

# Course Syllabus: IT 4423 Linux/Unix Administration

## Southern Polytechnic State University

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Jack Zheng, Spring 2012  
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### **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. Understand concepts and components of Linux/Unix.
2. Use common Linux/Unix 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, network, users, processes, services, etc.
5. Configure common network/internet services and clients such as web, FTP, SSH.

### Course features

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

### Prerequisites

1. IT 3423 Operating Systems Concepts and Administration.
2. Hands-on Windows management experience is preferred.

### Class meet location and time

CRN 2038: T TH 4:30PM – 5:45PM, J260

### 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  | 10:00AM - 12:00PM |
|                    | TH | 10:00AM - 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.**

# Course Materials and Resources

## Course websites

- GeorgiaVIEW Vista <https://spsu.view.usg.edu>
  - It's important to know how to use GeorgiaVIEW for: submitting assignments, checking grades and feedback, downloading protected files, participating discussion boards, etc.
  - Please check GeorgiaVIEW discussion boards regularly for important announcements and other issues.
- <http://jackzheng.net/teaching/it4423> (Bookmark it!)
  - This public website is for course schedule, lecture notes, live examples, other public materials and resources, etc. Lecture slides and other materials will be posted in each corresponding week regularly. Check the site regularly for new materials!

## Textbook

- Required textbook
  - Linux Administration: A Beginner's Guide, Fifth Edition: <http://www.amazon.com/dp/0071545883>
- Other complementary textbooks
  - "A Practical Guide to Ubuntu Linux," third edition, by Mark Sobell, Prentice Hall, 2010, 0-13-254248-X

## Required software/hardware

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

## Other readings and resources

- <http://distrowatch.com/>
- <http://linuxcommand.org/>
- <http://www.linux.com/>
- Other readings and resources will be suggested and posted in the schedule. Check course website later.

# Course Conduct

## Course Schedule

The following schedule is only an overview of the course structure. For the detailed and updated schedule, check the schedule webpage and GeorgiaVIEW regularly.

| Week/Module | Topics                       |
|-------------|------------------------------|
| 1           | Orientation                  |
| 2           | OS Overview                  |
| 3           | GUI/desktop environment      |
| 4           | Command line environment     |
| 5           | Network environment          |
| 6           | Shell programming            |
| 7           | Midterm exam                 |
| 8           | Admin overview               |
| 9           | File/directory management    |
| 10          | User management              |
| 11          | Software/Hardware management |
| 12          | Server/Service management    |
| 13          | Network management           |
| 14          | Security management          |
| 15          | Group project meetings       |
| 16          | Presentations                |

## Grading

| Item                   | Points | Percent | Grade |
|------------------------|--------|---------|-------|
| Exam                   | 20     | =>90%   | A     |
| Individual Assignments | 35     | =>80%   | B     |
| Self-Assessments       | 25     | =>70%   | C     |
| Project/Test           | 20     | =>60%   | D     |

More details about each assignment and exam will be provided later.

## Participation and attendance

There are two aspects of participation:

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

## Bonus points

There will be a maximum of 5% bonus points to your overall grade. Bonus points are offered with assignments and exams. Details will be given in corresponding assignments and exams.

## Student work submission

All assignments will be posted in GeorgiaVIEW. Submission instructions will be given for each individual assignment. Check GeorgiaVIEW for the due date of each required submission. 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.

## 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.

## 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.

## Other Policies

### Academic Honesty

Students may have general discussions about assignments with fellow classmates, but each student must develop his or her solution to the assignments, unless assignments are identified as team projects. Students may not 'share' work in any form or any portion of an assignment except on team assignments. It is each student's responsibility to keep his/her own work secure. Failing to adequately protect one's work does not relieve the student from academic dishonesty charges.

University regulations will be enforced regarding dishonorable or unethical conduct (Cheating, Plagiarism, Falsification, Unauthorized Collaboration or Multiple Submissions). The penalties for incidents of academic dishonesty can lead to expulsion from the University. In this class, there will be zero tolerance for dishonorable or unethical conduct. Electronic or physical sharing of answers will be considered cheating and will not be tolerated.

Cheating on examinations involves giving or receiving unauthorized help before, during, or after an examination. Examples of unauthorized help include sharing information with another student during an examination, intentionally allowing another student to view one's own examination, and collaboration before or after an examination which is specifically forbidden by the instructor.

Plagiarism is presenting another person's work as one's own. Plagiarism includes any paraphrasing or summarizing of the works of another person without acknowledgment, including the submitting of another student's work as one's own. Plagiarism frequently involves a failure to acknowledge in the text, notes, or footnotes the quotation of the paragraphs, sentences, or even a few phrases written or spoken by someone else. The submission of research or completed papers or projects by someone else is plagiarism, as is the unacknowledged use of research sources gathered by someone else. Failure to indicate the extent and nature of one's reliance on other sources is also a form of plagiarism. Any work, in whole or part, taken from the Internet or other computer based resource without properly referencing the source (for example, the URL) is considered plagiarism. A complete reference is required in order that all parties may locate and view the original source. The student is responsible for understanding the legitimate use of sources, the appropriate ways of acknowledging academic, scholarly or creative indebtedness, and the consequences of violating this responsibility.

Submission for academic credit of a work product, or a part thereof, represented as its being one's own effort, which has been developed in substantial collaboration with assistance from another person or source, or computer based resource, is a violation of academic honesty. It is also a violation of academic honesty to knowingly provide such assistance. Collaborative work specifically authorized by an instructor is allowed. (Collaboration on all individual assignments is forbidden. If your instructor discovers that you have had unauthorized assistance or collaboration, the instructor is obligated to file a report with the Dean's Office.)

If a student is charged with Academic Dishonesty, for each charge, a zero (0) will be given for the assignment, a minimum of 10% of total points will be deducted from the final course total points and a written Notice of Academic Dishonesty will be given to the Dean's office. The student will also receive a copy of the notice.