

**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

2025-2026

Academic Program Description Form

University Name: Diyala University

Faculty/Institute: College of Basic Education

Scientific Department: Computer Science

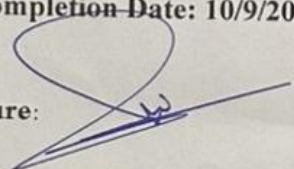
Academic or Professional Program Name: Basic Education-computer science

Final Certificate Name: Bachelor's degree in basic education

Academic System: Semester courses

Description Preparation Date: 10/9/2025

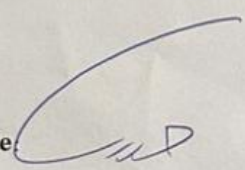
File Completion Date: 10/9/2025

Signature: 

Head of Department Name:

Shaymaa Taha Ahmed

Date: 10/9/2025

Signature: 

Scientific Associate Name:

Haider A.A Mohammed

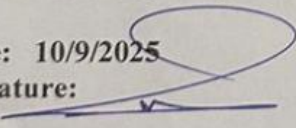
Date: 10/9/2025

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 10/9/2025

Signature: 


Approval of the Dean
Ayman Abdoun Nazal

1. Program Description				
Year/Level	Course Code	Course Name	Credit Hours	
2025-2026			theoretical	Practical
Third	ED-AD-FO-1	Arabic III	2	-
Third	CSB15SA311	Research Methods	3	-
Third	CSB15C312	TMS	2	-
Third	CSB15CA312	Measurement and Evaluation	2	-
Third	CSB15CN5314	General methods of teaching	2	-
Third	CSB15MER316	Viewing	-	4
Third	CSBPP321	Analysis systems	3	۱
Third	CSB15CA322	compilers	3	۱
Third	CSB15CN5325	Computer Architecture I	3	۱
Third	CSB15DS324	Communications and network security I	3	۱
Third	CSB15SE325	Operations Research	3	-
Third	EDPSE4	Prolog Lang	3	۱
Third	ARBF12	Computer Architecture II	3	۱
Third	CURSE3	Communications and network security II	3	۱
Third	DEMFII	Data security	3	-
Third	ARBFII	Software Engineering	2	-

Course Description Form

This course description provides a necessary summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the program description.;

Enterprise educational	College Education the basic
Section Scientific / Center	Calculators
Noun / Code scheduled	Structured programming I/ Comp 1301
shapes Attendees available	Is mandatory
the classroom / the year	the classroom scholastic / the third year
number hours tuition (total)	3×15 = 45
Date Preparation this the description	1/ 10/ 2025

Goals Decision: that is being requester knowledgeable with concepts following

1. Algorithms and flowcharts

2. Principles of Modular Programming

3. Top-Down Design Approach

4. Principles of structured programming

5. Pascal Program Structure

6. Write the expression in the Pascal language

7. Allocation and I/O statements

8. Procedures & Functions

9. Control and decision-making sentences

outputs scheduled and modalities education and learning and evaluation

A- Objectives Cognitive 1- That Known requesterHow to write algorithms and draw flowcharts
2- That Known requester Paradigm Programming Principles (modular programming) 3- That Known The top-down design approachTop-Down) 4- That Known requester Principles of

structured programming 5- That Known requester Program Structure in Pascal Language (pascal) 6- That Known requester How to write expression in Pascal language 7- That Known requester How Utilization assignment, input, and output statements I/O) 8- That Known requester How to write procedures and functions Procedures & Functions) 9- That Known requester what Control sentences and how to make a decision

B – Objectives Marathi own By decision. that made up I have Students skills with concepts coming 1-Writing algorithms and drawing flowcharts 2- Rules language Pascal (pascal) 3-Write the arithmetic expression in the Pascal language 4- use assignment, input, and output statements I/O) 5-Writing procedures and functions Procedures & Functions) 6- use Control sentences and how to make a decision

modalities education and learning

in Start the classroom Being inform Students vocabulary scheduled scholastic and sources the information (Books Same Relationship , periodicals , Messages undergraduate) and distributed vocabulary on me weeks the classroom scholastic, and Techniques Calendar that will run followed , my agencies: 1. Initialize Lectures According to sequence Which rose in scheduled scholastic About road help with sources the information precedent The remembrance. 2. Inform Students About Theme lecture coming with intent config. 3. Demand from Students Submit Leaves Belonging to subject or more from themes restriction studying.

modalities Evaluation

1. Procedure two exams two quarters the first distance expiration the week Fifth from the classroom scholastic And the second distance the week The tenth from the classroom scholastic and considerate in All Exam levels mental (Remember , application, exploration) where Degree Calendar to her 40% of achievement total on me that Takes I see consideration perseverance requester and volume Share it daily. 2. Exam End the classroom scholastic And for him 60% of achievement According timings Ministry And take into account At put questions inclusivity content scheduled scholastic and levels mental (Remember , application, exploration).

C- Objectives Sentimental And value :that is being requester able on me 1- Definition algorithm And chart streamlined 2- Writing expression Arithmetic 3- Writing camel personalization And input And output 4- Get acquainted on me the difference between procedures And functions 5- Get acquainted on me How Utilization camel the decision

Dr – skills the public And Qual movable (skills other related susceptibility recruitment and evolution profile). 1- Employment skills earned in education Knowledge sports I have Students Stage education Basis. 2- Choose Examples from Established education Basis And to each Of which skills that eat it scheduled scholastic. 3- Evaluation Bezel acquisition pupils education Basis for skills application. 4- Building Tests Especially domains thinking Logical for pupils Stage education Basis.

structure scheduled

the week	hours	outputs learning required	Noun Unit / or Topic	method education	method Evaluation
1	3	Concept of algorithm and flowchart	Concept of algorithm and flowchart	Discussion and interrogation	calendar structural
2	3	The concept of paradigm programming	The concept of paradigm programming	Discussion and interrogation	calendar structural
3	3	Design concept from top to bottom	Design concept from top to bottom	Discussion and interrogation	calendar structural
4	3	Principles of programming in Pascal language	Principles of programming in Pascal language	Discussion and interrogation	calendar structural
5	3	Pascal program structure	Pascal program structure	Discussion and interrogation	calendar structural
6	3	Test Monthly	Test Monthly	—	calendar structural

7	3	Use the arithmetic expression	Use the arithmetic expression	Discussion and interrogation	calendar structural
8	3	Use assignment, input and output statements	Use assignment, input and output statements	Discussion and interrogation	calendar structural
9	3	Learn about the proceduresProcedures	Learn about the proceduresProcedures	Discussion and interrogation	calendar structural
10	3	Learn about the proceduresProceduresAnd written	Learn about the proceduresProceduresAnd written	Discussion and interrogation	calendar structural
11	3	Test Monthly	Test Monthly	—	calendar structural
12	3	Identify on me functions Functions and written	Identify on me functions Functions and written	Discussion and interrogation	calendar structural
13	3	Identify on me camel take the decision	Identify on me camel	Discussion and interrogation	calendar structural

			take the decision		
14	3	Identify on me camel the control	Identify on me camel the control	Discussion and interrogation	calendar structural
15	3	audit scheduled	audit scheduled	Discussion and interrogation	calendar structural
structure substratum					
1- The required textbooks				Nothing	
2 main references (sources)				Fundamentals of programming in Pascal language. Written by Dr. Nidal Khudair Al-Abadi	
Recommended books and references (scientific journals, reports,)				Benefit from periodicals and resources related to the course	
B- Electronic references, websites...				Benefit from the international information network as well-known sources	
plan Development scheduled scholastic					
1. Done Development scheduled According to requirements Which Appear in Development curricula in Phase education Basis. 2. Done Development scheduled According to requirements Which Appear in Development curricula in the system Global.					

Course description form
Course description

This course description provides a necessary summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the program description.;

Enterprise educational	College Education the basic
Section Scientific / Center	Calculators
Noun / Code scheduled	Digital Image Processing /Comp 4332
shapes Attendees available	Is mandatory
the classroom / the year	the classroom scholastic the first / the third year
number hours tuition (total)	$3 \times 15 = 45$
Date Preparation this the description	1/ 10/ 2025
Goals Decision: that is being requester knowledgeable with concepts following	
1. Introduction to digital image processing	
2. Image Sampling	
3. Image Quantization	
4. Image Transformations	
5. Image Filtering	
6. Image Zooming	
7. Image Compression	
outputs scheduled and modalities education and learning and evaluation	

A- Objectives Cognitive 1- That Known requester image concept digital 2- That Known requester The concept of sampling 3- That Known requester Principles of quantization concept 4- That Known Types of image transformations 5- That Known requester The concept of image filtering and types of filters 6- That Known requester How to change the image scale in several ways 7- That Known requester Concept pressure Pictures And Species techniques Pressure

B – Objectives Marathi own By decision. that made up I have Students skills with concepts coming 1-Write a program about opening a digital image 2- Writing a program to apply Concept quantification 3-Write a program to show the types of image transformations 4- Writing a program About Implementation Some filters on me Picture 5-Write a program to apply image scaling methods

modalities education and learning

in Start the classroom Being inform Students vocabulary scheduled scholastic and sources the information (Books Same Relationship , periodicals , Messages undergraduate) and distributed vocabulary on me weeks the classroom scholastic, and Techniques Calendar that will run followed , my agencies: 1. Initialize Lectures According to sequence Which rose in scheduled scholastic About road help with sources the information precedent The remembrance. 2. Inform Students About Theme lecture coming with intent config. 3. Demand from Students Submit Leaves Belonging to subject or more from themes restriction studying.

modalities Evaluation

1. Procedure two exams two quarters the first distance expiration the week Fifth from the classroom scholastic And the second distance the week The tenth from the classroom scholastic and considerate in All Exam levels mental (Remember , application, exploration) where Degree Calendar to her 40% of achievement total on me that Takes I see consideration perseverance requester and volume Share it daily. 2. Exam End the classroom scholastic And for him 60% of achievement According timings Ministry And take into account At put questions inclusivity content scheduled scholastic and levels mental (Remember , application, exploration).

C- Objectives Sentimental And value :that is being requester able on me 1- Definition Picture digital 2- Definition my operation sampling And quantification 3- Apply Species Transfers Picture 4- Male Species filters 5- Apply Species modalities change measurement Picture 6- Comparison between modalities pressure Picture

Dr – skills the public And Qual movable (skills other related susceptibility recruitment and evolution profile). 1- Employment skills earned in education Knowledge sports I have Students Stage education Basis. 2- Choose Examples from Established education Basis And to each Of which skills that eat it scheduled scholastic. 3- Evaluation Bezel acquisition pupils education Basis for skills application. 4- Building Tests Especially domains thinking Logical for pupils Stage education Basis.

structure scheduled

the week	hours	outputs learning required	Noun Unit / or Topic	method education	method Evaluation
1	3	concept of digital image	concept of digital image	Discussion and interrogation	calendar structural
2	3	The concept of quantification and sampling	The concept of quantification and sampling	Discussion and interrogation	calendar structural
3	3	The concept of image transformations and their types	The concept of image transformations and their types	Discussion and interrogation	calendar structural
4	3	Concept of image enhancement process using filterat	Concept of image enhancement process using filterat	Discussion and interrogation	calendar structural
5	3	Concept of image optimization process using	Concept of image optimization process	Discussion and interrogation	calendar structural

		diagram	using diagram		
6	3	Test Monthly	Test Monthly	—	calendar structural
7	3	Concept of image enhancement process using levels adjustment	Concept of image enhancement process using levels adjustment	Discussion and interrogation	calendar structural
8	3	The concept of resizing an image	The concept of resizing an image	Discussion and interrogation	calendar structural
9	3	The concept of digital image compression	The concept of digital image compression	Discussion and interrogation	calendar structural
10	3	Concept of types of digital image compression methods	Concept of types of digital image compression methods	Discussion and interrogation	calendar structural
11	3	Test Monthly	Test Monthly	—	calendar structural

12	3	The concept of digital image compression methods without Loss And its algorithms	The concept of digital image compression methods without Loss And its algorithms	Discussion and interrogation	calendar structural
13	3	The concept of digital image compression methods With loss And its algorithms	The concept of digital image compression methods With loss And its algorithms	Discussion and interrogation	calendar structural
14	3	audit scheduled	audit scheduled	Discussion and interrogation	calendar structural
15	3	audit scheduled	audit scheduled	Discussion and interrogation	calendar structural
structure substratum					
1- The required textbooks				Nothing	
2 main references (sources)				Digital Image Processing, Gonzalez Image Processing Principles and Applications, By Tinku Acharya and Ajoy K. Ray	

Recommended books and references (scientific journals, reports,)	Benefit from periodicals and resources related to the course
B- Electronic references, websites...	Benefit from the international information network as well-known sources
plan Development scheduled scholastic	
1. Done Development scheduled According to requirements Which Appear in Development curricula in Phase education Basis. 2. Done Development scheduled According to requirements Which Appear in Development curricula in the system Global.	

Course Professor / A.M. Hamid Sadiq Mahdi

Course description form
Course description

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Enterprise educational	College Education the basic
Section Scientific / Center	Calculators
Noun / Code scheduled	analysis Organized
shapes Attendees available	Is mandatory
the classroom / the year	the classroom scholastic the first / the third year
number hours tuition (total)	30 hours
Date Preparation this the description	1/ 10/ 2025
Goals scheduled	
Understand the basic concepts of analyzing and developing information systems in the organization	
Understand the main stages in the systems development life cycle	
3- Identify and collect information system requirements	

Infer system specifications through system analysis
Provide clear system analysis and design using diagrams
outputs scheduled and modalities education and learning and evaluation
A- Objectives Cognitive a1- Tamkeen Students from get on me Knowledge and understanding from During absorb and analysis material systems the information a2- Tamkeen Students from get on me Knowledge and understanding for examples About systems the information in various ways its forms a3- Empowerment Students from get on me Knowledge and understanding About material analysis Organized a4- Empowerment Students from get on me Knowledge and understanding No matter issues that Belonging to systems the information a5- Empowerment Students from get on me Knowledge and understanding to analyze and interpretation issues material analysis Organized a6- Empowerment Students from get on me Knowledge and understanding Bahm Sources and references study analysis Organized
B – Objectives Marathi own By decision. B1 – compare between Species analysis Organized different B2 – Analyze material analysis Organized And explains Her reasons . B3 – Apply writing paper or Search in Theme from Topics analysis Organized B4- Collect information About analysis Organized and systems the information
modalities education and learning
1. Supply Students With the basics and topics related Analyze Organized . 2. Clarification And explain Subject tuition from Before Mr. Subject 3. Claim Students visit the library examining on me Sources study analysis Organized .
modalities Evaluation
1. Tests daily with questions specific 2. Lay grades for assignments household and posts class . 3. Tests monthly with questions objectivity and frying pan
C- Objectives Sentimental and value c1- That explains And he analyzes evidence for analysis Organized of all kinds . c2- differentiate between nature analysis Organized of all kinds . c3- He resides Some texts and information About analysis Organized . c4- Compare between analysis Organized systems the information.
modalities education and learning
1. Method Solution the problems. 2. storm mental . 3. method simulation
modalities Evaluation
1. The exam Editorial To measure capacity requester on me thinking and analysis conclusion. 2. writing Research About Some Examples analysis Organized. 3. exams daily with guidance Questions intellectual and deductive.

Dr – skills the public and rehabilitative movable (skills other related susceptibility recruitment and evolution profile). Dr1- It is used Sources and references contemporary. Dr2- formation a group from Students to study analysis Organized and systems the information Dr3- Statement from institutions Country Same Relationship Analyze Organized to increase acquaintances Students and distribute it. Dr4- Statement from centers documents and libraries that Contains on me manuscripts and documents analysis Organized

structure scheduled					
the week	hours	outputs learning required	Noun Unit / or Topic	method education	method Evaluation
the first	3	Enable Students from Understanding the system and analyze it	analysis and design System	lecture And casting	participation class
The second	3	Enable Students from knowledge analyzer systems	analyzer systems	lecture And casting	participation class
Third	3	Enable Students from save Forms About Cycle Life Development systems	Cycle Life Development systems	lecture And casting	participation class
the fourth	3	Enable Students from knowledge requirements System the information	requirements System the information	lecture And casting	participation class
Fifth	3	the definition With all Specifications the system in detail	Specifications the system from During analysis the system	lecture And casting	participation class

VI	3	Enable Students from knowledge patterns Design System the information	Design System the information It includes interface the user and lists and systems sub	lecture And casting	participation class
VII			the exam monthly		

structure substratum	
1 books assessed required	– analysis and design Organized the information – analysis and design systems
2 the reviewer Main (Sources)	analysis Organized , Dr Saad Ghalib Yassen. analysis and design systems , Slave The sustenance safety
a books and references that recommend with it (Journals Scientific , reports ,....)	Claim Students in numbers reports monthly About themes that They study it
B – the reviewer Electronic, sites the internet	– Location Archives – Location allure – Location Our library Arabic
plan Development scheduled scholastic	
1. Work on me Polarization Masters from universities other to throw Lectures Scientific specialized Analyze Organized . 2. assignment Students Achievement Research study field what suffer language anti from problems social And psychology and put Solutions effective for those the problems and tackle phenomena that He suffers Of which Darso analysis Organized	

M. Ban Jawad Kazem

Course description form

This course description provides a necessary summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the program description.;	
Enterprise educational	College Education the basic

Section Scientific / Center	Calculators
Noun / Code scheduled	engineering software
shapes Attendees available	Is mandatory
the classroom / the year	the classroom scholastic The second / the third year
number hours tuition (total)	30 hours
Date Preparation this the description	1/ 10/ 2025
Goals scheduled	
Understand the basic concepts of computer programming	
Understand the basic stages in data structures and algorithms	
3- Identify and achieve the life cycle of software operations	
Infer system specifications from software requirements	
Provide clear analysis and design of the system using toolsCASE in software engineering	
outputs scheduled and modalities education and learning and evaluation	
A- Objectives Cognitive a1- Tamkeen Students from get on me Knowledge and understanding from During absorb and analysis material engineering software a2- Tamkeen Students from get on me Knowledge and understanding for examples About engineering software in various ways its forms a3- Empowerment Students from get on me Knowledge and understanding About material engineering software a4- Empowerment Students from get on me Knowledge and understanding No matter issues that Belonging to engineering software a5- Empowerment Students from get on me Knowledge and understanding to analyze and interpretation issues material engineering software a6- Empowerment Students from get on me Knowledge and understanding Bahm Sources and references study engineering software	
B – Objectives Marathi own By decision. B1 – compare between Species engineering software different B2 – Analyze material engineering software And explains Her reasons . B3 – Apply writing paper or Search in Theme from Topics engineering software B4- Collect information About engineering software	
modalities education and learning	
1. Supply Students With the basics and topics related engineering software. 2. Clarification And explain Subject tuition from Before Mr. Subject 3. Claim Students visit the library examining on me Sources study engineering software.	

modalities Evaluation					
1. Tests daily with questions specific 2. Lay grades for assignments household and posts class . 3. Tests monthly with questions objectivity and frying pan					
C- Objectives Sentimental and value c1- That explains And he analyzes engineering software of all kinds . c2- differentiate between nature engineering software of all kinds . c3- He resides Some texts and information About engineering software . c4- Compare between engineering software.					
modalities education and learning					
1. Method Solution the problems. 2. storm mental . 3. method simulation					
modalities Evaluation					
1. The exam Editorial To measure capacity requester on me thinking and analysis conclusion. 2. writing Research About Some Examples engineering software. 3. exams daily with guidance Questions intellectual and deductive.					
Dr – skills the public and rehabilitative movable (skills other related susceptibility recruitment and evolution profile). Dr1- It is used Sources and references contemporary. Dr2- formation a group from Students to study engineering software Dr3- Statement from institutions Country Same Relationship engineering software to increase acquaintances Students and distribute it. Dr4- Statement from centers documents and libraries that Contains on me manuscripts and documents on me engineering software					
structure scheduled					
the week	hours	outputs learning required	Noun Unit / or Topic	method education	method Evaluation
the first	3	Enable Students from Understanding engineering software	Administration proces engineering software	lecture And casting	participation class
The second	3	Enable Students from knowledg e safety Organized	safety Organized Calculators	lecture And casting	participation class

		Calcu lators			
Third	3	Enable Students from save Forms About Cycle Life Development engineering software	Cycle Life Development engineering software	lecture And casting	participation class
the fourth	3	Enable Students from knowledge setting Quality software	setting Quality software	lecture And casting	participation class
Fifth	3	the definition With all Specifications the system in detail	Specifications the system from During Development rapid software	lecture And casting	participation class
VI	3	Enable Students from knowledge Administration project software	Administration project software	lecture And casting	participation class
VII			the exam monthly		
structure substratum					
1 books assessed required			— engineering		

	software – Phase engineering software
2 the reviewer Main (Sources)	engineering software , Basim Abdullah. Cycle Life engineering software , Bassam capsii.
a books and references that recommend with it (Journals Scientific , reports ,....)	Claim Students in numbers reports monthly About themes that They study it
B – the reviewer Electronic, sites the internet	– Location Archives – Location allure – Location Our library Arabic

plan Development scheduled scholastic

1. Work on me Polarization Masters from universities other to throw Lectures Scientific
specialized engineering software . 2. assignment Students Achievement Research study field what
suffer language anti from problems social And psychology and put Solutions effective for those
the problems and tackle phenomena that He suffers Of which Darso analysis Organized

M. Ban Jawad Kazem

Course description form Course description

This course description provides a necessary summary of the most important characteristics of
the course and the learning outcomes expected of the student to achieve, demonstrating whether
he has made the most of the available learning opportunities. It must be linked to the program
description.;

Enterprise educational	College Education the basic
Section Scientific / Center	Calculators
Noun / Code scheduled	structures data
shapes Attendees available	Is mandatory
the classroom / the year	the classroom scholastic the first / the third year
number hours tuition (total)	30 hours
Date Preparation this the description	1/ 10/ 2025
Goals scheduled	

Understand the basic concepts of analyzing and developing data structures in the calculator
Understand the basic stages in the formation of data structures
3. Identify and obtain data structures requirements
Infer the specification of the graphic structure by analyzing the data
Provide clear analysis and design of a graphical structure using charts
outputs scheduled and modalities education and learning and evaluation
A- Objectives Cognitive a1- Tamkeen Students from get on me Knowledge and understanding from During absorb and analysis material structures data a2- Tamkeen Students from get on me Knowledge and understanding for examples About structures data in various ways its forms a3- Empowerment Students from get on me Knowledge and understanding About material structures data a4- Empowerment Students from get on me Knowledge and understanding No matter issues that Belonging to structures data a5- Empowerment Students from get on me Knowledge and understanding to analyze and interpretation issues material structures data a6- Empowerment Students from get on me Knowledge and understanding Bahm Sources and references study structures data B – Objectives Marathi own By decision. B1 – compare between Species structures data different B2 – Analyze material structures data And explains Her reasons . B3 – Apply writing paper or Search in Theme from Topics structures data B4- Collect information About structures data and structures data
modalities education and learning
1. Supply Students With the basics and topics related with structures data . 2. Clarification And explain Subject tuition from Before Mr. Subject 3. Claim Students visit the library examining on me Sources study structures data .
modalities Evaluation
1. Tests daily with questions specific 2. Lay grades for assignments household and posts class . 3. Tests monthly with questions objectivity and frying pan
C- Objectives Sentimental and value c1- That explains And he analyzes evidence for structures data of all kinds . c2- differentiate between nature structures data of all kinds . c3- He resides Some texts and information About structures data . c4- Compare between structures data structures data.
modalities education and learning
1. Method Solution the problems. 2. storm mental . 3. method simulation
modalities Evaluation

1. The exam Editorial To measure capacity requester on me thinking and analysis conclusion. 2. writing Research About Some Examples structures data. 3. exams daily with guidance Questions intellectual and deductive.

Dr – skills the public and rehabilitative movable (skills other related susceptibility recruitment and evolution profile). Dr1- It is used Sources and references contemporary. Dr2- formation a group from Students to study and structures data Dr3- Statement from institutions Country Same Relationship with structures data to increase acquaintances Students and distribute it. Dr4- Statement from centers documents and libraries that Contains on me manuscripts and documents structures data

structure scheduled

the week	hours	outputs learning required	Noun Unit / or Topic	method education	method Evaluation
the first	3	Enable Students from Understanding structures graphic and analyze it	analysis and design structures graphic	lecture And casting	participation class
The second	3	Enable Students from knowledge structures data	analyzer systems	lecture And casting	participation class
Third	3	Enable Students from save Forms About acting data	Forms About acting data	lecture And casting	participation class
the fourth	3	Enable Students from knowledge requirements structures evidence	requirements structures data	lecture And casting	participation class
Fifth	3	the definition With all Specifications the structure My statement in detail	Specifications the structure My statement from During analysis the structure My statement	lecture And casting	participation class
VI	3	Enable Students from knowledge patterns Design structure My statement the information	Design structure My statement the information It includes interface the user and lists and systems sub	lecture And casting	participation class
VII			the exam monthly		

structure substratum	
1 books assessed required	– structures data – datastructure
2 the reviewer Main (Sources)	structures data , Dr Essam yolk. Data structure, john annie smith
a books and references that recommend with it (Journals Scientific , reports ,....)	Claim Students in numbers reports monthly About themes that They study it
B – the reviewer Electronic, sites the internet	– Location Archives – Location allure – Location Our library Arabic
plan Development scheduled scholastic	
1. Work on me Polarization Masters from universities other to throw Lectures Scientific specialized with structures data . 2. assignment Students Achievement Research study field what suffer language anti from problems social And psychology and put Solutions effective for those the problems and tackle phenomena that He suffers Of which They studied structures data	

Course description form
Course description

This course description provides a necessary summary of the most important characteristics of the course and the expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. the program description.;

Enterprise educational	College Education the basic
Section Scientific / Center	Calculators
Noun / Code scheduled	Design Logical
shapes Attendees available	Is mandatory
the classroom / the year	the classroom scholastic first / year The first
number hours tuition (total)	3 * 15 = 45 hours
Date Preparation this the description	1/ 10/ ٢٠٢٠
Goals scheduled	
Introducing the student to computer digital systems and the codes used	
Introducing students to logical gates and their operation.	
3- Introduce the student to Karnaugh diagrams.	
Introducing students to different electronic circuits.	
Introducing students to sequential logical electronic circuits.	
Introducing students to registers and counters.	
outputs scheduled and modalities education and learning and evaluation	
A- Objectives Cognitive a1- Tamkeen Students from get on me Knowledge and understanding for systems digital and conversion from System for another . a2- Tamkeen Students from get on me Knowledge and understanding for gates Logical And how build it. a3- Empowerment Students from get on me Knowledge and understanding to knock simplistic used charts Karnoff a4- Empowerment Students from get on me Knowledge and understanding for circles Logical different . a5- Empowerment Students from get on me Knowledge and understanding for circles Logical sequential and its uses. a6- Empowerment Students from get on me Knowledge and understanding for registration and counters and its uses.	

B – Objectives Marathi own By decision. B1 – Ability on me Utilization systems digital different and conversion between them. B2 – ability on me building and installation portals Logical . B3 – Enable requester from simplistic using ways different B4- Ability requester on me building circles e different.					
modalities education and learning					
1. Supply Students With the basics and topics related By design Logical. 2. Clarification And explain Subject tuition from Before Mr. Subject 3. Claim Students visit the library examining on me Sources study the design Logical .					
modalities Evaluation					
1. Tests daily with questions specific 2. Lay grades for assignments household and posts class . 3. Tests monthly with questions objectivity and frying pan					
C- Objectives Sentimental and value c1- That explains And he analyzes evidence for design Logical . c2- differentiate between systems digital And the codes different . c3- He resides Some texts and information About Design Calculator Logical. c4- Compare between circles e different .					
modalities education and learning					
1. Method Solution the problems. 2. storm mental . 3. method simulation					
modalities Evaluation					
1. The exam Editorial To measure capacity requester on me thinking and analysis conclusion. 2. writing Research About the design Logical for the computer. 3. exams daily with guidance Questions intellectual and deductive.					
Dr – skills the public and rehabilitative movable (skills other related susceptibility recruitment and evolution profile). Dr1- It is used Students vocabulary technological modern Dr2- make up groups to set up Relations together help Some Business positivity Dr3- He managed Students from Development subjective continuous when distance graduation . Dr4- He managed Students from passing Tests proces And professional organize from Before destinations local / regional / international					
structure scheduled					
the week	hours	outputs learning required	Noun Unit / or Topic	method education	method Evaluation
1	3	Learn systems digital	systems digital	Discussion and interrogation	Exam daily

2	3	Learn Codes used	Codes	Discussion and interrogation	Questions interrogative
3	3	Learn portals Logical	portals Logical	Discussion and interrogation	duty my house
4	3	knowledge Algebra Logical	Algebra Logical	Discussion and interrogation	Exam daily
5	3	knowledge Methods simplification portals Logical	charts Karnoff	Discussion and interrogation	Questions interrogative
6	3	Exam the month the first			
7	3	knowledge portals vehicle and circles e	portals vehicle	Discussion and interrogation	Exam sudden
8	3	knowledge circles Plural and subtraction and comparator	portals vehicle	Discussion and interrogation	Exam daily
9	3	knowledge circles Logical sequential	circles Logical sequential	Discussion and interrogation	Questions interrogative
10	3	knowledge Species Hoppers	HoppersFlip-Flop	Discussion and interrogation	Exam sudden
11	3	knowledge registry And its types	registry	Discussion and interrogation	Exam daily
12	3	knowledge Counters	Counters	Discussion and interrogation	Questions interrogative
13	3	knowledge State Diagram and FSA	State Diagram and FSA	Discussion and interrogation	Exam daily
14	3	knowledge RAM and ROM	RAM and ROM	Discussion and interrogation	Questions interrogative
15	3	Exam the month The second			
structure substratum					
readings required texts the basic books scheduledother			Fundamental Logic		

requirements Especially	Accommodation courses Training in area uses the computer and build it .Accommodation courses training to use the network arachnoidAccommodation Seminars and conferences Scientific and cultural
a books and references that recommend with it (Journals Scientific , reports ,....)	Benefit from periodicals and resources related to the course
B – the reviewer Electronic, sites the internet	Benefit from the international information network as well-known sources
plan Development scheduled scholastic	
1. Work on me Polarization Masters from universities other to throw Lectures Scientific specialized Techniques Calculator . 2. assignment Students Achievement Research study field what suffer language anti from problems social And psychology and put Solutions effective for those the problems and tackle phenomena that He suffers Of which They studied techniques Calculator	

Mother. Intisar Yassin Khudair

Course description form
Course description

This course description provides a necessary summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the program description.;	
Enterprise educational	College Education the basic
Section Scientific / Center	Calculators
Noun / Code scheduled	the theory reckoning
shapes Attendees available	Is mandatory
the classroom / the year	the classroom scholastic first / year the second
number hours tuition (total)	3 * 15 = 45 hours
Date Preparation this the description	1/ 10/ 2025
Goals scheduled	
Introducing students to the concept of computational theory	
Introducing students to logical gates and their operation.	

3- Introduce the student to Karnaugh diagrams.
Introducing students to different electronic circuits.
Introducing students to sequential logical electronic circuits.
Introducing students to registers and counters.
outputs scheduled and modalities education and learning and evaluation
A- Objectives Cognitive a1- Tamkeen Students from get on me Knowledge and understanding for systems digital and conversion from System for another . a2- Tamkeen Students from get on me Knowledge and understanding for gates Logical And how build it. a3- Empowerment Students from get on me Knowledge and understanding to knock simplistic used charts Karnoff a4- Empowerment Students from get on me Knowledge and understanding for circles Logical different . a5- Empowerment Students from get on me Knowledge and understanding for circles Logical sequential and its uses. a6- Empowerment Students from get on me Knowledge and understanding for registration and counters and its uses.
B – Objectives Marathi own By decision. B1 – Ability on me Utilization systems digital different and conversion between them. B2 – ability on me building and installation portals Logical . B3 – Enable requester from simplistic using ways different B4- Ability requester on me building circles e different.
modalities education and learning
1. Supply Students With the basics and topics related By design Logical. 2. Clarification And explain Subject tuition from Before Mr. Subject 3. Claim Students visit the library examining on me Sources study the design Logical .
modalities Evaluation
1. Tests daily with questions specific 2. Lay grades for assignments household and posts class . 3. Tests monthly with questions objectivity and frying pan
C- Objectives Sentimental and value c1- That explains And he analyzes evidence for design Logical . c2- differentiate between systems digital And the codes different . c3- He resides Some texts and information About Design Calculator Logical. c4- Compare between circles e different .
modalities education and learning
1. Method Solution the problems. 2. storm mental . 3. method simulation
modalities Evaluation
1. The exam Editorial To measure capacity requester on me thinking and analysis conclusion. 2. writing Research About the design Logical for the computer. 3. exams daily with guidance Questions intellectual and deductive.

Dr – skills the public and rehabilitative movable (skills other related susceptibility recruitment and evolution profile). Dr1- It is used Students vocabulary technological modern Dr2- make up groups to set up Relations together help Some Business positivity Dr3- He managed Students from Development subjective continuous when distance graduation . Dr4- He managed Students from passing Tests proces And professional organize from Before destinations local / regional / international

structure scheduled					
the week	hours	outputs learning required	Noun Unit / or Topic	method education	method Evaluation
1	3	Learn systems digital	systems digital	Discussion and interrogation	Exam daily
2	3	Learn Codes used	Codes	Discussion and interrogation	Questions interrogative
3	3	Learn portals Logical	portals Logical	Discussion and interrogation	duty my house
4	3	knowledge Algebra Logical	Algebra Logical	Discussion and interrogation	Exam daily
5	3	knowledge Methods simplification portals Logical	charts Karnoff	Discussion and interrogation	Questions interrogative
6	3	Exam the month the first			
7	3	knowledge portals vehicle and circles e	portals vehicle	Discussion and interrogation	Exam sudden
8	3	knowledge circles Plural and subtraction and comparator	portals vehicle	Discussion and interrogation	Exam daily
9	3	knowledge circles Logical sequential	circles Logical sequential	Discussion and interrogation	Questions interrogative

10	3	knowledge Species Hoppers	HoppersFlip-Flop	Discussion and interrogation	Exam sudden
11	3	knowledge registry And its types	registry	Discussion and interrogation	Exam daily
12	3	knowledge Counters	Counters	Discussion and interrogation	Questions interrogative
13	3	knowledge State Diagram and FSA	State Diagram and FSA	Discussion and interrogation	Exam daily
14	3	knowledge RAM and ROM	RAM and ROM	Discussion and interrogation	Questions interrogative
15	3	Exam the month The second			

structure substratum

readings required texts the basic books scheduledother	Fundamental Logic
requirements Especially	Accommodation courses Training in area uses the computer and build it .Accommodation courses training to use the network arachnoidAccommodation Seminars and conferences Scientific and cultural
a books and references that recommend with it (Journals Scientific , reports ,....)	Benefit from periodicals and resources related to the course
B – the reviewer Electronic, sites the internet	Benefit from the international information network as well-known sources

plan Development scheduled scholastic

1. Work on me Polarization Masters from universities other to throw Lectures Scientific specialized Techniques Calculator . 2. assignment Students Achievement Research study field what suffer language anti from problems social And psychology and put Solutions effective for those the problems and tackle phenomena that He suffers Of which They studied techniques Calculator

Course description form

Course name :
Calculators
Course code:
Organized employment
Semester / Year:
the classroom scholastic first / year fourth
Description Preparation Date:
1/ 10/ 2025
Available Attendance Forms:
Weekly/ mandatory
Number of Credit Hours (Total) / Number of Units (Total):
3 * 15 = 45 hours
Course administrator's name (mention all, if more than one name)
Dr :shaymaa Taha Ahmed
Email:mrs.sh.ta.ah@gmail.com
Course Objectives:
- Tamkeen Students from get on me Knowledge and understanding systems Employment . - Tamkeen Students from get on me Knowledge and understanding systems processing multi. - Empowerment Students from get on me Knowledge and understanding to structural System Employment. - Empowerment Students from get on me Knowledge and understanding components System Employment. - Empowerment Students from get on me Knowledge and understanding for services System Employment . - Empowerment Students from get on me Knowledge and understanding for how Administration memory.

Teaching and Learning Strategies:

1. Lectures using data show
2. Oral explanation
3. Illustration using white board and animated vedios

Course Structure

week	hours	outputs learning required	Noun Unit / or Topic	method education	method Evaluation
1	3	Learn Concept Organized Employment	Organized Employment	Discussion and interrogation	Exam daily
2	3	Learn Organized processing multi	system processing multi	Discussion and interrogation	Questions interrogative
3	3	Learn Species Organized Employment	Species Organized Employment	Discussion and interrogation	duty my house
4	3	knowledge Structural System Calculator	Structural System Calculator	Discussion and interrogation	Exam daily
5	3	knowledge Structural System Employment	Structural System Employment	Discussion and interrogation	Questions interrogative
6	3	Exam the month the first			
7	3	knowledge ingredients Organized Employment	ingredients Organized Employment	Discussion and interrogation	Exam sudden
8	3	knowledge services Organized Employment	services Organized Employment	Discussion and interrogation	Exam daily
9	3	knowledge Concept processing	Concept processing	Discussion and interrogation	Questions interrogative

10	3	knowledge instruction during processing	Implementation of instruction	Discussion and interrogation	Exam sudden
11	3	knowledge scheduler Alone processing central	scheduler Alone processing central	Discussion and interrogation	Exam daily
12	3	knowledge Administration memory	Administration memory	Discussion and interrogation	Questions interrogative
13	3	knowledge Administration storage	Administration storage	Discussion and interrogation	Exam daily
14	3	knowledge protection And the security	protection And the security	Discussion and interrogation	Questions interrogative

15	3	Exam the month The second
Course Evaluation		
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		

Learning and Teaching Resources	
readings required texts the basic books scheduled other	There is no decision
requirements Especially	Accommodation courses Training in area uses System Employment And deal With Calculator .Accommodation courses training to use the network arachnoid Accommodation Seminars and conferences Scientific and cultural
Books and references that recommend with it (Journals Scientific, reports,)	Benefit from periodicals and resources related to the course

The reviewer Electronic, cites the internet	Benefit from the international information network as well-known sources
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