Course Specification
(Bachelor)

Course Title:	smart operating systems
Course Code:	254 CIS- 2
Program	**Technical support**
Department	**Computer Department**
College:	**Applied College**
Institution	:Najran University
Version	: 3
Last Revision Date:	1-10-2024

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (2 hours)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (4th semester Second year)					
4. Course General Description:					
This course provided a detailed description about the objectives of smart device operating systems, the basic functions, and concepts. Types of security and their stages of development in smart operating systems and distinguish between smart operating systems.					
5. Pre-requirements for this course (if any):					
167 CIS- 3					
6. Co-requisites for this course (if any):					
NO					
7. Course Main Objective(s):					
Identify the services provided by the smart operating system Illustrate the structural design of a smart operating system. Identifies and describes the major and common components of a smart operating system Acquire basic knowledge of smart Operating System.					

2. Teaching mode (mark all that apply)

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

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	15
2.	**Laboratory/Studio**	15
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 PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Recognize the basic concepts related to smart operating system	K1	• Lectures, • Brainstorming, • Class • Discussion Lab Reports	• Class work • assignments • Quizzes • Midterm Exams Final Exam
1.2	Identifies the functional elements of smart operating systems	K2	Lecture Individual and group discussions	Exams •Assignments
...				
2.0	**Skills**			
2.1	The ability to improve how operating systems work	S1	• Lecture • Brainstorming • Small Group Work • Lab Demonstration • Project	• Exam • Group Reports • Lab Reports
2.2	The ability to find operating systems malfunctions and ways to solve them.	S2	• Lecture • Brainstorming • Small Group Work • Lab Demonstration • Project	• Exam • Group Reports • Lab Reports

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
...				
3.0	**Values, autonomy, and responsibility**			
3.1	Work in a group to solve the problems of intelligent operating systems	V1	• Small Group Work	• Lab Reports
3.2				
...				

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to smart operating system **Lab:** Smart operating system available	4
2.	Smart OS Components	3
3.	Intelligent Operating Systems Functions	4
4.	Types of Operating Systems Smart Devices **Lab:** Looking at the most popular OS in smart devices	3
5.	Install and update smart operating systems **Lab:** update the smart operating systems (IOS, Android)	6
6.	Types of security and their development stages in smart operating systems **Lab:** Practical Tips to provide security in your smart device	4
7.	Distinguish between smart operating systems. (iPhone - Palm - Android – Blackberry…….) **Lab:** Looking at different OS by using an online virtual machine "Demo"	3
8.	Other types of operating systems	3
9.		
Total		**30**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	First Monthly Exam	8	20%
2.	Year duties	continuously	10%

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
3.	Practical exam	15	20%
4.	Final exam	18	50%
5.			

*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 Essentials Companion Guide v6, 6th Edition by Cisco Networking Academy, Cisco Press (page 73 - 102).
Supportive References	Modern Operating Systems", Andrew S. Tanenbaum., Third Edition , Prentice Hall.
Electronic Materials	http://lms.nu.edu.sa/webapps/portal/frameset.jsp المكـتبة الرقمية http://lib.nu.edu.sa/DigitalLibbrary.aspx
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Lecture rooms should be large enough to accommodate the number of registered students
Technology equipment (projector, smart board, software)	Black Board/Data Show
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	***Student***	***Questioners***
Effectiveness of Students assessment	Staff committee	Cross checking
Quality of learning resources	Faculty Administration	Review and check the results
The extent to which CLOs have been achieved	Quality management in the department	A review of the measurement of learning outcomes

Assessment Areas/Issues	Assessor	Assessment Methods
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	