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

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: Southern Technical University

Faculty/Institute: Technical Institute of Architecture

Scientific Department: Electronic and communications technologies

Academic or Professional Program Name: Diploma in computer systems techniques

Final Certificate Name: Diploma in in computer systems techniques technologies

Academic System: quarterly

Description Preparation Date: 15/10/2023

File Completion Date: 15/10/2023

Signature:

Head of Department Name:..Dr.Nadia Ali Qassim

Date: 15-10-2023

Signature:

Scientific Associate Name:.

Suhad Jassim Khalifa

Date: 15-10-2023

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Naglaa Kadhem Abdel Hassan

Date: 15-10-2023

Signature:

Approval of the Dean

Prof. Dr. Mohammed Salih Abed Ali

1. Program Vision

The Computer Systems Technology Department seeks to form a scientific or human base in the field of computer maintenance and programming related to computer science and applications. It seeks to prepare plans to develop staff and curricula to ensure that the requirements of quality standards are met, in addition to keeping pace with development and ready-made applications in order to contribute to achieving part of it, and for the department to be a scientific edifice. Distinguished research in its programmes, curricula and scientific research.

2. **Program Mission**

Working to prepare specialized staff with a high level of professionalism to deal with applied and information software and working to provide appropriate opportunities to develop the community's capabilities in investing in the developments in technology and meeting their needs in the field of computers, and providing training consulting services.

3. **Program Objectives**

1. Preparing technical staff qualified to use computers
2. Preparing and verifying data and entering it into the computer
3. Participate in testing, auditing and debugging programmed systems
4. Participate in preparing and designing software systems
5. Implementing software systems
6. Focusing on the educational and moral aspect of the student and instilling a spirit of dedication, tolerance and commitment.

4. **Program Accreditation**

None

5. **Other external influences**

1. External influences contribute to solving many of the dilemmas related to approved studies.

2. Labor market needs, quality of graduates, and support of students' skills.

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	14 The first stage 13The second stage	46 units 45 units	50% 50%	Specialization + assistant
Summer Training	For one month for the first stage			
Other				

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

7. Program Description

The academic system in the Department of Computer Systems Technologies was transformed to the semester system according to University Order No. 7725/19 on 9/14/2021, and the curricula were updated and approved for the academic year 2023-2024 according to University Order No. 4894/19 on 7/13/2023.

REPUBLIC OF IRAQ
MINISTRY OF HIGHER EDUCATION
& SCIENTIFIC RESEARCH
SOUTHERN TECHNICAL UNIVERSITY
PRESIDENCY UNIVERSITY

بسمه تعالى

جمهورية العراق
وزارة التعليم العالي والبحث العلمي
الجامعة التقنية الجنوبية
رئاسة الجامعة
قسم الدراسات والتخطيط

العدد : ٤٨٩٤/١٩
التاريخ : ٢٠٢٣/٧/١٢

Ref :
Date :

الى / كليات ومعاهد الجامعة كافة – السيد العميد المحترم

م/ الخطط الدراسية للعام الدراسي 2023/ 2024

تحية طيبة

نرفق لكم ربطا مسودة الخطط الدراسية للعام الدراسي 2024/2023 للتفضل بالإيعاز الى الاقسام العلمية لتدقيقها مع مراعاة مايأتي:-

1- تكتب الملاحظات الخاصة بالخطط الدراسية للتخصصات الادارية والصحية والطبية بشكل منفصل لغرض ارسالها الى لجان العمداء .

2- تكتب الملاحظات الخاصة بالخطط الدراسية للتخصصات الاخرى الى قسم الدراسات والتخطيط بعد ان يتم الاتفاق بشأنها مع الاقسام المتناظرة في التشكيلات الاخرى.

3- ضرورة اكمال مفردات الدراسية للمواد الدراسية لكافة المراحل الدراسية لجميع التخصصات وتزويدنا بنسخة الكترونية منها حال اكمالها اما بالنسبة للأقسام العلمية المتناظرة فتكون مسؤولية ما ورد اعلاه (توحيد الملاحظات بشأن الخطط الدراسية + مفردات المواد الدراسية) على النحو الاتي:

الاقسام العلمية	التشكيل المسؤول
هندسة تقنيات النظم الكهروميكانيكية	الكلية التقنية ذي قار
تقنيات المحاسبة /كليات	الكلية التقنية الادارية
تقنيات المختبرات الطبية/كليات	كلية التقنيات الصحية والطبية
التقنيات الميكانيكية	المعهد التقني الناصرية
تقنيات المختبرات الطبية	المعهد التقني الناصرية
تقنيات صحة المجتمع	المعهد التقني الناصرية
التقنيات المدنية	المعهد التقني البصرة
تقنيات ميكانيك القدرة/سيارات	المعهد التقني البصرة
تقنيات التمريض	المعهد التقني البصرة
التقنيات الكهربائية/قوى	المعهد التقني/ القرنة
تقنيات المساحة	المعهد التقني الشطرة
تقنيات انظمة الحاسوب	المعهد التقني العمارة
تقنيات ادارة المواد	المعهد التقني العمارة
تقنيات المحاسبة	المعهد التقني العمارة

آملين ايلاء الموضوع بالغ الاهمية والاجابة في موعد اقصاه 2023/8/1.. مع التقديـــر.

الاستاذ الدكتور
علاء فريد عبد الاحد
مساعد رئيس الجامعة للشؤون العلمية
13/ تمـــوز/ 2023

الجامعة التقنية الجنوبية 2014 SOUTHERN TECHNICAL UNIVERSITY

المرافقات
- ملف pdf الخطط الدراسية

نسخة منه الى //
مكتب رئيس الجامعة / ليتفضل السيد رئيس الجامعة المحترم بالعلم.. مع التقديـــر.
مكتب المساعد العلمي / للتفضل بالعلم.. مع التقديـــر.
قسم الدراسات والتخطيط/ شعبة التخطيط والتدريب والتطوير مع الاوليات.
الصادرة

العنوان: العراق - البصرة - طريق الزبير العام - مقابل المدينة الرياضية
Address: Iraq-Basrah-Zubair Main Street-Front Of Sport City
E-mail : Presidency@stu.edu.iq

25 قسم تقنيات انظمة الحاسبات

الخطة الدراسية لقسم تقنيات انظمة الحاسوب حسب النظام الفصلي للعام الدراسي ٢٠٢٣/٢٠٢٤							
السنة الأولى - الفصل الاول							
ت	المادة الدراسية	عدد الساعات				عدد الوحدات	نوع المادة	الملاحظات
		نظري	عملي	مجموع				
1	البرمجة بلغة C++/1 Programming in C++/1	2	2	4		4	تخصصية	
2	الخوارزميات وحل المشكلة Algorithms and Problem Solving	2	-	2		2	تخصصية	
3	اساسيات الحاسوب/ ١ Computer Fundamentals/1	-	2	2		2	تخصصية	
4	التصميم المنطقي Logical Design	2	2	4		4	تخصصية	
5	اساسيات شبكات الحاسوب fundemantals and computer networks	2	2	4		4	تخصصية	
6	رياضيات وتحليل العددي Mathematics and Numerical Anaiysis	2	2	4		4	مساعدة	
7	حقوق الإنسان والديمقراطية Human Rights and Democracy	2	-	2		2	عامة	
	المجموع	12	10	22		22		

الخطة الدراسية لقسم تقنيات انظمة الحاسوب حسب النظام الفصلي للعام الدراسي ٢٠٢٣/٢٠٢٤							
السنة الأولى - الفصل الثاني							
ت	المادة الدراسية	عدد الساعات				عدد الوحدات	نوع المادة	الملاحظات
		نظري	عملي	مجموع				
1	البرمجة بلغة c++/2 Programming in c++/2	2	2	4		4	تخصصية	
2	اساسيات تصميم المواقع Fundamentals in Web Design	2	2	4		4	تخصصية	
3	اساسيات الحاسوب /٢ Computer Fundamentals/2	-	2	2		2	تخصصية	
4	البرمجة بلغة بايثون Programming in Python	2	2	4		4	تخصصية	
5	صيانة الحاسوب Computer Maintenance	2	2	4		4	تخصصية	
6	الإحصاء Statistics	2	2	4		4	مساعدة	
7	لغة انكليزية /١ English Language/1	2	-	2		2	عامة	
	المجموع	12	12	24		24		

الخطة الدراسية لقسم تقنيات انظمة الحاسوب حسب النظام الفصلي للعام الدراسي ٢٠٢٣/٢٠٢٤							
السنة الثانية - الفصل الاول							
ت	المادة الدراسية	عدد الساعات				عدد الوحدات	نوع المادة	الملاحظات
		نظري	عملي	مجموع				
1	انظمة التشغيل Operating systems	2	2	4		4	تخصصية	
2	تشفير وامنية المعلومات Information security and encryption	2	1	3		3	تخصصية	
3	اساسيات قواعد البيانات SQL Fundamentals of database in SQL	2	2	4		4	تخصصية	
4	البرمجة بلغة الفيجوال بيسك/١ Programming in Visual Basic/1	2	2	4		4	تخصصية	
5	تصميم المواقع الالكترونية متقدم Advaned in Web Design	2	2	4		4	مساعدة	
6	لغة انكليزية /٢ English Language/2	2	-	2		2	عامة	
7	مشروع تخرج Graduation Project	—	2	2		—	تخصصي	سنوي
	المجموع	12	11	23		21		

الخطة الدراسية لقسم تقنيات انظمة الحاسوب حسب النظام الفصلي للعام الدراسي ٢٠٢٣/٢٠٢٤							
السنة الثانية - الفصل الثاني							
ت	المادة الدراسية	عدد الساعات				عدد الوحدات	نوع المادة	الملاحظات
		نظري	عملي	مجموع				
1	هياكل البيانات Data Structures	2	2	4		4	تخصصية	
2	شبكات الحاسوب Computer Networks	2	2	4		4	تخصصية	
3	قواعد البيانات SQL Database in SQL	2	2	4		4	تخصصية	
4	البرمجة بلغة الفيجوال بيسك/٢ Programming in Visual Basic/2	2	2	4		4	تخصصية	
5	تحليل نظم System Analysis	2	-	2		2	تخصصية	
6	مشروع تخرج Graduation Project	—	2	2		4	تخصصي	سنوي
7	جرائم نظام البعث في العراق The Crimes of the Baath regime in Iraq	2	-	2		2	مساعدة	
	المجموع	12	10	22		24		

8. Expected learning outcomes of the program

Knowledge

1. Preparing and verifying data, entering it into the computer, and analyzing and designing database systems.
2. Ability to maintain and set up various operating systems with the ability to install service programs.
3. Participate in preparing and designing software systems and operating and using various ready-made applications.
4. The student's knowledge of the labor market and changes in computer fields.
5. The student's knowledge of how to conduct laboratory experiments and how to analyze and apply the results.

Skills

1. Ability to design and conduct experiments.
2. The ability to implement programming work and configure databases while connecting and distributing them through the network.
3. Designing and managing websites, operating network operating systems, and using various Internet applications.
4. The ability to use modern technological applications and tools to accomplish the necessary tasks.
5. Ability to maintain and install software and hardware.

Ethics

1. Developing students' abilities to share ideas
2. Communication skills and developing the ability to organize and present information effectively, whether orally, in writing, or using video and audio communication methods.
3. Ability to work within a team.
4. Ability to communicate effectively.
5. Put the graduate into the labor market and spread the spirit of fair competition.
6. Preparing the graduate to be successful in completing his academic career by obtaining certificates after the technical diploma and providing broad attention to the problems that arise in professional practice, including teamwork, leadership, occupational safety, ethics, service and economics.

9. Teaching and Learning Strategies

- Education strategies:

1- Lecture or delivery: In which the professor presents information, facts, and other ideas to the students related to the topic at hand.

2- Discussion: In this type of teaching strategy, the professor determines the topic that will be discussed in the lecture

3- Problem solving: In this strategy, the cognitive environment of students is activated through problem-solving activities, through most positive processes and activities that stimulate thinking and raise motivation to learn.

4- Project-based learning: This strategy relies on design work that requires applied work. Students are assigned an applied project for the activity, and they are forced to research, read, and use books and all cognitive sources in order to accomplish what is required.

5- Self-learning through research and use of electronic platforms.

10. Evaluation methods

Daily, mid-term, and semester exams, theoretical and practical. As well as attendance, participation and reports

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assistant Professor	Computer Science	Networks			staff	
Lecturer	Science	Physics			staff	
Lecturer	Engineering	Computer			staff	

Assistant Lecturer	Science	Computer			staff	
Assistant Lecturer	Science	Computer				**Lecturer**

Professional Development

Mentoring new faculty members

1-Holding workshops, seminars and seminars on developments in the field of computer and information technology.
2- Put them in courses to develop administrative skills, time management, and smart skills.
3- Keeping up with and following up on the implementation of the government program and entering the classifications.

Professional development of faculty members

The focus in the Computer Systems Technology Department in general is on continuous improvement. The department always seeks to improve the scientific and administrative process and overcome all the difficulties and obstacles that hinder the educational program by developing human resources for personal and professional development. The following procedures explain the steps implemented or in the process of implementation in this area:
D1. Continuous improvement and development of faculty members through training programs and workshops inside and outside the department and university.
D2. Increasing extracurricular activities, such as volunteering, scientific seminars, and personal and sports creativity, locally and regionally.
D3. Encouraging faculty members to obtain the highest academic and administrative ranks through promotions.
D4. Providing modern scientific sources and books for the department's library to keep pace with continuous progress.

12. Acceptance Criterion

1. Average for graduates of preparatory school/biological and applied science branch.
2. Examining the student's fitness and mental ability.
3. Central admission issued by the Ministry of Higher Education.

13. The most important sources of information about the program

- The curriculum approved by the Ministry of Higher Education and Scientific Research and its guidelines.
- Internet research for similar experiences.
- Personal experiences.
- Labor market needs.
- Methodical books.
- • General and specialized computer programs.
- Technical Institute YouTube channel.

14. Program Development Plan

1. Adding materials that keep pace with the change and development taking place in the field of computers and artificial intelligence.
2. Deleting and creating old materials while preserving the basics and their continuity.
3. Use and development of comprehensive virtual laboratories.

Program Skills Outline																
				Required program Learning outcomes												
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics				
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	
2023-2024 First year		Programming in c++/1	Specialized		√	√		√	√		√	√	√	√		
		Algorithms and problem solving	Specialized			√	√	√		√				√	√	
		Logical design	Specialized	√	√			√	√		√		√	√		
		Computer maintenance	Specialized		√		√	√			√	√		√	√	
		Computer fundamentals/1	Specialized	√		√		√	√				√	√		
		Mathematics and numerical analysis	assist	√						√		√			√	
		Fundamentals of computer networks	Specialized	√	√	√		√		√				√		
		Human rights and democracy	General				√						√	√	√	
		English language/1	General				√						√	√	√	
		Fundamentals in web design	Specialized			√	√	√			√	√	√			
		Programming in Python	Specialized		√	√		√	√		√	√	√	√		
		Programming in c++/2	Specialized		√	√		√	√		√	√	√	√		
		Computer fundamentals/2	Specialized	√	√			√		√	√		√	√		
		Statistics	assist	√			√	√			√	√		√	√	

2023-2024 Second year		Data structure	Specialized	√	√			√		√	√		√	√	
		Fundamentals of database SQL	Specialized	√		√	√			√	√	√	√		
		Operating systems	Specialized	√		√	√	√	√			√		√	
		System analysis	Specialized	√		√	√	√	√			√		√	
		Programming in visual basic	Specialized		√	√		√	√		√	√	√	√	
		Computer networks	Specialized	√	√	√		√		√				√	
		Advanced in web design	assist			√	√	√			√	√	√		
		English language/2	General				√						√	√	√
		Graduation project	Specialized	√	√				√		√	√		√	
		The crimes of the Baath regime in Iraq	General				√						√	√	√
		Information security and encryption	Specialized	√		√	√	√	√			√		√	

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Programming in c++/1
2. Course Code:
3. Semester / Year:
First and second semester / year 1
4. Description Preparation Date:
15/10/2023
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
120 yearly / 4 hours a week - 120 units
7. Course administrator's name (mention all, if more than one name)
Abbas Chekhair Kadum
8. Course Objectives
Introducing the student to programming languages and their types, the C++ language, the general structure of the program and its sections, the types of data used in this language, writing the code code for programs, countries, procedures and data files, and using the possibility of drawing in them.
9. Teaching and Learning Strategies

Strategy	10. Lecture or diction strategy. 11. Problem solving strategy. 12. Project-based learning strategy.

13. 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	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Providing students with the skill of preparing programs, writing code, analyzing and solving programmi ng problems	1. Abstract of programming languages What's a program language 2. The date and development of programming languages Levels of programming languages 3. Basic essentials for C++ language/ C++ language concepts What's C++ program contains? 4. What are the basic files? Simple explanation for basic files, that C++ program include 5. C++ language : beginning, development, its location within Levels	Lecture and lab	Daily Exams, mid-term exam and final exam

			of programming languages Basic element and tools of C++ language Language symbols 6. Definitions name keywords Constant represent Variables represent Data types in C++, and the represent methods in memory char type integer type real type Boolean (logical) type 7. Converting between deferent data types 8. Expressions types in C++ language, how formulate expression: 9. Arithmetic expression /deferent arithmetic operation and		

			its priorities / conversion manner of arithmetic expression to Arithmetic expression in C++ language/different examples Relational expression/ relational operations and its priorities/ formulate Relational expression Logical expression/ logical operation and its priorities/ formulate Logical expression 10. Compound expression/ priorities table of public operations/ different examples Give the primary values of constants and variables 11. Spaces and brackets		

			Type of comments Special tools, minim tools 12. Assignment statement, its types/ with explanation examples Arithmetic expression (equation), counters, counter types, different images for equations belong to C++ language Formatted Input and output functions output text Output numeric values Output Arithmetic expression 13. unFormatted Input and output functions Control, conditional, and loop statements		

			14. cond. Statement 15. Cond. Tools 16. If conditional statement 17. If…else statement 18. Nested conditional 19. switch conditional statement 20. nested conditional statement 21. repetition statements for loop ,Nested for		

14. Course Evaluation

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

15. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:
Programming in Python
2. Course Code:
3. Semester / Year:
Two / year one
4. Description Preparation Date:
15/10/2023
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
60 hours. 4 hours per week / 10 units
7. Course administrator's name (mention all, if more than one name)
Assist. Prof. Dr. Nadia Ali Qassim
8. Course Objectives
Introducing the student to programming languages and their types, the Python language, the general structure of the program and its sections, the types of data used in this language, and writing the code code for programs, functions, procedures and data files.
9. Teaching and Learning Strategies

Strategy	1. Lecture or diction strategy. 2. Problem solving strategy. 3. Project-based learning strategy.

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	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Providing students with the skill of preparing programs, writing code, analyzing and solving programmi ng problems	The Context of Software Development Software Learning Programming with Python Values and Variables Integer and String Values Identifiers User Input String Formatting Expressions and Arithmetic - Expressions - Arithmetic Examples Conditional Statements - Boolean expressions - If/Else statement - Other Conditional Expressions Iteration - Loops	Lecture and lab	Daily Exams, mid-term exam and final exam

			Using Functions - Introduction to Using Functions - Functions and Modules Writing Functions -1 - Function Basics - Parameter Passing - Custom Functions vs Standard Functions - Refactoring Writing Functions -2 - Global Variables - Making Functions Reusable - Functions as Data Objects - Using Objects - String, File Objects Lists - Using Lists - Building Lists - List Traversal Tuples, Dictionaries, and Sets - Storing Aggregate Data - Enumerating the Elements of a Data Structure Class Design - Composition and Inheritance		
11. Course Evaluation					

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Severance, Charles. Python for everybody: Exploring Data using python 3. Charles Severance, 2016.
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	https://www.py4e.com/

Course Description Form

1. Course Name:
Digital Design
2. Course Code:
3. Semester / Year:
First / year one
4. Description Preparation Date:
15/10/2023
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
60 hours / 4 hours a week - 8 units
7. Course administrator's name (mention all, if more than one name)
م. اسامة كريم محمد
8. Course Objectives
Introducing the student to the types of computers, numerical systems, and conversion between them, then addressing the representation of numbers in a digital calculator, Boolean algebra, the physical components of an electronic computer, machine languages, and data representation.
9. Teaching and Learning Strategies

Strategy	1. Lecture or diction strategy. 2. Problem solving strategy. 3. Project-based learning strategy.

10. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1 2 3 4	4 4 4 4	1- The student gets to know numerical	Essential information technical. Introduction, computer and software	Lectures and lab	Daily Exams, mid-term exam and final

5 6 7 8 9 10 11 12 13 14 15	4 4 4 4 4 4 4 4 4 4 4	systems and conversion between these systems. 2- Identify logical gates. 3- Study the physical components of the computer.	system, computer types. Numeric methods, Gates: Boolean algebra Formula rules and karnuf map. Characters and functions of box and power supply Study characters, functions and parts of the motherboard. Study functions and types memory: ROM AND ROM Study technical of secondary storage units: H.D ,F.D,C.D ,DVD Study characters and functions of slots cards(net, sound, video)		exam

11. Course Evaluation

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

12. Learning and Teaching Resources

Required textbooks (curricular books, any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Mathematics and numerical analysis
2. Course Code:
3. Semester / Year:
One / year one
4. Description Preparation Date:
15/10/2023
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours a week, 45 hour per class
7. Course administrator's name (mention all, if more than one name)
Name: sarah fawzi ghafel Email: sara4math1996@gmail.com
8. Course Objectives
The objective of the general and specific Subject is to develop the student's ability to U mathematics in practical applications andBenefit from it in engineering lessons
9. Teaching and Learning Strategies

Strategy	Discussion strategy Teamwork strategy

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2 3	2 2 2	Objectives of the Course: to Introduce the	The concept of matrices their	Explain the Scientific material	Daily Exams, mid-term exam

4 5 6 7 8 9 10 11 12 13 14 15	2 2 2 2 2 2 2 2 2 2 2 2	Student to the Mathematical Methods used to Solve Mathematical Methods used to Solve Mathematical Questions in a Logical manner, Including defning Functions Derivatives, Calculus, finding The root, Differentiation, and Numerical metho In solving Questions Mathematics Compared to Mathematical Methods, using Computer Applications , Including MATLA	types and how to find their ranks The equality of matrices and the operations on them(addition , subtraction, and multiplication) The determinant of matrix and its relation with their rank, sarus method to find the value of determinant The inverse matrix and its relation with rank, cofactors method to find the inverse matrix, solving the system of linear equations simul taneously using the inverse matrix of the coefficients Differentiation rules of the algebraic , trigonometric , exponential and logarithmic function, derivative of a composite function chain rule implicit differential and partial derivatives The approximate real root of	first then give examples to the students and discuss them with the students find the results of solving these examples using math equations	and final exam

			non-linear equation in some interval applying the iteration and newton-raphson methods Integration rules of algebraic, trigonometric, exponential and logarithmic functions Integration by parts and integration by partial fractions the concept of sequence and infinite series and their, ratio and root tests of their convergence and divergence		

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	1-CALCUKUS , George B, Thomas 2- TRIGONOMETRY, P .ABBOTT,B.A 3-كتاب الرياضيات التطبيقية تاليف يعقوب صباغة

Electronic References, Websites	

Course Description Form

1. Course Name:	
Statistics	
2. Course Code:	
3. Semester / Year:	
Two / year 1	
4. Description Preparation Date:	
15/10/2023	
5. Available Attendance Forms:	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3 hours a week, 45 hour per class	
7. Course administrator's name (mention all, if more than one name)	
Name: sarah fawzi ghafel Email: sara4math1996@gmail.com	
8. Course Objectives	
Course Objectives	**The objective of the general and specific Subject is to develop the student s abi to Use mathematics in practical applicatic and Benefit from it in engineering lessons**
9. Teaching and Learning Strategies	
Strategy	Discussion strategy Teamwork strategy

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	The objective of the course is to introduce the student to the use of statistical measures, data processing methods, and the application of operations research methods in studying phenomena. As well as introducing the student to statistical methods and methods in presenting and explaining the uses of measures of central tendency, dispersion, correlation, regression, and future forecasting, as well as applications	Definition of statistics - the importance of statistics and its relationship with other sciences. the second Data collection, classification and tabulation the third Ascending and descending clustered repetition the fourth Measures of central tendency for ungrouped data (arithmetic mean, mode median	Learning method Explain the Scientific material first then give examples to the students and discuss them with the students to find the results of solving these examples using math equations	Daily Exams, mid-term exam and final exam

		of linear programming in formulating linear models and analyzing them according to scientific and practical methods using their applications in the electronic calculator through SPSS applications	Fifth-sixth standards Central tendency for classified data, and the relationship between means. Measures of dispersion (range, variance, standard deviation for unclassified data) Seventh Eighth - ninth The tenth Measures of dispersion (range, variance, standard deviation for classified data Coefficient of variation and standard score for classified and unclassified data Simple correlation (Pearson method for unclassified data Spearman, Kendall rank correlation coefficient Correlation coefficient of traits, pairing, compatibility)		

			Simple regression Time series, measuring the general trend, finding the equation of the general trend line		

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	كتاب الرياضيات التطبيقية تاليف يعقوب صباغة
Recommended books and references (scientific journals, reports...)	- TRIGONOMETRY, P .ABBOTT,B.A كتاب الرياضيات التطبيقية تأليف يعقوب صباغة
Electronic References, Websites	websites related to the subject

Course Description Form

1. Course Name:
Algorithms and problem solving
2. Course Code:
3. Semester / Year:
First , year one
4. Description Preparation Date:
15/10/2023
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours. 2 hours per week. 2 units
7. Course administrator's name (mention all, if more than one name)
Haneen Abbas Chekhair
8. Course Objectives
Introducing the student to the nature of a computer program and the rules that help in understanding and solving the problem, writing algorithms and the stages of program development, learning about routines, learning about the method of designing software units, building a hierarchy of units, and dividing the program into units.
9. Teaching and Learning Strategies

Strategy	10. Lecture or diction strategy. 11. Problem solving strategy. 12. Project-based learning strategy.

13. 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	Get to know the student How to solve Problem and dealing with it correctly	Basic principles of programming Definition of the program and programming languages Solve the problem and understand the problem Division of the problem Problem solving process Data types and variables used in programming languages and their definition in the program Constants & Variables/ String and Numeric Flow chart - Benefits of flow charts - Shapes used in drawing flow charts, Types of flow charts - Simple flow chart	Lecture and lab	Daily Exams, mid-term exam and final exam

			Branched flow chart - Loop flow chart Algorithms/definitio n of algorithm/algorithm design, types of sequential, conditional, and repetitive algorithms Characteristics of a good program - program development stages, writing the program, implementation and debugging. Types of errors/spelling and grammatical errors (Syntax errors)/executive errors (Run time errors)/Semantic errors, Testing, Documentation & Maintenance Top-down design, Bottom-up design The life cycle of the process (program) inside the computer (Process life cycle) First / Ready / Secondly, waiting, thirdly, running, fourthly, completion Subroutines, Subprograms		

			Introduction to structured programming method/constructs used in structured programming Sequence/selection combinationIF-THEN -else Do-While repetition composition		

14. Course Evaluation

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

15. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Computer fundamentals / 1
2. Course Code:
3. Semester / Year:
First , year one
4. Description Preparation Date:
15/10/2023
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours / 2 hours per week / 30 units
7. Course administrator's name (mention all, if more than one name)
Suham Hasan Mohammed Hamza AbdulRidha Rasheed
8. Course Objectives
The student acquires the skills of dealing with basic office applications and creating office files and documents. The use of the operating system as well as the basics of working within the digital environment. Specific objective: To provide the student with knowledge in managing and using various computer applications
9. Teaching and Learning Strategies

Strategy	10. Lecture or diction strategy.

	11. Problem solving strategy. 12. Project-based learning strategy.

13. 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	1- The student learns about computer generations and operating systems 2- The student learns about the Windows operating system and how to deal with it 3- The student becomes familiar with the Microsoft	Introduction to the Windows operating system and learning about its advantages. Windows operating system functionality comparison between version types - Identifying the basic screen components, including the desktop icons (Folder, shortcut, files) and their types, the Task bar and its contents, its menu, and how to turn off the calculator Shut down. - The concept of the window, its components, and performing the operations of maximizing, minimizing, closing, etc.	Lecture and lab	Daily Exams, mid-term exam and final exam

		Word system 4- The student becomes familiar with Microsoft PowerPoint and prepares a presentation	- Dealing with the main desktop icons such as My computer, documents, recycle bin and the importance of each of them. - Perform copy, cut, and paste operations for components of folder icons, files, etc. - Use the Control panel properties -Mouse-Add printer-Regional Setting- -Display and change the wallpaper. Screen saver, display, setting, appearance. -Add and delete programs to the Programs list. - Working with the Paint program to draw, display and store drawings and images. - Word printing program: its features, benefits and operation. - The toolbar and its contents, document creation, how to deal with it, store it, and modify it.		

			- Search and replace, page preparation, formatting and numbering, use of the dictionary The spell checker prepares tables, deals with them, and performs pre-preview printing. -Power Point slide preparation program: its importance, advantages and operation Home screen and toolbar components and how to set up the slide Making and saving presentations and dealing with various multimedia (images, sounds, movies).		

14. Course Evaluation

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

15. Learning and Teaching Resources

Required textbooks (curricular books, if any)	اساسيات الحاسوب وتطبيقاته المكتبية 1
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Computer fundamentals / 2
2. Course Code:
3. Semester / Year:
Second , year one
4. Description Preparation Date:
15/10/2023
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours / 2 hours per week / 30 units
7. Course administrator's name (mention all, if more than one name)
Nasaem Hani Abbas
8. Course Objectives
The student acquires the skills of dealing with basic office applications and creating office files and documents. The use of the operating system as well as the basics of working within the digital environment. Specific objective: To provide the student with knowledge in managing and using various computer applications
9. Teaching and Learning Strategies

Strategy	1. Lecture or diction strategy. 2. Problem solving strategy.

	3. Project-based learning strategy.

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	Familiarizing the student with tables and databases	- Excel spreadsheet system, its importance, advantages and operation. - Toolbar and its contents. - Prepare a sheet (table), enter data and save it. - Dealing with table cells and performing operations to insert a row or column, delete cells, rows or columns, and modify the cell width or length. - File menu - Edit menu - Format menu - Sorting menu - Fill and sort cells. - How to write important mathematical and statistical equations such as: Sqrt, Stdev, Sum, Average, If, Count, Max, Sin Cos	Lecture and lab	Daily Exams, mid-term exam and final exam

			- Dealing with different graphs. - Drawing charts (lines, columns) and deriving the trend line and equation - How to read data from different worksheets Explaining the method of analyzing the situation of organizing payroll records - student absences, based on the EXCEL application - How to run the XEXCEL program and add it from the Internet to the EXCEL service menus - Access database management system - Designing tables - sub-tables - main tables - the normalization process - types of relationships. - Design the main form - Design the subform - - Link the main form with subforms on multiple pages (Pages)		

			- Queries, selection query - deletion query - Table Creation Query – Append Query Macros (Design and Run) - Conducting some exercises and treatment - applying a specific system (examination committee) - Simple reports - professional reports. * The Internet - the concept of the Internet - the idea of the emergence of the Internet - the method of obtaining an Internet subscription (wireless and wireless systems) Search engine - concept - types of engines (Yahoo, Google,…) A method of obtaining information in specific locations using keywords - storing data on CD-Flash RAM *E-mail service - the method of accessing the service - the		

			functions provided by the e-mail service - the method of sending or receiving attachments (files) with the message.		

11. Course Evaluation

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	اساسيات الحاسوب وتطبيقاته المكتبية 2
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

13. Course Name:	
Fundamentals in web design	
14. Course Code:	
15. Semester / Year:	
Second , year one	
16. Description Preparation Date:	
15/10/2023	
17. Available Attendance Forms:	
In person	
18. Number of Credit Hours (Total) / Number of Units (Total)	
60 hours / 4 hours per week / 60 units	
19. Course administrator's name (mention all, if more than one name)	
Haneen Abbas Chekhair Muna Alwan Jaber	
20. Course Objectives	
The goal is to introduce the student to the characteristics of the Internet, the types of applications used, the basics of website design, and to become familiar with the basic design languages (html, css,).	
21. Teaching and Learning Strategies	
Strategy	1. Lecture or diction strategy. 2. Problem solving strategy. 3. Project-based learning strategy.
4. 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	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	-The student learns about the languages used on Internet sites 2-The student learns how to create a website	Study the characteristics of the Internet and the types of applications used on it Study the protocol for transferring electronic pages, files and e-mail on Internet Study the basics of HTM -Delete a web page Programming using PHP and CSS Publish a page on the Internet - Website management	Lecture and lab	Daily Exams, mid-term exam and final exam

5. Course Evaluation

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

6. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

7. Course Name:
Computer maintenance
8. Course Code:
9. Semester / Year:
Second, year one
10. Description Preparation Date:
15/10/2023
11. Available Attendance Forms:
In person
12. Number of Credit Hours (Total) / Number of Units (Total)
60 hours. 4 hours per week / 60 units
13. Course administrator's name (mention all, if more than one name)
Osama Kareem Mohammed
14. Course Objectives
Introducing the student to the types of computers, their internal components, a methods of installation and maintenance. Types of operating systems, maintenan programs, anti-virus programs, and diagnosing common malfunctions.
15. Teaching and Learning Strategies

Strategy	1. Lecture or diction strategy. 2. Problem solving strategy. 3. Project-based learning strategy

4. 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	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1-Teaching the student the rules of general maintenance. 2-Identifying and maintaining computer equipment. 3-The student learns how to choose the hardware components of the computer.	Introduction - Maintenance and its types - General maintenance rules Foundations of occupational safety - devices and tools used in maintenance. Programs for installing and operating motherboard components Motherboard – its different types and components Power supply unit - its types, components and operation. Types of memory units (RAM, BIOS ROM) Studying the effect of memory size on computer performance Processor - its types according to the way it is installed on the motherboard Processor cooling methods.	Lecture and lab	Daily Exams, mid-term exam and final exam

			Identify and maintain computer programs Fault diagnosis programs:- Learn about some fault diagnosis programs Identify faults based on error messages Identify malfunctions based on audio signals issued by the computer Viruses: - Introduction - Definition of the virus - Virus removal system - Types of programs - Their operation and updating. - Firewall.		

5. Course Evaluation

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

6. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Internet sites that support computer maintenance

Course Description Form

7. Course Name:
Data structures
8. Course Code:
9. Semester / Year:
Second, year 2
10. Description Preparation Date:
15/10/2023
11. Available Attendance Forms:
In person
12. Number of Credit Hours (Total) / Number of Units (Total)
60 hours. 4 hours per week / 60 units
13. Course administrator's name (mention all, if more than one name)
Usama Kareem Mohammed
14. Course Objectives
Introducing the student to the meaning of graphical structure, types of graphical structures, their importance, characteristics and available applications, while explaining the advantages of structured programming and its efficiency compared to traditional programming.

15. Teaching and Learning Strategies

Strategy	1. Lecture or diction strategy. 2. Problem solving strategy. 3. Project-based learning strategy.

4. 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	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1-Familiarize the student with the types of data structures. 2-Introducing the student to how to choose the appropriate graphic structure. 3- Teaching the student how to deal with indicators	Definition of data structures. basic concept of data structures. data structure types. data structures selecting. Primitive data structures representation, Compound Data Structures, Pointers, Linked list, Stack, Queue, Graphs, trees, searching algorithms.	Lecture and lab	Daily Exams, mid-term exam and final exam

5. Course Evaluation

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

6. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

7. Course Name:
Advanced in web design
8. Course Code:
9. Semester / Year:
First, year 2
10. Description Preparation Date:
15/10/2023
11. Available Attendance Forms:
In person
12. Number of Credit Hours (Total) / Number of Units (Total)
60 hours / 4 hours per week / 60 units
13. Course administrator's name (mention all, if more than one name)
Haneen Abbas Chekhair Muna Alwan Jabir
14. Course Objectives

The goal is to familiarize the student with dealing with websites on the Internet and how to manage them, and to enable the student to design websites, download, and deal with the different servers and languages used on the Internet.

15. Teaching and Learning Strategies

Strategy	1. Lecture or diction strategy. 2. Problem solving strategy. 3. Project-based learning strategy.

4. 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	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		Introduction to the PHP Hypertext Preprocessor language - Historical introduction to the PHP development language - Comparison of the PHP language with other languages in website design - The most important types of PHP servers - How to install the Apache Webserver - PHP language components - Arithmetic operations in PHP - Integrating PHP with HTML - Explaining the basic requirements	Lecture and lab	Daily Exams, mid-term exam and final exam

			for programming a website using PHP Introduction to JavaScrip The general form of the JavaScript language How to declare variables Arithmetic transactions Logical operators Control statements Switch statement Repetition phrases Dealing with functions Working with arrays - Creating effective models Introduction to MySQL Mysql operating requirements - The most important instructions of MySql - How to connect MySql with Php - Explaining the operations of adding, deleting, and modifying MySQL databases - RWED explained on MySql by		
5. Course Evaluation					

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

6. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

7. Course Name:
Fundamentals of database in SQL
8. Course Code:
9. Semester / Year:
First, year 2
10. Description Preparation Date:
15/10/2023
11. Available Attendance Forms:
In person
12. Number of Credit Hours (Total) / Number of Units (Total)
60 hours annually. 4 hours per week / 60 units
13. Course administrator's name (mention all, if more than one name)
Muqdad Hanoon Dawood

14. Course Objectives

Introducing the student to the importance of SQL databases, what are their basic principles, how to install SQL, how to normalize a lot of data, creating a rule and naming it, and through it creating its own tables, and how to modify, add, delete, and index.

15. Teaching and Learning Strategies

Strategy	1. Lecture or diction strategy. 2. Problem solving strategy. 3. Project-based learning strategy.

4. 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	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Teaching students how to deal with SQL databases and how to add, modify, delete, and index	Introduction and installation of sql , Data normalization Using wizards, and HELP types Data definition types, Create data tables, saving and editing. Input various data type using commands and keys More on Alter table, Brows , Edit data Data Manipulation language, Replace, Delete , Pack, Recall, Zap data	Lecture and lab	Daily Exams, mid-term exam and final exam

			Indexing & Sorting data		

5. Course Evaluation
The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

6. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

7. Course Name:
Database in SQL
8. Course Code:
9. Semester / Year:
Second, year 2
10. Description Preparation Date:
15/10/2023
11. Available Attendance Forms:
In person
12. Number of Credit Hours (Total) / Number of Units (Total)
60 hours annually. 4 hours per week / 60 units
13. Course administrator's name (mention all, if more than one name)
Muqdad Hanoon Dawood

14. Course Objectives

Introducing the student to SQL databases and how to manage them through commands, after they learned in the first chapter about creating the database and its tables through the wizard, managing data, how to enter and call it in ascending or descending order, and also deleting, modifying, and adding to the database or tables.

15. Teaching and Learning Strategies

Strategy	1. Lecture or diction strategy. 2. Problem solving strategy. 3. Project-based learning strategy.

4. 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	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Providing students with the skill of preparing databases and how to add and delete using SQL commands	Introduction Database Management System (DBMS) Data Integrity Database Normalization Create, Drop, Insert, Select table Understand (WHERE) statement (Condition Ststement) Understand (Order by) statement	Lecture and lab	Daily Exams, mid-term exam and final exam

			Comparison Operators (Between, In, Like, Is Null) Logic Operations (And, Or, Not) Arithmetic Operators Boolean Expression Numeric Expressions Date Expressions Create Database Drop Database Select Database Understand JOINS Inner join Left join Right join Full join Self join Sub-Quary (One and More Tables) Sub-Quary with (Select, Insert, Update, Delete) statements SQL Injection		

5. Course Evaluation

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

6. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

7. Course Name:
8. Course Code:
9. Semester / Year:
10. Description Preparation Date:
15/10/2023
11. Available Attendance Forms:
In person
12. Number of Credit Hours (Total) / Number of Units (Total)
13. Course administrator's name (mention all, if more than one name)

14. Course Objectives

15. Teaching and Learning Strategies

Strategy	1. Lecture or diction strategy. 2. Problem solving strategy. 3. Project-based learning strategy.

4. 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	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	The stude understands the importan of informati security earn Skills encrypt important information and devel decent software protect devic from malicio attacks	Introduction of Information Security - Defining Security, Information Security Security Protection tools - History of Information Security - Models for Discussing Security Issues Information Security Attacks - Defining Security Attack - Hackers and Hacking - The Risks of the Security Attacks (Government, nongovernment) - Types of Information Security Attacks and Breaches (Types of	Lecture and lab	Daily Exams, mid-term exam and final exam

			Malware, Types of Cyber Attack) Identification and Authentication - Defining Identification and Authentication - Approaches to Authentication - Common Identification and Authentication Methods Authorization and Access Controls - Access Controls Actions - Access Control Lists - Access Control in Network - Weaknesses of Access Control Systems - Physical Access Controls Auditing and Accountability - Accountability - Security Benefits of Accountability - Auditing		

			Social Engineering (Human Element Security) - What is a Social Engineering? - Gathering Information for Social Engineering Attacks - Types of Social Engineering Attacks - Building Security Awareness with Security Training Programs Information Security Tools - Antivirus software - Wireshark) Network Security (Cryptography - The History of Cryptography - Modern Cryptographic Tools - Protecting Data at Rest, in Motion, and in Use Operations Security - The Operations Security Process - Laws of Operations Security		

			- Operations Security in Our Personal Lives Physical Security - Identifying Physical Threats - Protecting People, Data, Equipment Mobile, Embedded, And Internet Of Things Security - Mobile Security - Embedded Security - Internet of Things Security Kali Linux - What is Kali Linux?		

5. Course Evaluation

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

6. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Programming in Visual Basic
2. Course Code:
3. Semester / Year:
First and second, year 2
4. Description Preparation Date:
15/10/2023
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
120 hours annually. 4 hours per week / 120 units
7. Course administrator's name (mention all, if more than one name)
Abbas Chekhair Kadum

8. Course Objectives

Introducing the student to advanced technologies and integrated programs in the VB language through database programming and delving into the details of some spreadsheet tools and creating reports.

9. Teaching and Learning Strategies

Strategy	1. Lecture or diction strategy. 2. Problem solving strategy. 3. Project-based learning strategy.

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	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		* Integrated development environment (IDE). (Integrated Development Environment) - Integrated development environment windows Integrated Windows Development Environment - Integrated development environment lists. Integrated Menus Development Environment - Tool Bars * Writing the first program - The idea of the program	Lecture and lab	Daily Exams, mid-term exam and final exam

			- Creating the project. - Interface design Design Forms - Writing Codes - Runs & Updates - Compiling translation. * Forms and tools. - Common properties Properties - Name property. - Size & Location property. - Font & Color feature. - Tab feature - Mouse pointer feature. * Common Events - Mouse Events. - Keyboard Events. * Form Window. - Properties form. - Event Form Events - Menus. * Internal Toolbox. - Label tool - Textbox tool. - Command button - Checkbox tool. -Option button -List box tool. -Combo box menu tool - Picture box tool. - Image box tool - Scrollbar.		

			- File ToolsFileslistbox. * Programming Language. - Variables and Constants. -Variables. - Constants. - Mathematical expressions and effects - OperationsExpression - TransactionsOperators. - Logical & relational expressions. * Inputs & Outputs. - Message and input boxes. -Print sentence. * Control and control statement.Control - If-Then conditional transition statement - Compound transition expression using (And, Or, Not). Nested -If transition statement - Multiple optionsSelect-Case. * Loops. -For-Next loops. - Do-While-Loop. Do-Until-Loop. - Do-Loop. * Arrays		

			- One-dimensional arrays. - Two-dimensional arrays * Subroutines & Procedures. Subroutines. -Procedures & Functions - Ready-made functionsLibrary Functions. -Procedures. - Functions * Standard Modules -RestrictionsRecords . * Files.Files - Sequential Files. Random Files. * Database Programming. - Basic concepts in databases. - Data access techniques Access Database. * Objects in databases (ADO). - objectConnection - objectRecord set - objectCommand. * Tools and reports - Data Grid tool - Flex Grid tool - Data Combo tool.		

			- Data List tool - Crystal Reports design. * Object-oriented programming (OOP). (Object Oriented Programming). - Introduction to OOP - Characteristics of OOP. - Building classes.		

11. Course Evaluation

The distribution is as follows: 50 points for daily exams and mid-term. 50 Semester Exam Scores

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	