

# Course: ICT 418-001

## Title: Linux Systems Administration

Term: Fall 2022

Credit hours: 3

Meeting days/time/location: T/Th 11am - 12:15am

### Instructor Information

Name: Dr. Christopher Sean Burns

Email: sean.burns@uky.edu

Office building and room number: 327 Little Library Building

Office phone: (859)-218-2296

Office hours: Tue 2-4pm; Thu 9-11am

Preferred Method of Communication: Email.

I usually respond to emails within 24 hours or the first business day after the weekend or holiday; I do not respond to emails in the evenings or on the weekends. We will use Zoom or Teams to have one on one meetings/office hours.

### Course Description

Systems administrators install, maintain, and manage computer systems and servers that support small and large networks. We will learn how to administer these computer systems and servers with the Linux operating system. In the process, students will know how to install software, implement security policies, manage users, configure networks, evaluate logs, and automate processes.

### Course Prerequisites

ICT 301 Introduction to Databases

### Required Materials

Computer and access to the internet/web.

### Associated Expenses

For a minimal monthly cost, students are required to create and use a Google Cloud virtual machine, which requires a valid credit/debit card.

### Skill and Technology Requirements

Students must be to install and/or use software to connect to remote servers.

*For technical/account help not related to the course, students can contact Information Technology Services by phone 859-218-HELP (4357) and via the [ITS Customer Services](https://www.uky.edu/its/customer-support-student-it-enablement/customer-services) page. (<https://www.uky.edu/its/customer-support-student-it-enablement/customer-services>)*

### Student Learning Outcomes

*After completing this course, students will be able to:*

- *evaluate and apply technology resources (Program Learning Outcome);*
- *how to administer, maintain, and secure a Linux server; and,*

- *communicate using multiple modes of communication (Program Learning Outcome).*

## **Course Details**

### **Tentative Course Schedule**

Assignments (75% of final grade) and due dates include:

Assignment 1: Setup *gcloud* Account and VM Instance, due Sep 01, 2022

Assignment 2: Describe the File System, due Sep 11, 2022

Assignment 3: Demonstrate Changing File Attributes, due Sep 18, 2022

Assignment 4: Demonstrate the *grep* Command, due Sep 25, 2022

Assignment 5: Write a Bash Program, due Oct 09, 2022

Assignment 6: Set Up a New User and a Shared Group, due Oct 16, 2022

Assignment 7: Install New Software, due Oct 23, 2022

Assignment 8: IP Subnet Math, due Oct 30, 2022

Assignment 9: Create a *chroot*, due Nov 13, 2022

Project (25% of final grade): Install, Setup, and Configure WordPress, due 12/07

### **Course Activities and Exams**

This course is taught as a face to face course and as a flipped classroom. This means that most weeks will involve a lecture or a demonstration from the instructor delivered via videos and transcripts uploaded to Canvas, and demonstrations from the students. It is expected that students will devote a considerable amount of time to study the materials before each class session. Class time will include lab work.

All assignments are graded as completed (100 points) or incomplete (0 points). If an assignment is submitted and requires additional work, it will be marked as incomplete and the student will have one week to resubmit for a complete. The final grade is calculated based on the proportion of completed work and weighted per assignment type. Due date extensions are negotiable upon request.

The grading process described above pertains to all three assignment types. These include discussion assignments, major assignments, and the final project. However, since the final project is due near the last day of classes, the project must be submitted on time. Assignments account for 75% of the final grade; and the final project accounts for 25% of the final grade.

### **Grading Scale**

90 - 100% = A

80 - 89% = B

70 - 79% = C

60 - 69% = D

Below 60% = E

### **Midterm Grades**

For undergraduates, midterm grades will be posted in myUK by the deadline established by the University Senate and published in the [Academic Calendar](http://www.uky.edu/registrar/content/academic-calendar). (<http://www.uky.edu/registrar/content/academic-calendar>)

### ***Attendance Policy/Acceptable Documentation***

Since this course is taught as a flipped classroom, students may elect not to attend class sessions. However, classroom attendance is suggested if students require additional help or would like to watch additional demonstrations.

### **Assignment Policies**

#### ***Assignment Submissions***

Students will submit assignments via Canvas, via appointment on Zoom, or in class, depending on the assignment description and software requirements.

#### ***Late Assignments***

Late assignments are accepted. If an assignment is not submitted due to an unexcused absence, students must reach out to the instructor within one week after the due date to discuss submission times. Until submitted, all work will be marked as incomplete. No work will be accepted after the last day of classes, which is 12/07.

#### ***Assignments Due during Prep Week***

The Final Project is due on December 7, which is during Prep Week.

### **Academic Policy Statements**

Please review the Senate's [Academic Policy Statements](#).

### **Academic Offenses (Cheating, Plagiarism, and Falsification or Misuse of Academic Records)**

Please review the [Rules Regarding Academic Offenses](#).

### **Resources**

Please see UK's [Distance Learning Library Services](#), [Tutoring and Coaching Resources](#), proctoring information, etc.

### **Diversity, Equity, and Inclusion**

This course and instructor honor the University's statement on diversity, equity, and inclusion. To read this statement, see [Syllabus Statement on Diversity, Equity, and Inclusion \(DEI\)](#).

### **Other Student Resources**

*The University offers a variety of resources to students. Visit the University Senate's [Resources Available to Students](#).*