Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2024-2025

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program

Academic Program Description Form

University Name: Al-Furat Al-Awsat Technical University
Faculty/Institute: Babylon Technical Institute
Scientific Department: Diploma of Computer Networks and Software Techniques
Academic or Professional Program Name: Diploma in Computer Networks and Software Techniques

Final Certificate Name: Diploma
Academic System: Year Study
Description Preparation Date: 15/11/2024
File Completion Date: /12/2024

Signature:
Head of Department Name:
Asst.Prof. Nidaa Ghalib Ali
Date: 27/1/2025

Signature:
Scientific Associate Name:.
Asst.Prof.Dr.Oras Khudhayer Obayes
Date: 27/1/2025

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Asst.Prof.Khansaa Azeez Obayes Al-Husseini.
Date: 27/1/2025
Signature:

Approval of the Dean
Asst.Prof.Dr.Oras Khudhayer Obayes

أ. م. د
اوراس خضير عبيس
العميد وكالة
المعهد التقني بابل

1. Program Vision

The establishment of a scientific or human resource foundation in the field of networks and computer programming related to computer science and applications aims to develop plans for enhancing staff and curricula to meet quality standards. In addition to seeking to keep pace with advancements and ready-made applications to contribute to achieving part of them, making the department a distinguished scientific and research institution in its programs, curricula, and scientific research

.

2. Program Mission

The Computer Networks and Software Techniques aims to prepare a highly professional specialized workforce to deal with application, information software, all about computer networks and data communication. It works to provide suitable opportunities for the community to develop their capabilities in leveraging technological advancements and meeting their needs in the field of computing, as well as offering training consultancy services.

3. Program Objectives

١.Preparing qualified technical staff in computer networks and software.

2 .The graduate has basic information in the field of computer networks.

3 .Participating in testing, auditing and correcting programmed systems.

4 .Participating in preparing and designing software systems.

5. Implementing software systems

4. **Program Accreditation**
No

5. **Other external influences**
There is a close relationship with the labor market that receives our graduates, as the opinion of the labor market is taken into account in the academic curricula.

6. **Program Structure**				
Program Structure	**Number of Courses**	**Credit hours**	**Percentage**	**Reviews***
Institution Requirements	(first stage)13 +11(second stage)	42(first stage) +68 (second stage)	10%	All courses are core
College Requirements	42(first stage) +68 (second stage)	42(first stage) +68 (second stage)	10%	All courses are core
Department Requirements	(first stage)13 +11(second stage)	42(first stage) +68 (second stage)	80%	All courses are core
Summer Training	1	0	–	–
Other	–	–	–	–

* This can include notes on whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	Practical
First stage(corse first)	CNS1101	Programming in C++I language	2	2
First stage	CNS1102	Fundamentals Computer	–	2
First stage	CNS1103	Fundamental of computer Network	2	2
First stage	CNS1103	Logical design	2	2
First stage	CNS1105	Mathematics	2	2
First stage	CNS1106	Human rights	2	-
First stage	CNS1107	Arabic	2	-
First stage(corss second)	CNS1201	Programming in C++II language	2	2
First stage	CNS1202	Python Programming Language	2	2
First stage	CNS1203	Data communication	2	–
First stage	CNS1204	Basice Web design	2	2
First stage	CNS1205	Wireless Network	2	2
First stage	CNS1206	English	2	_
Second stage	CS200	Data structures	2	3
Second stage	CS201	Databases	2	2
Second stage	CS202	Operating Systems	2	2
Second stage	CS203	Systems analysis	1	2
Second stage	CS204	Programming in the V.Basic language	2	3
Second stage	CS205	Networks	1	2
Second stage	CS206	website design	1	2

Second stage	CS207	**Project**	**1**	**2**
Second stage	CS208	**English**	**1**	_
Second stage	CS209	**The crimes of the Baath regime in Iraq**	**1**	_
Second stage	CS210	**Arabic**	**1**	-

8. Expected learning outcomes of the program

Knowledge

1. Deep understanding of computer network design principles
2. Understanding the basics of software engineering and systems design.
3. Website design and management.
4. Familiarity with concepts such as artificial intelligence (AI).
5. Understanding the importance of documenting technical projects.

Skills

1. Ability to design and implement wired and wireless computer networks.
2. Develop and maintain software using modern programming languages
3. Set up and manage servers and network services
4. Ability to secure networks and perform penetration testing to enhance cyber protection.
5. Analyze and solve technical problems in network and software systems.
6. Create integrated web applications

Ethics

1. The student must pay attention to respecting time and order in the classroom and educational laboratories.
2. That the student understands what cognitive excellence and excellence mean.
3. The student should listen carefully to the professor's explanation.
4. That what the student studies is consistent with his inclinations and thinking trends.

9. Teaching and Learning Strategies

1. The lecture
2. Laboratory
3. Summer training
4. Systematic training

10. Evaluation methods

1. Oral exams
2. Written tests
3. Practical exams
4. Semester exams
5. Final exams
6. Daily evaluation
7. Annual evaluation
8. Projects

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Professor	Electrical and electronic engineering	communications engineering			1	
Assistant Professor	Computer Science	Information Technology			1	
Lecturer	Computer Science	Artificial Intelligence			3	
Lecturer	Computer Science	Information Technology			1	
Lecturer	Computer Science	Information Technology-Softwires			1	
Lecturer	Computer Science	Data Security			1	

Lecturer	Computer science	Informatics			1	
Lecturer	Electrical engineering	electrical power			1	
Assistant Lecturer	Computer technology engineering	Computer technology engineering			1	
Assistant Lecturer	Information technology	information networks			2	
Assistant Lecturer	Mathematical Sciences	Mathematical Sciences			1	
Assistant Lecturer	Political science	international relations			1	

Professional Development

Mentoring new faculty members

Briefly describe the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level.

Professional development of faculty members

1- Teamwork: Working within the group effectively and actively.

2- Time management: Managing time effectively and setting priorities with the ability to work organized by appointments.

3- Leadership: The ability to direct and motivate others.

4- Independence at work.

12. **Acceptance Criterion**
The department accepts only graduates of the scientific and professional branches.
13. **The most important sources of information about the program**
1- Internet sites 2- Educational bags 3-External sources 4 - Scientific methodological books in the field of specialization 5-The department's website 6- Lectures
14. Program Development Plan
Working to develop curricula and adding new materials to suit the requirements of the labor market and modern technological developments in the field of computer science, especially with regard to cybersecurity, artificial intelligence, and quantum computing.

Program Skills Outline														
				Required program Learning outcomes										
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics		
				A 1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First stage (corss first)	CNS1101	Programming in C++I language	Basic	X				X				x			
	CNS1102	Fundamentals computer	Basic	X				X				x			
	CNS1103	Fundamentals computer of network	Basic	X				X				x			
	CNS1103	Logical design	Basic	X				X				x			
	CNS1105	Mathematics	Basic(assistant)	X				X				x			
	CNS1106	human rights	Basic(General)		x				x				X		
	CNS1107	Arabic	General		x				x				X		

First stage (corss second)	CNS1201	Programming in C++ II language	Basic	x				X				x			
	CNS1202	Python Programming Language	Basic	x				X				x			
	CNS1203	Communication data	Basic	x				X				x			
	CNS1204	Basice Web design	Basic	x				X				x			
	CNS1205	Wireless network	Basic(assistant)		x				x				X		
	CNS1206	English	General		x				x				X		
Second stage	CS200	Data structures	Basic	X				X				x			
	CS201	Databases	Basic	X				X				x			
	CS202	Operating Systems	Basic	X				X				x			
	CS203	Systems analysis	Basic	X				X				x			
	CS204	Programming in the V.Basic language	Basic	X				X				x			

Second stage	CS205	networks	Basic	X				X				x			
	CS206	website design	Basic	X				X				x			
	CS207	Project	Basic		x				x				X		
	CS208	English	Basic		x				x				X		
	CS209	The crimes of the Baath regime in Iraq	Basic		x				x				X		
	CS2010	Arabic	General		x				x				x		

Course Description

1. Course Name:
Programming in C++ I
2. Course Code:
CNS1101
3. Semester / Year:
Semester system first course 2024−2025
4. Description Preparation Date:
22/11/2024
5. Available Attendance Forms:
Attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
4(hours)\ 4 (units)\ total 60 hour
7. Course administrator's name (mention all, if more than one name)
Name: Khamael Raqim Raheem Email: khmrakrah@atu.edu.iq
8. Course Objectives

Course Objectives	*Introducing the student to programming language their types, and C++. *The general structure of the program, its sections, and data types used in this language. *Writing code for programs, functions, procedures, and files Data and using the ability to draw on it.
9. Teaching and Learning Strategies	
Strategy	1- High thinking skill strategy. 2- Critical thinking strategy in learning. 3- A strategy according to the student's ability.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	4	*An overview of programming languages:-* *• What is a programming language* *• History and development of programming languages* *• Levels of programming languages* *• C++ language: the origins of the language, its development, and its position within the levels of programming languages*	*Learn about programming Languages*	*lecture Practical laboratory Oral discussion*	Daily exam
Second	4	*Basic principles of the C++ language / C++ language concepts* *• What does a C++ program consist of?* *• What are vertical files? A simple explanation of the header files included in a C++ program*	*What are header files*	*lecture Practical laboratory Oral discussion*	Daily exam
Third	4	*C++ language components and tools / Basic element of C++ language* *• Language codes* *• Definitive names* *• Reserved words* *• Representing constants* *• Representing variables*	*C++language and its tools*	*lecture Practical laboratory Oral discussion*	Daily exam
Forth	4	*data types in C++ and ways to represent them in memory / Data types in C++* *• Char type* *• The correct type is integer type* *• real type* *• Boolean (logical) type* *•Converting between different graphic types*	*Ways to represent them in memory*	*lecture Practical laboratory Oral discussion*	Daily exam
Fifth	4	*Types of expressions in C++ and how to formulate the expression:-* *• Arithmetic expression / various arithmetic operations and their priorities / method of converting a mathematical expression into an arithmetic expression in C++ / various examples*	*Arithmetic expressions*	*lecture Practical laboratory Oral discussion*	Daily exam

Sixth	4	• *Relational expression / relational processes and their priorities / formulation of relational expression* • *Logical expression / logical operations and their priorities / formulation of logical expression* • *Compound expression / general process priority table / various examples*	*Logical expressions*	*lecture Practical laboratory Oral discussion*	Daily exam
Seventh	4	*- Giving initial values to variables and constants* *- Parentheses and spaces* *- Types of notes* *- Special tools*	*Notes and special tools*	*lecture Practical laboratory Oral discussion*	Daily exam
Eighth	4	*Precision tools*	*Precision tools*	*lecture Practical laboratory Oral discussion*	Daily exam
Ninth	4	*-The designation sentence and its types/with illustrative examples:-* *1. Arithmetic expression (equation)* *2. Counters and their types* *3. Other forms of equations specific to the C++ language*	*Mathematical expressions and equations*	*lecture Practical laboratory Oral discussion*	Daily exam
Tenth+ Eleventh	8	*Formulated input and output functions* *- Print texts* *- Print numerical values* *- Print arithmetic expressions* *- Unformulated input and output functions*	*Printing in all its forms*	*lecture Practical laboratory Oral discussion*	Daily exam
Twelveth	4	*Control, condition, and repetition statements* *Control, cond. & loop statements* *1. Cond conditional sentences. Stat* • *Cond tool. Tools* • *The conditional if statement* • *If…else sentence* • *Nested cond.*	*Conditional functions of all kinds*	*lecture Practical laboratory Oral discussion*	Daily exam
Thirteen	4	*2. The conditional distribution statement switch* • *Nested conditional distribution statement nested switch*	*Conditional functions of all kinds*	*lecture Practical laboratory Oral discussion*	Daily exam
Fourteen	4	*3. Repetition sentences* • *The for loop expression* • *Nested for*	*Repetition and nested repetition*	*lecture Practical laboratory Oral discussion*	Daily exam
Fifteen	4	• *The while expression*	*Repetition expression*	*lecture Practical laboratory Oral discussion*	Daily exam

11. Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretical)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Lectures according to the curriculun
Main references (sources)	C++ programming with 469 solv problems .
Recommended books and references (scientific journals, reports…)	A comprehensive reference programming in C++
Electronic References, Websites	https://www.kutub.info/library/book 396

Course Description

1. Course Name:	
Computer Fundamentals	
2. Course Code:	
CNS1102	
3. Semester / Year:	
Semester system first course / 2024-2025	
4. Description Preparation Date:	
3-12-2024	
5. Available Attendance Forms:	
Daily Attendance/ 2 Hours per Week (practical)	
6. Number of Credit Hours (Total) / Number of Units (Total)	
2(hours)\ 2 (units) total 30 hour	
7. Course administrator's name (mention all, if more than one name)	
Name: Dhiyaa Salih Hammad E-Mail: dhiyaa_alshammari@atu.edu.iq	
8. Course Objectives	
Course Objectives	• Learn the basic concepts of the computer and explain how to use it. • Learn how to use the Windows operating system and the basics of working in the digital environment. • Learn to use Microsoft Office Word to create and process text data. • Learn to use Microsoft Office PowerPoint to create and display slides. • Develop skills through periodic tests. • Preparing the student to learn to manage and use various computer applications.
9. Teaching and Learning Strategies	
Strategy	• Discussion Strategy. • Strategy for introducing and teaching students how to use the operating system. • Strategy to encourage students to learn how to use computers and some of their applications, such as: (Word + PowerPoint).

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-2	2	knowledge and understanding	Introduction to Windows 10 (Operating steps+ Desktop components + icons)	Practical discussions and lectures	Monthly and daily tests and discussions
3	2	knowledge and understanding	The concept of the window, its components, and the operations of zooming in, out, and exiting it. (Maximize, Minimize, Close, etc.)	Practical discussions and lectures	Monthly and daily tests and discussions
4	2	knowledge and understanding	Dealing with the main desktop icons such as my computer, recycle bin, document, control panel, and the importance of each one.	Practical discussions and lectures	Monthly and daily tests and discussions
5	2	knowledge and understanding	Copy, cut, and paste operations for folder icons, files, etc.	Practical discussions and lectures	Monthly and daily tests and discussions
6	2	knowledge and understanding	•Use the Control panel properties to add and delete programs to the Programs list. •Dealing with the Paint program in drawing, displaying, and storing drawings and images.	Practical discussions and lectures	Monthly and daily tests and discussions
7	2	knowledge and understanding	Introduction to Microsoft Word, Its advantages, benefits, and operation.	Practical discussions and lectures	Monthly and daily tests and discussions
8	2	knowledge and understanding	Get to know the main interface of the Word program.	Practical discussions and lectures	Monthly and daily tests and discussions
9	2	knowledge and understanding	Learn about the Word program tabs and the contents of each tab, for example, the Home tab, which consists of groups such as the Font group, which includes several commands such as the font color command, the font size command, the italic command, etc.	Practical discussions and lectures	Monthly and daily tests and discussions
10	2	knowledge and understanding	Create a new document new document and how to handle, store, and modify it.	Practical discussions and lectures	Monthly and daily tests and discussions

11	2	knowledge and understanding	• Writing and formatting text in a Word document. • Perform search, replace, page preparation, formatting, and numbering. • Prepared and handled tables and conducted pre-inspection printing.	Practical discussions and lectures	Monthly and daily tests and discussions
12	2	knowledge and understanding	PowerPoint slide preparation program, its importance, advantages, and operation.	Practical discussions and lectures	Monthly and daily tests and discussions
13	2	knowledge and understanding	Main screen components, toolbar, and how to set up a slide.	Practical discussions and lectures	Monthly and daily tests and discussions
14	2	knowledge and understanding	Learn about all the tabs of the presentation program and their contents.	Practical discussions and lectures	Monthly and daily tests and discussions
15	2	knowledge and understanding	Conducting and saving presentations and dealing with various multimedia.	Practical discussions and lectures	Monthly and daily tests and discussions

11. Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretical)

12. Learning and Teaching Resources

Required textbooks (methodology if any)	Nothing
Main References (Sources)	Nothing
Recommended supporting books and references (.scientific journals, reports, etc)	1 - Computer Fundamental and Office Applications Part First, Prof. Dr. Ghassan Abdul Hamid and others, 2014, Baghdad. 2- Computer Fundamental and Office Applications, Part Two, Prof. Ghassan Abdul Hamid and others, 2016, Baghdad.
Electronic references, websites	Nothing

Course Description

1. Course Name:
Fundamentals of computer networks
2. Course Code:
CNS1103
3. Semester / Year:
Semester system first course2024-2025
4. Description Preparation Date:
2-12-2024
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
4(hours)\ 4 (units) total 60 hour
7. Course administrator's name (mention all, if more than one name)
Name: Wafaa Mohammed Ridha Shakir Email: inb.wfa@atu.edu.iq

8. Course Objectives

Course Objectives	1-Introducing the student to networks, their benefits, their technologies, their types, types of connections, types of connection media, the different physical components, and the approved network standards. 2-Introducing the student to the Internet and computer security

9. Teaching and Learning Strategies

Strategy	1- High thinking skill strategy. 2- Critical thinking strategy in learning. 3- Strategy according to the student's ability

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Computer Networks	Introduction of Computer Networks	Lecture - Practical Lab - Oral Discussion	
2	4	Types	Computer Network types	Lecture - Practical Lab - Oral Discussion	

3	4	Physical Networks	Physical Network Topologies	Lecture - Practical Lab - Oral Discussion	
4&5	4	Physical Media	Physical Media	Lecture - Practical Lab - Oral Discussion	
6&7	4	Interconnection	Open Systems Interconnection OSI & Protocols	Lecture - Practical Lab - Oral Discussion	
8	4	Network Devices	Network Devices	Lecture - Practical Lab - Oral Discussion	
9&10	4	IP Address	IP Address IPV4 and IPv6	Lecture - Practical Lab - Oral Discussion	
11&12	4	WLA IP Addressing	IP Address subnetting	Lecture - Practical Lab - Oral Discussion	
13	4	Ethernet Networks	Ethernet LANs and Switches and Spanning Tree protocol	Lecture - Practical Lab - Oral Discussion	
14	4	VLAN	Virtual Local Area Network (VLAI	Lecture - Practical Lab - Oral Discussion	
15	4	WLAN	Wireless Local Area Network (WLA	Lecture - Practical Lab - Oral Discussion	

11. Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretical)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	nothing
Main references (sources)	Computer networks
Recommended books and references (scientific journals, reports…)	nothing
Electronic References, Websites	Nothing

Course Description

1. Course Name:
logical design
2. Course Code:
CNS1103
3. Semester / Year:
Semester system first course 2024-2025
4. Description Preparation Date:
12−12−2024
5. Available Attendance Forms:
My presence
6. Number of Credit Hours (Total) / Number of Units (Total)
4(hours)\ 4 (units) total 60 hour
7. Course administrator's name (mention all, if more than one
Name: dr. Ali Salah Mahdi Email: alisalahelect1985@gmail.com ali.khafaja@atu.edu.iq
8. Course Objectives

Course Objectives	• **Intro conver numbe**

9. Teaching and Learning Strategies

Strategy	1. Developing the student's mentality 2. Developing the skillful talent

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subjec
first	4	Number Systems • Binary, Octal, Decimal a Hexadecimal • Conversion form Oth Bases to Decimal	Numb

the second	4	Conversion form Decimal Other Bases • Conversion form Binary Octal and Hexadecimal • Binary-Coded Decim (BCD)	Conve
the third	4	Binary Arithmetic • Addition, Subtracti Multiplication and Division • Representation of Negati Numbers • 2's Complement Numbe • 1's Complement Numbe	Binary
Fourth	4	Subtraction Usi Complement • Subtraction with Complements • Subtraction with (r – 1 Complement	Subtra
Fifth	4	Logic Gates • NOT • AND and NAND • OR and NOR • XOR and XNOR	Logic
Sixth	4	Boolean Algebra • Boolean Variables • Boolean Expression • Truth Table	Boole
Seventh	4	Basic Identities of Boole Algebra • DeMorgan's Theorem • Algebraic Manipulation • Complement of a Functi	Boole
The eighth	4	Standard Forms • Sum Term and Produ Term • Minterm and Maxtern • Sum of Product a Product of Sum	Stand
Ninth	4	Karnaugh Maps • Two-Variable Karnau Maps	Karna

		• Three-Variable Karnau Maps • Four-Variable Karnau Maps	
Tenth	4	Binary Adders – Half Adde • Binary Adders – Full Adc • Binary Parallel Adder	B nary
Eleventh	4	Binary Subtractors – H Subtractor • Binary Subtractors – F Subtractor • Binary Adder-Subtractor	B nary
Twelfth	4	Flip-Flops • D Flip-Flop • S-R Flip-Flop	F ip-F
Thirteenth	4	J-K Flip-Flop • T Flip-Flop	J-K Fli
Fourteenth a fifteenth	8	Shift Registers • Serial In/Serial Out Shift Registers • Serial In/Parallel Out Sh Registers • Parallel In/Serial Out Sh Registers • Parallel In/Serial Out Sh Registers	S ift F

11. Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretica

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Computer Archite ture
Main references (sources)	***Computer System Arch***
Recommended books and references (scientific journals, reports…)	***Computer System Archi***
Electronic References, Websites	http://files.bo oks.e

Course Description

1. Course Name:
Mathematics and numerical analysis
2. Course Code:
CNS1105
3. Semester / Year:
Semester system first course2024−2025−
4. Description Preparation Date:
1−12−2024
5. Available Attendance Forms
Attendance (theoretical + practical)
6. Number of Credit Hours (Total) / Number of Units (Total)
4(hours)\ 4 (units) total 60 hour
7. Course administrator's name (mention all, if more than one name)
Name: israa essa abed Email: israa.abed@atu.edu.iq
8. Course Objectives

Course Objectives	• **The student must be able to understand mathematics problems a how to solve them** • **The student must be able to work in groups** • **The student must be able to communicate in the field of work…**
9. Teaching and Learning Strategies	
Strategy	1- By setting educational objectives 2- Through discussion and participation in solving mathematic problems 3- Intentional error 4- By summarizing the main ideas

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	4	matrices	matrices/Types of matrices / Properties of matrices and how to find their rank	lecture Practical laboratory Oral discussion	Daily exam
2+3	8	Operations on matrices	The equality of of matrices and the Operations(addition, subtraction and multiplication)	lecture Practical laboratory Oral discussion	Daily exam
4	4	Inverses of matrices/ determinant of matrices	The determinant of matrices and relation with rank to used method to find value of determinant	lecture Practical laboratory Oral discussion	Daily exam
5+6	8	Solve linear equations	Solve linear equations using matrix inverse and by using of determent	lecture Practical laboratory Oral discussion n	Daily exam
7+8	8	Linear and trigonometric functions	Linear and trigonometric functions and their derivatives	lecture Practical laboratory Oral discussion	Daily exam
9+10	8	Exponential and logarithmic functions	Exponential and logarithmic functions and their derivatives	lecture Practical laboratory Oral discussion	Daily exam
11	4	Partial differentiation	Partial differentiation/implicit differentiation	lecture Practical laboratory Oral discussion	Daily exam

12	4	Numerical differentiation	Numerical differentiation/trapezoid method	lecture Practical laboratory Oral discussion	Daily exam
13	4	differential equations	Ordinarydifferential equations of first order	lecture Practical laboratory Oral discussion	Daily exam
14	4	Types and methods of solving equations	Types and methods of solving differential equations (separation of variables, homogeneous ones)	lecture Practical laboratory Oral discussion	Daily exam
15	4	Complete differential equations	Complete and linear differential equations	lecture Practical laboratory Oral discussion	Daily exam

11. Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretical)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Lectures according to the curriculum
Main references (sources)	Shawm series,
Recommended books and references (scientific journals, reports…)	Calculus book The methodological book of applied mathematics, Mr. Abdul Razzaq Al-Hassan
Electronic References, Websites	Books website

Course Description

1. Course Name:	
human rights	
2. Course Code:	
CNS1106	
3. Semester / Year:	
2024−2025	
4. Description Preparation Date:	
10 /12/2024	
5. Available Attendance Forms:	
Presence	
6. Number of Credit Hours (Total) / Number of Units (Total)	
2(hours)\ 2 (units) \total 60 hour	
7. Course administrator's name (mention all, if more than one name)	
Name: mustafa abbas mohammed Email: mustafaalkhafagji815@gamil.com	
8. Course Objectives	
Course Objectives 1.Educating students about human rights principles 2. Explaining the articles of the Universal Declaration of Human Rights of 1948 and indicating the most prominent articles 3. The student should be familiar w constitutional, judicial and politi guarantees	**4. For the student to become familiar with stages of development of the concept of hun rights in the ancient, medieval, and modern e**
9. Teaching and Learning Strategies	
Strategy	Explaining the curriculum divided into two hours each we using multiple means of illustration, such as press repor archival books, and illustrated materials.

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Developing knowledge human rights Developing knowledge human rights Developing knowledge human rights Developing knowledge human rights Developing knowledge human rights Developing knowledge human rights Developing knowledge human rights	The histori development human rights ancient tim (Mesopotamia other ancie civilizations) Explanation a discussion of t articles of t Universal Declaration Human Rights 1948 Human rights international a regional conventions /European Convention Human Rights African Charter Human Rights / Ar Charter on Hum Rights) -Rights in Islan law - Aspects of equality between men and women in rights - Freedoms in Islamic law - Public .	Theoretical lecture And discussi Theoretical lecture And discussion Theoretical lecture And discussion Theoretical lecture And discussion Theoretical lecture And discussion Theoretical lecture And discussion Exams Theoretical lecture And discussion Theoretical lecture And discussion	General questions a discussion General questions a discussion General questions a discussion General questions a discussion General questions a discussion General questions a discussion Exams General questions a discussion General questions a discussion

11. Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretical)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Lectures according to t curriculum
Main references (sources)	Human Rights book written by Alaa Al-Enezi
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	Various press reports on YouTube

1. Course Name:
Arabic
2. Course Code:
CNS1107
3. Semester / Year:
Semester system first course 2024-2025
4. Description Preparation Date:
22/12/2024
5. Available Attendance Forms:
Attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
2(hours)\ 2 (units) \total 30 hour
7. Course administrator's name (mention all, if more than one name)
Name: Email:
8. Course Objectives

Course Objectives	**• Helps students develop their linguistic skills comprehensively, preserve cultural identity, teach and learn, understand religious texts, and benefit from Arabic literature.**

9. Teaching and Learning Strategies	
Strategy	Lecture, lab, summer training

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Duties	throw Lecture	- Introduction to linguistic err the tied taa	Knowing how avoid making linguistic mistak	1	1
Oral exams	Giving lectures	Rules for writing the extended shortened alif + solar and lun . letters	B sentence construction ar grammatical .structures	1	2
Discussions	Giving lectures	. The letters Ḍād and Ḍā	How to different between writing letters Dhad and .	1	3
Direct questions	Giving lectures	Writing the hamza	Writing the ham al-wasl, hamzat qata', hamzat a middle and	1	4
Short test	Giving lectures	punctuation mar	punctuation mar	1	5
Duties	Giving lectures	Noun, verb an the difference between them	Knowing the no and verb	1	6
Oral exams	Giving lectures	Effects	:Effects The object- Absolute effec Deferred effec The object- The object with	1	7
Discussions	Giving lectures	number	How to write th number	1	8
Direct questions	Giving lectures	Common language errors applications	linguistic error	1	9+10
Direct questions	Giving lectures	+ Noon and Tanwee meanings of preposition	,Anun of empha nun, nun of won ,Tanween Fath Damma and Ka	1	11
Direct questions	Giving lectures	Formal aspects For administrative speech	Administrativ speech and how write it	1	12
Direct questions	Giving lectures	Language of speech Administrativ	Language of spe	1	13+14
Direct questions	Giving lectures	Administrative correspondence sampl	administrative correspondenc	1	15

11. Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretical)

12. Learning and Teaching Resources

Required textbooks (curricular books any)	Nothing
Main references (sources)	1- Clear Dictation: Abdul Majeed Al-Naimi Daham Al-Kayyal, Dar Al-Mutanabbi Library, Baghdad, 6th edition, 1987 AD 3- Lessons in Language, Grammar and Dictation for State Employees: Ismail Hamoud Atwan and others, Ministry of Education Press No. (3), Baghdad, 2nd edition, 1984 AD 5- General Arabic Language for Non-Specialization Departments: Abdul Qader Hassan Amin and others, Ministry of Higher Education and Scientific Research, 2nd edition, 2000 AD 6- Inspired by Arabic Literature: Hafal Muhammad Amin, Al-Saadoun Press, Baghdad.
Recommended books and references (scientific journals, reports…)	Iraqi magazines website
Electronic References, Websites	Scientific Researcher

Course Description

1. Course Name:	
Programming in C++ II	
2. Course Code:	
CNS1201	
3. Semester / Year:	
Semester system, second course 2024-2025	
4. Description Preparation Date:	
22/11/2024	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
4(hours)\ 4 (units)\ total 60 hour	
7. Course administrator's name (mention all, if more than one name)	
Name: Khamael Raqim Raheem Email: khmrakrah@atu.edu.iq	
8. Course Objectives	
Course Objectives	*Introducing the student to programming languages, their types, and C++. *The general structure of the program, its sections, and data types used in this language. *Writing code for programs, functions, procedures, and files Data and using the ability t draw on it.
9. Teaching and Learning Strategies	
Strategy	1- High thinking skill strategy. 2- Critical thinking strategy in learning. 3- A strategy according to the student's ability.

١٠.Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
First	4	*• The repetition expression do…while*	*Repetition expression*	*lecture Practical laboratory Oral discussion*	Daily exam
Second	4	*4. Control statements and control iterators* *• The continuation sentence continue.* *• Exit function* *• The transition sentence Goto*	*Continue , exit, goto*	*lecture Practical laboratory Oral discussion*	Daily exam
Third	4	*Variables tagged as arrays and matrices* *One dimensional array*	*One dimensional array*	*lecture Practical laboratory Oral discussion*	Daily exam
Fourth +fifth	8	*Two-dimensional matrix, square matrix (as a special case of two-dimensional matrix*)	*Working with arrays*	*lecture Practical laboratory Oral discussion*	Daily exam
Sixth	4	*Symbolic array and string representation (symbolic strings*)	*Working with arrays*	*lecture Practical laboratory Oral discussion*	Daily exam
Seventh	4	Functions *• Local variables and global variables* *• Definition of the function* *• Call the function* *Function call methods*	*Defining and calling functions*	*lecture Practical laboratory Oral discussion*	Daily exam
Eighth	4	*• The formula for returning values from the returning value function* *• Constants and dependent variables parameters arguments* *• Factors affecting the use of the factor effecting function*	Defining and calling functions	*lecture Practical laboratory Oral discussion*	Daily exam
Ninth	4	*• Functions of type void* *• User-defined functions (innovative)*	Defining and calling functions	*lecture Practical laboratory Oral discussion*	Daily exam
Tenth	4	*Ready-made function library:-* *• Functions for symbolic threads* *• Mathematical functions* *• Time and date functions*	Mathematical and special functions	*lecture Practical laboratory Oral discussion*	Daily exam
Eleventh+ twelfth	8	*Drawing and screen graphics and screen* *• Color functions* *• Point plot functions* *• Line drawing functions* *• Functions for drawing rectangles* *• Circuit drawing functions*	Choose color and draw shapes	*lecture Practical laboratory Oral discussion*	Daily exam

		• *Functions for drawing shapes* • *Types of screens*			
thirteenth-fifteen	12	Building an integrated application system that addresses the above matrices and functions	Building an integrated program	*lecture Practical laboratory Oral discussion*	Daily exam

١١.Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretical)

١٢.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Lectures according to the curriculum
Main references (sources)	C++ programming with 469 solved problems .
Recommended books and references (scientific journals, reports…)	A comprehensive reference to programming in C++
Electronic References, Websites	https://www.kutub.info/library/book/5396

Description Form

1. Course Name:	
Python Programming Language	
2. Course Code:	
CNS1202	
3. Semester / Year:	
Semester system, second course / 2024-2025	
4. Description Preparation Date:	
15-12-2024	
5. Available Attendance Forms:	
Daily Attendance/ 4 Hours per Week (2 Theoretical & 2 practical)	
6. Number of Credit Hours (Total) / Number of Units (Total)	
4(hours)\ 4 (units) \total 60 hour	
7. Course administrator's name (mention all, if more than one name)	
Dr. Dhiyaa Salih Hammad Al-Shammari E-Mail: dhiyaa_alshammari@atu.edu.iq	
8. Course Objectives	
Course Objectives	• Understanding the fundamentals of input and output, control structures, functions, sequences, and lists. • Designing the logic of programs and then implementing those programs using Python. • Understanding programming concepts and problem-solving skills, without assuming any previous programming Experience.
9. Teaching and Learning Strategies	
Strategy	• Project-Based Learning: Encourage students to work on hands-on coding projects that solve real-world problems. This approach reinforces programming concepts and fosters creativity and critical thinking. • Gamification: Gamify coding exercises to make learning more engaging. Coding challenges, competitions, and interactive tutorials can make learning enjoyable. • Cross-Disciplinary Integration: Incorporate Python into other subjects, such as math, science, and art. This interdisciplinary approach shows students the practical applications of programming in various fields.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	4	knowledge and understanding	•Introduction to Programming • Compilers and Interpreters • Input, Processing, and output using Python	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
2	4	knowledge and understanding	•Variables • print function • Numeric Data Types and Literals • Input function	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
3	4	knowledge and understanding	• Performing Calculations/math operators • Floating-Point and Integer Division • Operator Precedence •The Augmented Assignment Operators	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
4	4	knowledge and understanding	• Breaking Long Statements into Multiple Lines • Suppressing the print Function's Ending Newline • Escape Characters • Formatting Numbers	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
5	4	knowledge and understanding	• Decision Structure • The if Statement • Boolean Expressions and Relational Operators • The if-else Statement	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
6	4	knowledge and understanding	• Nested Decision Structures • The if-elif-else Statement • Logical Operators • Boolean Variables	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
7-8	4	knowledge and understanding	• Introduction to Repetition Structures • The while Loop: A Condition-Controlled Loop • The for Loop: A Count-Controlled Loop • Using the range Function with FOR Loop	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
9	4	knowledge and understanding	• Introduction to Functions • Void Functions and Value-Returning Functions • Defining and Calling a Void Function • Indentation in Python	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
10	4	knowledge and understanding	• Local Variables • Passing Arguments to Functions • Passing Multiple Arguments • Global Variables and Global Constants	Theoretical, Practical, and lectures	Monthly and daily tests and discussions

11	4	knowledge and understanding	• Introduction to Value-Returning Functions • Standard Library Functions and the import Statement • Generating Random Numbers	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
12	4	knowledge and understanding	• Writing Your Value-Returning Functions • Returning Strings and Boolean Values • Returning Multiple Values • The math Module	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
13	4	knowledge and understanding	• Sequences • Introduction to Lists • The Repetition Operator and Len Function • Indexing	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
14	4	knowledge and understanding	• Changing Lists and Concatenating Lists • List Slicing • Finding Items in Lists with the Operator • List Methods and Useful Built-in Functions	Theoretical, Practical, and lectures	Monthly and daily tests and discussions
15	4	knowledge and understanding	• The insert Method • The index Method • Tuples • Converting Between Lists and Tuples	Theoretical, Practical, and lectures	Monthly and daily tests and discussions

11. Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretical)

12. Learning and Teaching Resources

Required textbooks (methodology if any)	Nothing
Main References (Sources)	Introduction to Programming Using Python by (Y. Daniel Li
Recommended supporting books and references (.scientific journals, reports, etc)	https://www.geeksforgeeks.org/make-simple-calculator-using-python/?ref=next_article
Electronic references, websites	Nothing

Description Form

1. Course Name:
Data communications
2. Course Code:
CNS1203
3. Semester / Year:
Semester system, second course2024-2025
4. Description Preparation Date:
1-11-2024
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
2(hours)\ 2 (units)\ total 30 hour
7. Course administrator's name (mention all, if more than one name)
Name: Wafaa Mohammed Ridha Shakir Email: inb.wfa@atu.edu.iq
8. Course Objectives

Course Objectives	1- Introducing the student to the basic concepts of data transmission, the differen physical components and the approved network standards. 2-Introducing the student to data transmiss protocols
9. Teaching and Learning Strategies	
Strategy	1- High thinking skill strategy. 2- Critical thinking strategy in learning. 3- Strategy according to the student's ability

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-3	6	Basic Concepts of D Communication	Basic Concepts of Data Communicatio Components of Data Communication	Lecture– - Oral Discussion	Quiz
4	2	Types	Computer Network types	Lecture – Oral Discussion	Quiz
5-8	8	Networks topology	Physical Network Topologies	Lecture – - Oral Discussion	Quiz
9-11	6	Digital communicati	Digital and analog signals	Lecture – Oral Discussion	Quiz
12-15	8	Digital translations	Digital translations protocols	Lecture – Oral Discussion	Qz

11. Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretical)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Nothing
Main references (sources)	Data communications book
Recommended books and references (scientific journals, reports...)	Nothing
Electronic References, Websites	Nothing

Description Form

1. Course Name: basics Web design
2. Course Code: CNS1204
3. Semester / Year: Semester system, second course2024-2025
4. Description Preparation Date: 1/12/2024
5. Available Attendance Forms: presence daily
6. Number of Credit Hours (Total) / Number of Units (Total) houre
4(hours)\ 4 (units) total 60 hour
7. Course administrator's name (mention all, if more than one name)
Name: Zainab Sahib dhahir Email: Zainab.dhahir@atu.edu.iq
8. Course Objectives

Course Objectives	• Introducing the student to dealing with websites on the Internet and how to manage them, and enabling the student to design websites, download, and deal with servers and the different languages used on the Internet.

9. Teaching and Learning Strategies	
Strategy	The lecture Theory The laboratory Practical

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

First – Second	8	General introduction	Study the characteristics of the Internet and the types of applications used on it	The lecture Practical lab Oral discussion	Daily exam
the third –Fifth	12	Protocols	Study of the protocol for transferring electronic pages, files and e-mail on Internet	The lecture Practical lab Oral discussion	Daily exam
Sixth- Seventh	8	basicsHTML	studyBasics ofHTM	The lecture Practical lab Oral discussion	Daily exam
The eighth- Ninth	8	Delete web page	Delete web page	The lecture Practical lab Oral discussion	Daily exam
Twelfth – Third ten	8	Publish a page on the Internet	Publish a page on the Internet	The lecture Practical lab Oral discussion	Daily exam
Fourteenth – Fifth ten	8	Website Management	Website Management	The lecture Practical lab Oral discussion	Daily exam

11. Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretical)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Nothing
Main references (sources)	Nothing
Recommended books and references (scientific journals, reports…)	Nothing
Electronic References, Websites	Web design & W3Schools Online Web

Description Form

1. Course Name:
Wireless Networks
2. Course Code:
CNS1205
3. Semester / Year:
Semester system, second course2024-2025
4. Description Preparation Date:
12−12−2024
5. Available Attendance Forms:
My presence
6. Number of Credit Hours (Total) / Number of Units (Total)
4(hours)\ 4 (units)\ total 60 hour
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Ali Salah Mahdi Email: alisalahelect1985@gmail.com :ali.khafaja@atu.edu.iq
8. Course Objectives

Course Objectives	• **It is to provide theoretical and practical knowledge technologies to enable students to develop, wireless networks.**
9. Teaching and Learning Strategies	
Strategy	• Practical laboratory • Theoretical lecture • Oral discussion • Reports

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name
First a second	8	Introduction Wireless communication	Introduction

3-6	16	TECHNICAL BACKGROUND Transmission Fundamentals Communication Networks Protocols and t TCP/IP Suite	TECHNICAI BACKGROUND
7-10	12	WIRELESS COMMUNICATION TECHNOLOGY Antennas a Propagation Signal Encodi Techniques Spread Spectrum Coding and Err Control	WIRELESS COMMUNICATIO
11-12	8	WIRELESS NETWORKING Satellite Communications Cellular Wirele Networks Mobile IP a Wireless Acce Protocol	WIRELESS NETWORKING
13-15	12	WIRELESS LANS Wireless L Technology Wi-Fi and the IE 802.11 Wireless L Standard Bluetooth and IE 802.15	WIRELESS LANS Wireless
11. Course Evaluation			

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month %20 (10% practical+10% theore

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	wire
Main references (sources)	wire
Recommended books and references (scientific journals, reports…)	Co ne
Electronic References, Websites	https:// eeexpl

Course Description

1. Course Name:	
English	
2. Course Code:	
CNS1206	
3. Semester / Year:	
Semester system, second course2024-2025	
4. Description Preparation Date:	
7-12-2024	
5. Available Attendance Forms:	
in person	
6. Number of Credit Hours (Total) / Number of Units (Total)	
2(hours)\ 2 (units) total 30 hour	
7. Course administrator's name (mention all, if more than one name)	
Name: israa essa abed Email: israa.abed@atu.edu.iq	
8. Course Objectives	
Course Objectives	**- Supporting students in the country to learn and develop the English language by graduating a group of students who have the ability to speak the English language and write correctly.** **- Developing the student's language by practicing reading, writing, and speaking English, and keeping pace with developments taking place in the world.** **- Enabling the student to raise his level of thinking by acquainting him with the best literary and linguistic works.** **- General and transferable skills (other skills related to employability and personal development)** **- Developing the student's self-confidence through speaking and discussion conducted during the school year.** **- Enhancing the student's confidence in his ability to express.**
9. Teaching and Learning Strategies	

Strategy	**1. The lectures that are presented to students are in the form of a set of presentation slides, or via the smart board, data show, or are written directly by the lecturer.** **2. Lectures are printed and distributed in advance to students so that notes can be made and discussed during the lesson.** **3. Scientific lectures are uploaded to the department's official website via the Internet.** **4. Discussion through small and large groups.** **5. Discussion through questions and answers during official lecture times or during the teacher's office hours.**

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	am/are/is, my/your	Unit one Hello!	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
1	1	Plurals	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
2	1	am/are/is he/she/they- his/her/and question	Unit two Your World	explanation lectures With examples on the board and	questions during Lecture And a quick exam

				Book	
3	1	Questions with question words	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
4	1	Discussion	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
5	1	Jobs Am/are/is. Negative andquestion	Unit three All about you	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
6	1	personal information	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
7	1	Have/has. Our/their.	Unit four Family and friends	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
8	1	Possessive's . the family	=	explanation lectures	questions during Lecture

				With examples on the board and Book	And a quick exam
9	1	Present simpl tense	Unit five It's my life	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
10	1	Positive, Negative, Qustion	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
11	1	Tenses	Unit six Every Day	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
13	1	Adverbs of present simple Tense	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
13	1	Object Pronouns	Unit seven Places I Like	explanation lectures With examples on the board and	questions during Lecture And a quick exam

				Book	
14	1	Questions and Answers	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam
15	1	There is, are, any	Unit eight Where I Live	explanation lectures With examples on the board and Book	questions during Lecture And a quick exam

11. Course Evaluation

Final%50 (10%practcal+40%theoretical)	Evaluation10% (Assessment includes daily reparation, daily exam and oral exam	second month%20 (10% practical+ 10%theoretical)	First month%20 (10% practical+10%theoretical)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	New headway plus beginner
Main references (sources)	New headway plus beginner
Recommended books and references (scientific journals, reports…)	English teaching book
Electronic References, Websites	www.busuu.com

Course Description

1. Course Name:
Data structures
2. Course Code:
CS200
3. Semester / Year:
Year
4. Description Preparation Date:
10/12/2024
5. Available Attendance Forms:
Attendance (theoretical + practical)
6. Number of Credit Hours (Total) / Number of Units (Total)
5(hours)\ 10 (units) total 150 hour
7. Course administrator's name (mention all, if more than one name)
Name: Ali Khalid Mohamed Ali Email: ali.khalid@atu.edu.iq
8. Course Objectives

Course Objectives	Introducing the student to the meaning of data structure, types of data structures, their importance, characteristics, and available applications, while explaining the advantages of structured programming, its efficiency, and comparison with traditional programming.
9. Teaching and Learning Strategies	
Strategy	1. The ability to design various programs. 2. Participate in designing software information systems. 3. The ability to express and convey ideas clearly and accurately. 4. The ability to work in groups.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	**Basic principles of data structure**	• Definition of data structures	Lecture Practical laboratory Oral discussion	Daily exam

			• Basic principles of data structure.basic concept of data structures • * Types of data structures.data structure types * How to choose the appropriate graphic structure.data structures selecting		
2	5	**Representing data structures**	* Primitive data structures representation method. - Integers. - Real numbers. - Characters icons.	Lecture Practical laboratory Oral discussion	Daily exam
3	5	**Representing data structures**	- Symbolic Strings. - Pointers. Logical Data	Lecture Practical laboratory Oral discussion	Daily exam
4	5	**Composite-data structures**	* Compound Data Structures. - Arrays.	Lecture Practical laboratory Oral discussion	Daily exam
5	5	**Matrices**	Representing matrices. - Unary array representation in memory. - Binary matrix representation in memory. - Rows method. - Column method.	Lecture Practical laboratory Oral discussion	Daily exam
6	5	**Basics of indicators**	pointers • Definition of the indicator • Memory/Reserve memory for cursors and edit them • The benefits and advantages of indicators Pointers and Arrays / Arrays Pointers and pointers to arrays	Lecture Practical laboratory Oral discussion	Daily exam
7	5	**Indicators**	• Indicators as addresses • Compare indicators • Indicators indicators • Function pointers	Lecture Practical laboratory Oral discussion	Daily exam
8 + 9	10	**Linked lists**	• Indicators as addresses	Lecture Practical laboratory	Daily exam

			• Compare indicators • Indicators indicators • Function pointers • Linked lists • Define a linked list • Types of linked lists and ways to represent them • Simple list / reading items - printing the list - inserting an item into (front, specific location, back) of the list.	Oral discussion	
10+11	10	**Lists**	• Binary List / Read Items – Print the list rcular List / Reading Items Print the list	Lecture Practical laboratory Oral discussion	Daily exam
12+13	10	**Stack**	* Stack - Representing the stack using an array. Array representation of stack - Linked stack - Stack operations algorithms. - Stack applications.	Lecture Practical laboratory Oral discussion	Daily exam
14+15	10	**Queue**	Queue epresenting the queue using matrix. - Linked queue - Queuing applications. - Circular queue.	Lecture Practical laboratory Oral discussion	Daily exam
16+17	10	**Nonlinear data**	Non-linear data structures -Graphs. Types of charts.graphs typ - Methods of graphs representation.	Lecture Practical laboratory Oral discussion	Daily exam
18	5	**the trees**	* the trees. - Tree types. - Methods of tree representation. Tree traversing methods.	Lecture Practical laboratory Oral discussion	Daily exam
19	5	**Tree applications**	* Convert generic trees to binary. - Trees applications	Lecture Practical laboratory Oral discussion	Daily exam
20+21 + 22+23	20	**Sort and search**	sorting and searching. - sorting algorithms. - Selection sort - Bubble sort sort bubble.	Lecture Practical laboratory Oral discussion	Daily exam

			- Quick sort.		
24+25	10	**Search algorithms dialogues**	* Search algorithms. - Sequential search - Binary search	Lecture Practical laboratory Oral discussion	Daily exam
26	5	**files structures**	files structures	Lecture Practical laboratory Oral discussion	Daily exam
27+28 + 29+30	20	**Discussion study**	Case studies for discussion.	Lecture Practical laboratory Oral discussion	Daily exam

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc
First semester exam (100%)/Grade 20%
Second semester exam (100%)/Grade 20%
Daily preparation, daily oral, monthly, or written exams, reports / Grade 10%
Final exam (100%)/ Grade 50%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Data structures book by Issam Al-Saffar
Main references (sources)	Data structures book by Issam Al-Saffar
Recommended books and references (scientific journals, reports…)	Data structures book by Issam Al-Saffar
Electronic References, Websites	www.noor-book.com

Course Description

1. Course Name:
Databases
2. Course Code:
CS201
3. Semester / Year:
Year
4. Description Preparation Date:
7/12/2024
5. Available Attendance Forms:
Attendance (theoretical + practical)
6. Number of Credit Hours (Total) / Number of Units (Total)
5(hours)\ 5 (units)\ total 150 hour
7. Course administrator's name (mention all, if more than one name)
Name: Yasser hassen jassem Email: yasser.jassem@atu.edu.iq
8. Course Objectives

Course Objectives	Introducing the student to database concepts and terminology, integration with databases, models and programming, and introducing the student to the characteristics of databases.
9. Teaching and Learning Strategies	
Strategy	1- High thinking skill strategy. 2- Critical thinking strategy in learning. 3- A strategy according to the student's ability.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Introduction to databases	Student definition of databases. Advantages of databases and their comparison with traditional file systems.	Lecture Practical laboratory Oral discussion	Daily exam

2 + 3	10	Primary key, secondary key	Key, primary key, secondary key Relations One to one relationship One to many relationship Many to many relationship	Lecture Practical laboratory Oral discussion	Daily exam
4 + 5	10	Data types	Data types Create tables Append Blank	Lecture Practical laboratory Oral discussion	Daily exam
6 + 7 + 8	15	View and modify data	Brows, Edit, Change Replace Delete Recall Pack, zap	Lecture Practical laboratory Oral discussion	Daily exam
9	5	Organizing and indexing data	Sorting, indexing Seek, set filter Locate, Goto,	Lecture Practical laboratory Oral discussion	Daily exam
10	5	Assembly instructions	Average, Sum, Count Calculate AVG (), CNT (), Sum () Min (), STD ()	Lecture Practical laboratory Oral discussion	Daily exam
11-13	15	Normative relationships	Normal form Un normalized form 1NF 2NF 3NF	Lecture Practical laboratory Oral discussion	Daily exam
14	5	Graphic models	Data Models Relational model	Lecture Practical laboratory Oral discussion	Daily exam
15	5	Create a database	Database Container using VFP	Lecture Practical laboratory Oral discussion	Daily exam
16+17	10	Virtual tables	Views Create views	Lecture Practical laboratory Oral discussion	Daily exam
18 - 20	15	Models	Forms Building forms with form Form properties Data Layout Main and sub forms	Lecture Practical laboratory Oral discussion	Daily exam
21 - 24	20	Reports	Group Reports Simple reports Printing Report	Lecture Practical laboratory Oral discussion	Daily exam
25	5	Programming using VFP	Memory Variable Array	Lecture Practical laboratory	Daily exam

			If.....ENDIF Do case	Oral discussion	
26	5	Repetition instructions	Do...While Scan...End scan For...End for	Lecture Practical laboratory Oral discussion	Daily exam
27+28	10	Local and global variables	Procedure and function	Lecture Practical laboratory Oral discussion	Daily exam
29+30	10	Build and modify the project	Build an application.exe	Lecture Practical laboratory Oral discussion	Daily exam

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

First semester exam (100%)/Grade 20%

Second semester exam (100%)/Grade 20%

Daily preparation, daily oral, monthly, or written exams, reports / Grade 10%

Final exam (100%)/ Grade 50%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Special edition using visual foxprp6
Main references (sources)	Special edition using visual foxprp6
Recommended books and references (scientific journals, reports…)	Database Systems: The Complete Book
Electronic References, Websites	Database warehouse + internet websites

Course Description Form

1. Course Name:
Operating systems
2. Course Code:
CS202
3. Semester / Year:
Yearly
4. Description Preparation Date:
15-12-2024
5. Available Attendance Forms:
Attendance (theoretical + practical)
6. Number of Credit Hours (Total) / Number of Units (Total)
4(hours)\ 8 (units)\ total 60 hour
7. Course administrator's name (mention all, if more than one name)
Name: Nidaa Ghalib Ali Email: inb.nedaa10@atu.edu.iq
8. Course Objectives

Course Objectives	• **Introducing the student to systems software in general** • **Introducing the student to the types of systems and their general functions** • **Identify the types and specifications of some operating systems** • **Providing case studies on the use of these systems**
9. Teaching and Learning Strategies	
Strategy	- Theoretical lecture - Practical laboratory - Oral discussion

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The first	4	Introductory introduction	An introductory introduction includes: • A simple historic overview of	lecture Practical laboratory Oral discussio	Daily exam

			computer operatir systems • Definition of operating system • Types of operati systems - Mainframe operating systems - Server computer operating systems - Multiprocessor operating systems - Personal comput operating systems - Portable comput operating systems - Operating system integrated with hardware - Real-time operat systems - Smart card operating systems		
The Second	4	Services provided the operating systen	Services provided the operating syste	lecture Practical aboratory Oral discussio	Daily exam
The third	4	Computer syst architecture	Calculator system architecture	lecture Practical aboratory Oral discussio	Daily exam
The forth	4	Basic concepts operating systems	Basic terms and concepts in operat systems: • Program, proces (processing) • Address space • Resources and participation • The kernel and shell of the operati system • Proactive preparations of th system	lecture Practical aboratory Oral discussio	Daily exam
The fifth	4	Caching	• caching • Interruptions (intercepts), traps, exceptions Vector and interru routines • Vectors	lecture Practical aboratory Oral discussio	Daily exam
The Sixth	4	Loaded into the computer's memory	Load the operating system into the	lecture Practical aboratory	Daily exam

			computer's memo and start it • How to locate an then load the operating system • Boot the comput - Basic I/O service - Adjust calculator settings - Removable and non-bootable disks - How does the computer boot program work?	Oral discussio	
The Seventh	4	Hard disk partitionir	• Partition the har disk • Format the hard disk • How to install a new computer operating system?	lecture Practical aboratory Oral discussio	Daily exam
The eighth	4	File systems	File systems: • Files - File naming - File structure - File types - Ways to access fi - File specification - Operations that c be performed on fi • Directories and folders - Single-level evidence and evidence with progressive levels - Label the path leading to the directory - Operations that c be performed on directories	lecture Practical aboratory Oral discussio	Daily exam
The ninth	4	Implementation of file system	• Implementation the file system - FAT16-32 file reservation table - New technology f system (NTFS) - Comparison between FAT and NTFS file systems - How to convert between FAT and NTFS file systems	lecture Practical aboratory Oral discussio	Daily exam

The tenth	4	Copying supporting copies	Copying and supporting copies files • Supportive copyi • Types of support copies - The usual - Differential - Incremental - Daily • Recover support files	lecture Practical aboratory Oral discussio	Daily exam
The eleventh	4	Storage structure	Storage structure: • A simple introduction to: 1- The physical components of the main memory 2- Types of electro circuits used in building main memory 3- Desired specifications in m memory 4- The gradual structure of storag devices	lecture Practical aboratory Oral discussio	Daily exam
The twelfth	4	Protection of hardw components	Hardware protection: • Input and output protection • Memory protecti • Protect the centr memory unit • The difference between the terms protection and security according the logic of electro computers	lecture Practical aboratory Oral discussio	Daily exam
The thirteenth	4	Operating system departments	Operating system departments: • A simple introduction to: - Process management (processors) - Main memory management - Files management	lecture Practical aboratory Oral discussio	Daily exam
The fourteenth	4	System calls(s).	system calls(s).	lecture Practical aboratory	Daily exam

			• What is the meaning of system call? - System calls for managing operatic - System calls for f management - System calls for managing director and folders	Oral discussio	
The fifteenth	4	Operations Management	operations Management • Key concepts - Process, task, function, thread - The activation period of the CPU a I/O devices - Process model, closure, terminatic progression, and status of the proce • Control block for the process	lecture Practical aboratory Oral discussio	Daily exam
The Sixteenth	4	Threads	• Threads - Heavy and light operations - Why do we use threads? - Thread levels - Regular and irregular polythera - Synchronization of processes and threads	lecture Practical aboratory Oral discussio	Daily exam
The seventeenth	4	Scheduling	Scheduling • Introduction to scheduling, includi - Scheduling in payment systems - Scheduling in interactive system - Scheduling in rea time systems • Operations scheduling • Queue schedulin	lecture Practical aboratory Oral discussio	Daily exam
The eighteenth	4	CPU scheduling	CPU scheduling - Preventive and n preventive scheduling - Sender - Scheduling standards	lecture Practical aboratory Oral discussio	Daily exam

			• Evaluation of scheduling algorithms		
The nineteenth	4	Processor scheduling algorithn	Processor schedul algorithms - First-arrival serv scheduling algorith -Shortest job scheduling algorith first - Priority schedulii algorithm Round Robin algorithm for scheduling - Queuing schedulii	lecture Practical aboratory Oral discussio	Daily exam
The twentieth	4	Practical examples	Practical examples scheduling algorithms	lecture Practical aboratory Oral discussio	Daily exam
twenty-first	4	Memory managemer	Memory management • Logical memory and real memory • Logical and real address space • Memory word si • Linking addresse existing in memor • Participating libraries • Binding when running	lecture Practical aboratory Oral discussio	Daily exam
twenty-second	4	switch (barter)	Swap (barter) • Contiguous memory allocatio - Single-part customization - Multi-part customization • Decomposition (fragmentation or fragmentation), external and intern	lecture Practical aboratory Oral discussio	Daily exam
twenty-third	4	Virtual memory	Virtual memory • Browsing • The basic idea of browsing • Page table • Speed up browsi • Examples of usin the browsing meth	lecture Practical aboratory Oral discussio	Daily exam
twenty-fourth	4	Browse by page	Browsing by requested page – slow evaluation	lecture Practical aboratory	Daily exam

			• Replace page • Page replacemen algorithms: - Page first in, first out algorithm - Least Usage Page Algorithm	Oral discussio	
twenty-fifth	4	Principles of hardware compone of input and out devices	Principles of hardware components of inp and output devices • Input/output devices • Device control circuits • Memory map input/output • Direct memory access	lecture Practical aboratory Oral discussio	Daily exam
twenty-sixth	4	Principles of softw components for in and output devices	Principles of software compone for input and outp devices • Programmed input/output • Interrupt-based • DMA-based I/O	lecture Practical aboratory Oral discussio	Daily exam
Twenty-seventh - thirtieth	4	Case studies	Case studies show the strengths and weaknesses of Windows and Linu operating systems	lecture Practical aboratory Oral discussio	Daily exam

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc
First semester exam (100%)/Grade 20%
Second semester exam (100%)/Grade 20%
Daily preparation, daily oral, monthly, or written exams, reports / Grade 10%
Final exam (100%)/ Grade 50%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Lectures according to the curriculum
Main references (sources)	Introduction to operating systems book
Recommended books and references (scientific journals, reports…)	Introduction to operating systems book
Electronic References, Websites	www.kutub-download.com

Course Description

1. Course Name:
Systems Analysis
2. Course Code:
CS203
3. Semester / Year:
Yearly
4. Description Preparation Date:
18/12/2024
5. Available Attendance Forms:
Attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
3(hours)\ 6 (units) \total 90 hour
7. Course administrator's name (mention all, if more than one name)
Name: Khansaa Azeez Obayes Al-Husseini Email: inb.khanssa@atu.edu.iq

8. Course Objectives	
Course Objectives	•Introducing the students to the basic concepts of systems and identifying the characteristics, levels and types of information systems. • Introducing the students to the stages of information systems analysis and design Approved. •Introducing the students to systems design using a set of analysis and design tools.

9. Teaching and Learning Strategies	
Strategy	• High thinking skill strategy. • Critical thinking strategy in learning. • A strategy according to the student's ability.

10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week

Daily exam	lecture And oral discussion	Basic concepts in the analysis and design of computer-based information systems: Systems theory, principles of systems theory, general characteristics of systems - goal - environment - boundaries, subsystems - feedback - control mechanism. Classification of systems includes the degree of complexity of the system - the nature of the system - making the system - the relationship with the environment - the nature of the outputs - the nature of the purpose. Data, data processing - basic processors - advanced processors. Information: Characteristics of good information, sources of information - paper sources - electronic sources - audio sources. The importance of information - forms of information General discussion.	Basic concepts in systems analysis	9	First - Third
Daily exam	lecture And oral discussion	Computer information systems Computer: basic computer functions - computer features - components of computer information systems - components of the computer information system - the process of building and developing computer information, Stages of developing computer information systems - analysis stage - design stage - implementation stage Objectives of computer information systems - Types of computer information systems - Database-based management information systems - databases The most important computer information systems based on databases: data processing systems - transaction processing and information processing systems - management information systems - decision support systems - group decision support systems - executives information systems. Computer information systems based on knowledge bases: knowledge bases The most important computer information systems based on knowledge bases: intelligent systems (artificial intelligence) - expert systems - neural networks. Computer information systems environments: information systems	Computer information systems	12	Fourth - Seventh

		that work to support the work of individuals - information systems that work to support the work of groups Computer information systems analyst and designer Systems Analyst: Systems Analyst qualifications - Systems Analyst's personal qualities - The most important problems facing the Systems Analyst - The development of the Systems Analyst's relationship with the end user: The old method - Disadvantages of this method - The Modern Method. Systems analyst work areas - systems analysis company - information management in an organization. Systems Analysis Working Group: Reasons for the failure of developing computer information systems in some institutions Information systems development methods and methodologies: Types of information systems development methods - systems development life cycle method - stages of systems development life cycle method - gradual development method in stages - Stages of the incremental development method - the team-based development method - the initial modeling method - the progressive (evolutionary) method - the similar models method - modeling defects - uses of modeling - the urgent development method - the top-down analysis method - the bottom-up analysis method - Installation method. Factors for choosing the appropriate method - methodologies for developing information systems - classification of development methodologies - Types of development methodologies: Systems analysis and structural design methodologies - Information engineering methodology - Computer-aided software engineering tools - Types of tools - The most important functions of software engineering tools - Advantages of software engineering tools.			

		Ready-made packages methodology: Advantages - Where to get ready-made packages General discussion			
Daily exam	lecture And oral discussion	Stages of analysis and design of computer-based information systems System analysis stage (preliminary study) - information gathering stage - sources of information required to analyze the existing system. Methods of collecting information within the organization and verifying its validity First: Methods of collecting information Second: Methods of verifying the accuracy of the information collected Methods of collecting information: personal interview - advantages of the personal interview method - disadvantages of the personal interview - obstacles to the interview. Questionnaire: Factors for choosing the questionnaire to collect information - Preparation before distributing the questionnaire - Rules for questions in the questionnaire - Preparation during the distribution of the questionnaire - The most important activities after the questionnaire - Advantages of the questionnaire - Disadvantages of the questionnaire - Examples of uses of the questionnaire. Monitoring – Document analysis -Methods of verifying the validity of information Lecture (presentation) - Preparation before the lecture - Preparation during the lecture - The most important activities after the lecture Team meetings Preparing before the work team meeting - the work team meeting - problems of team meetings, group development of applications, advantages of the JAD method Disadvantages of the JAD method, problem definition and feasibility study stage, problem definition, problem methods, steps to understand and solve the problem, feasibility study	Stages of systems analysis and design	24	Eighth - Fifteenth

		Solutions subject to feasibility study, possible decisions to be taken General discussion Continue: System analysis stage (detailed study) Detailed study stage: First: analysis of system operations, system function model, definition of system function model, objectives of the system function model. Characteristics of the system function model, the process of defining system functions, the data flow diagram, the importance of the data flow diagram, the elements of the data flow diagram, Levels of data flow diagram, characteristics of data flow diagram, steps for preparing a data flow diagram. Second: Analyze system data Data modeling, data modeling charts, relational databases Components of relational databases, entity-relationship model, relationships, The intermediate table in a many-to-many relationship, entity degree, relationship degree Relationship diagram, converting from the entity-relationship model to the relationship diagram Entity life history diagram, symbols used in the entity life history diagram Example: life history "submit request" Petri nets, symbols used in petri nets, description of operations Process description tools, structural language, description methods Decision tables Steps to create decision tables Data dictionary, importance of data dictionary, description of system components, Examples of data dictionary, data classification, data classification properties, Types of classification, data coding, characteristics of good coding, types of coding, Coding errors. Analysis of relationships, normative relationships, levels of normative relationships, Definition of the non-normative relationship, definition of the first normative rule,			

		Justified repetition, unjustified repetition, definition of the second standard rule, Definition of the third normative rule Definition of the normative Codd-Boyce relationship Definition of the fourth normative rule Definition of the fifth normative relationship Analyze document data in a way Normative relations (normalization) Normalization rules (normative rules/normalization) Apply the three normalization rules mentioned above Action steps for document data analysis comments Optimal model, system modeling, definition of modeling Modeling components, stages of system modeling (in the analysis stage), physical model of the existing system, logical model of the existing system, steps to design the logical model of the existing system, outputs of the analysis stage. General discussion			
Daily exam	lecture And oral discussion	Systems development life cycle - Design stage, general design stage, preparing the logical model for the new system, steps for designing the logical model for the new system. The “make adjustments” method, the “process redesign” method. Preparing the physical model of the new system, steps to design the physical model of the new system, detailed design phase, and other activities. Interface design Interfaces, types of user interfaces, design of outputs and inputs, design of outputs, design of inputs, characteristics of outputs and inputs, design of reports, types of reports, benefits of reports, characteristics of good reports, and possible errors in report design. Model design, model design goals, good model specifications, model design steps. Database design, points to consider when designing a database, database design tools, program	Systems development life cycle	6	Sixteenth Seventeenth

		design, characteristics of good programs. General discussion			
Daily exam	lecture And oral discussion	Systems development life cycle Implementation phase Training phase Training during the system analysis and design phases Training during the pre-implementation phase Training plan Conversion stage (conversion strategy) Conversion strategy, direct conversion strategy, direct conversion Parallel conversion strategy, parallel conversion, gradual conversion strategy. Evaluation and maintenance phase, evaluation phase, maintenance phase, documentation, types of documentation, importance of documentation, documentation method. Summary of the activities of the final stages General discussion	Systems development life cycle	6	Eighteenth Nineteenth
Daily exam	lecture And oral discussion	Computer information systems security introduction Security system for computer information systems Characteristics of a computer information system security system Elements of a computer information system security system Individuals, data security, software security, hardware and peripherals security, Security of communications systems and networks. Types of penetrations in the security system of the computer information system Computer viruses, virus damage, computer crimes Methods of confronting the risk of computer information system intrusion The cost of designing a security system for a computer information system General discussion	Information Systems Security	3	Twentieth
Daily exam	lecture And oral discussion	Analysis and design of information systems based on knowledge bases Knowledge-based systems, knowledge, expert, knowledge bases, types of knowledge Knowledge representation, knowledge-based systems,	Designing systems based on knowledge bases	6	Twenty-First Twenty-Second

		components of the knowledge system, basic components of expert systems, knowledge base, reasoning machine, Knowledge engineer, user interfaces, interpreting heuristics. Comparison between knowledge bases and databases, components of the knowledge base system, Knowledge base systems, analysis and design of knowledge base systems. Analysis stage, design stage, development and programming stage, Implementation and testing phase, maintenance phase, applications of knowledge base systems, artificial intelligence, areas of application of artificial intelligence, expert systems, applications of expert systems. Conclusion Leveraging data into knowledge and wisdom General discussion			
Daily exam	lecture And oral discussion	Object-oriented analysis and design, the most important concepts of object-oriented analysis and design, unified modeling language, object modeling, object structure, Stages of object-oriented modeling, identifying the objects that make up the system, determining the characteristics of each object, identifying events, defining the operations of each object, determining the characteristics of each process, determining the chronological order of operations, implementing the system, Methods of modeling the objects that make up the system, features of the Unified Modeling Language, layers of the Unified Modeling Language. The first layer: the user objects layer The second layer: the model layer The third layer: the layer beyond the model The fourth layer: the layer beyond the model Modeling using Unified Modeling Language, modeling diagrams, diagram of use cases, writing use cases, difficulties of writing use cases,	Modeling	12	Twenty-Third - Twenty-Sixth

		Class diagrams (categories), components of class diagrams, disadvantages of class diagrams, interactive diagrams, cooperation diagrams, sequence diagrams, case diagrams, physical diagrams, component diagrams, Equipment plans. UML models Waterfall model, advantages of the waterfall model, disadvantages of the waterfall model, the most important problems of the waterfall model, spiral model, disadvantages of the spiral model, incremental iterative model, consumption phase, detailing phase, construction phase, transition Iterations, time constraints, benefits of time constraints, typical project timings General discussion			
Daily exam	lecture And oral discussion	Graduation projects General instructions and general ideas Types of computerized systems, general directions and instructions before starting work on the project, the most important warnings, basic project provisions. Preparing for discussion Before starting the discussion, during the discussion, an important note. Examples of projects Computer administrative system project “university library” A computerized educational curriculum project “Geography curriculum for a specific grade” Website project “scientific website” Electronic journal project “general journal”	Projects	12	Twenty-Seventh - Thirtieth

11.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc
First semester exam (100%)/Grade 20%
Second semester exam (100%)/Grade 20%
Daily preparation, daily oral, monthly, or written exams, reports / Grade 10%
Final exam (100%)/ Grade 50%

12.Learning and Teaching Resources

Required textbooks (curricu books, if any)	Nothing
Main references (sources)	Systems Analysis and Design
Recommended books and references (scientific journals, reports…)	Fundamentals of System Analysis & Design
Electronic References, Websites	https://www.noor-book.com/%D9%83%D8%AA%D8%A8-%D8%A7%D8%B1%D9%88%D9%8A-%D9%8A%D8%AD%D9%8A%D9%8A-%D8%B9%D8%A8%D8%AF-%D8%A7%D9%84%D8%B1%D8%AD%D9%85%D9%86-%D8%A7%D9%84%D8%A7%D8%B1%D9%8A%D8%A7%D9%86%D9%8A-pdf#google_vignettehttps://www.researchgate.net/publication/344162158_Information_Systems_analysis_and_design_Badraldeen_Hassan_ktab_thlyl_wtsmym_nzm_almlwmat_bdraldyn_hsn

Course Description

1. Course Name:
Programming in V.Basic language
2. Course Code:
CS204
3. Semester / Year:
Yearly
4. Description Preparation Date:
13-12-2024
5. Available Attendance Forms:
Attendance (Theoretical and Practical lectures)
6. Number of Credit Hours (Total) / Number of Units (Total):
5(hours)\ 10 (units) \total 150 hour
7. Course administrator's name (mention all, if more than one name)
Name: payman hussein hussan Email: Inb.beman10@atu.edu.iq
8. Course Objectives

Course Objectives	**Introducing the student to advanced technologies and coherent programs in the VB language, through database programming, delving into the details of some table tools and creating reports, and then moving on to object oriented programming OOP.**

9. Teaching and Learning Strategies

Strategy	• Lecture • Practical lecture • Oral discussion • Reports

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	5	IDE	(Integrated Development Environment)	Lecture Practical lecture	Daily

			-Integrated Windows Development Environment .-Integrated Menus Development Environment -Tool Bars * First Program Creating Project. -Design Forms -Codes -Runs & Updating -Compiling	Oral discussion	Quiz
Second	5	Forms & to	.Forms -Properties -Name. -Size & Location. -Font & Color. -Tab - Mouse. *Event – Mouse Event. -Keyboard Event. *Form Window. -Properties form. -Event Form – Menus	Lecture Practical lecture Oral discussion	Daily Quiz
Third	5	ToolBox	-Toolbox. -Label -Textbox. -Command button - Checkbox. -Option button -List box. -Combo box– Picture box. -Image box - Scrollbar. - Fileslistbox.	Lecture Practical lecture Oral discussion	Daily Quiz
Fourth	5	Programmin Language	Programming Language. -variables and Constants. -Variables. -Constants. -Expression - Operators. -Logical & relational Expression	Lecture Practical lecture Oral discussion	Daily Quiz
Fifth	5	Inputs & Outputs.	Inputs & Outputs. -Mesgbox & Inputbox. -Print. *.Control -.If-Then -(And, Or, Not). -Nested –If -Select-Case.	Lecture Practical lecture Oral discussion	Daily Quiz
Sixth	5	loops	Loop. -For-Next. -Do-While-Loop. -Do-Until-Loop.	Lecture Practical lecture Oral discussion	Daily Q

			-Do-Loop.		uiz
Seventh	5	Arrays	.Arrays -One-Dimension Array. - Two-Dimension Array -.Collections	Lecture Practical lecture Oral discussion	Daily Quiz
Eighth+ Ninth	10	Subroutines	Subroutines& Procedures. -Subroutines. -.Procedures& Functions -Library Functions.	Lecture Practical lecture Oral discussion	Daily Quiz
Tenth – Twelfth	15	Standard Modules	-Standard Module -Records *Files -Sequential Files. -Random Files.	Lecture Practical lecture Oral discussion	Daily Quiz
Thirteenth	5	Data Base Programming.	Data Base Programming. -Basic Database. -Access Database	Lecture Practical lecture Oral discussion	Daily Quiz
Fourteenth	5	Objects in database	(ADO). -Connection - Record set - Command.	Lecture Practical lecture Oral discussion	Daily Quiz
Fifteenth	5	Tools & Reports	-Data Grid-Flex Grid - Data Combo. -Data List - Crystar Reports	Lecture Practical lecture Oral discussion	Daily Quiz
Sixteenth + Seventeenth	10	OOP	(OOP). (Object Oriented Programming). -introduction to OOP - Feature of OOP. -Classes.	Lecture Practical lecture Oral discussion	Daily Quiz
Eighteenth	5	Using Objects	Objects -Memory Image Object. -Binding. -Delete & Update Object	Lecture Practical lecture Oral discussion	Daily Quiz
Nineteenth	5	Polymorphism. & Inheritance.	Polymorphism. -Inheritance. -Relation between Classes. -Collection Classes	Lecture Practical lecture Oral discussion	Daily Quiz

Twentieth + twenty-first	10	Advanced Visual Basic applications	Application Programming Interface(API)	Lecture Practical lecture Oral discussion	Daily Quiz
Twenty-second + Twenty-third	10	Com Programming	-Com- ActiveX EXE. -ActiveX DLL.	Lecture Practical lecture Oral discussion	Daily Quiz
Twenty-fourth + Twenty-fifth	10	Internet Programming	Internet Programming. -DHTML VbScript -DHTML.	Lecture Practical lecture Oral discussion	Daily Quiz
Twenty-sixth + twenty-seventh	10	ASP	(ASP) - IIS	Lecture Practical lecture Oral discussion	Daily Quiz
Twenty-eighth + Twenty-ninth	10	Various Application	Various Applications	Lecture Practical lecture Oral discussion	Daily Quiz
Thirtieth	5	Building an integrated	Building an integrated application system	Lecture Practical lecture	Daily

		application system		Oral discussion	Quiz

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc
First semester exam (100%)/Grade 20%
Second semester exam (100%)/Grade 20%
Daily preparation, daily oral, monthly, or written exams, reports / Grade 10%
Final exam (100%)/ Grade 50%

12. Learning and Teaching Resources

Required textbooks (curricular books any)	Learn Visual Basic 6.0 كتاب الفجول بيسك: تايلف مصطفى خالد كتاب أكود الفيجوال بيسك أونلاين تأليف احمد صادق
Main references (sources)	http://lnr.irb.hr/ebooks/078971633X/index.htm
Recommended books and references (scientific journals, reports…)	http://lnr.irb.hr/ebooks/078971633X/index.htm
Electronic References, Websites	https://www.scribd.com/ https://www.scribd.com/doc/236620803/Visual-Basic-6-0-Practicals

Course Description

1. Course Name:	
Networks	
2. Course Code:	
CS205	
3. Semester / Year:	
annual	
4. Description Preparation Date:	
11/12/2024	
5. Available Attendance Forms:	
Lecture (theoretical + practical)	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3(hours)\ 6 (units)\ total 90 hour	
7. Course administrator's name (mention all, if more than one name)	
Name: Thoalfukar Husseini Email: thoalfukar@atu.edu.iq	
8. Course Objectives	
Course Objectives	At the end of the course the student will be able to: 1. Know about Computer Networks and Its importance 2. Student will also be able to learn different kind of networks and distinguish betw them. 3. In addition, the student will be able to deal with advantages and disadvantages of several kind of network. **4**. Moreover, the student will be able to perform different types of networks software.
9.Teaching and Learning Strategies	
Strategy	Every theoretical lecture starts with an introduction to the subject matter. This would cover the majority of queries that may be raised on the subject and will be addressed in the lecture. The pre-answers to those questions will be revealed to the students during a conversation. A thorough description of the subject is then provided, along with several examples and answers. Additionally, the lecture has a variety of instructional videos that help to virtually explain the subject. Students are asked a variety of questions at the conclusion of the lecture to make sure they have fully grasped the fundamentals of the subject. However, the students receive the lesson as stated during the practical lecture.

10.Course Structure

Theoretical

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1st week	1hr	**Introduction to computer networks:** An idea about the structure of the connection: - The provider (server) and types of providers - The client - Identifying peer-to-peer networks - Identifying client-server networks (Client / Server Network)	Introduction to computer networks	Theoretical lecture	Examination and quiz
2nd week	1hr	**Identify the main components of networks** - Physical: computers cards media -peripheral devices Software: network operating system program communication protocols - network management systems	The main components of networks	Theoretical lecture	Examination and quiz
3rd week	1hr	**A general idea about basic network designs** Things that must be - adopted to design a network - Linear type networks Bus - Ring network - Star networks	Basic network designs	Theoretical lecture	Examination and quiz
4th week	1hr	- Ethernet networks - Token Ring networks o Token passing	Basic network designs	Theoretical lecture	Examination and quiz
5th week	1hr	**General idea about the types of network connection** - Depending on the method of network connection: ▪ Single-point communication networks ▪ Multi-point communication networks	Types of connecting	Theoretical lecture	Examination and quiz

		- Depending on the geographical coverage: o Local Area Network (LAN) ▪ Local Area Network devices ▪ Local Area Network specifications o Metropolitan Area Network (MAN) ▪ Regional Area Network devices ▪ Specifications, ▪ measurements and technologies o Wide Area Network (WAN) ▪ Wide Area Network devices ▪ Specifications, ▪ measurements and technologies o Advanced wide-area networks: ▪ Internet ▪ Intranet ▪ Extranet			
6th week	1hr	**Network Interface Cards:** - Definition of Network Adapter Cards - Types of Network Interface Cards - General idea about installing and setting up a network card - General idea about installing a network interface card	Network Interface Cards	Theoretical lecture	Examination and quiz
7th week	1hr	**The cables used in networks**: Learn about the types and characteristics of network cables:	The cables used in networks:	Theoretical lecture	Examination and quiz

		- Twisted Pair cables - Coaxial Cable - Fiber Optic cables			
8th week	1hr	**Communication Media** - A general idea about communication media between network elements: - Wired communication media	Communication Media	Theoretical lecture	Examination and quiz
9th week	1hr	- Wireless communication media	Communication Media	Theoretical lecture	Examination and quiz
10th week	1hr	**Bandwidth** - Importance of Bandwidth - Bandwidth Measurements - Limitations of Bandwidth	Bandwidth	Theoretical lecture	Examination and quiz
11th week	1hr	- Bandwidth of Throughput - Data Transfer Calculation	Bandwidth	Theoretical lecture	Examination and quiz
12th week	1hr	**General principles of communication devices used in networks:** - Modems - Network Interface Card (NICs) - Repeaters - Hubs	Networks Communication devices	Theoretical lecture	Examination and quiz
13th week	1hr	- Switches - Bridges - Routers - Gateways	Networks Communication devices	Theoretical lecture	Examination and quiz
14th week	1hr	**Principles of Network Protocols** - What is a protocol? - Protocol operation - Advantages of the protocol - Disadvantages of the protocol	Principles of Network Protocols	Theoretical lecture	Examination and quiz
15th week	1hr	- Tasks of protocols in the sending device - Tasks of protocols in the receiving device	Principles of Network Protocols	Theoretical lecture	Examination and quiz

16th week	1hr	- The concept of Binding - Description of the TCP/IP protocol package - Most important features of the TCP/IP protocol package	Principles of Network Protocols	Theoretical lecture	Examination and quiz
17th week	1hr	OSI Model Principles: - The basic principles behind the OSI - Description of the functions of the 7 layers that make up the OSI model: - Identify the functions of the lower three layers - Identify the functions of the upper three layers - Identify the functions of the middle layer	Open Systems Interconnection (OSI) model	Theoretical lecture	Examination and quiz
18th week	1hr	Protocols used for communication between corresponding layers - Data encapsulation steps - Data De-Encapsulation - Description of the services available of the OSI model layers	Open Systems Interconnection (OSI) model	Theoretical lecture	Examination and quiz
19th week	1hr	An idea about the IEEE standard specifications model: -Description of the networking idea -Ways to develop security methods networking	Open Systems Interconnection (OSI) model	Theoretical lecture	Examination and quiz
20th week	1hr	- IP addresses and network masks - IP address classes	IP addresses and network masks	Theoretical lecture	Examination and quiz
21st week	1hr	- MAC address - ARP address resolution protocol	IP addresses and network masks	Theoretical lecture	Examination and quiz
22nd week	1hr	- Network division techniques into subnets	IP addresses and network masks	Theoretical lecture	Examination and quiz
23rd week	1hr	Idea about Virtual Private Network (VPN): - Features of Virtual Network - Components of Virtual Networks - Virtual Network Protocols	Virtual Private Network (VPN)	Theoretical lecture	Examination and quiz
24th week	1hr	Theoretical Structure of Virtual Network	Virtual Private Network (VPN)	Theoretical lecture	Examination and quiz
25th week	1hr	- Risks that threaten networks and vulnerabilities - Possible methods and means of protection from risks	Network Security Principles	Theoretical lecture	Examination and quiz

		- Solving common network problems			
26th week	1hr	Computer and network security components: - Human resources - Physical components - Software - Databases	Network Security Principles	Theoretical lecture	Examination and quiz
27th week	1hr	Principles of network vulnerabilities, Types of breaches, prevention methods Modern spying methods on networks and computer centers An idea about computer and network crimes An idea about legal legislation	Network Security Principles	Theoretical lecture	Examination and quiz
28th week	1hr	Encryption principles, methods and types	Encryption principles	Theoretical lecture	Examination and quiz
29th week	1hr	Substitutional encryption methods	Encryption principles	Theoretical lecture	Examination and quiz
30th week	1hr	Compensatory encryption methods	Encryption principles	Theoretical lecture	Examination and quiz

Practical

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1st -4th week	2hr	- Identifying network ports on the personal computer - Identifying the Internet Methods of connecting to the global network, including: Telephone and wireless lines Direct connection via satellite - Network means and media: Wired communication cards through the phone using the modem Wireless communication cards through local network cards LAN Cards - Identifying the capabilities provided by the Windows XP operating system in the field of networks		practical lecture	oral examination and writing report
5th - 10th week	2hr	- The concept and idea of networking and its types - How to connect two computers directly and		practical lecture	oral examination and writing report

		create a small local network - How to share computers in: different software and data in the network - Transfer data between two computers and use one printer simultaneously - Identify workstations - Identify cables and their types - How to connect cables Identify the RJ 45 connection with a UTP cable - Identify the tools for making connections			
11th - 15th week	2hr	- Identifying the tools used in troubleshooting - How to network multiple computers, printers and modems - The devices you need when networking - Connecting a number of lab computers in the form of a local network - How to connect the Internet through a telephone connection and using access cards for the locally paid service - Connecting with the service provider Server in wired and wireless networks and defining the computer linked to this service		practical lecture	oral examination and writing report
16th - 30th week	2hr	- Using the Packet Tracer program - Getting to know the main interface of the program - Getting to know the components of the program - Various practical experiences		practical lecture	oral examination and writing report

11.Course Evaluation

the Distribution of the score out of 100 is according to the following:

1. **Theoretical:**
   - **a.** First semester = 10 marks
   - **b.** Second semester= 10 marks
2. **Practical:**

a. Fiest semester= 10 marks b. Second semester= 10 marks 3. **daily oral and preparation= 10 Marks** 4. **Final exam** a. Theoretical=40 marks b. Practical =10 marks

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	All books and Journals which includes the network topics
Main references (sources)	All books and Journals which includes the network topics
Recommended books and references (scientific journals, reports…)	All books and Journals which includes the network topics
Electronic References, Websites	https://stackexchange.com/

Course Description

1. Course Name:
Website Design
2. Course Code:
CS206
3. Semester / Year:
Yearly
4. Description Preparation Date:
15\12\2024
5. Available Attendance Forms:
Attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
3(hours)\ 6 (units) \total 90 hour
7. Course administrator's name (mention all, if more than one name)
Name: Zainab Sahib Dhahir Email: Zainab. Dhahir@atu.edu.iq
8. Course Objectives

Course Objectives	The student's ability to interact with websites on the internet, manage them, and empower the student to design websites, upload and handle servers, and work with different languages used on the internet.
9. Teaching and Learning Strategies	
Strategy	Theoretical Lecture Practical Laboratory

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First + Second	6	Introduction to the Internet	Introduction to the Internet, websites, search engines and servers	Lecture Practical Laboratory Oral discussion	Daily exam

Third + Fourth + V + Sixth	12	ForkCast Markup Language	HyperText Markup Language (HTML)	Lecture Practical Laboratory Oral discussion	Daily exam
Seventh + Eighth + Ninth + X + Eleventh + Twelfth	15	CSS Introduction	Cascading Style Sheet is a descriptive language that gives the website its beautiful shape and unique design that will distinguish it from other sites . One of the requirements of Front End Developer interface designers and developers	Lecture Practical Laboratory Oral discussion	Daily exam
XIII + Fourteenth + Fifteenth + Sixteenth	21	Language (PHP)	Language (PHP), Introduction to PHP, Running Windows IIS 5.0, Adding PHP to IIS, Adding MySQL to IIS , PHP file structure, web protocols, comments, variables, numbers, arithmetic operations, system variables, constants, knowledge and transformation of data types, time	Lecture Practical Laboratory Oral discussion	Daily exam

			and date functions, forms (GET, POST), conditional commands (IF statement, operands) Boolean, multiplicity of conditions, nesting conditional statements, Switch statement, getting rid of html tags, iterations and arrays, array functions, sorting arrays, additional array functions, multidimensional arrays, code order (Function, Print) , variable range, stable variables, file inclusion), tracking, phishing and error prevention (error types, logical errors, error avoidance, Regular Expressions, character class industry), client handling, cookies, Session		
Seventeenth–Twenty-third	12	JavaScript	, Use JavaScript JavaScript	Lecture Practical Laboratory	Daily exam

			language, the general form that the JavaScript program will be, declaration of variables, arithmetic coefficients, logical coefficients, control statements, SWITCH , iteration, events , , Create a button to send email WHILE , functions, forms, arrays, objects, literal strings Applied Information	Oral discussion	
XXIV + Twenty-fifth + Twenty-sixth + Twenty-seventh	12	Types of database servers	Types of database providers MySQL, PostgreSQL , MS SQL, Oracle Database Management System (MY SQL))	Lecture Practical Laboratory Oral discussion	Daily exam
Twenty-eighth + Twenty-ninth + Xxx	12	Site Management	Administration of Apache web sites, Local server , Smart and Grammar Sites	Lecture Practical Laboratory Oral discussion	Daily Exam
11. Course Evaluation					

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc First semester exam (100%)/Grade 20% Second semester exam (100%)/Grade 20% Daily preparation, daily oral, monthly, or written exams, reports / Grade 10% Final exam (100%)/ Grade 50%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Nothing
Main references (sources)	Nothing
Recommended books and references (scientific journals, reports…)	Web design programming and developing
Electronic References, Websites	www.php.com www.school.com www.javascript.com

Course Description

1. Course Name:
English language
2. Course Code:
CS208
3. Semester / Year:
Year
4. Description Preparation Date:
10/12/2024
5. Available Attendance Forms: present
6. Number of Credit Hours (Total) / Number of Units (Total)
1(hours)\ 2 (units)\ total 30 hour
7. Course administrator's name (mention all, if more than one name)
Name:payman hussein Email: inb.beman10@atu.edu.iq
8. Course Objectives

Course Objectives	This program aims to achieve the following objectives: - Supporting students in the country to learn and develop the Eng language by graduating a group of students who have the ability to speak English language and write correctly. - Developing the student's language through practicing reading, writing, speaking English, and keeping pace with developments taking place in world. - Enabling the student to raise his level of thinking by acquainting him v the best literary and linguistic works. - General and transferable skills (other skills related to employability personal development) - Developing the student's self-confidence through speaking and discuss conducted during the school year. - Enhancing the student's confidence in his ability to express.

9. Teaching and Learning Strategies

Strategy	The workers in this program have extensive knowledge of educatio tools that are appropriate to the academic vocabulary. Among the tools and methods are: The lectures that are presented to students are in the form of a set presentation slides, or via the smart board, data show, or are writt directly by the lecturer.

	Lectures are printed and distributed in advance to students so th notes can be made and discussed during the lesson. Scientific lectures are uploaded to the college's official website via t Internet. Discussion in small and large groups. Discussion through questions and answers during official lectu times or during the teacher's office hours. Evaluation methods The approved evaluation methods are: - Written exam. - Student's oral presentation. - Writing individual reports or working on group projects. - Homework. - Writing graduation research.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	The student learns vocabulary, parts of speech/words that have multiple meanings	Unit one Getting to Know you	explanation lectures With examples on the board and Book	questions during Lecture And a quick Exam
1	1	Social expressions reading	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick Exam
2	1	rules: Vocabulary	Unit two The way we Live	explanation lectures With examples on the board	questions during Lecture And a quick

				and Book	Exam
3	1	Everyday life	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick Exam
4	1	Read and speak living in America		explanation lectures With examples on the board and Book	questions during Lecture And a quick Exam
5	1	Past tense negation made time expressions prepositionsر	Unit three It all went Wrong	explanation lectures With examples on the board and Book	questions during Lecture And a quick Exam
6	1	Read and listen to thieves friends	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick Exam
7	1	Questions Definite articles Listening	Unit four Let's go Shopping	explanation lectures With examples on the board	questions during Lecture And a quick

				and Book	Exam
8	1	Read and listen	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick Exam
9	1	Present continuous tense	Unit five What do You want To do	explanation lectures With examples on the board and Book	questions during Lecture And a quick Exam
10	1	Words and pronunciation, synonyms and antonyms	=	explanation lectures With examples on the board and Book	questions during Lecture And a quick Exam
11	1	Tenses	Unit six Tell me What's it like	explanation lectures With examples on the board and Book	11
13	1	Words and pronunciation, synonyms and antonyms	=	explanation lectures With examples	12

				on the board and Book	
13	1	Rules	Unit seven Famous couples	explanation lectures With examples on the board and Book	13
14	1	Read and listen	=	explanation lectures With examples on the board and Book	14
15	1	Rules	Unit eight Do & don't	explanation lectures With examples on the board and Book	15
16	1	Rules		explanation lectures With examples on the board and Book	16
17	1	Read and listen	Unit nine Going Places	explanation lectures With examples	17

				on the board and Book	
18	1	Rules	=	explanation lectures With examples on the board and Book	18
19	1	Comparative adjectives	Unit ten Scared to Death	explanation lectures With examples on the board and Book	19
20	1	Read and listen	=	explanation lectures With examples on the board and Book	20
21	1	Listening and vocabulary: talk to me	Unit eleven Things that Change the World	explanation lectures With examples on the board and Book	21
22	1	Reading vocabulary	=	explanation lectures With examples	22

				on the board and Book	
23	1	Tenses	Unit twelve Dream & Reality	explanation lectures With examples on the board and Book	23
24	1	Words and pronunciation, synonyms and antonyms	=	explanation lectures With examples on the board and Book	24
25	1	Everyday English social expressions	Unit thirteen Earning a Living	explanation lectures With examples on the board and Book	25
26	1	Words and pronunciation, synonyms and antonyms	=	explanation lectures With examples on the board and Book	26

27	1	Read and listen	Unit fourteen Love you and Leave you	explanation lectures With examples on the board and Book	27
28	1	Listening and vocabulary: talk to me	=	explanation lectures With examples on the board and Book	28
29	1	About the adverb	Writing	explanation lectures With examples on the board and Book	29
30	1	About superlative adjectives	=	explanation lectures With examples on the board and Book	30

11.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc
First semester exam (100%)/Grade 20%
Second semester exam (100%)/Grade 20%
Daily preparation, daily oral, monthly, or written exams, reports / Grade 10%
Final exam (100%)/ Grade 50%

12.Learning and Teaching Resources

quired textbooks (methodology, if any)	headway beginner
n references (sources)	headway beginner & per ntermediate
Recommended books and references (scientific journals, reports…)	english file
chronic References, Websites	English with Lucy

Course Description

1. Course Name:
The crimes of the Baath regime in Iraq
2. Course Code:
CS209
3. Semester / Year:
Yearly
4. Description Preparation Date:
10\12\2024
5. Available Attendance Forms:
Presence
6. Number of Credit Hours (Total) / Number of Units (Total)
1(hours)\ 2 (units) total 30 hour
7. Course administrator's name (mention all, if more than one name)
Name: Mustafa abbas mohammed Email: mustafaalkhafagji815@gamil.com
8. Course Objectives

Course Objectives	**Exposing the criminal acts of the fallen Baathist regime to the new generations of students who did not see or touch these criminal acts.** **Educating students regarding human rights and the concept of crime and its types in general**

9. Teaching and Learning Strategies	
Strategy	Explaining the curriculum divided into two hours each week using multiple means of illustration, such as press reports, archival books, and illustrated materials.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Baath Party crim according to t Supreme Crimi Court Law of 200	The concept of crimes and their categories Definition of cri linguistically a terminologically	Giving lectures And Usi technological means to deliv lectures	1. Oral exam 2. Daily evaluation lecture
2	2				lecture

3	2	Psychological crimes	-The concept crimes and th categories	-Giving lectures And Using	Oral discussion
4	2		Crime department	technological	Lecture
5	2	The Baathist regime's position on religion	-Decisions issued by the Supreme Criminal Court	means to deliver lectures	and Oral discussion
6	2	Violations of Ira laws	-Psychological crimes		Lecture and Oral
7	2		-Mechanisms of psychological	-Giving lectures	discussion
8	2		crimes	And Using	Lecture
9	2		Psychological crimes and the effects of	technological means to deliver	and Oral discussion
10	2		psychological crimes, social	lectures	Lecture and Oral
11	2	Political And	crimes -Militarization of		discussion
12	2	military violation	society	-Giving lectures	Lecture and Oral
13	2	Prison and detenti	The Baathist regime's position on religion	And Using technological	discussion
14	2	places	-Violations of Iraqi laws	means to deliver	Exams
15	2		Images of human rights violations	lectures	Lecture and Oral
16	2		and crimes of power		discussion
17	2	Environmental crimes	, some decisions regarding	-Giving lectures And Using	Lecture and Oral
18	2	Military pollution	political and military	technological means to	discussion
19	2		violations of the Baath regime	deliver lectures	Lecture and Oral
20	2	scorched earth policy	-Prison and detention places		discussion
21	2	Crimes committ against the marsh	of the Baath regime	-Giving lectures	
22	2		-Environmental crimes of the	And Using technological	Lecture and Oral
23	2		Baath regime in Iraq	means to	discussion

24 25 26 27 28 29 30	2 2 2	Mass graves Genocide and mass graves	Military and radioactive contamination and mine explosions Destroying cities and villages -Drying the marshes - Razing palm groves, trees and crops -Mass grave crimes -The establishment of cemeteries for the genocide committed by the Baath regime in Iraq -Chronological classification of genocide graves in Iraq for the period 1963-2003 AD	deliver lectures -Giving lectures And Using technological means to deliver lectures -Giving lectures And Using technological means to deliver lectures	Lecture and Oral discussion Lecture and Oral discussion Lecture and Oral discussion Lecture and Oral discussion

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc
First semester exam (100%)/Grade 20%
Second semester exam (100%)/Grade 20%
Daily preparation, daily oral, monthly, or written exams, reports / Grade 10%
Final exam (100%)/ Grade 50%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Official book
Main references (sources)	Visual Basic online code book Written by Ahmed Sadiq
Recommended books and references (scientific journals, reports…)	Al-Qabas Kuwaiti newspaper
Electronic References, Websites	Various press reports on YouTube

1. Course Name:
Arabic
2. Course Code:
CS210
3. Semester / Year:
Year
4. Description Preparation Date:
22/12/2024
5. Available Attendance Forms:
Attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
1(hours)\ 2 (units) total 30 hour
7. Course administrator's name (mention all, if more than one name)
Name: Ali Mohsin Email: alialharby14@gmail.com
8. Course Objectives

Course Objectives	**• Helps students develop their linguistic skills comprehensively, preserve cultural identity, teach and learn, understand religious texts, and benefit from Arabic literature.**

9. Teaching and Learning Strategies	
Strategy	Lecture, lab, summer training

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Duties	throw Lectures	Grammar and morphology ,Nouns, verbs .(pronouns b sentence structure And the structures *Grammar*	Grammar And th exchange ,Names) .(Verbs, pronoun B sentence construction and grammatical .structures Signs **Punctuation and its uses**	1	١+2+3+4+5
Discussions	Giving lectures		Noun and verb And the differenc between them	1	6+7+8+9
Direct questions	Giving lectures		:Effects The object- Absolute effect - Deferred effect- The object- The object with i	1	10+11+12+ 13+14+15+16+17
Short test	Giving lectures		preparation And distinguish it	1	18+19+20
Duties	Giving lectures		linguistic errors Common	1	21+22
Oral exams	Giving lectures		Meanings of free letters The rule of the separating thousa The rule of Noon and Tanween	1	23+24
Discussions	Giving lectures		Formal aspects For administrativ speech	1	25+26
Duties	Giving lectures		Administrative discourse langua	1	27+28
Exams Oral	Giving lectures		General review And applied proj	1	29+30

1. Course Evaluation

,The grade is distributed out of ١٠٠ according to the tasks assigned to the student, such as daily preparation, daily .oral, monthly and written exams, reports, etc

2. Learning and teaching resources

nothing	Required textbooks (methodology if any)
Clear dictation: Abdul Majeed Al- -١ Naimi	Main References (Sources)

Daham Al-Kayyal, Al-Mutanabbi, ,Library ,Baghdad6 , th edition 1987AD 3 Language, grammar and spelling - lessons for employees State: Ismail Hamoud Atwan and others Ministry of Education Printing Press) .No(3)Baghdad , .ed1987.AD 5- General Arabic for non-specialize departments Specialization: Abdul Qader Hassan Amin And others, Ministry of Higher ,Education and Scientific Research and ed2000.AD 6- Inspired by Arabic literature: Hafa ,Muhammad Amin . Press , Baghdad	
Iraqi magazines website	Recommended supporting books and references (scientific (.journals, reports, etc
Scientific Researcher	Electronic references , websites