduling an appointment with the Disability Services Coordinator as soon as possible." (*SPSU Catalog*). The coordinator can be contacted at 678-915-7244