

# TC 362 **Web Administration**

ONLINE SECTION @ D2L.MSU.EDU

## Course Description

Web Server Administration will be a primer on building and deploying modern web servers using cloud computing servers and infrastructure. The course will be focused on Linux-based web servers and content will cover everything from basic shell commands and administration to security and deploying Ruby on Rails applications. Students will also be exposed to professional tools like Git and learn how to operate within a larger development group.

## Instructor

Jeff Siarto (siartoje@msu.edu)

Office: Virtual (Skype ID: jsianto), State News Building, 2nd Floor, East Lansing

Hours: By appointment

## Course Prerequisites

- TC 331 or CSE 232

## Required Materials

- Book: No book
- A GitHub account
  - <http://github.com>
- You will also need to get Git setup on your computer ([Mac](#), [Windows](#), [Linux](#))
  - Mac: <https://help.github.com/articles/set-up-git>
  - Windows: <https://help.github.com/articles/set-up-git#platform-windows>
  - Linux: <https://help.github.com/articles/set-up-git#platform-linux>
- A Digital Ocean account
  - <https://www.digitalocean.com>
  - Note: you will need to enter a credit card for payment--you'll be responsible for cloud server fees throughout the semester (the cloud servers we use in this class typically run about \$5/month or \$0.007/hour).

## What To Expect

- Computer time: **100%**
- Programming experience: **Minimal** (some scripting will be covered)
- Server experience: **Helpful, not required**
- Computer proficiency: **High**

- Format: **Online/Desire2Learn (No in-person class)**

## Covered Topics

- Basics of the Unix shell
- Linux servers and distributions
- Web servers (Apache, NGINX)
- Managing databases (MySQL)
- Hosting websites
- Hosting and deploying web applications
- Server security
- Cloud infrastructure
- Other special topics

## Assignments

**Screencasts:** Most of the weekly lessons will be delivered in Screencast format—consider this your “lecture” and take notes where appropriate. I’ll also provide a rough outline of the material, any additional reading you need to complete and a list of key points and concepts from the lesson.

**Labs:** Each week there will be one primary lab project. This work will be hands-on, command-slinging server admin and will amount to 60% of your final grade.

**Final Project:** 40% of your final grade will be a final project. This will be a full-featured server build out ready to host websites and web applications.

## Late Work

Late assignment lose 20% each day they are not turned in. If you have a special circumstance or are struggling with the class, please let me know as early as possible so that I can help you.

## Grading

- 60% Weekly “Lab” Assignments
- 40% Final Project

Final grade distributions are based on class performance, in past classes a 4.0 typically has required an overall score of 92-94%.

## Tentative Schedule

Week 1 - Class setup and accounts

Week 2 - Introduction to Cloud Computing  
Week 3 - Managing Remote Servers  
Week 4 - Package Management and Software Installation  
Week 5 - Web Servers (Apache)  
Week 6 - Web Servers (Nginx and others)  
Week 7 - Virtual Hosts and DNS  
Week 8 - Databases  
Week 9 - Server Security  
Week 10 - Scripting  
Week 11 - Application Configuration and Deployment  
Week 12 - Flex Week/Final Project  
Week 13 - Final Project  
Week 14 - Final Project