

# CSCI 425 – Network Systems Operations and Administration

Fall 2016 - Section 001

**Instructor:** Jason Patalon  
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**Class Info:** Wednesday 6:00 – 8:30 pm  
Hamilton Hall LL

**Office Hours:** Wednesday 5:00-ish – 6:00 pm  
Hamilton Hall LL

## **Course Websites**

**D2L:** Lecture notes, readings, announcements, class files, and **grades**. Log on at [my.edinboro.edu](http://my.edinboro.edu)  
[jpatalon.cs.edinboro.edu](http://jpatalon.cs.edinboro.edu) – Lecture notes, readings, announcements, and class files.

## **Course Description**

This course introduces students to the principles and practices of operating a small to medium sized network of computers. Topics include network services to support user accounts in a networked system. Network hardware installation and support is also discussed. Students will install and configure systems and services related to the topics discussed on multiple operating systems. Issues involving operating system interoperability and security will be explored. Prerequisites CSCI 310 and CSCI 325.

## **Course Objectives**

1. Demonstrate a working knowledge of the theoretical foundation of network services.
2. Install, configure and deploy network operating systems and their services.
3. Demonstrate a basic understanding of network system security.

## **Course Materials**

**Required textbook:** Linux Administration: A Beginners Guide, Seventh Edition, 2016  
ISBN: 978-0071845366

**Recommended Textbook:** The Practice of System and Network Administration, Second Edition, 2007  
ISBN: 978-0321492661

**Recommended:** 8GB or larger USB flash drive.

## **Attendance**

Regular and punctual attendance is expected. This course will follow attendance guidelines set forth in the Class Attendance Policy and Procedure section of the university catalog. Any in-class exercises must be done in class and are not available for make-up.

## **Technology Use**

The use of cell phones or other communication devices during class is disruptive to the learning environment and prohibited from use during class. If there is an emergency which requires immediate attention, students must leave the classroom to take any calls.

## **Title IX Reporting Requirements**

Edinboro University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment and to comply with Title IX of the Education Amendments of 1972 and guidance from the Office for Civil Rights, the University requires faculty members to report incidents of sexual violence shared by students to the University's Title IX Coordinator. Information regarding the reporting of sexual violence and the resources that are available to victims of sexual violence is set forth at: <http://www.edinboro.edu/directory/offices-services/social-equity/sex-discrimination-sexual-misconduct>.

## **Grading Policy**

**Grades will be given according to the following breakdown:**

<u>Description</u>	<u>Percentage</u>	<u>Total Points</u>
Attendance	7.9%	75
Midterm Exam	21.1%	200
Final Exam	21.1%	200
Presentation	21.1%	200
Assignments/System Checks	28.9%	275
<del>Assignments</del>	<del>12.5%</del>	<del>125</del>
<del>System Checks</del>	<del>20%</del>	<del>200</del>
Total Points		950

## **Grading Scale**

<b>Percentage</b>	<b>Grade</b>	<b>Percentage</b>	<b>Grade</b>
90.0-100.0	A	70.0-76.9	C
87.0-89.9	B+	67.0-69.9	D+
80.0-86.9	B	60.0-66.9	D
77.0-79.9	C+	0-59.9	F

## **Course Policies**

- Attendance will be taken randomly during class, and may be taken multiple times during the same class.
- Disruptive behaviors, including but not limited to excessive talking, arriving late, sleeping, or using unauthorized electronic devices during class is not permitted. Repeat offenders may be administratively withdrawn according to university policy.
- Do your own work! There is no tolerance for cheating or plagiarism. Students engaged in dishonest academic activity may receive a lower or failing grade, or other academic sanctions including suspension or expulsion.
- Turn in all homework on time. Late homework assignment submissions are not accepted. Homework assignments are due at the end of the day (11:59:59 Eastern Time) of the day specified.
- All exams must be taken during the scheduled class time, unless prior approval is given from the instructor. In the case of a different exam time, the exam given may be different from the exam given in class.
- Inform the instructor of any special needs or arrangements, including university sport or disability requirements, at the beginning of the semester! If you require accommodations for test-taking from the Office for Students with Disabilities (OSD), please provide the appropriate accommodation documentation during the first week of the semester. You must also provide a test accommodation form for each test in which the accommodation will be required. This documentation should be provided at least one week prior to the scheduled exam.
- DISCLAIMER! Any information in this document is subject to change at any time without notice.

## Tentative Course Schedule

Exact schedule may change

<b>Week 1</b> <b>8/31/2016</b>	Intro and overview Review of Computer Networking History and Terminology Requests for Comments (RFC) Network Addresses and Domain Names
<b>Week 2</b> <b>9/7/2016</b>	Directory Services Motivation LDAP AD Routing Trends Other systems (NIS, etc) OS Interoperability
<b>Week 3</b> <b>9/14/2016</b>	DNS Overview and Operation Planning and Creating Subdomains Implementation
<b>Week 4</b> <b>9/21/2016</b>	Network Hardware Hubs, Routers, Switches Obtaining a Domain
<b>Week 5</b> <b>9/28/2016</b>	Network Printers OOB Access DHCP NTP
<b>Week 6</b> <b>10/5/2016</b>	NFS Disaster Recovery Thin Clients SAN NAS Network Virtualization
<b>Week 7</b> <b>10/12/2016</b>	Network based file systems DFS OS Interoperability Midterm Review

<b>Week 8</b> <b>10/19/2016</b>	APSCUF Union Strike...
<b>Week 9</b> <b>10/26/2016</b>	Midterm Exam Work Time
<b>Week 10</b> <b>11/2/2016</b>	Midterm Results Review Virtualization Overview Survey of VM Software Guest OS Installation Containers
<b>Week 11</b> <b>11/9/2016</b>	Documentation Change Management Monitoring Automation
<b>Week 12</b> <b>11/16/2016</b>	Other Network Services SSH E-Mail VoIP Firewalls VPN
<b>Week 13</b> <b>11/23/2016</b>	Thanksgiving Break
<b>Week 14</b> <b>11/30/2016</b>	Security Network Security Issues Presentations Work Time
<b>Week 15</b> <b>12/7/2016</b>	Network Security Awareness Social and Ethical Issues Presentations Final Review
<b>Week 16</b> <b>12/14/2016</b>	Final Exam Hamilton Hall LL 6:00-8:00PM

Revised December 10 2016