CSIS-581: OS INSTALLATION AND CONFIGURATION

Effective Term
Fall 2026

BOT Approval Date
05/15/2025

Discipline
CSIS - Computer Sci/Info Systems
Course Number
581

Course Title
OS Installation and Configuration

Short Title
OS Installation

Credit Status (CB 04)
D - Credit - Degree applicable

Units

Lecture Units
3.00

Total Units
3.00

Hours

Lecture Contact Hours
48-54
Out of Class Hours Lecture
96-108

Total Contact Hours
48 - 54

Total Out of Class Hours
96 - 108

Total Student Learning Hours
144 - 162

Distance Education
Yes

Distance Education

Distance Education Type
Both Fully Online and Hybrid Online

Fully Online Delivery Requirements:
a. Students must be notified via the college schedule of classes and the syllabus for the class if proctored tests are required for this course
b. Any planned face-to-face meetings, such as an orientation or study session, must be optional

c. The MSJC curriculum committee requires the use of accessible, asynchronous discussion as a component of every fully online course

Are you using publisher content?

No

Regular Substantive Interaction

Instructor-to-student, student-to-student, and student-to-content contact shall be distributed in a manner that will ensure regular substantive interaction (RSI) is maintained not only weekly but also for the duration of the course. Instructor interactions should be equivalent in time, quality and consistency to the engagement students would receive in a face-to-face course—for example, through announcements, discussion participation, personalized feedback, video messages, or other instructional communications. Instructors are expected to be responsive to student inquiries within a 24-72 hour time frame excluding holidays. RSI will be maintained through a variety of methods: • Orientation - Students must be oriented to the online and face-to-face portions at the start of the course. • Announcements - Announcements using the course management system must be posted at least weekly to keep students current on course events, due dates, materials, etc. • Discussion Forums - Content-related discussion forums within the designated CMS will include appropriate instructor participation and will be initiated and maintained, with timely feedback provided. Instructors are required to monitor the discussions and related activities to provide guidance and direction. Open-ended discussion boards may be used to further learning and interaction. • MSJC Communication – Instructor will use MSJC-administered communication tools (such as email or the designated CMS communication tools) to regularly communicate with and provide ease of access to students. • Timely Feedback - Timely feedback on student work will be provided by the instructor, which may include comments and/or rubrics, within the Grades area of the designated CMS. • Scheduled Meetings – Hybrid and synchronous courses will meet at regularly scheduled times. ADA Compliance - All course interactions and content must be designed with accessibility in mind and meet ADA requirements.

Catalog Description

This course is designed to prepare students to pass the Comptia A+ Operating Systems Installation and Configuration exam. Topics include installation and configuration of various operating systems, common features and functionality of the Mac and Linux operating systems, Identification of common security threats and vulnerabilities along with common security prevention methods.

Codes

TOP Code (CB 03)

0708.00* - *Computer Infrastructure and Support

CIP Code

15.1203 - Computer Hardware Technology/Technician.

Repeatability Code

No

Grading Option

Letter grade OR P/NP

Minimum Qualifications

Minimum Qualifications	And/Or
Computer Information Systems	End

Learning Objectives

Learning Objectives

Learning Objective
1. Compare and contrast various features and requirements of Microsoft Operating Systems.
2. Prepare common preventive maintenance procedures using the appropriate Windows OS tools.
3. Appraise common features and functionality of the Mac OS and Linux operating systems.
4. Analyze the properties and purpose of services provided by networked hosts.
5. Compare and contrast basic features of mobile operating systems.
6. Assemble and configure basic mobile device network connectivity and email.
7. Analyze methods and data related to mobile device synchronization.

8. Appraise common security threats and vulnerabilities.
9. Compare and contrast common security prevention methods.
10. Analyze and troubleshoot common PC operating system problems with appropriate tools.
11.Evaluate the impact of inclusive design principles in operating system development by analyzing accessibility features in Windows 11

Learning Outcome Information

Course Learning Outcomes

Learning Outcome
1. The student will compare and contrast various features and requirements of Microsoft Operating Systems.
2. The student will identify common features and functionality of the Mac OS and Linux operating systems.
3. The student will Identify common security threats and vulnerabilities.
4. The student will demonstrate the ability to troubleshoot PC operating system problems with appropriate tools.

Content

Course Lecture Content

1. Technician Essentials and Computer / Device Anatomy
   a. The Essential Parts of Any Computer or Mobile Device
   b. Hardware, software, firmware
   c. Troubleshooting theory
   d. Technician tools and equipment
2. Windows Operating Systems
   a. Features and Installation
   b. Differentiate between Windows versions
   c. Boot methods
   d. Installation types
   e. Partitioning methods
   f. Windows File Systems
3. Configuring Windows
   a. During / After Installation
   b. Using Factory Recovery
   c. Partition
   d. Refresh and reset Windows
   e. Characteristics of a properly formatted boot drive
4. Managing Microsoft Windows
   a. Command Line Tools
   b. Microsoft Administrative Tools
   c. Task Manager
   d. Disk Management
   e. Storage Spaces
   f. Windows Upgrade Tools
   g. System Utilities
   h. Control Panel Utilities
5. Networking
   a. Microsoft
   b. Windows Homegroup vs. Workgroup
   c. Domain setup
   d. Network Shares
   e. Administrative shares
   f. Printer sharing vs. network printer mapping
   g. Establish networking connections
6. Proxy settings

   a. Remote desktop connection and remote assistant
   b. Home, work, and public networks
   c. Firewall settings
   d. Configuring an alternative IP Network card properties
7. Operational Procedures
   a. Using appropriate safety procedures
   b. Applying environmental controls
   c. Addressing prohibited content or activity
   d. Licensing DRM / EULA
   e. Personally identifiable information
   f. Corporate end user policies and security best practices
   g. Communications methods and professionalism
8. OSX and Linux
   a. Best Practices
   b. Tools
   c. Features
   d. Basic Linux commands
9. Virtualization, Cloud Computing, and Network Services
   a. Client server virtualization overview
   b. Basic cloud concepts
   c. Properties and purposes of networking services
   d. Internet appliances
   e. Legacy and embedded systems
10. Mobile Operating Systems and Devices
   a. Android, IOS, Windows Features Compared
   b. Mobile device connectivity
   c. Email Configuration
   d. PRI updates / PRL updates / Baseband updates
11. Radio Firmware
   a. IMEI vs. IMSI
   b. VPN
   c. Data Synchronization
12. Security
   a. Common security threats and vulnerabilities
   b. Common prevention methods
   c. Windows basic security settings
   d. Best security practices for workstations
   e. Securing mobile devices
   f. Data destruction and disposal methods
   g. SOHO network security
13. Troubleshooting Desktop and Mobile Operating Systems
   a. Common symptoms
   b. Tools for troubleshooting software
   c. Troubleshooting mobile OS and application issues
   d. Mobile devices and applications security issues
   e. Troubleshooting PC security issues
14. Inclusive Design Approaches for OS
   a. Principles of Inclusive Design
   b. Configuring Operating Systems for Accessibility
   c. Troubleshooting and Managing Inclusive OS Features

Methods of Instruction

Method

Discussion

Integration

Weekly discussions will serve as a platform for students to compare and contrast the implementation of various Microsoft Operating System features, analyze Mac OS and Linux functionalities, identify common security threats and vulnerabilities, and demonstrate troubleshooting skills for PC operating system issues using appropriate tools.

Students will engage in:

Debates on OS features – Evaluating system performance, usability, and security differences across operating systems.
Collaborative problem-solving – Sharing troubleshooting strategies and best practices for common OS-related issues.
Case study analysis – Examining real-world security vulnerabilities and their impact on different OS environments.
DEI discussions – Reflecting on the accessibility of operating systems and the role of inclusive design in usability for diverse user groups

DE Adaptations for MOI

Discussions will be conducted through the discussion tool within the course management system (CMS) to ensure asynchronous participation and accessibility.

Threaded Discussion Forums – Organized by weekly topics, allowing structured engagement.
Screen Reader Compatibility & Adjustable Text Options – Ensuring accessibility for all students.
Embedded Media Responses – Students can submit text, audio, or video-based discussion responses.
Small Group Breakout Discussions – Using CMS group collaboration tools for in-depth analysis.
Optional Voice or Video-Based Responses – Students can engage via audio/video recordings using CMS-integrated tools.
Interactive Polls & Surveys – Encouraging student feedback on OS security risks and usability features.

Method

Lecture

Integration

Lectures, supported by visual materials such as presentations and multimedia content, will introduce both conceptual and practical skills, including:

Comparison of Microsoft Operating System features and requirements.
Identification of common features and functionalities of Mac OS and Linux operating systems.
Analysis of security threats and vulnerabilities affecting different operating systems.
Demonstration of troubleshooting techniques for PC operating system issues using appropriate tools.
Lectures will provide a structured framework for students to engage with key operating system concepts, analyze real-world scenarios, and apply best practices for system security and troubleshooting..

DE Adaptations for MOI

The course management system (CMS) will serve as a centralized platform for delivering lecture content in multiple formats to ensure accessibility and inclusivity:

Pre-recorded lectures – Available for on-demand access, featuring closed captions (CC) and downloadable transcripts to accommodate diverse learning needs.
Slide-based presentations with narration – PowerPoint or PDF presentations embedded within the CMS with audio explanations and text alternatives.
Supplementary reading materials – Lecture notes, OS documentation, and research articles will be available in CMS content modules.
Video lectures with interactive elements – Segmented videos with knowledge checks, quizzes, or discussion prompts to reinforce key concepts.
Text-based lecture summaries – Condensed wiki pages or blogs within the CMS summarizing core topics for quick reference.
Optional virtual office hours – Scheduled Q&A sessions via CMS chat or discussion boards, allowing students to seek clarification asynchronously.

Method

Observation and Demonstration

Integration

Observation and demonstration will reinforce lecture principles and reading assignments by focusing on fundamental concepts and their practical applications in solving problems and completing homework assignments. Guided practice will cover comparing and contrasting the implementation of various Microsoft Operating System features and requirements, identifying common features and functionalities of Mac OS and Linux, recognizing security threats and vulnerabilities across different operating systems, and demonstrating troubleshooting methods using appropriate OS tools.Students will examine how Windows 11 integrates user feedback to enhance accessibility, exploring features such as high-contrast themes, redesigned sound configurations, and the renaming of "Ease of Access" to "Accessibility". Through guided demonstrations, they will evaluate the effectiveness of these features for users with disabilities and compare them with accessibility options available in Mac OS and Linux. Observing real-world applications of OS installation, configuration, and troubleshooting, students will assess how different operating systems support users with diverse needs and how inclusive design impacts usability and security.Following demonstrations, hands-on exercises will require students to apply accessibility configurations, troubleshoot issues related to usability, and propose improvements to enhance inclusivity in OS environments. This approach ensures that students not only develop technical expertise in operating system management but also gain a deeper understanding of how inclusivity and accessibility shape user experiences across different platforms

DE Adaptations for MOI

Observation and demonstrations will be delivered through multiple interactive and multimedia formats within the course management system (CMS) to ensure accessibility and engagement:

Closed-captioned instructional videos – Step-by-step demonstrations of OS configurations and troubleshooting procedures, ensuring accessibility for all students.
Web-based interactive tutorials – Self-paced modules guiding students through OS installations, security configurations, and troubleshooting steps.
Interactive software simulations – Hosted within the CMS to provide hands-on practice in real-time virtual environments for installing and configuring different operating systems.
Live or recorded screen-sharing sessions – Video demonstrations showing system configurations, security settings, and real-time troubleshooting.
Virtual troubleshooting labs – Simulated problem-solving scenarios where students analyze issues and apply solutions based on observed demonstrations.
Collaborative wikis or knowledge-sharing forums – Students document and discuss key takeaways from demonstrations, reinforcing learning through peer collaboration.

Methods of Evaluation

Method

Exams/Tests

Integration

Weekly exams will assess students' mastery of operating system concepts, including:

The use and implementation of various features and requirements of Microsoft Operating Systems.
Identifying common features and functionalities of Mac OS and Linux operating systems.
Recognizing common security threats and vulnerabilities in operating systems.
Demonstrating the ability to troubleshoot PC operating system problems using appropriate tools.
Evaluation Criteria:

Multiple-choice and true/false questions will be evaluated based on correct answer selection.
Short-answer questions will be assessed based on accuracy, clarity, and application of course concepts.
DEI considerations: Students will analyze how OS design and security features impact diverse user needs, particularly in accessibility and inclusive technology development.

DE Adaptations for MOE

Submission: Exams will be administered through the course management system (CMS) and will consist of:
Multiple-choice and true/false questions for automated assessment.
Short-answer questions requiring in-depth responses.
Evaluation:
Objective questions (multiple-choice, true/false) will be automatically graded within the CMS, providing immediate feedback.
Short-answer responses will be individually reviewed and evaluated within 48 hours, with feedback highlighting accuracy, reasoning, and application of inclusive technology principles.
Reinforcement of Learning:

Exam results and feedback will be accessible through the CMS to support continuous improvement.
Additional instructor clarification will be available through CMS discussion boards or Q&A forums for students who need further explanation.
Optional DEI reflection questions may be included to encourage students to think critically about how OS accessibility features impact different user demographics.

Method

Homework

Integration

Weekly assignments will provide students with opportunities to apply theoretical concepts to real-world operating system configurations and troubleshooting scenarios, ensuring they gain both technical proficiency and a deeper understanding of accessibility in OS environments. Assignments will focus on implementing various features and requirements of Microsoft Operating Systems, identifying common functionalities of Mac OS and Linux, recognizing security threats and vulnerabilities across different platforms, and demonstrating troubleshooting techniques using appropriate OS tools.students will analyze Windows 11's inclusive design features they will evaluate the accessibility features of various operating systems, including high-contrast themes, sound configurations, and user interface modifications designed for individuals with disabilities. Assignments will also include reflection components, prompting students to explore how inclusive design impacts usability, security, and system performance across diverse user demographics.

DE Adaptations for MOE

Submission: Assignments will be submitted through the assignment in the course management system (CMS) to ensure accessibility and consistency.
Evaluation:
Technical assignments will be assessed based on accuracy, adherence to procedures, and implementation of security best practices.

Reflection-based assignments will be assessed on depth of analysis regarding diversity, equity, and inclusion (DEI) considerations in OS design and security.
Instructor Feedback:
Detailed feedback will be provided through the CMS grading tool within one week of the submission deadline.
Strengths and areas for improvement will be highlighted, particularly in technical execution, safety measures, and inclusivity considerations.
Alternative Submission Methods:
Depending on the assignment type, students may also submit their work using:
Discussion boards – For peer feedback on OS troubleshooting strategies.
Blogs – For reflective assignments discussing accessibility and DEI in OS design.
Wiki tools – For collaborative research on security threats and mitigation strategies.

Assignments

Assignment Type

Reading

In-class and/or outside of class

Outside of class

Formative or Summative

Summative

Assignment

Background:
Windows 11, the latest version of Microsoft's operating system, incorporates significant input from users with disabilities. Features such as redesigned high-contrast themes and new sound configurations demonstrate efforts to make the OS more inclusive. This assignment explores how inclusive design principles impact accessibility in technology and evaluates the role of user feedback in shaping a more accessible operating system.

Assignment Overview:

In this project, you will analyze the inclusive design approach taken in Windows 11 to enhance accessibility. You will examine the effectiveness of specific accessibility features, reflect on the benefits and challenges of integrating user feedback in design processes, and propose further improvements to ensure technology is accessible to diverse user groups.

Tasks:

Part 1: Understanding Inclusive Design
Analyze the Inclusive Design Approach: Research the inclusive design principles applied in Windows 11 and discuss their significance in enhancing accessibility.
Investigate features like high-contrast themes, reimagined sound configurations, and the renaming of “Ease of Access” to “Accessibility.”
Explain why these changes were necessary and how feedback from people with disabilities informed the design choices.
Part 2: Usability Evaluation
Evaluate an Accessibility Feature: Select one Windows 11 accessibility feature (e.g., redesigned high-contrast themes or new sound configurations) and analyze its impact.
Assess how well the feature supports users with specific disabilities, such as visual impairments or hearing challenges.
Identify limitations or areas for further enhancement, using specific examples.
Part 3: Implications for Diversity and Inclusion
Reflect on Feedback Integration: Discuss how incorporating feedback from users with disabilities during the design phase can lead to more inclusive technology.
Consider the broader implications of co-creating technology with diverse user groups.
Address the challenges and benefits of integrating user feedback in the development of accessible software.
Part 4: Propose Inclusive Enhancements
Recommend Accessibility Improvements: Suggest at least two additional accessibility features for Windows 11 or another operating system.
Examples could include voice-controlled navigation, gesture-based accessibility options, or multi-language support tools.
Justify your recommendations by discussing how they would further promote inclusivity and support a diverse range of user needs.

Reading:
“Making Windows 11 the most inclusively designed version of Windows yet” by Carolina Hernandez

Grading and Feedback:
The evaluation will focus on the technical completeness and correctness of the proposed accessibility solutions, ensuring that recommendations are well-justified and address diverse user needs. The quality of the written analysis will be assessed for comprehensiveness, structure, and thorough documentation, with a clear, well-organized approach that covers all required aspects. Engagement in online discussions will be evaluated based on the clarity of initial posts, constructive peer responses, and the integration of diverse perspectives. Objectivity and inclusivity will be considered, ensuring the analysis recognizes and promotes accessibility for various user groups. Timeliness will also be assessed, with feedback provided objectively by finals week.

How assignment will be adapted in online format

The assignment will be conducted through the course management system (CMS) as an online discussion. Students will submit their written responses to each part of the assignment as initial posts and engage in peer discussions by responding to at least two classmates' posts. The reading will be available via the CMS, and students will receive feedback on their work within one week, addressing the quality of their analysis, reflection, and proposed solutions. The instructor will evaluate both the initial submissions and peer interactions, ensuring constructive and timely feedback to facilitate learning.

Assignment Type

Writing

In-class and/or outside of class

In-class
Outside of class

Formative or Summative

Formative

Assignment

Background:

Throughout this course, you will engage in hands-on lab activities to build practical skills and reinforce key concepts in identifying and troubleshooting performance bottlenecks in computer systems. This lab focuses on using performance monitoring tools to identify potential hard drive bottlenecks.

Assignment Overview:
In this lab, you will assume the role of a technician troubleshooting a computer's performance issues. You will use Windows Performance Monitor and Task Manager to monitor hard drive activity, analyze system performance, and investigate potential causes of a bottleneck.

Tasks:
Monitor Hard Drive Performance Using Performance Monitor:
Open Performance Monitor and configure it to display two counters related to the hard drive: % Disk Time and Avg. Disk Queue Length.
Observe the activity of these counters while performing tasks such as browsing the web or playing a game.
Record the maximum values for both counters.
Identify Resource-Intensive Processes Using Task Manager:
Open Task Manager and sort processes by disk usage.
Identify processes with high disk activity and classify which belong to Windows and which are third-party applications.
Evaluate Hard Drive Space and Configuration:
Check the total size and free space of the hard drive.
Determine whether Windows is configured to automatically defragment or optimize the drive and note the schedule.
Investigate Hard Drive Specifications:

Use Device Manager to identify the brand and model of the hard drive.
Research whether the drive is a solid-state drive (SSD) or a magnetic drive and determine its RPM rating if applicable.
Write a One-Page Report:
Summarize your findings from the lab, including observations on hard drive performance, identification of resource-intensive processes, and evaluation of disk space and configuration.
Discuss the potential causes of a hard drive bottleneck based on your findings and suggest possible solutions for improving performance.
Use online resources to support your recommendations and include any relevant references.

Grading and Feedback:
Evaluate the accuracy and thoroughness of the lab activities, including correct identification of performance issues and use of monitoring tools. Assess the clarity and depth of the one-page report, ensuring it is well-structured, concise, and effectively summarizes findings and recommendations. For lab-related discussions, evaluate participation, engagement, and contributions to troubleshooting. Provide objective feedback that considers diverse perspectives and varying levels of technical experience. Feedback will be given within one week of submission, with final grading completed by the end of the course.

How assignment will be adapted in online format

This course will integrate lab activities, performance analysis tasks, and written reports within the online learning environment. You will access lab instructions and submit your completed results and one-page report electronically through the course management system (CMS). Lab submissions will be uploaded as text or PDF files. Simulations and interactive tutorials will support hands-on activities related to the lab tasks, while discussion forums will facilitate collaboration and troubleshooting. Instructors will provide feedback through the CMS within one week, focusing on lab accuracy and report quality. Virtual office hours will ensure additional guidance is available when needed.

Assignment Type

Writing

In-class and/or outside of class

In-class
Outside of class

Formative or Summative

Summative

Assignment

Complete a final project that demonstrates your understanding of monitoring security events and implementing security policies. The project will involve designing and configuring an event monitoring system using Local Security Policy and Event Viewer. This project should simulate a real-world scenario where a medium-sized organization requires the detection of unauthorized access attempts and changes to sensitive files.

Example Final Project:
Design and implement a monitoring system to track unauthorized sign-in attempts and changes to a specific set of files within a network. The project will include:
Configuring auditing policies to monitor failed sign-in attempts, password changes, and access to sensitive folders.
Setting up a standard user account and configuring security auditing for specific events.
Monitoring and analyzing logged events in the Event Viewer, including user activities and file access events.
Documenting the rationale for auditing policy choices, setup procedures, and providing a user guide for system configuration and event analysis.

Grading and Feedback:
Evaluate the technical completeness of the security configurations and auditing policies. Assess the quality of documentation, ensuring that the project report is well-structured, clear, and explains the choices made during the configuration. If a presentation is required, assess the clarity, confidence, and ability to answer questions about the project. Provide timely and detailed feedback through the course management system within one week of the submission deadline.

How assignment will be adapted in online format

The final project will be submitted through the course management system, along with any supporting documentation and files. Instructors will provide feedback and guidance throughout the project development process. Students will receive a comprehensive evaluation of their final submission, with feedback addressing both technical configurations and documentation quality. Final feedback will be delivered through the CMS within one week of the project submission, ensuring students receive timely and detailed insights into their performance.

Course Materials

Textbooks

CompTIA A+ Guide to Information Technology Technical Support, Loose-leaf Version | 11th Edition(2025)
Jean Andrews/Joy Dark Shelton/Nicholas Pierce

Class Size Information

Class Size

35

Class Size Category

B - Facilitated learning 35

Diversity and Inclusion

Course Design and Materials: Course will incorporate diverse perspectives, authors, and examples that reflect a variety of cultures, identities, and lived experiences. Instructional materials will be reviewed regularly to ensure representation, inclusivity, and alignment with equity-minded practices across disciplines.

Inclusive Learning Environment: Instructors will establish classroom norms and policies that promote respect, civil discourse, and belonging in both online and face-to-face classes. Clear expectations for communication and engagement will support a learning space where all students feel valued and heard.

Accessible Instruction: Course content will be delivered using accessible design. Materials will follow accessibility guidelines within the CMS, including captioned media, readable document formats, and multiple means of engagement to support diverse learning.

Equitable Teaching Practices: Instructors will use transparent and grading criteria, varied assessment methods, and timely feedback to promote fairness and student success. Opportunities for revision, reflection, and multiple demonstrations of learning may be incorporated when appropriate to the discipline.

Culturally Responsive Pedagogies: Instructional strategies will encourage critical thinking about diverse perspectives and systems of power relevant to the course content. Faculty will foster opportunities for students to connect course material to real-world contexts.

Ongoing Reflection and Improvement: Faculty will engage in continuous professional development related to IDEAA principles and reflect on course practices using metacognition to identify opportunities for increased equity, inclusion, and accessibility.

Explain how diversity and inclusion(e.g., gender, culture/race, sexuality, etc.) is infused into the course.

Diversity and inclusion are fundamental to the Operating Systems course, ensuring that students develop a strong technical understanding of system accessibility, usability, and inclusive design principles. Through a curriculum that highlights the importance of accessibility in operating system development, students will analyze how Windows 11 incorporates inclusive design features, such as high-contrast themes, redesigned sound configurations, and user-friendly accessibility settings. By studying real-world applications of inclusive design, students will gain a deeper awareness of how operating system development impacts diverse user groups, including individuals with disabilities.The course integrates structured assignments, research-based analysis, and usability testing exercises, ensuring that students develop both technical expertise and an understanding of the role of accessibility in OS design. In the Inclusive Design Approaches for OS project, students will critically evaluate Windows 11's accessibility features, assess their effectiveness for different disabilities, and propose enhancements to improve inclusivity in operating system environments. These assignments align with the course objectives, which include evaluating the impact of inclusive design principles, configuring operating systems for accessibility, and troubleshooting accessibility features in real-world environments.

Describe how assignments, instruction, evaluation, course content, and interactions are contextualized for diverse learners promoting an equitable course.

Representation in course materials: The course content will be thoughtfully curated to ensure representation of diverse individuals and groups. Case studies, examples, and images featured in the course materials will highlight the contributions and experiences of people from various cultural, ethnic, and socio-economic backgrounds in the field of operating systems. This approach aims to promote inclusivity and ensure that all students feel acknowledged and able to relate to the material, fostering a sense of belonging in the classroom. For example, the course content includes the following selections:
#Principles of Inclusive Design
#Configuring Operating Systems for Accessibility
#Troubleshooting and Managing Inclusive OS Features

Real-world scenarios: The assignments and projects within the course will emphasize real-world scenarios that involve diverse populations and contexts in the realm of OS installation and configuration. This approach enables students to understand the importance of considering diversity and inclusion when setting up and managing operating systems in various environments, such as workplaces, educational institutions, and public facilities.

Addressing bias and stereotypes: The course will discuss potential biases and stereotypes that may exist within the field of OS installation and system configuration, with a focus on how they manifest in software design, default settings, and accessibility options. By acknowledging these issues, students can become more aware of their own biases and work towards creating a more inclusive and equitable environment in their professional practice.

Encouraging diverse perspectives: Group discussions, collaborative projects, and peer evaluations will be structured to encourage the sharing of diverse perspectives and experiences within the realm of operating systems. This approach promotes open-mindedness, empathy, and a greater understanding of the importance of diversity and inclusion in software configuration, user experience, and systems administration.

Cultivating an inclusive learning environment: The instructor will establish a safe and supportive learning environment where students feel comfortable expressing their thoughts and ideas without fear of judgment or discrimination in the realm of OS installation and configuration. This includes setting clear expectations for respectful communication, providing opportunities for anonymous feedback, and actively addressing any incidents of discrimination or bias that may arise during the course of study.

Interactions

Explain how the course will incorporate student-to-student interaction.

Collaborative Projects: Collaborative projects, such as the lab activity on troubleshooting performance bottlenecks, will encourage students to work in groups, promoting teamwork and problem-solving throughout the course. This approach aligns with the MOI of Observation and Demonstration, as students will learn from each other's techniques while engaging in practical tasks like monitoring system performance. The MOE of Discussion / Guided Practice ensures that evaluations will consider both individual contributions and the quality of group interaction, supporting skill development through peer feedback and shared insights.
Interactive Classroom Sessions: During lectures, students will participate in small-group activities and discussions that create space for collaboration and real-time engagement. This approach supports the MOI of Lecture by incorporating interactive segments into content delivery, allowing students to apply concepts immediately. The MOE of Discussion / Guided Practice is relevant as

participation in these sessions will be assessed, emphasizing the importance of active engagement with peers in understanding course material. For instance, discussions around accessibility features in Windows 11 will prompt students to analyze design principles collaboratively.
Online Discussion Platforms: The course will use a "Student Lounge" within the CMS as a space for informal discussions, complementing instructor-led forums. This approach supports the MOI of Discussion by encouraging students to engage in dialogues beyond structured assignments, enriching the learning experience through peer-to-peer interactions. The MOE of Discussion / Guided Practice will evaluate students' engagement based on their initial posts and responses to classmates, particularly in assignments like the analysis of Windows 11's inclusive design, where diverse perspectives can deepen understanding.

Explain how the course will incorporate instructor-to-student interaction.

Course Introduction Package: The personalized welcome package, including a letter and orientation video, will introduce course goals and navigation tips, aligning with the MOI of Lecture by providing a structured start to the course. The MOE of Homework applies here as students will be expected to review these materials independently, laying the groundwork for future assignments, such as the final project on monitoring security events, by setting expectations and providing resources upfront.
Weekly Updates: Weekly announcements through the CMS will highlight key topics, deadlines, and upcoming assessments, reinforcing the MOI of Lecture by keeping students informed about their learning journey. The MOE of Exams/Tests connects here as these updates will guide students in preparing for assessments, such as midterm exams administered via the CMS, helping to ensure they are aware of the criteria and areas of focus.
Interactive Discussion Platforms: Discussion boards linked to each course unit will offer a venue for students to ask questions and seek clarification on challenging content, supporting the MOI of Discussion by creating an interactive environment. The MOE of Discussion / Guided Practice will be applied as the instructor participates, offering feedback that helps students refine their understanding, particularly for tasks like evaluating accessibility features in Windows 11, where guided feedback is crucial for deeper analysis.
Accessible Support Channels: Office hours and email communication will provide accessible channels for direct instructor support, aligning with the MOI of Observation and Demonstration as the instructor can offer personalized assistance and demonstrate solutions to specific issues. The MOE of Homework is relevant in these instances, as students may seek clarifications on assignments such as the final project, where guidance on configurations and documentation can significantly enhance their work.

Explain how the course will incorporate student-to-content interaction.

Interactive Lecture Sessions: Lectures will include interactive segments, such as "test your knowledge" quizzes, to engage students actively with the content. This aligns with the MOI of Lecture, as it integrates immediate application of concepts. The MOE of Exams/Tests applies here since these activities prepare students for formal assessments by allowing them to assess their understanding in real-time, especially important for assignments like the performance bottleneck troubleshooting lab.
Educational Video Clips: Video clips that reinforce key concepts will be provided to complement lectures, fitting the MOI of Observation and Demonstration as they offer visual explanations that support diverse learning needs. The MOE of Homework applies because students will use these videos to better understand topics covered in assignments, such as the inclusive design analysis, which will require a solid grasp of principles introduced through multimedia content.
Application Exercises and Practice Materials: Practice exercises, such as problem sets and mock exams, will allow students to engage with course material in a hands-on manner, supporting the MOI of Lecture by providing opportunities to apply theoretical concepts. The MOE of Exams/Tests connects here as these resources will prepare students for graded assessments, such as the final project on security event monitoring, by offering practical experience and reinforcing learned skills.

Explain how the course will incorporate student-to-self interaction (metacognitive).

Reflective Self-Evaluation: Regular self-assessment exercises encourage students to reflect on their learning, supporting the MOI of Discussion by fostering an ongoing dialogue with themselves about their progress. The MOE of Homework fits here, as these reflections are treated as assignments that help identify areas for improvement, especially valuable in preparation for projects like troubleshooting bottlenecks, where understanding one's learning process can aid in skill mastery.
Diverse Problem-Solving Approaches: Students will be encouraged to experiment with various strategies to solve problems, aligning with the MOI of Observation and Demonstration by allowing them to see different methods in practice. The MOE of Exams/Tests is applied as this approach enables students to develop adaptive skills that can be assessed in exams or projects like the final monitoring system configuration, where varied approaches may be necessary to tackle different scenarios effectively.

Key: 1091