هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title:	Advanced Computer Applications
Course Code:	0106 عال
Program:	Computer Science (Programming- Networks)
Department:	Applied Sciences
College:	Applied College
Institution:	Imam Mohammad Bin Saud Islamic University
Version:	1st version
Last Revision Date:	2023/02/26

Table of Contents:

A. General information about the course:

Course Identification					
1. **Credit hours:**	3 (2 Theory, 2 lab)				
2. **Course type:**					
a.	University ☐	College ☐	Department☒	Track☐	Others☐
b.	Required ☒	Elective☐			
3. **Level/year at which this course is offered:** 3rd Level					
4. **Course general Description:** The course is a continuation to the topics that have been introduced csc0114, but in a deeper and more specific manner scope focusing on the practical side of application. And the course covers topics related to library computer applications related to word processing, databases, and spreadsheets Access & Excel & Word This course should also be covering the following professional certification:					
5. **Pre-requirements for this course (if any):** cs0114					
6. **Co- requirements for this course (if any):** N/A					
7. **Course Main Objective(s):** The course introduces students to the foundations of information technology, It also trains students on how to use of a personal computer, how to operate it, and on using the most popular office applications.					

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom		
2.	E-learning		
3.	Hybrid • Traditional classroom • E-learning	60	100%
4.	Distance learning		

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	12
2.	Laboratory/Studio	48
3.	Field	
4.	Tutorial	
5.	Others (specify)	150
	Total	210

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	To mention the importance of office softwares in doing work, correspondence, data saving and management.	ع1، ع5	Class lectures. Class discussion. Questions/Answers session in class. Home work. Learning by discovery. Self-education. Brainstorming. Online search. KWL learning table. Mind maps. Concept maps.	Quizzes. Homework and Assignments. Written and online exams. Writing reports. Presentations. Discussion and debate. Achievement file. Performance
1.2	To know about the most prominent office softwares, their interfaces, and their components.	ع1، ع5		
1.3	To state the concept of databases, their types, and their most popular applications.	ع1، ع5		
2.0	Skills			
2.1	To use the word processing program skillfully in correspondence.	ع1، ع5	Class lectures. Class discussion. Questions/Answers session in class. Home work. Learning by discovery. Self-education. Brainstorming. Online search. Mind maps. Concept maps.	Quizzes. Homework and Assignments. Written and online exams. Writing reports. Presentations. Discussion and debate. Achievement file. Performance tests.
2.2	To design templates and use them in word processing program.	ع1، ع5		
2.3	To use charts programs to organize, display, search for data.	ع1، ع5		
2.4	To use database programs to create, modify, design, and accurately build. connections between databases.	ع1، ع5		
3.0	Values, autonomy, and responsibility			
3.1	Collaboration, teamwork, and professional ethics.	ق1	Class lectures. Class discussion. Questions/Answers session in class. Home work. Learning by discovery. Self-education. Brainstorming. Online search. Mind maps. Concept maps.	Quizzes. Homework and Assignments. Written and online exams. Writing reports. Presentations. Discussion and debate. Achievement file. Performance.
3.2	Take the responsibility for continuous learning, and self-development.	ق2		
3.3	Effective and efficient time management when applying acquired knowledge and skills.	ق3		

C. Course Content

No	List of Topics	Contact Hours
1.	**Word processor software (MS Word):** ○ Create and manage documents. ○ Search for text, insert hyperlinks, create bookmarks, move to a specific location or object in a document. ○ Prepare documents for collaboration (restrict editing, protect documents by using passwords) ○ Use advanced editing and formatting features. ○ Create and manage references. ○ Create and modify macros. ○ Perform mail merges(manage recipient lists - insert merged fields - preview merge results -create merged documents, labels, and envelopes)	16
2.	**Spreadsheet software (MS Excel):** ○ Create functions. ○ Functions (Sum, Average, Max, Min, if, AND, OR, NOT and VLOOKUP(), HLOOKUP(), MATCH(), and INDEX()) ○ Create and modify PivotTables. ○ Create and modify PivotCharts ○ Create advanced charts and tables. ○ Insert the header and footer to the worksheet. ○ Print the worksheet. Building a Dashboard using the spreadsheet software (MS Excel).	16
3	**Access software (MS Access)** ○ Create and manage a database ○ Build tables ○ Create queries ○ Create forms ○ Create reports	16
Total		48

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Mid-term	Week 7, 11	10%
2.	Quizzes (From 3-4 Quizzes)	Week 4, 8, 10	15%
3.	1st Practical Evaluation	Week 6	25%
4	2nd Practical Evaluation	Week 12	25%

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
5	Participation	All Semester	5%
6	Final	Week13	20%
7	Total Marks		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	○ Microsoft Office Step by Step (Office 2021 and Microsoft 365)1st edition, ISBN: 0137544766, Authors: Joan Lambert, Curtis Frye. ○ Microsoft Office 2019 Step by Step, 1st edition Published by Microsoft Press (December 7th 2018) - Copyright © 2019. Computer Skills, King Abdulaziz University 9th edition Published by Khawarizm Academic - Copyright © 2021.
Supportive References	N/A
Electronic Materials	Online resources will be provided during class lectures on LMS.
Other Learning Materials	N/A

2. Required Facilities and equipment

Items	Resources
Facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom – A computer lab equipped and connected to a shared printer and the internet.
Technology equipment (projector, smart board, software)	Smart board, data projector, Microsoft Visio or Edraw Max and Internet browser.
Other equipment (depending on the nature of the specialty)	N\A

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Peer references – students.	1.Questionnaires and referendums approved by the department. 2.Peer evaluation of faculty members. 3.Review the results of the students' evaluation.
Effectiveness of students assessment	Peer references - program leaders - faculty members – students.	1.Questionnaires and referendums approved by the department. 2.Review course descriptions and course reports periodically. 3.Peer evaluation and periodic exchange of

Assessment Areas/Issues	Assessor	Assessment Methods
		correction and scrutiny among fellow faculty members. 4.Review samples of students' work.
Quality of learning resources	Program leaders - faculty members - students	1.Questionnaires and referendums approved by the department. 2.Write-offs and monitoring.
The extent to which CLOs have been achieved	Program leaders - faculty members.	1.Review the course report. 2. Analysis of exams forms, grades, students' work and records of achievement.
Other		

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

G. Specification Approval Data

COUNCIL /COMMITTEE	Department of Applied Sciences – Applied College
REFERENCE NO.	
DATE	

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications

Course Title:	Introduction to Routing
Course Code:	CS 0102
Program:	Networks
Department:	Applied Sciences
College:	Applied College
Institution:	Imam Muhammad Bin Saud Islamic University

Table of Contents

A. Course Identification

1. Credit hours:	**3(1 theory , 4 lab)**
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered:	Third Semester
4. Pre-requisites for this course (if any)**:**	None
5. Co-requisites for this course (if any)**:**	None

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	3hours\week	100%
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	10
2	**Laboratory/Studio**	40
3	**Tutorial**	
4	**Others** (specify)	
	Total	50

B. Course Objectives and Learning Outcomes

1. Course Description

This course is the second in a series of courses on computer networking. It assumes familiarity with the basics of network architecture including the physical layer, the link layer, the network layer, and the transport layer.
This course describes the architecture, components, and operations of routers and switches in a small network.

2. Course Main Objective

By the end of this course, you will be able to configure and troubleshoot routers and switches and resolve common issues with different routing protocols.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Identify the components of computer networks, including: routers and switches, and clarify their basic functions.	ع1,ع2
1.2	Explain the main aspects of Ethernet, VLAN and TCP/IP.	ع5
1.3	Expressing common network management systems, their components, activities and services	ع4
2	**Skills :**	
2.1	Examine different computer network setups and improve the skill of dealing with computer network components, including routers and switches.	م1,م2
2.2	Discuss networking services and protocols.	م3
3	**Values:**	
3.1	Work effectively in a team to accomplish a specific goal regarding computer network services.	ق1,ق2,م7

C. Course Content

No	List of Topics	Contact Hours
1	**Networking** • Introduction to networking • Internetworking devices • Overview of the OSI reference model	4
2	**Ethernet** • Ethernet overview • Ethernet addressing • Ethernet cables • Data encapsulation and the Cisco three-layer model	4
3	**Introduction to TCP/IP** • Overview of TCP/IP model • Application/process layer • Transport/host-to-host layer • Internet layer • IP addressing • IPv4 address • Classes of IP addresses • Public and private addresses	8
4	**IP Routing** • Overview of IP routing	8

	• The IP routing process • Configure IP routing • Static routing • Default routing • Administrative distances and routing protocols • **Class & Lab Activities** • **Basic Routing Concepts and Configuration** o Built a network with router o Set up the router configurations: - **Mode types:** ● password, identification, and banner ● initial command ● login to the router device by • user mode. • privileged mode. • configuration mode. • Reset password • command history and the editing feature o Activate IP o Find bugs in Routers and fix them using Pin command	
5	**Routing Protocols** • Overview of Routing Protocols • RIP. • IGRP. • OSPF. • BGP	8
6	**Switching** • LAN Design • The Switched Environment • Frame Forwarding • Switching Domains • **Class & Lab Activities** • Create networks and sending messages • Built a network of 2 devices • Built a network with hub • Built a network with switch • **Packet Tracer Activities** • **Basic Switching Concepts and Configuration**	9

7	**VLANs** • VLANs and Port Modes • Flow control specifications and main methods. • Inter VLAN Routing • Types of VLANs • VLANs in a Multiswitched Environment • IP Addressing Issues with VLAN • **Class & Lab Activities** • Troubleshoot VLANs and Trunks	9
Total		50

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Identify the components of computer networks, including: routers and switches, and clarify their basic functions.	Class lectures Class Discussion Questions/Answers sessions in class Homework assignments Quizzes Case studies and Analysis.	Quizzes Homework and Assignments. Written exams (Midterm and final). Writing reports.
1.2	Explain the main aspects of Ethernet, VLAN and TCP/IP.	Class lectures Class Discussion Questions/Answers sessions in class Homework assignments Quizzes Case studies and Analysis.	Quizzes Homework and Assignments. Written exams (Midterm and final). Writing reports. Study cases.
1.3	Expressing common network management systems, their components, activities and services.	Class lectures Class Discussion Questions/Answers sessions in class Homework assignments Quizzes Case studies and Analysis.	Quizzes Homework and Assignments. Written exams (Midterm and final). Writing reports. Study cases.

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
2.0	**Skills**		
2.1	Examine different computer network setups and improve the skill of dealing with computer network components, including routers and switches.	Class lectures Class Discussion Questions/Answers sessions in class Home work assignments Quizzes Case studies and Analysis.	Quizzes Homework and Assignments. Written exams (Midterm and final). Writing reports. Study cases.
2.2	Discuss networking services and protocols	Class lectures Class Discussion Questions/Answers sessions in class Homework assignments Quizzes Case studies and Analysis.	Quizzes Homework and Assignments. Written exams (Midterm and final). Writing reports. Study cases.
3.0	**Values**		
3.1	Work effectively in a team to accomplish a specific goal regarding computer network services.	Class lectures Class Discussion Questions/Answers sessions in class Homework assignments Quizzes Case studies and Analysis.	Quizzes Homework and Assignments. Written exams (Midterm and final). Writing reports. Study cases.

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes	Week3,5	10%
2	Midterm	Week 7	20%
3	Lab Assignments group or individual /Class Assignments group or individual	Week4,7,9	15%
4	Lab Evaluations	All Semester	15%
5	Final	Week13	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

6 office hours per week.
3 hours of weekly meetings
Contact through the LMS
Communication/interact via e-mails with students

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	1. Routing and switching essentials. Indianapolis, IN: Cisco Press, by Boger, P. 2. Routing and Switching Essentials Lab Manual (Lab Companion), Cisco Systems, Inc. Published by: Cisco Press, 800 East 96th Street Indianapolis, IN 46240 USA.
Essential References Materials	1. Computer networking. Boston: Pearson, by Kurose, J. & Ross, K. 2. CCNA Routing and Switching 200-125 Official Cert Guide Library. By Wendell Odom Published by Cisco Press. 3. CCNA Routing and Switching Complete Study Guide: Exam 100-105, Exam 200-105, Exam 200-125, by Todd Lammle. Sybex Publishing.
Electronic Materials	Online resources will be provided during class lectures.
Other Learning Materials	N/A

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Lecture room with Smart board Lab with 25 Pcs
Technology Resources (AV, data show, Smart Board, software, etc.)	PC and WiFi Internet access within the class room
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	N\A

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Student	Indirect using course evaluation survey
Quality of learning resources	Student and Faculty	Indirect using course evaluation and faculty survey

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title:	**Programming 1**
Course Code:	**CS 120**
Program:	**Computer Science (Cybersecurity- Programming- Networks)**
Department:	**Applied Sciences**
College:	**Applied College**
Institution:	**Imam Muhammad Bin Saud Islamic University**
Version:	**1st Version**
Last Revision Date:	**06 Feb 2023**

Table of Contents:

A. General information about the course:

Course Identification					
1. Credit hours:	4 (3 theory , 2 lab)				
2. Course type					
a.	University ☐	College ☐	Department☒	Track☐	Others☐
b.	Required ☒	Elective☐			
3. Level/year at which this course is offered: Third semester					
4. Course general Description: Through this course, the student is introduced to a set of basic skills in object-oriented programming (OOP). This course includes identifying the environment that is used for editing the program (Editing), translating it into machine language, executing it, recognizing and correcting errors, as well as representing data and operations of all kinds, in addition to using sentences, commands, and structural control tools. Throughout the semester, the course includes an integrated case study in which all previous concepts are employed to build an integrated project.					
5. Pre-requirements for this course (if any): CS 115					
6. Co- requirements for this course (if any): N/A					
7. Course Main Objective(s): The course aims to lay the foundation for the basic skills in object-oriented programming for the student to be able to propose solutions to problems so that they are valid for formulation in the form of a computer program.					

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom		
2.	E-learning		
3.	Hybrid • Traditional classroom • E-learning	55	100%
4.	Distance learning		

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	33
2.	Laboratory/Studio	22
3.	Field	
4.	Tutorial	
5.	Others (specify)	137
	Total	192

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	Familiarity with the basic concepts of object-oriented programming.	ع1، ع2، ع5	• Classroom Lecture • Dialogue and discussion • Survey • Learning by discovery • Self-learning • Developed lecture • Brainstorming • Web polling • KWL Learning Schedule • Mind Maps • Concept Maps	• Traditional and electronic achievement tests • Classroom Questions • Assignments and periodic evaluations • Presentations • Discussion and debate • Cognitive Performance Tests • Achievement File
1.2	Knowledge of the types of programming errors, comparison between them, and how to avoid and address them.	ع1، ع5		
2.0	Skills			
2.1	Write a simple program in Java using the basic components of the language.	م1، م2، م3، م4، م7	• Practical presentation • Developed Lecture • Discovery learning • Peer Learning • Self-learning • Dialogue and discussion • Web polling • Brainstorming • Collaborative Learning • Problem solving • Project-Based Learning • Online discussion forums	• Presentations • Grading scales • Performance tests • Production Metrics • Observation • Software Projects • Achievement File • Peer Evaluation • Self-evaluation
2.2	Addressing programming errors that appear when executing the program.	م1، م2، م4، م7		
2.3	Use all kinds of operations when writing a program in Java.	م1، م2، م3، م4، م7		
2.4	Use structural control string tools when writing a program in Java.	م1، م2، م3، م4، م7		
2.5	Adjust the mechanism for tracking the progress of the program's implementation.	م1، م2، م7		
2.6	The use of information and communication technology in	م1، م2، م7		

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	communication, exchange of ideas, scientific research, and performance of tasks and costs.			
2.7	Practice critical thinking and problem solving facing the learner in the course in creative ways.	م1، م2، م7		
3.0	Values, autonomy, and responsibility			
3.1	Cooperation, teamwork, and imitation of professional ethics.	ق1	• Project-Based Learning • Collaborative Learning • Dialogue and discussion • Practical lecture • Modeling and role models • Web polling	• Note cards • Discussion and dialogue • Classroom Questions • Grading metrics • Measures of values • Self-evaluation • Peer Evaluation • Achievement File
3.2	Take responsibility for continuous learning and continued personal development.	ق2		
3.3	Manage time efficiently and effectively when applying acquired knowledge and skills.	ق3		

C. Course Content

No	List of Topics	Contact Hours

1.	**Chapter 1: Introduction to Java**
	• Review concepts in programming.
	• Compilers.
	• Bugs.
	• The basic structure of Java code.
	• Components of the Java language:
	  ○ Language Rules.
	  ○ Reserved words.
	  ○ Escape Characters
	  ○ Variables and constants.
	  ○ Statements
	  ▪ Declaration Statements
	  ▪ Comments Statements
	  ▪ Input/Output Statements
	  • Standard Input/Output Statements
	  • GUI Input/Output Statements
	  ○ Control statements
		10

	○ Operators	
2.	**Chapter 2: Operations in Java** • Operations ○ Assignment Operations ○ Arithmetic Operations ○ Logical Operations ○ Relational Operations ○ Textual Operations ○ Casting Operations • Expressions • Order of precedence	15
3.	**Chapter 3: Control Structure - Conditional Statements** • simple if • if else • nested if else • ?: procedure • nested conditional • switch	15
4.	**Chapter 4: Control Structure – Looping and Jumping Statements** • Looping Statements Tools: ○ for ○ while ○ do while ○ nested loop • Jumping Statements Tools: ○ break ○ continue ○ return	15
Total		55

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm	Week 7	15%
2.	Quizzes (3-4 Quizzes)	All Semester	10%
3.	Lab Evaluations	All Semester	20%
4.	Project	Week 10	10%
5.	Participation	All Semester	5%
6.	Final	Week 12-13	40%
	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	Deitel P.J., Deitel H.M. - Java. How to Program, 10th Edition
Supportive References	1- Head First Java, by Kathy Sierra and Bert Bates. 2- Java: A Beginner's Guide, by Herbert Schildt. 3- Effective Java: Programming Language Guide (Java Series), by Joshua Bloch. 4- Simple Program Design, by Lesley Robertson.
Electronic Materials	Online resources will be provided during class lectures.
Other Learning Materials	N/A

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom, Computer lab
Technology equipment (projector, smart board, software)	Data Show, Smart Board, NetBeans software
Other equipment (depending on the nature of the specialty)	-

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Student , Peer Reviewer	1. Questionnaires and referendums approved by the department. 2. Peer evaluation of faculty members. 3. Review the results of student evaluation.
Effectiveness of students assessment	Students, Faculty, Program Leaders, Peer Reviewer	1. Questionnaires and referendums approved by the department. 2. Review course descriptions and course reports periodically. 3. Peer evaluation and periodic exchange of correction and auditing between faculty colleagues. 4. Review samples of students' work.
Quality of learning resources	Student, Faculty, Program Leaders	1. Questionnaires and referendums approved by the department. 2. Deletion and monitoring lists.

Assessment Areas/Issues	Assessor	Assessment Methods
The extent to which CLOs have been achieved	Faculty, Program Leaders	1. Review the course report. 2. Analyze test forms, grades and student work and records of their achievements.
Other		

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

G. Specification Approval Data

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

اعتماد NCAAA
T4
2020

توصيف المقرر الدراسي

اسم المقرر:	اللغة الإنجليزية المتخصصة
رمز المقرر:	نجل 102
البرنامج:	العلوم التطبيقية - تقنية البرمجة – الشبكات – الأمن السيبراني
الكلية:	الكلية التطبيقية
المؤسسة:	جامعة الإمام محمد بن سعود الإسلامية

المحتويات

أ. التعريف بالمقرر الدراسي:

1. الساعات المعتمدة: 3 (نظري)

2. نوع المقرر:

أ. متطلب جامعة ☐ متطلب كلية ☐ متطلب قسم ☐ متطلب برنامج ☑

ب. إجباري ☑ اختياري ☐

3. السنة / المستوى الذي يقدم فيه المقرر

المستوى الثاني

4. المتطلبات السابقة لهذا المقرر (إن وجدت):

نجل 101

5. المتطلبات المتزامنة مع هذا المقرر (إن وجدت)

لا يوجد

6. نمط الدراسة (اختر كل ما ينطبق)

م	نمط الدراسة	عدد الساعات التدريسية	النسبة
1	المحاضرات التقليدية	33	100%
2	التعليم المدمج		
3	التعليم الإلكتروني		
4	التعليم عن بعد		
5	أخرى		

7. ساعات الاتصال (على مستوى الفصل الدراسي)

م	النشاط	ساعات التعلم
1	محاضرات	33
2	معمل أو إستوديو	
3	دروس إضافية	
4	أخرى (تنفيذ الواجبات والدراسة الذاتية والمشاريع والبحث والاختبارات والعمل الجماعي)	90
	الإجمالي	126

ب- هدف المقرر ومخرجاته التعليمية:

1. الوصف العام للمقرر

In this course the students will be fully updated in line with the latest developments in information communication technology. This course teaches students the language and skills they need to understand and work in the world of computers. A focus on terminology is combined with vocabulary to give students the tools to use English in areas such as describing features and functions, applying for jobs, etc.

2. الهدف الرئيس للمقرر

The course aims at training students in English required by the latest developments in information communication technology. It provides them with the necessary language skills to perform their duties in English wherever required.

3. مخرجات التعلم للمقرر:

	مخرجات التعلم للمقرر	رمز مخرج التعلم المرتبط للبرنامج
1	**المعرفة والفهم**	
1.1	الإلمام بالمفاهيم الأساسية للحاسب الآلي وكيفية توظيفها في مجال الدراسة.	ع1، ع5
2	**المهارات**	
2.1	القدرة على تحليل مكونات الحاسب الآلي المادية والبرمجية بلغة جيدة.	م1، م2، م7
2.2	تمييز مفاهيم الاتصالات والشبكات باللغة الانجليزية.	م1، م2، م7
2.3	التواصل وتبادل الأفكار حول المقرر واستخدام تقنية المعلومات والاتصال في البحث العلمي وأداء المهام والتكاليف باللغة الإنجليزية.	م1، م2، م7
2.4	ممارسة التفكير الناقد وحل المشكلات التي تواجه المتعلم في المقرر بطرق ابداعية.	م1، م2، م7
3	**القيم**	
3.1	التعاون والعمل بروح الفريق والتمثل بأخلاقيات المهنة.	ق1
3.2	تحمل مسؤولية التعلم المستمر، والاستمرار في التطوير الشخصي.	ق2
3.3	إدارة الوقت بكفاءة وفعالية عند تطبيق المعارف والمهارات المكتسبة.	ق3

ج. موضوعات المقرر

م	قائمة الموضوعات	ساعات الاتصال
1	- **Computers Today:** • A digital age. • Computer essential. • Inside the system. • Buying a computer.	6
2	- **Input /output devices:** • Type, click, and talk. • Favorite image. • Display screens and ergonomic. • Choosing a printer. • Devices for the disables.	6
3	- **Storage devices:** • Magnetic. • Optical. • Flash.	6
4	- **Basic software:** • Operating system. • Word processing. • Spreadsheets and databases.	3
5	- **Faces of the internet:** • Internet and email. • The web. • Chat and conferencing. • Internet security.	3
6	- **Creative software:** • Graphics and designs. • Desktop publishing. • Multimedia. • Web design **.**	3
7	- **Programing:** • Program design and computer languages. • Java. • Jobs.	3

8	- **Computers tomorrow:** • Communication system. • Networks. • Video games. • New technology.	3
المجموع		33

د. التدريس والتقييم:

1. ربط مخرجات التعلم للمقرر مع كل من استراتيجيات التدريس وطرق التقييم

الرمز	مخرجات التعلم	استراتيجيات التدريس	طرق التقييم
1.0	**المعرفة والفهم**		
1.1	الإلمام بالمفاهيم الأساسية للحاسب الآلي وكيفية توظيفها في مجال الدراسة.	– المحاضرة الصفية – الحوار والمناقشة – الاستقصاء – التعلم بالاكتشاف – التعلم الذاتي – المحاضرة المطورة – العصف الذهني – الاستقصاء عبر الويب – جدول التعلم KWL – الخرائط الذهنية – خرائط المفاهيم	– الاختبارات التحصيلية التقليدية والإلكترونية – الأسئلة الصفية – الواجبات والتقييمات الدورية – العروض التقديمية – المناقشة والمناظرة – اختبارات الأداء المعرفية – ملف الإنجاز
2.0	**المهارات**		
2.1	القدرة على تحليل مكونات الحاسب الآلي المادية والبرمجية بلغة جيدة.	– العرض العملي – المحاضرة المطورة – التعلم بالاكتشاف – التعلم بالأقران – التعلم الذاتي – الحوار والمناقشة – الاستقصاء عبر الويب – العصف الذهني – التعلم التعاوني – حل المشكلات – التعلم القائم على المشروعات – منتديات النقاش الإلكتروني	– العروض التقديمية – سلالم التقدير – اختبارات الأداء – مقاييس الإنتاج – الملاحظة – المشاريع البرمجية – ملف الإنجاز – تقويم الأقران – التقويم الذاتي
2.2	تمييز مفاهيم الاتصالات والشبكات باللغة الانجليزية.		
2.3	التواصل وتبادل الأفكار حول المقرر واستخدام تقنية المعلومات والاتصال في البحث العلمي وأداء المهام والتكاليف باللغة الإنجليزية.		
2.4	ممارسة التفكير الناقد وحل المشكلات التي تواجه المتعلم في المقرر بطرق ابداعية.		

3.0	القيم		
3.1	التعاون والعمل بروح الفريق والتمثل بأخلاقيات المهنة.	– التعلم القائم على المشروعات – التعليم التعاوني – الحوار والمناقشة – المحاضرة العملية – النمذجة والقدوة – الاستقصاء عبر الويب	– بطاقات الملاحظة – المناقشة والحوار – الأسئلة الصفية – مقاييس التقدير – مقاييس القيم – التقويم الذاتي – تقويم الأقران – ملف الإنجاز
3.2	تحمل مسؤولية التعلم المستمر، والاستمرار في التطوير الشخصي.		
3.3	إدارة الوقت بكفاءة وفعالية عند تطبيق المعارف والمهارات المكتسبة.		

2. أنشطة تقييم الطلبة

م	أنشطة التقييم	توقيت التقييم (بالأسبوع)	النسبة من إجمالي درجة التقييم
1	اختباري أعمال الفصل	الأسبوع 7، 10	%30
2	تقييم للمهارات اللغوية	مستمر	%12
3	مشاركة	مستمر	%6
4	مشروع حول موضوعات المقرر	الأسبوع 11	%12
5	الاختبار الفصلي	الأسبوع 13	40%
6	المجموع		100%

هـ - أنشطة الإرشاد الأكاديمي والدعم الطلابي:

- توزيع الأدلة الإرشادية المعدة من قبل عمادة شؤون القبول والتسجيل.
- تخصيص ساعات مكتبية لأعضاء هيئة التدريس لمتابعة استفسارات الطلاب الأكاديمية.
- دراسة المشكلات الدراسية لطلاب الكلية وكل ما يتعلق بأسباب الفصل والتعثر الدراسي والتأخر وانخفاض المعدل.

و – مصادر التعلم والمرافق:

1. قائمة مصادر التعلم:

المرجع الرئيس للمقرر	1. Trish Stott, At your service, English for the Travel and Tourist Industry, Oxford: OUP. 2. InfoTech English for computer users (4th ed.) by : Santiago Esteras. 3. Student,s book: Infi Tech English for computer users (4th ed) by: Santiago Esteras. 4. Touchstone 2 (students and work book) by McCarthy. McCarten and Sendirod.
المراجع المساندة	-
المصادر الإلكترونية	1. www.TalkEnglish.com 2. http://www.cambridge.org/us/esl/touchstone/student/index.html 3. www.wjcompass.com

	4. موقع المقرر على شبكة الانترنت من خلال منصة blackboard يتم من خلاله تسليم الواجبات الكترونياً وطرح أسئلة النقاش ورفع محتوى المقرر بحيث يتاح للطالبة الرجوع للمحاضرات بشكل كامل، ونشر الاختبارات القصيرة الإلكترونية، والفيديوهات التعليمية المرتبطة بالمقرر، كما يتم عرض الاعلانات الخاصة بالمقرر وتقديم التغذية الراجعة المباشرة وفق ما يراه أستاذ المقرر.
أخرى	-

2. المرافق والتجهيزات المطلوبة:

العناصر	متطلبات المقرر
المرافق (القاعات الدراسية، المختبرات، قاعات العرض، قاعات المحاكاة ... إلخ)	قاعة دراسية - معمل لغة انجليزية.
التجهيزات التقنية (جهاز عرض البيانات، السبورة الذكية، البرمجيات)	سبورة ذكية، جهاز عرض بيانات.
تجهيزات أخرى (تبعاً لطبيعة التخصص)	-

ز. تقويم جودة المقرر:

مجالات التقويم	المقيمون	طرق التقييم
فاعلية أساليب التدريس	المراجع النظير – الطلاب	1. الاستبانات والاستفتاءات معتمدة من القسم.. 2. تقويم الأقران من أعضاء هيئة التدريس. 3. مراجعة نتائج تقويم الطلاب.
فاعلية طرق تقييم الطلاب	المراجع النظير– قيادات البرنامج – أعضاء هيئة التدريس – الطلاب	1. الاستبانات والاستفتاءات المعتمدة من القسم. 2. مراجعة تواصيف المقررات وتقارير المقررات بشكل دوري. 3. تقويم الأقران والتبادل الدوري للتصحيح والتدقيق بين الزملاء من أعضاء هيئة التدريس. 4. مراجعة عينات من أعمال الطلاب.
مصادر التعلم	قيادات البرنامج – أعضاء هيئة التدريس – الطلاب	1. الاستبانات والاستفتاءات المعتمدة من القسم. قوائم الشطب والرصد.
مدى تحصيل مخرجات التعلم للمقرر	قيادات البرنامج - أعضاء هيئة التدريس	1. مراجعة تقرير المقرر. 2. تحليل نماذج الاختبارات والدرجات وأعمال الطلاب وسجلات إنجازهم.

ح. اعتماد التوصيف

جهة الاعتماد	لجنة البرامج والخطط – الكلية التطبيقية
رقم الجلسة	السابعة - الفصل الدراسي الثاني من العام الجامعي 1441 - 1442 هـ
تاريخ الجلسة	1442/9/22هـ

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title:	Computer Maintenance
Course Code:	NET104
Program:	Network Technology
Department:	Applied Sciences
College:	Applied College
Institution:	Imam Mohammad Ibn Saud Islamic University
Version:	2023
Last Revision Date:	1st March 12, 2023

Table of Contents:

A. General information about the course:

Course Identification					
1. Credit hours:	3 (2 theory, 2 lab)				
2. Course type					
a.	University ☐	College ☒	Department☐	Track☐	Others☐
b.	Required ☒	Elective☐			
3. Level/year at which this course is offered:	Third				
4. Course general Description: This course deals with the physical parts of a computer. It refers to the computer system, especially those that form part of the central processing unit. Trainees should know the basic components of computer hardware and how to work with each part, including the motherboard, power supply, keyboard, mouse and monitor. In this course, we learn what computer hardware is and the basic components of it along with how trainees can safely assemble and troubleshoot key parts of a computer. **This course should also be covering the following professional certification:** ○ CompTIA A+ Core 1 220-1101 Certification ○ CompTIA A+ Core 2 220-1102 Certification					
5. Pre-requirements for this course (if any): None					
6. Co- requirements for this course (if any): None					
7. Course Main Objective(s): This course is designed to develop & enhance the knowledge and skills of trainees in computer maintenance field. The course deals with the basic concepts of dealing with the physical components of a computer and how to assemble them to form a computer, with training on how to diagnose and repair faults.					

1. Teaching mode (mark all that apply)

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

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	18
2.	Laboratory/Studio	30
3.	Field	
4.	Tutorial	
5.	Others (Specify)	
	Total	48

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	Determine the importance of computers, their types, benefits and planning.	ع1، ع4، ع5	- Lecture. - Discussion. - Survey. - Discovery learning. - Self-education. - Developed lecture. - Brainstorming. - Web survey. - KWL chart. - Mind maps. - Concept maps.	- Traditional and online achievement tests. - Questions. - Assignments and assessments. - Presentations. - Discussion and debates. - Cognitive performance tests. - Achievement file.
1.2	Discussing the importance of security and protection as well as identifying the threats and risks that a computer may be exposed to.	ع1، ع4، ع5		
2.0	Skills			
2.1	Assembling and installing hardware components to configure and operate a computer	م1، م2، م8	- Demonstration. - Developed lecture. - Discovery learning. - Peer learning. - Self-education. - Discussion. - Web survey. - Brainstorming. - Co-learning. - Problem Solving. - Project. - Online discussion.	- Presentations. - Rating ladders. - Performance tests. - Production metrics. - Observation. - Projects. - Achievement file. - Peer assessment. - Self-calendar.
2.2	Troubleshooting, computer fault diagnosis and maintenance.	م1، م2، م6، م8		
2.3	Dealing with the integrated and non-integrated maintenance tools in operating systems.	م1، م2، م8		
2.4	Installing antivirus software and be able to deal with them efficiently.	م1، م2، م6، م7، م8		
2.5	Communicating and exchange of ideas about the course. And the use of information and communication technology in scientific research.	م1، م2، م8		
2.6	Practicing critical thinking and creatively solving problems that learners may face in the course.	م1، م2، م8		

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
3.0	Values, autonomy, and responsibility			
3.1	Work effectively on team to accomplish a specific goal regarding the course.	ق1	- Demonstration. - Developed lecture. - Discovery learning. - Peer learning. - Self-education. - Discussion. - Web survey. - Brainstorming. - Co-learning. - Problem Solving. - Project. - Online discussion.	- Presentations. - Rating ladders. - Performance tests. - Production metrics. - Observation. - Projects. - Achievement file. - Peer assessment. - Self-calendar.
3.2	Managing time efficiently when applying acquired knowledge and skills.	ق٢		
3.3	Take responsibility for continuous learning and continuing personal development.	ق٣		

C. Course Content

No	List of Topics	Contact Hours
1.	**Planning and implementing computer maintenance:** • Why Computer Maintenance Is Important. • The benefits of regular computer maintenance. • Occupational safety requirements in the work environment. • Types of computer maintenance. • Factors that may affect maintenance planning. • How to plan for a computer maintenance. • Computer maintenance reports. • Maintenance contracts.	8
2.	**Computer assembly:** • Motherboard installation. • CPU & Memories installation. • Expansion Cards installation • HDD/SSD installation. • Connecting the DC power supply. • Connecting a monitor, keyboard and mouse.	8
3.	**Running and testing the computer:** • Running and testing the computer. • Connecting the devices to the main power source. • Verifying that the devices is working properly. • Accessing the BIOS Setup. • Identifying the stages that the device goes through from startup until loading the OS. • Install and configure PC system unit components and peripheral devices. • Install, configure, and troubleshoot display, multimedia devices, storage devices, and internal system components.	4

4.	**Fault diagnosis:** • Computer malfunctions. • Troubleshooting stages. • Diagnosing Hardware failures and how to solve them. • Computer hardware problems. • Reasons of computers failure. • Factors of computers failure. • Suitable environment for the computer • Diagnosing computer failures at startup and how to solve them. • Dealing with error messages. • Diagnosing computer devices and peripheral failures and how to solve them. • Diagnosing software failures and how to solve them. • Computer software problems (in Windows OS) • Finding software crashes. • Malfunction diagnosis programs and their types. • Initial steps to deal with faults and how to diagnose them. • Common Hardware problems and quick fixes. • Common Software problems and quick fixes. • Configure and troubleshoot network connections. • Support and troubleshoot laptops, mobile devices and print devices.	12
5.	**Maintenance Tools:** • Tools concept. • The appropriate equipment and tools for computer maintenance. • Hardware computer maintenance tools. • Software computer maintenance tools.	8
6.	**Computer security and protection:** • Why security and protection are important. • Threats and risks. • Installing antivirus software. • How antivirus software works. • How to avoid computer viruses.	8
Total		48

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (In week no)	Percentage of Total Assessment Score
1.	Midterm Exam	Week7	20%
2.	Quizzes	Continuous	10%
3.	Project	Continuous	10%
4.	Passing CISCO Networking Academy Course	Continuous	10%
5.	Practical Assessment	Continuous	10%
6.	Final Exam	Week13	40%

*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	Upgrading and Repairing PCs: Mueller, Scott. The Complete PC Upgrade & Maintenance Guide, by Mark Minasi. CompTIA A+ Core 1 220-1101 Certification Study Guide CompTIA A+ Core 2 220-1102 Certification Study Guide
Supportive References	Supportive resources will be provided during class lectures.
Electronic Materials	Online resources will be provided during class lectures.
Other Learning Materials	N/A

2. Required Facilities and equipment

Items	Resources
Facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom included: 1. Appropriate equipment and tools for computer maintenance. 2. A projector connected to a PC, preferably with Internet access. 3. A vertical sliding board. 4. An equipped computer lab with at least 25 seats.
Technology equipment (Projector, smart board, software, etc.)	Computing resources (Projector, data show, Smart Board, software, etc.)
Other equipment (Depending on the nature of the specialty)	N/A

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Student	1. Students feedback (collected through surveys) as per university policy/procedure. 2. Teacher's Course report.
Effectiveness of student's assessment	Faculty	1. Review of Course Reports. 2. Review of Student feedback.
Quality of learning resources	Student and Faculty	Indirect using course evaluation and faculty survey.
The extent to which CLOs have been achieved	Program Leaders	Continuous review of the course contents, teaching strategies and utilizing the best practices.
Other	N/A	N/A

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

G. Specification Approval Data

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	