



COLLEGE OF INFORMATION TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE SYLLABUS/ SPECIFICATION

Course Code & Title:	ITCS 441 - System Administration II
Weight:	(2-2-3)
Prerequisite:	ITCS 341
NQF Level Allocated:	Level 8

NQF Notional Hours / Credits: 120 notional hours/ 12 NQF credit

Description: This course provides critical knowledge and experience for IT professionals. Student will have the knowledge required to assemble components based on customer requirements, install, configure and maintain devices, PCs and software for end users, understand the basics of networking and security/forensics, properly and safely diagnose, resolve and document common hardware and software issues while applying troubleshooting skills. Student will also provide appropriate customer support; understand the basics of virtualization, desktop imaging, and deployment.

Objective:

1. To explain commercial operating Systems functionality and components.
2. To configure commercial operating systems to suite personnel & corporate uses.
3. To explain troubleshooting techniques and executing them.
4. To explain the differences between mobile devices and standard PC architecture and functionality.

Semester:

Instructor:

Office Telephone:

Email (s):

Intended Learning Outcomes (ILOs):

A. Knowledge and Understanding		NQF Descriptor/ Level
A1	Concepts and Theories: Demonstrate critical understanding of various Microsoft operating systems, its command line tools, some of its networking and security utilities as well as different Mobile devices and troubleshooting techniques.	Knowledge: theoretical understanding [Level 8]
B. Subject-specific Skills		NQF Descriptor/ Level
B1	Problem Solving: Detect various system symptoms and choose the appropriate tool for troubleshooting it.	Knowledge: Practical Application [Level 8] Skills: Communication, ICT & Numeracy [Level 8]
B3	Application of Methods and Tools: Perform preventive maintenance procedures using appropriate tools as well as use different command line tools to customize and configure the operating system.	Knowledge: Practical Application [Level 8] Skills: Communication, ICT & Numeracy [Level 8]
C. Critical-Thinking Skills		NQF Descriptor/ Level
C1	Analytic skills: Analyze specific scenario to choose appropriate security methods and tools	Generic Problem Solving & Analytical skills [Level 8]
D. General and Transferable Skills (other skills relevant to employability and personal development)		NQF Descriptor/ Level
D1	Communication: Communicate efficiently and fluently.	Communication, ICT and Numeracy Skills [Level 8]
D3	Organizational and Developmental Skills: Demonstrate ability to organize ideas and effectively allocate time in given assignment.	Competence: Autonomy, Responsibility and Context [Level 8]

Course Structure (Outline)

Week	Hours		ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
	Lecture	Lab				
1	2	2	A1	Syllabus, Introduction	Lecture	
2	2	2	A1, B3	Operating Systems <ol style="list-style-type: none"> 1. The Windows OS 2. Windows XP 3. Windows Vista 4. Windows 7 5. 32 or 64 bit 6. Upgrading Windows 7. Windows Upgrade Advisor 8. Upgrade Paths 	Lecture/ In-Lab Supervised Work	In-Lab Exercises
3	2	2	A1, B3, C1	Installing Windows <ol style="list-style-type: none"> 1. Hardware Requirements 2. Boot Methods 3. Hard Disk Partitioning 4. Partition Schemes and Types 5. File System Formatting- part I 6. File System Formatting- part II 7. Workgroup Vs. Domain 8. Factory Recovery 	Lecture/ In-Lab Supervised Work	In-Lab Exercises
4-5	4	4	A1, B3	Windows command Line Tools <ol style="list-style-type: none"> 1. OS Commands 2. TASKKILL 3. BootRec 4. Shutdown 5. Working with 	Lecture/ In-Lab Supervised Work	In-Lab Exercises/ Quiz1

6	2	2	A1, B3	Networking Command Line Tools <ol style="list-style-type: none"> 1. PING 2. IPCONFIG 3. TRACERT 4. NETSTAT 5. NET 6. NSLOOKUP 	Lecture/ In-Lab Supervised Work	In-Lab Exercises
7-8	4	4	A1, B3, C1, D1, D3	Administrative Tools <ol style="list-style-type: none"> 1. Computer Management 2. Device Manager 3. Local Security Policy 4. Performance Monitor 5. Services 6. Windows Memory Diagnostic 7. Windows Firewall 8. WFAS 9. MSCONFIG 10. Task Manager 11. Disk Management 	Lecture/ In-Lab Supervised Work	In-Lab Exercises/ Assignment 1
9	2	2	A1, B3	Control Panel Utilities <ol style="list-style-type: none"> 1. Internet Options 2. Display 3. Folder Options 4. User Accounts 5. System 6. Power Options 	Lecture/ In-Lab Supervised Work	In-Lab Exercises

10	2	2	A1, B3	Configuring Windows Networking <ol style="list-style-type: none"> 1. Windows 7 Homegroups 2. Network Shares 3. Mapping Drives 4. Network Types 5. Alternative IP Addresses 	Lecture/ In-Lab Supervised Work	Major Test
11	2	2	A1, B3, C1	Sharing Resources <ol style="list-style-type: none"> 1. NTFS Vs. Share Permissions. 2. Allow Vs. Deny 3. Moving Vs. Copying. 	Lecture/ In-Lab Supervised Work	In-Lab Exercises
12	2	2	A1, B3, C1	Security <ol style="list-style-type: none"> 1. Physical Security. 2. Digital Security. 3. User Education 4. Common Security Threats 5. Malware - Part I 6. Malware - Part II 7. Hard Drive Disposal 8. Securing A Wireless Network 	Lecture/ In-Lab Supervised Work	In-Lab Exercises
13	2	2	A1, B3, C1	Mobile <ol style="list-style-type: none"> 1. Android Vs. iOS. 2. Mobile Features. 3. Bluetooth 4. Laptops Vs. Tablet PCs 	Lecture/ Class Discussion/ In-Lab Supervised Work	In-Lab Exercises/ Quiz2

14-15	4	4	A1, B1, B3, C1, D1, D3	Troubleshooting 1. CommonHard Drive Symptoms. 2. Hard Drive Troubleshooting Tools. 3. CommonDisplay Symptoms 4. Troubleshooting Network Issues 5. Network Troubleshooting Tools 6. Common OS Symptoms 7. OS Troubleshooting Tools 8. CommonPrinter Symptoms	Lecture/ Class Discussion/ In-Lab Supervised Work/ Independent Learning/ Demonstration	In-Lab Exercises/ Assignment 2
16	2	-	A1, B1, C1	All Topics		Final Exam

* Formative assessment

Teaching Materials:

Textbook(s):	1- Faithe Wempen, Jane Holcombe, (2019) <i>CompTIA A+ Certification Study Guide</i> , 10 th Edition (Exams 220-1001 & 220-1002), McGraw-Hill Education, ISBN: 978-1260456653
Handout(s):	Available on Moodle i.e. http://www.ahlia.edu.bh/moodle
Reference(s):	COMPTIA A+ CERTIFICATION Website https://certification.comptia.org/getCertified/certifications/a.aspx

Assessments:

Type of Assessment	Description	ILOs	Weighting
In-Lab Exercises	Each of the In-Lab exercises consists of a set of practical tasks to be carried by the students during lab time and that will help in evaluating hands-on capability of the students.	B1, B3, C1	Formative
Quizzes	The purpose of the quiz is to assess the students' knowledge and understanding of the topics covered in the course like various Windows OS, its command line tools, different mobile devices, etc.. Students will be given two quizzes, each one is 30 minutes, and the best one will be considered.	A1, C1	10%
Major Test	The test will be an in-class 60 minutes exam that will consist of multiple choice questions, fill in the blank, short-answer and few essay questions. It will cover the topics studied in the first 10 weeks.	A1, C1	30%
Assignments	The students will be given 2 research based assignments each worth 15 marks and their average will be considered at the end.	A1, B1, C1, D1, D3	20%
Final Exam	The final exam is comprehensive and will be of two hours duration. It will consist of multiple choice questions, fill in the blank, short-answer and few essay questions.	A1, B1, C1	40%
Overall			100%

Admissions	
Minimum number of students	5
Maximum number of students	20

Ahlia University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.ahlia.edu.bh/integrity for more information).