Resources

- **CIT VM Farm**
  - Create VM and connect from osx/Linux
  - Manage VMs with CLI instead of Web
  - Connect to vm from Linux host
- **AWS**
  - Create EC2 instance
  - Connect EC2 instance
- **Software**
  - If you are using windows to connect to your vm, you might need the following:
    - Putty
    - TightVNC
  - If you have a newer version of windows 10 and have installed the linux subsystem, you can just ssh from the command line like you do in OSX and Linux.

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**Week 1 (Jan 10, 12)**

- **Slides**
  - DHCP Slides
- **Readings**
- **Lectures**
  - DHCP Lecture
  - Bionic Networking
  - Wireshark DHCP Capture
- **Screenshots/Helps**
  - DHCP Dynamic
  - DHCP Fixed
  - DHCP Dynamic Client
- **Assignment**
  - Hosts

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**Week 2 (Jan 19)**

- **Slides**
  - NFS Slides
  - PXE Boot
  - Kickstart
- **Reading**
- **Lectures**
- **Screenshots/Helps**
  - NFS How To
  - kickstart
  - tftp and Netboot
- **Assignment**
  - DHCP

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**Week 3 (Jan 24, 26)**

- **Slides**
  - Diskless
- **Reading**
• Lectures
  • Screenshots/Helps
    ‣ Dual netboot
    ‣ Create an Initial ramdisk
    ‣ Use debootstrap to create a disk image
    ‣ FOG
  • Assignment
    ‣ NFS 1
    ‣ DHCP 2 - netboot/kickstart

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**Week 4 (Jan 31, Feb 2)**

** EXAM 1 **

• Slides
• Reading
• Lectures
• Screenshots/Helps
  ‣ Review
  ‣ Capture image fog video old video
  ‣ Deploy image fog video
• Assignment
  ‣ Diskless Boot
  ‣ FOG

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**Week 5 (Feb 7, 9)**

• Slides
  ‣ Shell 1
  ‣ StdOut
  ‣ StdIn
  ‣ Command Execution
  ‣ Variables
• Reading
  ‣ Shell review - Cookbook ch1
  ‣ The bash cookbook version 2 is located on Oreilly. Navigate to library.dixie.edu -> ebook collections -> O'Reilly. Search for “bash cookbook”.
  ‣ stdout review - Cookbook 2
  ‣ stdin review - Cookbook 3
  ‣ Executing commands - Cookbook 4
• Lectures
  ‣ Sample files
• Screenshots/Helps
• Assignment
  ‣ Bash on Windows

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**Week 6 (Feb 14, 16)**

• Slides
  ‣ Logic
  ‣ Sed/Awk
• Reading
  ‣ Variables - cookbook 5
  ‣ Shell logic and arithmetic - cookbook 6
  ‣ A better one on logic
  ‣ Recommended on brackets
  ‣ AWK, SED - Read 7.10- 7.11
Lectures

Screenshots/Helps
- SSH As root
- Sample cloner script
- Sample loops script

Assignment
- Shell Script 1
- Shell Script 2

Week 7 (Feb 23)
- NO CLASS FEB 21
- Slides
  - Regex
  - Shell Features
- Reading
  - Additional Scripting - Cookbook 10
  - Shell Speed
  - Shell troubleshooting
- Lectures
- Screenshots/Helps
- Assignment
  - Shell Script 3
  - Regex

Week 8 (Feb 28, Mar 2)
- Slides
- Reading
  - Quick Shell - cookbook 18
  - Troubleshooting - cookbook 19
- Lectures
- Screenshots/Helps
  - Sample scripting exam
  - Sample solution other
- Assignment
  - Shell Script 4
  - Shell Script 5

TEST 2

Week 9 (Mar 7,9)
- Slides
  - Terraform
  - Terraform2
  - Terraform3
- Reading
  - Read chapter 2 in “Terraform up and running 2nd edition” found on Oreilly (safarionline) from library.dixie.edu website.
- Lectures
Review AWS
Infrastructure as Code
Terraform

**Screenshots/Helps**

**Assignment**
- Terraform
- Terraform 2

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**Week Mar 13-19**

SPRING BREAK

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**Week 10 (Mar 21,23)**

- **Slides**
  - Automation with Ansible
  - Ansible Playbooks
  - Ansible Playbooks 2

- **Reading**
  - Ansible variables

- **Lectures**
  - Configuration management with Ansible

- **Screenshots/Helps**

- **Assignment**
  - Ansible 1
  - Ansible 2

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**Week 11 (Mar 28,30)**

- **Slides**
  - Ansible Roles
  - Ansible Advanced stuff

- **Reading**

- **Lectures**
  - Ansible Roles
  - Example of Roles

- **Screenshots/Helps**

- **Assignment**
  - Ansible 3

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**Terraform and Ansible Exam**

**Week 12 ( Apr 4,6)**

- **Slides**
  - Python

- **Reading**
Lectures
- Python video slide lecture

Screenshots/Helps
- Python example

Assignment
- Python

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**Week 13 (Apr 11,13)**

- Slides
  - Salt
- Reading
  - Salt states
  - Basic usage
  - More complex states
- Lectures
  - Installing saltstack
- Screenshots/Helps
- Assignment
  - Salt 1

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**Week 14 (Apr 18,20)**

- Reading
- Lectures
  - Salt 1
  - Salt 2
- Screenshots/Helps
  - Salt example file
- Assignment
  - Salt 2
  - Salt 3

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**Week 15 (Apr 25,27)**

- SALT
- REVIEW
- EXAM