

SYLLABUS

INFOTECH 125 - Operating System Technologies

Course Description

The course provides an introduction to various operating systems. Topics include memory, utility programs, file systems, storage, upgrades, and partitioning. Emphasis is placed on interpreting operating system faults, troubleshooting, and resolving common operating system problems. 6 units

Prerequisite

INFOTECH 106 Introduction to Information Technology

Student Learning Outcomes

Upon completion of this course, students should be able to:

1. Install appropriate operating systems - including installation of drivers and system patches.
2. Perform system configuration and maintenance tasks on an operating system.
3. Demonstrate appropriate workplace communication skills and professionalism.
4. Describe the structure of various operating systems, including boot process, memory usage, file systems, partitioning, storage, basic network protocols, bundled utility programs, and upgrade options.
5. Troubleshoot common operating system problems.

Instructor Information

Lenny Bailes; Lenny_Bailes@heald.edu; (Lenny.Bailes@sanfrancisco.heald.edu)

April 2011

Office Hours: by appointment

Topics Covered

- Introducing Operating Systems
- Installing Windows
- Jobs, Certification, and Professionalism
- Maintaining Windows
- Command Line Interface
- Optimizing Windows
- Tools for Solving Windows Problems
- Fixing Windows Problems
- Networking
- Security

Textbook(s)**Bundle ISBN: 0-538-46505-0**

This bundle consists of:

Andrews, J. (2010). *A+ Guide to Software: Managing, Maintaining, and Troubleshooting* (5thed.). Boston: Course Technology. ISBN 1-435-48737-0

Note: A supplement to this textbook that covers Windows 7 is currently available for [students of this class](#) to view online:

Simulation Software

Note: Each student should purchase the A+ Transcender exam disks for Exams 220-701 and 220-702. These will be obtained for INFOTECH 115 or INFOTECH 125 - whichever the student takes first.

Transcender – Simulation of the A+ Essentials Exam, Exam # 220-701
Simulation NUMBER: SIM-T-220-701

Transcender – Simulation of the A+ Practical Application Exam, Exam # 220-702
Simulation number: SIM-T-220-702

Optional

A+ Essentials Exam Voucher
Voucher #: JK0-701

A+ Practical Application Exam Voucher
Voucher #: JK0-702

Grading

Exams	50%
Projects and Assignments	40%
Participation	10%

A grade of 90 percent or higher earns an A grade; 80 to 89 percent earns a B grade; 70 to 79 percent earns a C grade; 60 to 69 percent earns a D grade. A minimum grade of C is required in major courses or courses that are prerequisites for advanced courses.

Course at a Glance

Week 1	
Topics	<ul style="list-style-type: none"> Introducing Operating Systems <ul style="list-style-type: none"> Description/history of various operating systems and the differences between them Components of Windows Operating Systems How operating systems interface with users, files, folders, applications, and hardware
Reading Assignments and Homework	<ul style="list-style-type: none"> <i>A+ Guide to Software, 5th Edition</i>, Read Chapter 1 Project #1: Installation of Windows XP (all students perform together) Project #2: Hands-on Projects (HOP) 1-1, (textbook, p.43) Project #3: Installation of Windows 7 Pro (all students perform together) <i>Chapter 1 Reviewing the Basics exercises 2, 4, 6, 13, 22</i> <i>Thinking Critically exercises: 5,</i> Review Chapters 2&3 for Week 2
Week 2	
Topics	<ul style="list-style-type: none"> Installing Windows <ul style="list-style-type: none"> Planning a Windows installation Editions of Windows 7 Windows 7 Action Center Working as a PC Technician <ul style="list-style-type: none"> Job roles and responsibilities of those who sell, fix, or support personal computers Customer wants and expectations Interacting with customers
Reading Assignments and Homework	<ul style="list-style-type: none"> <i>A+ Guide to Software, 5th Edition</i>, Read Chapters 2&3 <i>Windows 7 Supplement</i>, Review Chapter 1, p. 1-19 Real Problems 3-1, 3-2, pp. 132-133 Chapter 2 Reviewing the Basics exercises 1-20, page 70 Chapter 2 Thinking Critically exercises 1 & 2, pages 70-71 Read Chapter 4 for Week 4
Week 3	
Topics	<ul style="list-style-type: none"> Jobs, Certification, and Professionalism <ul style="list-style-type: none"> Job roles and responsibilities of those who sell, fix, or support personal computers Customer wants and expectations Interacting with customers
Reading Assignments and Homework	<ul style="list-style-type: none"> <i>A+ Guide to Software, 5th Edition</i>, Read Chapter 2 <ul style="list-style-type: none"> Chapter 2 Reviewing the Basics exercises 1-20, page 70 Chapter 2 Thinking Critically exercises 1 & 2, pages 70-71 Read Chapter 3 for Week 3

Week 4	
Topics	<ul style="list-style-type: none"> Maintaining Windows <ul style="list-style-type: none"> Setting up and performing preventive maintenance tasks Preparing for disaster with backups of user data and Windows system files Directory structures used by Windows Managing files and folders Windows utilities to manage hard drives Command Line Interface
Reading Assignments and Homework	<ul style="list-style-type: none"> <i>A+ Guide to Software, 5th Edition</i>, Read Chapter 4 <ul style="list-style-type: none"> Chapter 4 Reviewing the Basics exercises 1-33, pages 205-206 Chapter 4 Thinking Critically exercises 1 & 3, page 206 Begin reading Chapter 5 for Week 5
Week 5	
Topics	<ul style="list-style-type: none"> Optimizing Windows <ul style="list-style-type: none"> Windows utilities and tools Optimizing Windows
Reading Assignments and Homework	<ul style="list-style-type: none"> <i>A+ Guide to Software, 5th Edition</i>, Read Chapter 5 <ul style="list-style-type: none"> Chapter 5 Reviewing the Basics exercises 1-30, pages 273-274 Chapter 5 Thinking Critically exercises 2, 3, & 5, pages 274-275 Begin reading Chapter 6 for Week 6
Week 6	
Topics	<ul style="list-style-type: none"> Tools for Solving Windows Problems <ul style="list-style-type: none"> Windows tools to solve problems caused by hardware, faulty applications, and failed Windows components Windows Vista tools that help resolve Vista startup problems Windows 2000/XP tools that help resolve XP or 2000 startup problems Diagnosing/resolving blue screen errors
Reading Assignments and Homework	<ul style="list-style-type: none"> <i>A+ Guide to Software, 5th Edition</i>, Read Chapter 6 <ul style="list-style-type: none"> Chapter 6 Reviewing the Basics exercises 1-33, pages 337-338 Chapter 6 Thinking Critically exercises 1, 2, 4, & 5, page 339 Begin reading Chapter 7 for Week 7

Week 7	
Topics	<ul style="list-style-type: none">• Fixing Windows Problems<ul style="list-style-type: none">• Responding to hardware device, application, or Windows component problems• Windows Vista won't boot or boots with errors• Solving problems with Windows 2000/XP startup
Reading Assignments and Homework	<ul style="list-style-type: none">• <i>A+ Guide to Software, 5th Edition</i>, Read Chapter 7<ul style="list-style-type: none">• Chapter 7 Reviewing the Basics exercises 1-20, pages 376-377• Chapter 7 Thinking Critically exercises 1-5, pages 377-378• Begin reading Chapters 8 and 9 for Week 8
Week 8	
Topics	<ul style="list-style-type: none">• Networking<ul style="list-style-type: none">• Windows protocols and standards• Connecting a computer to a network• Troubleshooting tools and tips• Connecting computers or small networks to the Internet using a broadband, satellite, or dialup connection• Tools and utilities used to troubleshoot problems with network and Internet connections• Troubleshooting connectivity problems with networks and client applications
Reading Assignments and Homework	<ul style="list-style-type: none">• <i>A+ Guide to Software, 5th Edition</i>, Read Chapter 8: pages 382-385, 392-395, 396 (bottom) – 401, 407 (bottom) – 423.<ul style="list-style-type: none">• Chapter 8 Reviewing the Basics exercises 1, 2, 4-9, 16-20, pages 421-422• Chapter 8 Thinking Critically exercises 1, page 422• <i>A+ Guide to Software, 5th Edition</i>, Read Chapter 9: pages 425-446, 461-486.<ul style="list-style-type: none">• Chapter 9 Reviewing the Basics exercises 1-6, 10-30, pages 491-492• Chapter 9 Thinking Critically exercises 1 & 3, pages 492-493• Begin reading Chapter 10 for Week 9

Week 9	
Topics	<ul style="list-style-type: none"> Security <ul style="list-style-type: none"> The importance of complying with established security policies Authenticating and classifying users to control access to your resources and rights Additional methods to protect resources Monitoring and maintaining security measures
Reading Assignments and Homework	<ul style="list-style-type: none"> <i>A+ Guide to Software, 5th Edition</i>, Read Chapter 10: Suggested Emphasis: pages 498 – 506, 510 – 522, and 528 – 537. <ul style="list-style-type: none"> Chapter 10 Reviewing the Basics exercises 1-20, pages 539-540 Chapter 10 Thinking Critically exercises 1 - 3, page 540 <p>Begin reading Chapter 11 for Week 10</p>
Week 10	
Topics	<ul style="list-style-type: none"> Security (continued) <ul style="list-style-type: none"> Protect against and remove malicious software Implement security using Windows BIOS security features
Reading Assignments and Homework	<ul style="list-style-type: none"> <i>A+ Guide to Software, 5th Edition</i>, Read Chapter 11 <ul style="list-style-type: none"> Chapter 11 Reviewing the Basics exercises 1-20, pages 594-595 Chapter 11 Thinking Critically Exercises 1 & 3
Week 11	
Topics	<i>Finals</i>
Reading Assignments	<i>None</i>

Instructor's Biography

Lenny Bailes has been an IT instructor, course designer, and free-lance consultant in the San Francisco Bay Area for 15 years. Before coming to Heald, he designed and taught classes for San Francisco State University's Extension Learning program, the San Francisco Unified School District, and several non-profit post-secondary vocational institutions.

Heald Policy Reminders

Heald College policies can be found in the Heald Academic Catalog. Please review the reminders below and, if needed, refer to the Academic Catalog for complete policy details.

- Attendance**

Policies and standards at Heald College prepare graduates to meet the demands of future employers. Attendance is considered in the evaluation of each student's performance when making recommendations to employers.

Students are required to attend all classes on **required attendance** days and are expected to be ready for class at the scheduled time. Students who are tardy or leave early may miss graded events that will negatively impact their overall course grade.

A record of attending at least 85% of the scheduled class meetings generally supports student success academically and in the work place. Students are encouraged to monitor their attendance by using the following table to maintain at least 85% attendance

Guidelines to Maintain 85% Attendance – Maximum Number of Absences

Number of Class Meetings per week	Quarter Schedule 11 Week Term	Modular Schedule 5/6 week term
1	2	1
2	3	2
3	4	2
4	6	3

Guidelines to Maintain 70% Attendance – Maximum Number of Absences

Number of Class Meetings per week	Quarter Schedule 11 Week Term	Modular Schedule 5/6 week term
1	3	2
2	6	3
3	9	4
4	12	6

Students who exceed the absence limits specified in the 85% attendance guidelines listed above will not be admitted to class without following the procedures indicated in the Heald Academic Catalog.

Heald College has set 70 percent as the minimum attendance standard for a student to continue to be enrolled in a course. Using 70 percent as a guideline, students will be withdrawn from any course when their absences exceed those in the 70% Attendance table.

A student who is absent 14 or more consecutive calendar days in a course will be withdrawn from the course.

- **Makeup Policy**

Each student has the opportunity to make up one missed major in-class graded event. Your instructor will inform you of which graded events fall into this category in this course.

- **Professional Appearance**

At Heald College, student professional appearance standards have been established to be at or above those normally required for employment in business, industry, and healthcare in the area. The dress standard helps prepare a student for the workplace and fosters a professional appearance, which is a positive factor in job placement. The

professional appearance policy is discussed in the enrollment process and is available in the Academic Affairs office.

Instructor's Classroom Policies

- Students should arrive to class ON TIME. Continued lateness to class may affect a student's participation grade.
- Three absences during the quarter will place you AT RISK. Four consecutive absences (two weeks missed) is an automatic DROP
- We will generally have one knowledge assessment assignment and a quiz every two to three weeks, in addition to weekly hands-on projects such as installing and configuring operating systems, and troubleshooting operating system settings to resolve performance problems.
- Assignments may be accepted late, if student consults with instructor prior to due date and discusses the issue.
- Cell phones/pagers: students should generally switch these off during class. Emergency calls can be answered outside the classroom.
- Food, drink and gum chewing: No food or drink is allowed inside the classroom. Gum chewing is permitted as long as students exercise reasonable hygiene.
- Missed classes: If emergencies come up, students are expected to notify the instructor of the problem in advance
- Professional behavior: Students are expected to show respect toward the instructor and their fellow students and exhibit professional behavior at all times within the classroom.
- Professional dress: Students should adhere to a "casual business" dress standard. Jeans and t-shirts are inappropriate in classroom situations.
- Homework: Homework in addition to reading assignments in the text may be assigned in connection with optional class research projects. Students will generally have some discretion in electing to volunteer for these projects.
- Make-up tests: Students may be allowed to make up missed tests or quizzes at the discretion of the instructor
- Instructor contact information: Email: lenny_bailes@heald.edu

Portfolio

A portfolio represents the assembly of – and reflection upon – the depth and breadth of learning that has taken place at Heald College during your program of study. It can be used during the job interview process to highlight the skills and knowledge gained throughout your education.

You should start saving key assignments from each class in your first quarter at Heald College. You will select those documents that best highlight your skill development throughout your time at Heald. In general, the portfolio should contain evidence of learning related to your program's outcomes including written communication, business, computer and keyboarding skills, as well as interpersonal skills and teamwork. Consult with your instructor on strategies for collecting evidence.

We recommend creating both an electronic and paper storage system and storing evidence as you complete each course in your program. You can create a folder in your P: drive titled "Portfolio" in which to place portfolio documents. You can also buy a two-inch binder and start saving paper copies of your work.

Success with Attendance!

Attendance tips:

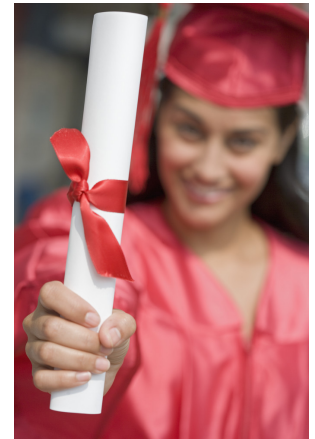
- ☑ Be sure NOT to miss the first week of school. The Add/Drop period is the first week of class ending on Friday of the 1st week.
- ☑ New or continuing students who did not attend the first week must attend the first class following the Add/Drop period.
- ☑ A student who is absent 14 or more consecutive calendar days from a course will be withdrawn from that course.



Good attendance enables the student to pass.

The reward for passing is:

 **Graduation!**



The consequences from not attending class:

- ☞ Being dropped from the class and receiving a W grade (Withdrawal).
- ☞ Being dropped from the class and receiving a WF grade (Withdrawal/Failed).
- ☞ **Being dropped below six units causes a retraction of financial aid - requiring the student to pay cash for that quarter.**
- ☞ The student incurs the cost of the class as a debt.



If you know you are going to be absent:

Call Student Services HOTLINE **415-808-3011** and have them advise your teacher that you are missing that class period and when you plan on returning. And email your instructors to stay current with turning in assignments and preparations for forthcoming Tests/Quizzes.

Success is based on attendance – and you can be successful!