

Lassen Community College Course Outline

CS 153 System Administration and IT Infrastructure Services 0.0 units

I. Catalog Description

This is the fourth of five courses that aims to prepare students for a role as an entry-level IT Support Professional. Once all five courses are completed students will be eligible for the IT Support Professional Certificate. In this course, students learn about the infrastructure services that keep all organizations, big and small, up and running. Students will focus on cloud to understand everything from typical cloud infrastructure setups to how to manage cloud resources. Students also learn how to manage and configure servers and how to use industry tools to manage computers, user information, and user productivity. Finally, students will learn how to recover your organization's IT infrastructure in the event of a disaster. This course covers a wide variety of IT topics and can be taken as a standalone course and will give students entry level IT skills in Directory Services, Backup and Lightweight Directory Access Protocol (LDAP). This course has been approved for online and hybrid delivery.

Prerequisite(s): None

Transferable: Not transferable

30 hours lecture

Scheduled: Fall & Spring

II. Coding Information

Repeatability: Not Repeatable, Take 1 Time

Grading Option: Pass/No Pass

Credit Type: Non Credit

TOP Code: 070100

III. Course Objectives

A. Course Student Learning Outcomes

Upon completion of this course the student will be able to:

1. Demonstrate knowledge of different directory services and how a centralized system admin can support different parts of IT Infrastructure
2. Apply the concepts of system administration to real life scenarios
3. Identify appropriate methods of system recovery and back-up

B. Course Objectives

Upon completion of this course the student will be able to:

1. Utilize best practices for choosing hardware, vendors, and services for your organization.
2. Manage an organization's computers and users using the directory services, Active Directory, and OpenLDAP
4. Choose and manage the tools that your organization will use
5. Backup your organization's data and be able to recover your IT infrastructure in the case of a disaster.
6. Utilize systems administration knowledge to plan improve processes for IT environments.

IV. Course Content

- A. What is System Administration
- B. Network and Infrastructure Services
- C. Software and Platform Services
- D. Directory Service
- E. Data Recovery and Backups

V. Assignments

A. Appropriate Readings

- 1. IT Infrastructure articles
- 2. IT networking blogs
- 3. History of Computers/IT online readings
- 4. Networking support Journals and articles

B. Writing Assignments

Research three fictitious companies and provide recommendations and advice about how to support their IT infrastructure.

C. Quizzes

Weekly online quizzes

D. Virtual labs

Qwiklabs activities to simulate hands on data recovery, backup and user generation.

VI. Methods of Evaluation

Traditional Classroom Evaluation

Homework (analysis of current economic problems), classroom discussion, essay, journals, and multiple choice problems.

Hybrid Evaluation

All quizzes and exams will be administered during the in person class time. Students will be expected to complete online assignments and activities equivalent to in class assignments and activities for the online portion of the course. Electronic communication, both synchronous and asynchronous will be evaluated for participation and to maintain effective communication between instructor and students.

Online Evaluation

A variety of methods will be used, such as: research papers, asynchronous and synchronous (chat/forum) discussions, online quizzes and exams, posting to online website and email communications using the districts approved learning management system.

VII. Methods of Delivery

Check those delivery methods for which, this course has been separately approved by the Curriculum/Academic Standards Committee.

Traditional Classroom Delivery

Correspondence Delivery

Hybrid Delivery

Online Delivery

Traditional Classroom Delivery

Lecture, discussion, audio/visual aids, demonstration, group exercises, guest speakers, lab, individualized programs and other as needed.

Hybrid Delivery

A combination of traditional classroom and online instruction will be utilized. Each semester a minimum of 17 hours, or 1/3 of the lecture hours, will be taught face-to face by the instructor and the remaining hours will be instructed online through the technology platform adopted by the District. Traditional class instruction will consist of exercises/assignments, lectures, visual aids, and practice exercises. Online delivery will consist of exercises/assignments, lecture posts, discussions, adding extra resources and other media sources as appropriate.

Online Delivery

A variety of methods will be used, such as: research papers, asynchronous and synchronous (chat/forum) discussions, online quizzes and exams, posting to online website and email communications using the districts approved learning management system.

VIII. Representative Texts and Supplies

All course materials, including readings and texts are available through Coursera

IX. Discipline/s Assignment

Computer Science, Computer Information Systems

X. Course Status

Current Status: Active

Original Approval Date: 12/01/2020

Course Originator: Melinda Duerksen

Board Approval: 12/15/2020

Chancellor's Office Approval: 01/21/2021

Revised by: Melinda Duerksen

Curriculum/Academic Standards Committee Revision Date: 10/03/2023