هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title:	IT Infrastructure
Course Code:	IS1507
Program:	Computer Information Systems
Department:	Computer Information Systems
College:	Computer Science and Information Technology
Institution:	University of Al-Baha
Version:	1
Last Revision Date:	25/05/2023

Table of Contents:

Content	Page
A. General Information about the course	3
1. Teaching mode (mark all that apply) 2. Contact Hours (based on the academic semester)	4
B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods	5
C. Course Content	6
D. Student Assessment Activities	7
E. Learning Resources and Facilities	8
1. References and Learning Resources	8
2. Required Facilities and Equipment	9
F. Assessment of Course Qualit	9
G. Specification Approval Data	9

A. General information about the course:

Course Identification					
1. Credit hours:	3 Credit Hours (3, 0, 0) (Lecture, Lab, Tutorial) (3Contact Hours)				
2. Course type					
a.	University ☐	College ☐	Department☒	Track☐	Others☐
b.	Required ☒	Elective☐			
3. Level/year at which this course is offered:	Level: 8Th /Year 3				

4. Course general Description

This course provides an introduction to IT infrastructure issues for students majoring in Information Technology. It covers topics related to both computer and systems architecture and communication networks, with an overall focus on the services and capabilities that IT infrastructure solutions enable in an organizational context. It gives the students the knowledge and skills that they need for communicating effectively with professionals whose special focus is on hardware and systems software technology and for designing organizational processes and software solutions that require in-depth understanding of the IT infrastructure capabilities and limitations. It also prepares the students for organizational roles that require interaction with external vendors of IT infrastructure components and solutions. The course focuses strongly on Internet-based solutions, computer and network security, business continuity, and the role of infrastructure in regulatory compliance.

5. Pre-requirements for this course (if any): none

6. Co- requirements for this course (if any): none

7. Course Main Objective(s)

- Describe the conceptual IT infrastructure model and the IT System model
- Recognize the current trends in IT infrastructure
- Illustrate attributes of IT Systems
- Reconstruct traits that make IT Systems valuable
  - o Availability
  - o Performance
  - o Security
- Diagram how various components fit into the IT infrastructure
  - o Data center
  - o Servers
  - o Networks
  - o Storage
- Demonstrate the impact of virtualization on IT infrastructure

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	30 Hours	100%
2.	E-learning		
3.	Hybrid • Traditional classroom • E-learning		
4.	Distance learning		

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	
5.	Others (specify)	
	Total	30

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Describe the conceptual IT infrastructure model and the IT System model - Support existing operations - Enable development of new business - Provide efficiencies	K1	Lecture	-Midterm exams - Final Exam
1.2	Realize the current trends in IT infrastructure. - Ability to demonstrate basic knowledge and understanding of essential facts, concepts, principles, and theories relating to how information technology is being currently used, and how it fits into a business enterprise	K1	Lecture	-Midterm exams - Final Exam
…				
2.0	Skills			
2.1	Employ traits that make IT Systems valuable (nonfunctional attributes: o Availability o Performance o Security	S1	Lecture	-Midterm exams - Final Exam
2.2	Evaluate how various components fit into the IT infrastructure o Data center o Servers	S3	Lecture	-Quiz - Final Exam

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	o Networks o Storage o Compute o Operating Systems o End User Device			
…				
3.0	Values, autonomy, and responsibility			
3.1	Manage attributes of IT Systems	V2	Course project	Report & Slides presentation

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to IT Infrastructure Models	1.5
2.	IT Systems Models	1.5
3.	Attributes of IT Infrastructure and its Components	1.5
4.	Availability	1.5
5.	Performance	1.5
6.	Security	3
7.	Data Centers	3
8.	Servers	3
9	Networking	1.5
10.	Storage	3
11.	Compute	3
12.	Operating Systems	3
13.	End User Devices	3

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm Exam	6th week	20%
2.	Quiz	8th week	10%
3.	Course project (report and presentation)	10th week	10%
4.	Final Exam	11th week	60%
5.	Total		100%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	IT Infrastructure Architecture - Infrastructure Building Blocks and Concepts Second Edition [Hardcover] SjaakLaan Hardcover: 438 pages Publisher: Lulu.com (February 24, 2013) Language: English ISBN-10: 1291250794 ISBN-13: 978-1291250794
Supportive References	• Computer Science Curriculum 2013 – http://cs2013.org • ACM(Association for Computer Machinery) Curricula Recommendations - http://www.acm.org/education/curricula-recommendations • Communications of ACM (Association for Computer Machinery) - http://cacm.acm.org/ • Journal of the ACM - http://jacm.acm.org/ • ACM SIGCSE (Special Interest Group on Computer Science Education) bulletin -http://www.sigcse.org/Bulletin • ACM Transactions on Computing Education (TOCE) - http://toce.acm.org/
Electronic Materials	• Access to the Saudi Digital Library (SDL). • Using the learning management system of the university – Rafid System (https://lms.bu.edu.sa/). • ACM (Association for Computer Machinery) web site - http://www.acm.org/ • ACM SIGCSE (Special Interest Group on Computer Science Education) resource web site - http://www.sigcse.org/SIGresources • IEEE Computer Society web site - http://www.computer.org/portal/web/guest/home • Intel The Journey Inside web site (has a collection of interactive, online lessons about technology, computers, and society) – http://educate.intel.com/en/TheJourneyInside/ • Google Code University Curriculum Resource web site - http://code.google.com/edu/resources/index.html
Other Learning Materials	None

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	A classroom or lecture hall with whiteboard for 25 students.
Technology equipment (projector, smart board, software)	A digital image projection system with connection to desktop computer. High-speed Internet connection
Other equipment (depending on the nature of the specialty)	None

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	• Students • Peer Reviewer	• Survey (indirect) • Peer review (direct
Effectiveness of students assessment	• Students • Exam Evaluation	• Survey (indirect) • Exam Review (direct)
Quality of learning resources	• Faculty • Students	Survey (indirect)
The extent to which CLOs have been achieved	• Faculty • Course Coordinator	• Exams (direct) • Exit Exams (direct)
Other		

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	25/05/2023