



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

Course Code & Title: ITCS 341 - System Administration I
Weight: (2-2-3)
Prerequisite: ITCS 214
NQF Level Allocated: Level 7

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

Description: This course provides broad knowledge and experience for IT professional. Student will have the knowledge required to assemble components based on customer requirements, install, configure PCs and software for end users, and understand the basics of networking, properly and safely.

Objective:

1. To explain PCs, Laptops, printers & network hardware standards.
2. To explain Professional conduct & professional communications with clients.
3. To explain assembling, disassembling and installing PCs, laptops, printers & network cards, and expansion cards.

Semester:

Instructor:

Office Telephone:

Email (s):

Intended Learning Outcomes (ILOs):

A. Knowledge and Understanding		NQF Descriptor/ Level
A1	Concepts and Theories: Demonstrate detailed knowledge and understanding of computer components, peripheral devices and networking basic settings requirements.	Knowledge: theoretical understanding [Level 7]
A3	Professional Responsibility: Demonstrate advanced knowledge and understanding of the professional conducts for IT professionals.	Knowledge: theoretical understanding [Level 7]

B. Subject-specific Skills		NQF Descriptor/ Level
B1	Problem Solving: Show ability to install, configure and troubleshoot various hardware and device components.	Knowledge: Practical Application [Level 7] Skills: Communication, ICT & Numeracy [Level7]
B3	Application of Methods and Tools: Install and expand devices by adding additional equipment through the usage of different tools such as standard technician toolkit and maintenance kit.	Knowledge: Practical Application [Level 7] Skills: Communication, ICT & Numeracy [Level 7]

C. Critical-Thinking Skills		NQF Descriptor/ Level
C1	Analytic skills: Compare and Contrast various configurations and choose the most appropriate as per user requirements as well as evaluate and select the appropriate component and operational procedures for a user configuration.	Generic Problem Solving & Analytical skills [Level 7]

D. General and Transferable Skills (other skills relevant to employability and personal development)		NQF Descriptor/ Level
D1	Communication: Express and communicate ideas in written and oral form.	Communication, ICT and Numeracy Skills [Level 7]
D3	Organizational and Developmental Skills: Demonstrate ability to organize ideas and effectively allocate time in given assignment.	Competence: Autonomy, Responsibility and Context [Level 7]

Course Structure (Outline)

Week	Hours		ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
	Lecture	Lab				
1-2	4	4	A1, B1, B3, C1	- Syllabus, Introduction - Motherboards and expansion cards 1. Differentiate between motherboard components and their purposes. 2. Differentiate between expansion slots/ expansion cards and their properties	Lecture/ Class Discussion/ In-Lab Supervised Work	In-Lab Exercises
3	2	2	A1, B1, B3, C1	CPUs and power supplies 1. Differentiate among various CPU types and features and select the appropriate cooling method. 2. Power supply: know connector types, their voltages and properties	Lecture/ Class Discussion/ In-Lab Supervised Work	In-Lab Exercises
4	2	2	A1, B1, B3, C1	Memory and physical storage Compare and contrast RAM types and features	Lecture/ Class Discussion/ In-Lab	In-Lab Exercises
5-6	4	4	A1, B1, B3, C1	Connections Compare and contrast various connection interfaces and explain their purpose.	Lecture/ Class Discussion/ In-Lab	In-Lab Exercises/ Quiz1(Week 6)
7	2	2	A1, B1, B3, C1	Peripherals devices Install and configure various peripheral devices like: input devices, output devices and multimedia devices	Lecture/ Class Discussion/ In-Lab Supervised Work	In-Lab Exercises

8	2	2	A1, B1, B3, C1, D1, D3	Printers 1. perform printer maintenance 2. Install, and configure printers 3. Explain the differences between the various printer types and summarize the associated imaging process.	Lecture/ Class Discussion/ In-Lab Supervised Work	In-Lab Exercises/ Assignment 1
9	2	2	A1, B1, B3, C1	Notebooks 1. Compare and contrast laptop features. 2. Compare and contrast the components within the display of a laptop. 3. Install and configure laptop hardware and components.	Lecture/ Class Discussion/ In-Lab Supervised Work	In-Lab Exercises
10-11	4	4	A1, B1, B3, C1	Networking Basics Identify various types of networks.	Lecture/ Class Discussion/ In-Lab Supervised Work	Major Test (Week 11)
12	2	2	A1, B1, B3, C1	The Physical Network 1. Identify types of network cables and connectors. 2. Categorize characteristics of connectors and cabling. 3. Compare and contrast network devices, their Functions, and features.	Lecture/ Class Discussion/ In-Lab Supervised Work	In-Lab Exercises

13	2	2	A1, B1, B3, C1	Networking Protocols 1. Explain properties and characteristics of TCP/IP. 2. Explain common TCP and UDP ports, protocols, and their purpose.	Lecture/ Class Discussion/ In-Lab Supervised Work	In-Lab Exercises
14	2	2	A1, B1, B3, C1	Wireless Networking Compare and contrast wireless networking standards and encryption types.	Lecture/ Class Discussion/ In-Lab Supervised Work	In-Lab Exercises/ Quiz2
15	2	2	A1, B1, B3, C1, D1, D3, A3	Professional Conducts	Lecture/ Class Discussion/	Assignment 2
16	2	-	A1, B1, C1, A3	All Topics		Final Exam

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):	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	Formative

Quizzes	The purpose of the quiz is to assess the students' knowledge and understanding of the topics covered in the course like computer components, its peripherals and networking concepts. Students will be given two quizzes, each one is 30 minutes, and the best one will be considered.	A1, B1, 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, B1, C1	30%
Assignments	The students will be given 2 assignments each worth 10 marks and their total will be considered at the end.	B3, 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, A3	40%
Overall			100%

Admissions	
Minimum number of students	5
Maximum number of students	20

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