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

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:

<u>Academic Program Description</u>: 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.

<u>Course Description</u>: 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.

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

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

<u>Program Objectives</u>: 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.

<u>Teaching and learning strategies</u>: 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 2023 - 2024

University AL-Furat AL-Awsat Technical University Faculty/Institute: Al-Mussaib Technical Institute Scientific Department: Mechanical Techniques Department Academic or Professional Program Name: Diploma Final Certificate Name: Diploma in mechanical techniques Academic System: Annual **Description Preparation Date: 2023–2024** File Completion Date: 28/2/202

Head of Department Name: Dr. Zaid H. Rashid Date: 28/2/202

Signature:

Scientific Associate Name: Dr. Mohammed H. Sabry Date: 28/2/2021

The file is checked by:

Signature: -

Department of Quality Assurance and University Performance Director of the Quality Assurance and University Performance Department:

جامعة الفرات الا

المعهد التتنبي المسيد شعبة ضمان الجودة والأداء الجا

Date: 28/2/202

Signature:

Approval of the Dean

1. Program Vision

Creating a comprehensive, creative technical education system that is based on market needs, focuses on local needs, bears responsibility for covering the needs of local employers, and serves the changing needs of the market.

2. Program Mission

Providing high-quality technical education makes the return benefiting from the education process more efficient and distinct, expanding its base quantitatively and qualitatively, laying the foundations for sustainable human development and professional ethics, and responding quickly to changing needs by keeping pace with scientific and technical developments, external openness, adopting education for the market, and ensuring confirmation of the quality of the targeted return from the education process.

3. Program Objectives

1. Use of all mechanical operating machines,

2. Use of measuring and testing devices,

3. Completing various welding and plumbing works and conducting laboratory tests.

4. Program Accreditation

Does the program have program accreditation? And from which agency? Non

5. Other external influences

Is there a sponsor for the program?

Non

Program Structure Number of Credit hours Percentage Reviews*	6. Program Structure											
Courses	Program Structure	Number of Courses	Credit hours	Percentage	Reviews*							

Institution	20	130	Annual
Requirements			system
College Requirements	20	130	Annual
			system
Department	20	130	Annual
Requirements			system
Summer Training	20	130	Fulfillment
			only
Other			

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

7. Program De	escription			
Year/Level	Course Code	Course Name	C	redit Hours
			theoretical	practical
First		Manufacturing Processes(1)	2	2
First		Material Properties	2	-
First		Workshops(1)	-	8
First		Mechanics	2	3
First		Mathematics	2	-
First		Computer application(1)	1	2
First		Engineering drawing	-	3
First		Electrical technology	1	2
First		Democracy and Human rights	1	-
First		English Language	1	-
Second		Machine Parts	3	-
Second		Manufacturing Processes(2)	2	2
Second		Metallurgy	2	2
Second		Workshops(2)	-	8
Second		Project	-	4
Second		Industrial drawing	-	3
Second		Management & occupational safety	2	-
Second		Computer application(2)	1	2
Second		Crimes of the defunct Baath Party	1	-
Second		English Language	1	-

8. Expected learning outcomes of the program							
Knowledge							
 The student must be familiar with selecting suitable metals for products and types of heat treatments To be familiar with industrial and engineering drawings of various mechanical installations To be familiar with the various metal manufacturing processes for various products To be familiar with all mechanical and metallurgical testing methods To be able to organize the technological process of production processes 	 The student obtains the knowledge and skills necessary to work in the field of materials engineering. His ability to work independently in this field. Its ability to contribute to the development of the metal industry. 						
Skills	• Shill in working on all devices and machines						
 Skill in using all mechanical operating machines Skill in using all measuring and testing devices Skill in performing plumbing and welding work and conducting laboratory tests 	 Skill in working on all devices and machines The skill of planning and preparing technological paths for machines Skill in planning and implementing emergency maintenance work 						
Ethics							
 Presentation of the design of a product and thinking about developing an integrated program for its production Encouraging the development of thought in memorization and speculation and motivating it towards critical thinking Developing Internet research skills to expand the cognitive horizon Using brainstorming to come up with creative ideas for some gifted students 	 Emphasizing the importance of critical thinking and motivating students to analyze information rather than simply memorize it. Help them use the Internet as a reliable source of knowledge. Encouraging gifted students to use their creative skills to solve problems. 						
9. Teaching and Learning Strategies							
 Scientific lecture (use of data display, blackbo) Discussion among students. Preparing reports related to the lecture. 	pard, display of illustrative pictures).						
10. Evaluation methods							
(Lecture, workshop, laboratory, methodol	ogical training, summer training).						
11. Faculty							
Faculty Members							

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff		
	General	Special			Staff	Lecturer	
Lecturer	Mechanical engineering	Applied mechanical engineering			2		

Lecturer	Material engineering	Polymers		1	
Assistant Lecturer	Material engineering	Production engineering		1	
Assistant Lecturer	Mechanical engineering	Applied mechanical engineering		1	
Assistant Lecturer	Material engineering	Polymers		1	
Assistant Lecturer	Physics Science	Applied Physics		1	
Assistant Lecturer	Management and economy	Industrial management		1	

Professional Development

Mentoring new faculty members

1. Having local and international courses in general and private specialization to increase on-site skills and develop appropriate solutions.

2. Having research applied to various internal and external sites, which helps him obtain a database of all mechanical parts.

Professional development of faculty members

1. Supporting self-efforts, such as reading and reading, by faculty members and academic leaders.

2. Including engaging and joining scientific meetings directly,

3. Using modern technological means such as training courses, workshops, panel discussions, conferences, and professional degree programs.

12. Acceptance Criterion

Central admission for preparatory school students, direct admission and differentiation for professional studies students.

13. The most important sources of information about the program

Internet websites, public libraries, professional organizations and associations, companies and institutions.

14. Program Development Plan

1. Providing academic support capabilities in organizing field visits.

2. Providing an appropriate classroom environment that enables the teacher to diversify teaching strategies.

3. Providing information technology in the campus library.

4. Hosting experts from outside the institute, or from the work environment for which they are preparing, to benefit from their expertise in developing the course according to the actual need of the labor market.

	Program Skills Outline														
							Req	uired	progr	am Lo	earnin	g outcon	nes		
Year/Level	Course	Course Name	Basic or	Knov	Knowledge			Skills			Ethics				
	Coue		optional	A1	A2	A3	A4	B1	B2	B 3	B4	C1	C2	С3	C4
		Manufacturing Processes(1)	Basic												
		Material Properties	Basic												
		Workshops(1)	Basic												
		Mechanics	Basic												
		Mathematics	Basic												
First		Computer application(1)	Basic	\checkmark											
		Engineering drawing	Basic		\checkmark										
		Electrical technology	Optional												
		Democracy and Human rights	Basic												
		English Language	Basic												

	Machine Parts	Basic			V					
Second	Manufacturing Processes(2)	Basic			\checkmark					
	Metallurgy	Basic			\checkmark					
	Workshops(2)	Basic			V		V			
	Project	Basic			\checkmark					
	Industrial drawing	Basic			V					
	Management & occupational safety	Basic	V	V		V	V	V		
	Computer application(2)	Basic			\checkmark					
	Crimes of the defunct Baath Party	Basic	$\overline{\mathbf{v}}$		\checkmark			\checkmark		

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

1. Course Name:

Mathematics

2. Course Code:

3. Semester / Year:

First and second semester / first year

4. Description Preparation Date:

19/2/2024

5. Available Attendance Forms:

Attend a lecture according to weekly schedule

6. Number of Credit Hours (Total) / Number of Units (Total):

2 hours / 4 units

7. Course administrator's name (mention all, if more than one name)

Name: Dr. Riyadh A. Sarhan

Email: Sarhan.Riyadh@atu.edu.iq

8. Course Objectives

8. Course Object	1465							
Course Objectives	Introducing the student to the use of mathematics in other scientific							
	topics and increasing his ability to think logically when solving							
	exercises, as well as increasing his ability to develop and how to link							
	data with his information to obtain a solution to the problem.							
0 Taaching and	Corrige Strategies							

9. Teaching and Learning S	trategies
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Strategy	1 -Identify mathematical matrices and ways to solve them.
	2 -Identify mathematical derivatives.
	3 -Identify the integration of mathematical functions.

4 -Learn how to draw mathematical functions.

5- Identify the processes of mathematical statistics

10. Co	ourse St	tructure			
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Identify determinants and their properties, solve simultaneous equations using the	Determinants and their properties, solving simultaneous equations using the determinant method (Cramer).	lecture	Written tests Quarterly exams final exams Daily evaluation

		determinant method			
		(Cramer).			
2	2	Identify determinants and their properties, solve simultaneous equations using the determinant method	Determinants and their properties, solving simultaneous equations using the determinant method (Cramer).	lecture	Written tests Quarterly exams final exams Daily evaluation
3	2	Learn about differentiation, algebra of derivatives, and multiple functions.	Differentiation, algebra of derivatives, multiple functions.	lecture	Written tests Quarterly exams final exams Daily evaluation
4	2	Learn about differentiation, algebra of derivatives, and multiple functions.	Differentiation, algebra of derivatives, multiple functions.	lecture	Written tests Quarterly exams final exams Daily evaluation
5	2	Learn about differentiation, algebra of derivatives, and multiple functions.		Written tests Quarterly exams final exams Daily evaluation	
6	2	Recognizing trigonometric, logarithmic and exponential functions and their derivatives and implicit functions, the chain rule.	Trigonometric, logarithmic and exponential functions and their derivatives and implicit functions, chain rule.	lecture	Written tests Quarterly exams final exams Daily evaluation
7	2	Recognizing trigonometric, logarithmic and exponential functions and their derivatives and implicit functions, the chain rule.	Trigonometric, logarithmic and exponential functions and their derivatives and implicit functions, chain rule.	lecture	Written tests Quarterly exams final exams Daily evaluation
8	2	Recognizing trigonometric, logarithmic and exponential functions and their derivatives and implicit functions, the chain rule.	Trigonometric, logarithmic and exponential functions and their derivatives and implicit functions, chain rule.	lecture	Written tests Quarterly exams final exams Daily evaluation
9	2	Learn about graphing functions, graphing	Drawing functions, drawing trigonometric functions and	lecture	Written tests Quarterly exams final exams

		trigonometric functions, and maximum and minimum limits.	maximum and minimum limits.		Daily evaluation
10	2	Learn about graphing functions, graphing trigonometric functions, and maximum and minimum limits.	Drawing functions, drawing trigonometric functions and maximum and minimum limits.	lecture	Written tests Quarterly exams final exams Daily evaluation
11	2	Learn about graphing functions, graphing trigonometric functions, and maximum and minimum limits.	Drawing functions, drawing trigonometric functions and maximum and minimum limits.	lecture	Written tests Quarterly exams final exams Daily evaluation
12	2	Learn about physical differential applications, velocity and acceleration, and engineering differential applications.	Physical calculus applications, velocity and acceleration and engineering calculus applications.	lecture	Written tests Quarterly exams final exams Daily evaluation
13	2	Learn about physical differential applications, velocity and acceleration, and engineering differential applications.	Physical calculus applications, velocity and acceleration and engineering calculus applications.	lecture	Written tests Quarterly exams final exams Daily evaluation
14	2	Identify integration, its laws, and its relationship to differentiation, definite and indefinite integration.	Integration, laws, and its relationship to differentiation, definite and indefinite integration.	lecture	Written tests Quarterly exams final exams Daily evaluation
15	2	Identify integration, its laws, and its relationship to differentiation, definite and indefinite integration.	Integration, laws, and its relationship to differentiation, definite and indefinite integration.	lecture	Written tests Quarterly exams final exams Daily evaluation
16	2	Learn about implicit integration, geometric (areas and	Implicit integration, geometric (areas and volumes) and physical	lecture	Written tests Quarterly exams final exams

	volumes) and	applications of		Daily evaluation
	physical	integration.		
	applications of			
	integration.			
	Learn about implicit			
	integration,	Implicit integration,		Written tests
	geometric (areas and	geometric (areas and		Quarterly exame
2	volumes) and	volumes) and physical	lecture	final exame
	physical	applications of		Daily evaluation
	applications of	integration.		Daily Cvaluation
	integration.			
	Learn about implicit			
	integration,	Implicit integration,		Writton tosta
	geometric (areas and	geometric (areas and		Ouerterly evens
2	volumes) and	volumes) and physical	lecture	Quarterly exams
	physical	applications of		Doily avaluation
	applications of	integration.		Daily evaluation
	integration.	-		
	Learn about implicit			
	integration,	Implicit integration,		Written tests
	geometric (areas and	geometric (areas and		Written tests
2	volumes) and	volumes) and physical	lecture	Quarterly exams
	physical	applications of		final exams
	applications of	integration.		Daily evaluation
	integration.	C		
	Learn about general			
	methods of	General methods of		
	integration,	integration include		W. witten tests
	substitution and	substitution, partial		Written tests
2	partial integration,	substitution, and the	lecture	Quarterry exams
	and the use of	use of exponential and		Doily avaluation
	exponential and	logarithmic partial		Daily evaluation
	logarithmic partial	fractions.		
	fractions.			
	Learn about general			
	methods of	General methods of		
	integration,	integration include		Writton tosts
	substitution and	substitution, partial		Ouerterly evens
2	partial integration,	substitution, and the	lecture	Quarterry exams
	and the use of	use of exponential and		Doily avaluation
	exponential and	logarithmic partial		Daily evaluation
	logarithmic partial	fractions.		
	fractions.			
	Learn about general	General methods of		
	methods of	integration include		Writton tosta
	integration,	substitution, partial		written tests
2	substitution and	substitution, and the	lecture	Quarterry exams
	partial integration,	use of exponential and		Doily avaluation
	and the use of	logarithmic partial		Daily evaluation
			1	1
	2 2 2 2 2 2 2 2	volumes) and physical applications of integration.Learn about implicit integration, geometric (areas and volumes) and physical applications of integration.Learn about implicit integration.Learn about implicit integration.Learn about implicit integration, geometric (areas and volumes) and physical applications of integration.Learn about implicit integration, geometric (areas and volumes) and physical 	volumes) and physical applications of integration, geometric (areas and volumes) and physical applications of integration.applicit integration, geometric (areas and volumes) and physical applications of integration.2Learn about implicit integration, geometric (areas and volumes) and physical applications of integration, geometric (areas and volumes) and physical applications of integration, geometric (areas and volumes) and physical applications of integration.Implicit integration, geometric (areas and volumes) and physical applications of integration.2Learn about implicit integration, geometric (areas and volumes) and physical applications of integration.Implicit integration, geometric (areas and volumes) and physical applications of integration.2Learn about general methods of integration, substitution and partial integration, and the use of exponential and logarithmic partial fractions.General methods of integration, and the use of exponential and logarithmic partial fractions.2Learn about general methods of integration, substitution and partial integration, and the use of exponential and logarithmic partial fractions.General methods of integration, and the use of exponential and logarithmic partial fractions.2Learn about general methods of integration, and the use of exponential and logarithmic partial fractions.General methods of integration, and the use of exponential and logarithmic partial fractions.2Learn about general methods of integration, and the use of expo	volumes) and physical applications of integration, geometric (areas and volumes) and physical applications of integration, integration, add the use of substitution and substitution and partial integration, and the use ofapplications of integration, substitution and substitution, and the use of exponential and logarithmic partial fractions.applications of integration, substitution, and the use of exponential and logarithmic partial fractions.application sof integration, substitution, and the use of exponential and logarithmic partial fractions.application sof integration, substitution, and the use of exponential and logarithmic partial fractions.application integration, substitution, and the use of exponential and logarithmic partial fractions.application integration, substitution, and the use of exponential and logarithmic partial fractions.application integration, integration, substitution, partial substitution, and the use

		logarithmic partial			
23	2	logarithmic partial fractions. Learn about discrete, homogeneous, and linear differential equations with their various applications. Learn about discrete, homogeneous, and linear differential equations with their	Discrete, homogeneous and linear differential equations with their various applications. Discrete, homogeneous and linear differential equations with their various applications	lecture	Written tests Quarterly exams final exams Daily evaluation Written tests Quarterly exams final exams Daily evaluation
25	2	various applications. Learn about discrete, homogeneous, and linear differential equations with their various applications.	Discrete, homogeneous and linear differential equations with their various applications.	lecture	Written tests Quarterly exams final exams Daily evaluation
26	2	Learn about discrete, homogeneous, and linear differential equations with their various applications.	Discrete, homogeneous and linear differential equations with their various applications.	lecture	Written tests Quarterly exams final exams Daily evaluation
27	2	Identifying vectors (direct and quantitative multiplication and calculating angles between vectors).	Vectors (direct and quantitative multiplication and calculating angles between vectors).	lecture	Written tests Quarterly exams final exams Daily evaluation
28	2	Identifying vectors (direct and quantitative multiplication and calculating angles between vectors).	Vectors (direct and quantitative multiplication and calculating angles between vectors).	lecture	Written tests Quarterly exams final exams Daily evaluation
29	2	Learn about statistics (principles) and probability theory.	Statistics (principles) and probability theory.	lecture	Written tests Quarterly exams final exams Daily evaluation
30	2	Learn about statistics (principles) and probability theory.	Statistics (principles) and probability theory.	lecture	Written tests Quarterly exams final exams Daily evaluation
11.Co	ourse E	valuation			
Distribu	ting the	score out of 100 acco	rding to the tasks assigned	d to the stu	dent such as daily
prepara	tion, dail	y oral, monthly, or writ	ten exams, reports etc		
12.L6	arning	and reaching Resol			

Required textbooks (curricular books, if any)	Thomas Calculus 13th Edition
Main references (sources)	Thomas Calculus 13th Edition
Recommended books and references	A collection of books in the field o
(scientific journals, reports)	applied mathematics
Electronic References, Websites	Check out websites in this field

1	Court	a Na				
I.		se mai	itiona 1			
Comp						
۷.	Cours	se Co	le:			
2	a		X 7			
<u> </u>	Seme	ster /	Year:			
First a	nd see	$\frac{\text{cond } s}{1}$	semester / first stage			
4.	Desci	ription	Preparation Date:			
				2024/3/1		
5.	Avail	able A	Attendance Forms:			
Weekl	y and	acco	rding to schedule			
6.	Numl	ber of	Credit Hours (Total)) / Number of	Units (Tota	al)
3 hr./ 6	5 unit	S				
7.	Cours	se adr	ninistrator's name (m	ention all, if n	nore than o	ne name)
	Name	e: Not	ır Al-Huda Sabah Jas	ssim		
	Emai	1:				
8.	Cours	se Ob	iectives			
Course (Objectiv	ves	• Explaining the role of the	e calculator in prod	lucing engined	ering drawings and applying th
			in public life		alamlatan amul	liantions and other estances
			 Creating an effective relation of the section of the sect	cations and use the	m effectively in	n organizing office work
9.	Teacl	ning a	nd Learning Strategi	es	v	8 8
Strategy Explanation on the board - presentation - coordination with students - train						
Strategy		Expla	anation on the board -	- presentation -	coordinati	on with students - train
Strategy		Expla - disc	anation on the board - cussion	- presentation -	coordinati	on with students - train
Strategy	ourse	Expla - disc Struc	anation on the board - cussion ture	- presentation -	coordinati	on with students - train
Strategy 10. C Week	ourse	Expla - disc Struc Requ	anation on the board - cussion ture iired Learning	- presentation -	coordinati	on with students - train Evaluation method
Strategy 10. C Week	ourse Ho urs	Expla - disc Struc Requ Outo	anation on the board - cussion ture iired Learning omes	- presentation - Unit or subject	coordinati	on with students - train Evaluation method
Strategy 10. Co Week	ourse Ho urs	Expla - disc Struc Requ Outo	anation on the board - cussion ture nired Learning omes	- presentation - Unit or subject name	coordinati	on with students - train Evaluation method
Strategy 10. Co Week	ourse Ho urs	Expla - disc Struc Requ Outo	anation on the board - cussion ture hired Learning omes	- presentation - Unit or subject name	coordinati	on with students - train Evaluation method Practical tests
Strategy 10. C Week	ourse Ho urs	Expla - disc Struc Requ Outc	anation on the board - cussion ture hired Learning omes oduction to computers: their generations,	- presentation - Unit or subject name Computer	Learning method	on with students - train Evaluation method Practical tests Quarterly exams
Strategy 10. Co Week	ourse Ho urs	Expla - disc Struc Outc Intro	anation on the board - cussion ture hired Learning omes oduction to computers: their generations, ponents: hardware and ware (custem software	- presentation - Unit or subject name Computer applications 1	Learning method	on with students - train Evaluation method Practical tests Quarterly exams final exams
Strategy 10. C Week	ourse Ho urs 3	Expla - disc Struc Outo Intro com soft	anation on the board - cussion ture hired Learning omes oduction to computers: their generations, ponents: hardware and ware (system software application software).	- presentation - Unit or subject name Computer applications 1	Learning method	on with students - train Evaluation method Practical tests Quarterly exams final exams Daily evaluation
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Strategy 10. C Week 1 4 - 2	ourse Ho urs 3	Expla - disc Struc Outo Outo Intro com soft and Wind V au requ syste ma com	anation on the board - cussion ture dired Learning omes oduction to computers: their generations, ponents: hardware and ware (system software application software). lows operating system: The concept of the Vindows system, its dvantages and basic irements, operating the em, components of the in desktop screen, the neept of the icon, the ethod of dealing with	- presentation - Unit or subject name Computer applications 1 Computer applications 1	Coordination Coord	on with students - train: Evaluation method Practical tests Quarterly exams final exams Daily evaluation Practical tests Quarterly exams final exams Daily evaluation
Strategy 10. C Week 1 4 - 2	ourse Ho urs 3	Expla - disc Struc Outc Outc Intro com soft and Wind Wind requ syste ma con ma	anation on the board - cussion ture bired Learning omes oduction to computers: their generations, ponents: hardware and ware (system software application software). lows operating system: The concept of the Vindows system, its dvantages and basic irements, operating the em, components of the in desktop screen, the neept of the icon, the ethod of dealing with nouse activities, the	- presentation - Unit or subject name Computer applications 1 Computer applications 1	Coordination	on with students - train: Evaluation method Practical tests Quarterly exams final exams Daily evaluation Practical tests Quarterly exams final exams Daily evaluation
Strategy 10. C Week 1 4 - 2	ourse Ho urs 3	Expla - disc Struce Requ Outce Intro com soft and Wind Wind requ syste ma com ma com	anation on the board - cussion ture bired Learning omes oduction to computers: their generations, ponents: hardware and ware (system software application software). lows operating system: The concept of the Vindows system, its dvantages and basic irements, operating the em, components of the in desktop screen, the neept of the icon, the ethod of dealing with nouse activities, the rtance and components	- presentation - Unit or subject name Computer applications 1 Computer applications 1	Coordination	on with students - train Evaluation method Practical tests Quarterly exams final exams Daily evaluation Practical tests Quarterly exams final exams Daily evaluation
Strategy 10. C Week 1 4 - 2	ourse Ho urs 3	Expla - disc Strucc Requ Outc Intro com soft and Wind Wind V au requ syste ma con impo of th	anation on the board - cussion ture dired Learning omes oduction to computers: their generations, ponents: hardware and ware (system software application software). lows operating system: The concept of the Vindows system, its dvantages and basic irements, operating the em, components of the in desktop screen, the neept of the icon, the ethod of dealing with nouse activities, the rtance and components e Taskbar, making use	- presentation - Unit or subject name Computer applications 1 Computer applications 1	Coordination Coord	on with students - train: Evaluation method Practical tests Quarterly exams final exams Daily evaluation Practical tests Quarterly exams final exams Daily evaluation
Strategy 10. C Week 1 4 - 2	ourse Ho urs 3	Expla - disc Struce Requ Outo Intro Com soft and Wind Wind V ac requ syste ma con impo of th of S	anation on the board - cussion ture bired Learning omes oduction to computers: their generations, ponents: hardware and ware (system software application software). lows operating system: The concept of the Vindows system, its dvantages and basic irements, operating the em, components of the in desktop screen, the neept of the icon, the ethod of dealing with nouse activities, the rtance and components e Taskbar, making use tart to enter programs,	- presentation - Unit or subject name Computer applications 1 Computer applications 1	coordination in the second sec	on with students - train Evaluation method Practical tests Quarterly exams final exams Daily evaluation Practical tests Quarterly exams final exams Daily evaluation

			1		
		the concept of loaded tasks, exiting the system and turning it off. Calculator Shut Down).			
6 - 5	3	The concept of the window for any program and identifying its main components, dealing with desktop icons such as (My Document; My Computer; Recycle Bin).	Computer applications 1	Lecture	Practical tests Quarterly exams final exams Daily evaluation
8 - 7	3	Getting to know My Computer in terms of disks, folders and files, how to deal with formatting floppy disks, copying folders and files, dealing with the trash, and how to delete and retrieve files through what the trash can provides in this regard.	Computer applications 1	Lecture	Practical tests Quarterly exams final exams Daily evaluation
10 - 9	3	Taking advantage of Control Panel programs such as the Mouse icon, the screen saver control icon, changing the appearance of the desktop background, and Program to add and delete programs.	Computer applications 1	Lecture	Practical tests Quarterly exams final exams Daily evaluation
11	3	Take advantage of the Run option to execute programs appropriately, as well as switch to the system signal (Ms-Dos) and deal with its commands.	Computer applications 1	Lecture	Practical tests Quarterly exams final exams Daily evaluation
12	3	*Use entertainment programs such as (Window Media Player) to play movies.	Computer applications 1	Lecture	Practical tests Quarterly exams final exams Daily evaluation
13	3	*Use of additional programs such as the calculator.	Computer applications 1	Lecture	Practical tests Quarterly exams final exams Daily evaluation
14	3	*Dealing with the drawing program (Paint) in creating, saving and retrieving drawings through the commands it provides.	Computer applications 1	Lecture	Practical tests Quarterly exams final exams Daily evaluation
15	3	Dealing with the Notes window (Notpad; Wordpad) in writing texts,	Computer applications 1	Lecture	Practical tests Quarterly exams final exams

		coving them matricesing			Doily avaluation
		saving them, retrieving them, printing them, and changing their printing style			Daily evaluation
		and formatting.			
					Practical tests
16	2	Learn how to get help and	Computer	T to	Quarterly exams
16	3	its different methods.	applications 1	Lecture	final exams
					Daily evaluation
		Introduction to AutoCAD			Practical tests
17	3	version (2000) and an	Computer	Lecture	Quarterly exams
17	5	explanation of the program	applications 1	Lecture	final exams
		interface.			Daily evaluation
			~		Practical tests
18	3	Screen settings (Snap,	Computer	Lecture	Quarterly exams
10	C	Limit, Grid, Pan, Zoom,).	applications 1		final exams
					Daily evaluation
			Comment		Practical tests
19	3	Draw menu.	Computer	Lecture	Quarterly exams
			applications 1		Deily evoluation
					Daily evaluation Dractical tests
			Computer		Quarterly exame
20	3	List of revisions (modify).	applications 1	Lecture	final exams
			applications 1		Daily evaluation
					Practical tests
	_		Computer	_	Quarterly exams
21	3	Object Snap menu.	applications 1	Lecture	final exams
					Daily evaluation
					Practical tests
22	2	Lavana	Computer	Lastra	Quarterly exams
22	3	Layers.	applications 1	Lecture	final exams
					Daily evaluation
					Practical tests
23	3	Dimensions	Computer	Lecture	Quarterly exams
23	5	Dimensions.	applications 1	Lociule	final exams
					Daily evaluation
					Practical tests
24	3	Writing .	Computer	Lecture	Quarterly exams
	_		applications 1		tinal exams
					Daily evaluation
		Store files, import files	Computer		Practical tests
25	3	from other programs, and	applications 1	Lecture	final examp
		export them.	applications 1		Daily evaluation
					Practical tests
		Make blocks and import	Computer		Quarterly exams
26	3	parts from other programs	applications 1	Lecture	final exams
		parts from other programs.	applications 1		Daily evaluation
			<u> </u>		Practical tests
27	3	Draw a plan for the	Computer	Lecture	Quarterly exams
	_	department's specialization.	applications 1		final exams
	I	1			

	0			r	r	
					Daily evaluation	
					Practical tests	
20	2	Draw a section of that	Computer	Lastura	Quarterly exams	
28	3	diagram.	applications 1	Lecture	final exams	
					Daily evaluation	
		Drinting conving and			Practical tests	
20.20	2	extracting files on the	Computer	Lastura	Quarterly exams	
30-29	3	plotter.	applications 1	Lecture	final exams	
					Daily evaluation	
11.C	ourse	Evaluation				
Distribu	iting t	he score out of 100 accordin	g to the tasks a	ssigned to	the student such as daily	
prepara	tion, d	aily oral, monthly, or written e	xams, reports	etc		
12.Le	earnin	g and Teaching Resources	5			
Require	Required textbooks (curricular books, if any)					
Main re	Main references (sources)					
Recom	Recommended books and references (scientific journals,					
reports.)					
Electron	nic Ref	ferences, Websites				

1 Cours						
1. Course Name:						
Engineering	Engineering drawing / (AutoCAD)					
2. Cours	2. Course Code:					
3. Seme	ster / Ye	ear:				
First and see	cond ser	nester / first year				
4. Descr	ription P	reparation Date:				
2024/2/20						
5. Avail	able Att	endance Forms:				
Attendance	daily ac	cording to the weel	kly schedule			
6. Numb	per of C	redit Hours (Total)	/ Number of Units	s (Total)		
3 hours: 6 u	nits					
7. Cours	se admir	histrator's name (me	ention all, if more	than one nam	e)	
Name	e: Ali Av	wad Ismaeel				
Email	l: <u>aliawa</u>	d@atu.edu.iq				
8. Cours	se Objec	tives				
Course Objectiv	ves	Teaching students how	w to draw using AutoCA	D		
9 Teach	ning and	Learning Strategie				
Strategy		se datashow				
		se a computer				
		se a whiteboard				
10 Course	Structur					
Week	Hours					
	IIVUIS	Required	Unit or subject	Learning	Evaluation	
	nours	Required Learning	Unit or subject name	Learning method	Evaluation method	
	110015	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method	
		Required Learning Outcomes The importance of engineering drawing, the importance of	Unit or subject name	Learning method	Evaluation method	
		Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to	Unit or subject name	Learning method	Evaluation method	
1	3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing	Unit or subject name	Learning method Use datashow Use a computer	Evaluation method	
1	3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing, standard drawing	Unit or subject name Engineering drawing / (AutoCAD)	Learning method Use datashow Use a computer Use a whiteboard	Evaluation method	
1	3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing, standard drawing board sizes, an	Unit or subject name Engineering drawing / (AutoCAD)	Learning method Use datashow Use a computer Use a whiteboard	Evaluation method Quick exams + class questions	
1	3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing, standard drawing board sizes, an overview of the AutoCAD program.	Unit or subject name Engineering drawing / (AutoCAD)	Learning method Use datashow Use a computer Use a whiteboard	Evaluation method Quick exams + class questions	
1	3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing, standard drawing board sizes, an overview of the AutoCAD program. Preparing for	Unit or subject name Engineering drawing / (AutoCAD)	Learning method Use datashow Use a computer Use a whiteboard	Evaluation method	
1	3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing, standard drawing board sizes, an overview of the AutoCAD program. Preparing for computer drawing Title Block	Unit or subject name Engineering drawing / (AutoCAD)	Learning method Use datashow Use a computer Use a whiteboard Use datashow Use a computer	Evaluation method Quick exams + class questions Quick exams + class questions	
2	3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing, standard drawing board sizes, an overview of the AutoCAD program. Preparing for computer drawing Title Block	Unit or subject name Engineering drawing / (AutoCAD) Engineering drawing / (AutoCAD)	Learning method Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard	Evaluation method Quick exams + class questions Quick exams + class questions	
1	3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing, standard drawing board sizes, an overview of the AutoCAD program. Preparing for computer drawing Title Block	Unit or subject name Engineering drawing / (AutoCAD) Engineering drawing / (AutoCAD)	Learning method Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard Use datashow	Evaluation method Quick exams + class questions Quick exams + class questions	
1 2 3	3 3 3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing, standard drawing board sizes, an overview of the AutoCAD program. Preparing for computer drawing Title Block Drawing geometric shapes using the computer	Unit or subject name Engineering drawing / (AutoCAD) Engineering drawing / (AutoCAD) Engineering drawing / (AutoCAD)	Learning method Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard Use datashow Use datashow Use a computer Use a whiteboard	Evaluation method Quick exams + class questions Quick exams + class questions Quick exams + class questions	
1 2 3	3 3 3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing, standard drawing board sizes, an overview of the AutoCAD program. Preparing for computer drawing Title Block Drawing geometric shapes using the computer	Unit or subject name Engineering drawing / (AutoCAD) Engineering drawing / (AutoCAD) Engineering drawing / (AutoCAD)	Learning method Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard	Evaluation method Quick exams + class questions Quick exams + class questions Quick exams + class questions	
1 2 3	3 3 3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing, standard drawing board sizes, an overview of the AutoCAD program. Preparing for computer drawing Title Block Drawing geometric shapes using the computer	Unit or subject name Engineering drawing / (AutoCAD) Engineering drawing / (AutoCAD) Engineering drawing / (AutoCAD)	Learning method Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard	Evaluation method Quick exams + class questions Quick exams + class questions	
1 2 3 5+4	3 3 3 3	Required Learning Outcomes The importance of engineering drawing, the importance of using a computer to implement engineering drawing, standard drawing board sizes, an overview of the AutoCAD program. Preparing for computer drawing Title Block Drawing geometric shapes using the computer Graphic modifications, computer drawing aids	Unit or subject name Engineering drawing / (AutoCAD) Engineering drawing / (AutoCAD) Engineering drawing / (AutoCAD) Engineering drawing / (AutoCAD)	Learning method Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard Use datashow Use a computer Use a whiteboard	Evaluation methodQuick exams + class questionsQuick exams + class questionsQuick exams + class questionsQuick exams + class questionsQuick exams + class questions	

F						
8+7+6	3	Types of lines for engineering drawing, engineering operations, and setting dimensions.	Engine (.	eering drawing / AutoCAD)	Use datashow Use a computer Use a whiteboard	Quick exams + class questions
9	3	Perspective drawing, a perspective drawing that contains a circle represented by an oval.	Engine (2	eering drawing / AutoCAD)	Use datashow Use a computer Use a whiteboard	Quick exams + class questions
11+10	3	Projection theory, drawing simplified projections.	Engine (.	eering drawing / AutoCAD)	Use datashow Use a computer Use a whiteboard	Quick exams + class questions
15+14+13+12	3	Main projections, even angles, drawing according to the theory of the first even angle of projection, drawing according to the theory of the third even angle of projection.	Engine (.	eering drawing / AutoCAD)	Use datashow Use a computer Use a whiteboard	Quick exams + class questions
17+16	3	Draw the three main projections at even angles and note the difference between them.	Engineering drawing / (AutoCAD)		Use datashow Use a computer Use a whiteboard	Quick exams + class questions
19+18	3	Deducing the third projection from the two projections.	Engine (.	eering drawing / AutoCAD)	Use datashow Use a computer Use a whiteboard	Quick exams + class questions
21+20	3	Inferring perspective from two or three projections.	Engine (/	eering drawing / AutoCAD)	Use datashow Use a computer Use a whiteboard	Quick exams + class questions
23+22	3	Cutting theory, cutting shapes and lines according to the type of material, drawing cut sections.	Engine (2	eering drawing / AutoCAD)	Use datashow Use a computer Use a whiteboard	Quick exams + class questions
25+24	3	Drawing projections cut from one specific projection	Engine (.	eering drawing / AutoCAD)	Use datashow Use a computer Use a whiteboard	Quick exams + class questions
27+26	3	Partially cropped project drawing	Engineering drawing / (AutoCAD)		Use datashow Use a computer Use a whiteboard	Quick exams + class questions
30+29+28	3	Drawing a half-cut projection, drawing winding sections.	Engineering drawing / (AutoCAD)		Use datashow Use a computer Use a whiteboard	Quick exams + class questions
11.Course	Evaluat	ion				
Distributing t	he score	out of 100 according	to the	tasks assigne	d to the student	t such as daily
preparation, d	ally oral,	monthly, or written ex	xams, r	eports etc		
Required text	ig and T books (cu	ricular books. if any)				
Main reference	es (source	es)		Auto cad +	internet lectu	res
L						
			22			

Recommended books and references (scientific journals, reports)	
Electronic References, Websites	

1. (1. Course Name:					
Manuf	acturing	processes I				
2. 0	Course (Code:				
3. \$	Semeste	r / Year:				
First an	nd secon	d semester / first yea	ar			
4.]	Descript	ion Preparation Date	2:			
2024/2	/19					
5. 4	Availabl	e Attendance Forms	:			
Daily a	ttendan	ce according to the v	veekly schedule			
6. I	Number	of Credit Hours (To	tal) / Number of Uni	ts (Total)		
4 hours	s/8 units					
7. 0	Course a	dministrator's name	(mention all, if more	e than one nan	ne)	
	Nam	e: Roaa Mohammed	Muneer Email: roa	a.muneer@atu	ı.edu.iq	
8. (Course (Objectives				
Course C	bjectives	- Preparing the stude	ent to be able to use all measu	ring devices for me	echanical operation	
		- Improving the stud	ent's ability to conduct tests	on plumbing sand a	and tests concerned	
		with the quality of p	roducts manufactured by cast	ing and welding pro	ocesses.	
		- Providing the stud	dent with skills in forming	and working meta	als with plumbing,	
	welding, blacksmithing, and the calculations required to achieve the highest accuracy in production					
9. Teaching and Learning Strategies						
9. 7	Feaching	g and Learning Strat	egies			
9. 7 Strategy	Feaching Ex	g and Learning Strat planation on the board - pres	egies sentation – organization with	students - training -	- discussion	
9. Strategy 10. Co	Feaching Expurse Str	g and Learning Strat planation on the board - pres	egies sentation – organization with	students - training -	- discussion	
9. 7 Strategy 10. Co Week	Teaching Expourse Str Hours	g and Learning Strat planation on the board - pres ucture Required Learning	egies entation – organization with Unit or subject	students - training -	- discussion Evaluation	
9. 7 Strategy 10. Co Week	Teaching Ex Durse Str Hours	g and Learning Strat planation on the board - pres ucture Required Learning Outcomes	egies sentation – organization with Unit or subject name	students - training - Learning method	- discussion Evaluation method	
9. 7 Strategy 10. Co Week	Teaching Ex purse Str Hours	g and Learning Strat planation on the board - pres ructure Required Learning Outcomes Definition of measurement and units	egies sentation – organization with Unit or subject name	students - training - Learning method	- discussion Evaluation method	
9. 7 Strategy 10. Co Week	Teaching Ex Durse Str Hours	g and Learning Strat planation on the board - pres ructure Required Learning Outcomes Definition of measurement and units of measurement, error	egies sentation – organization with Unit or subject name	students - training - Learning method - lecture	- discussion Evaluation method - Daily test	
9. 7 Strategy 10. Co Week	Teaching Ex purse Str Hours	g and Learning Strat planation on the board - pres ucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main	egies sentation – organization with Unit or subject name Manufacturing processes	students - training - Learning method - lecture -Laboratory	- discussion Evaluation method - Daily test - Laboratory	
9. 7 Strategy 10. Co Week	Teaching Expurse Str Hours 2	g and Learning Strat planation on the board - pres cucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple	egies sentation – organization with Unit or subject name Manufacturing processes 1	students - training - Learning method - lecture -Laboratory experiments	- discussion Evaluation method - Daily test -Laboratory experiments	
9. 7 Strategy 10. Co Week	Teaching Expurse Str Hours	g and Learning Strat planation on the board - press ucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring	egies sentation – organization with Unit or subject name Manufacturing processes 1	students - training - Learning method - lecture -Laboratory experiments	- discussion Evaluation method - Daily test -Laboratory experiments	
9. 7 Strategy 10. Co Week	Teaching Expurse Str Hours 2	g and Learning Strat planation on the board - pres cucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring devices.	egies sentation – organization with Unit or subject name Manufacturing processes 1	students - training - Learning method - lecture -Laboratory experiments	- discussion Evaluation method - Daily test -Laboratory experiments	
9. 7 Strategy 10. Co Week	Teaching Expurse Str Hours 2 2	g and Learning Strat planation on the board - pres cucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring devices. Measuring feet (probes), their parts, uses, and	egies sentation – organization with Unit or subject name Manufacturing processes 1 Manufacturing processes	students - training - Learning method - lecture -Laboratory experiments - lecture - lecture - Laboratory	- discussion Evaluation method - Daily test -Laboratory experiments - Daily test -Laboratory	
9. 7 Strategy 10. Co Week	Teaching Expurse Str Hours 2	g and Learning Strat planation on the board - pres cucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring devices. Measuring feet (probes), their parts, uses, and types.	egies sentation – organization with Unit or subject name Manufacturing processes 1 Manufacturing processes 1	students - training - Learning method - lecture -Laboratory experiments - lecture -Laboratory experiments	- discussion Evaluation method - Daily test - Laboratory experiments - Daily test - Laboratory experiments	
9. 7 Strategy 10. Co Week	Teaching Expurse Str Hours 2 2	g and Learning Strat planation on the board - pres ucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring devices. Measuring feet (probes), their parts, uses, and types. Micrometers, their types, uses parts and the idea	egies sentation – organization with Unit or subject name Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes	students - training - Learning method - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture	- discussion Evaluation method - Daily test -Laboratory experiments - Daily test -Laboratory experiments - Daily test -Laboratory experiments - Daily test	
9. 7 Strategy 10. Co Week	Teaching Expurse Str Hours 2 2 2 2	g and Learning Strat planation on the board - pres ucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring devices. Measuring feet (probes), their parts, uses, and types. Micrometers, their types, uses, parts, and the idea of how a micrometer	egies sentation – organization with Unit or subject name Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1	students - training - Learning method - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture	- discussion Evaluation method - Daily test - Laboratory experiments - Daily test - Laboratory experiments - Daily test - Laboratory	
9. 7 Strategy 10. Co Week	Teaching Expurse Str Hours 2 2 2 2	g and Learning Strat planation on the board - pres ucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring devices. Measuring feet (probes), their parts, uses, and types. Micrometers, their types, uses, parts, and the idea of how a micrometer works.	egies entation – organization with Unit or subject name Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1	students - training - Learning method - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture	- Daily test - Daily test - Daily test - Laboratory experiments - Daily test - Laboratory experiments - Daily test - Laboratory experiments	
9. 7 Strategy 10. Co Week	Teaching Expurse Str Hours 2 2 2 2	g and Learning Strat planation on the board - pres ucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring devices. Measuring feet (probes), their parts, uses, and types. Micrometers, their types, uses, parts, and the idea of how a micrometer works. Measuring molds and their uses, turne, and	egies sentation – organization with Unit or subject name Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes	students - training - Learning method - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture	- discussion Evaluation method - Daily test - Laboratory experiments - Daily test - Laboratory experiments - Daily test - Laboratory experiments - Daily test - Laboratory experiments - Daily test - Laboratory experiments	
9. 5 Strategy 10. Co Week 1 2 3 4	Teaching Expurse Str Hours 2 2 2 2 2 2	g and Learning Strat planation on the board - pres ucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring devices. Measuring feet (probes), their parts, uses, and types. Micrometers, their types, uses, parts, and the idea of how a micrometer works. Measuring molds and their uses, types, and how to use them.	egies entation – organization with Unit or subject name Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1	students - training - Learning method - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture	- Daily test - Daily test - Daily test - Laboratory experiments - Daily test - Laboratory experiments - Daily test - Laboratory experiments - Daily test - Laboratory experiments - Daily test - Laboratory experiments	
9. 7 Strategy 10. Co Week	Teaching Expurse Str Hours 2 2 2 2 2 2	g and Learning Strat planation on the board - pres ucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring devices. Measuring feet (probes), their parts, uses, and types. Micrometers, their types, uses, parts, and the idea of how a micrometer works. Measuring molds and their uses, types, and how to use them. Measuring angles and	egies sentation – organization with Unit or subject name Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1	students - training - Learning method - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture	- discussion Evaluation method - Daily test - Laboratory experiments - Daily test - Laboratory experiments - Daily test - Laboratory experiments - Daily test - Laboratory experiments - Daily test - Laboratory experiments	
9. 5 Strategy 10. Co Week 1 2 3 4	Teaching Expurse Str Hours 2 2 2 2 2 2	g and Learning Strat planation on the board - pres ucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring devices. Measuring feet (probes), their parts, uses, and types. Micrometers, their types, uses, parts, and the idea of how a micrometer works. Measuring molds and their uses, types, and how to use them. Measuring angles and side shapes, tools for measuring angles and	egies entation – organization with Unit or subject name Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes	students - training - Learning method - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture	- discussion Evaluation method - Daily test - Laboratory experiments - Daily test - Laboratory experiments	
9. 7 Strategy 10. Co Week 1 2 3 4 5	Teaching Expurse Str Hours 2	g and Learning Strat planation on the board - pres ucture Required Learning Outcomes Definition of measurement and units of measurement, error and its causes, methods of measuring main dimensions, simple conveyor measuring devices. Measuring feet (probes), their parts, uses, and types. Micrometers, their types, uses, parts, and the idea of how a micrometer works. Measuring molds and their uses, types, and how to use them. Measuring angles and side shapes, tools for measuring angles and measuring cups (dabaa)	egies sentation – organization with Unit or subject name Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes 1	students - training - Learning method - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture -Laboratory experiments - lecture	- Daily test - Daily test - Daily test - Laboratory experiments - Daily test - Laboratory experiments	

	T		Г Г		1
		Method of measuring			
		screw elements, external		- lecture	
		and internal diameters,	Manufacturing processos		- Daily test
6	2	measuring step and step		-Laboratory	-Laboratory
		diameter, electronic	1	experiments	experiments
		mechanical comparison		· ·	I I I I I
		devices			
		Ontigel devices.			
		Optical device, some		1 /	
-	2	modern measurement	Manufacturing processes	- lecture	- Daily test
1	2	methods (acoustic	1	-Laboratory	-Laboratory
		frequency measuring	_	experiments	experiments
		devices, digital optical).			
		Files and their role in			
		industrial development,			
		the process of slicing.			
		the tools used and the			
		processes involved in the			
		filing process files used	Manufacturing processos	- lecture	 Daily test
8	2	ming process, mes used	Manufacturing processes	-Laboratory	-Laboratory
		and their specifications,	1	experiments	experiments
		machines and their types		· ·	I I I I I
		and methods of attaching			
		crafts to them, uses of			
		files, and how to clean			
		files.			
		Cutting with a saw, the			
		conditions that must be			
		met in the sawing		- lecture	- Daily test -Laboratory experiments
		process the saw weapon			
		the groups and their			
		the crowns and then	Manufastarina ana sasa		
9	2	types, the teeth, the	Manufacturing processes	-Laboratory	
		method of sharpening	1	experiments	
		and maintaining them,			
		the types of manual			
		hammer heads and the			
		method of installing			
		them.			
		Drilling and grinding,			
		types of drills, types of	Manufacturing processes	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
		primers, types of			
10	2	primers how to perform			
		the drilling and grinding	Ť		
		process			
	-	Models their times			
		wood wood in their		1	Dellater
1.1	_	wood used in their	Manufacturing processes	- lecture	- Daily test
11	2	manufacture, and the	1	-Laboratory	-Laboratory
		conditions that must be	-	experiments	experiments
	1	met in the model.			
		Tools and devices used		locture	Doily tost
10		Tools and devices used in making the model,	Manufacturing processes	- lecture	- Daily test
12	2	Tools and devices used in making the model, box molds, and how to	Manufacturing processes	- lecture -Laboratory	- Daily test -Laboratory
12	2	Tools and devices used in making the model, box molds, and how to design a simple model	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
12	2	Tools and devices used in making the model, box molds, and how to design a simple model.	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
12	2	Tools and devices used in making the model, box molds, and how to design a simple model. Plumbing, historical overview, main methods	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
12	2	Tools and devices used in making the model, box molds, and how to design a simple model. Plumbing, historical overview, main methods	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
12	2	Tools and devices used in making the model, box molds, and how to design a simple model. Plumbing, historical overview, main methods of plumbing (cast	Manufacturing processes	- lecture -Laboratory experiments - lecture	- Daily test -Laboratory experiments - Daily test
12	2	Tools and devices used in making the model, box molds, and how to design a simple model. Plumbing, historical overview, main methods of plumbing (cast casting, sand casting,	Manufacturing processes 1 Manufacturing processes	- lecture -Laboratory experiments - lecture -Laboratory	- Daily test -Laboratory experiments - Daily test -Laboratory
12	2	Tools and devices used in making the model, box molds, and how to design a simple model. Plumbing, historical overview, main methods of plumbing (cast casting, sand casting, metal mold casting, other	Manufacturing processes 1 Manufacturing processes 1	- lecture -Laboratory experiments - lecture -Laboratory experiments	- Daily test -Laboratory experiments - Daily test -Laboratory experiments
12	2	Tools and devices used in making the model, box molds, and how to design a simple model. Plumbing, historical overview, main methods of plumbing (cast casting, sand casting, metal mold casting, other methods of plumbing)	Manufacturing processes 1 Manufacturing processes 1	- lecture -Laboratory experiments - lecture -Laboratory experiments	- Daily test -Laboratory experiments - Daily test -Laboratory experiments
12	2	Tools and devices used in making the model, box molds, and how to design a simple model. Plumbing, historical overview, main methods of plumbing (cast casting, sand casting, metal mold casting, other methods of plumbing) Advantages of the	Manufacturing processes 1 Manufacturing processes 1	- lecture -Laboratory experiments - lecture -Laboratory experiments	 Daily test Laboratory experiments Daily test Laboratory experiments
12	2	Tools and devices used in making the model, box molds, and how to design a simple model. Plumbing, historical overview, main methods of plumbing (cast casting, sand casting, metal mold casting, other methods of plumbing) Advantages of the plumbing process.	Manufacturing processes 1 Manufacturing processes 1	- lecture -Laboratory experiments - lecture -Laboratory experiments	- Daily test -Laboratory experiments - Daily test -Laboratory experiments
12	2	Tools and devices used in making the model, box molds, and how to design a simple model. Plumbing, historical overview, main methods of plumbing (cast casting, sand casting, metal mold casting, other methods of plumbing) Advantages of the plumbing process. Plumbing sand,	Manufacturing processes 1 Manufacturing processes 1 Manufacturing processes	- lecture -Laboratory experiments - lecture -Laboratory experiments	 Daily test Laboratory experiments Daily test Laboratory experiments

		anosifisations		Laboratere	Laboraterre
		specifications, components, plumbing sand, devices used and additives to plumbing		-Laboratory experiments	-Laboratory experiments
15	2	Dumps and tools used in preparing sand molds, the process of molding a simple model and the last one, the parasitic molds and the final molds used	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
16	2	Pulp, its types, pulp sand, mixture ratios and materials added to it, stages of its work (mixing and preparing sand, making balls, drying it), the benefit of the drying process, ovens or methods of drying balls and their equipment.	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
17	2	Casting with metal molds, its types, centrifugal casting, and its types.	with metal its types, Manufacturing processes casting, and 1 ypes.		- Daily test -Laboratory experiments
18	2	Lost wax plumbing, continuous plumbing, shell plumbing.	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
19	2	Metal smelting and its foundations, types of smelting furnaces, blast furnace, main dimensions and method of operation, blast furnace, electric arc furnace, reflector furnace, rotary furnace.	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
20	2	Casting of castings, its equipment and foundations, cleaning of castings, casting defects, inspection of castings.	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
21	2	Welding, foundations of metal welding, clarification of the main methods of welding (pressure welding, electric arc fusion welding, other methods of fusion welding, flash welding and caustic welding), types of welding joints.	Manufacturing processes	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
22	2	Hot pressure welding, including (electrical resistance welding, including spot and line welding, flash welding), cold pressure welding,	Manufacturing processes	- lecture -Laboratory experiments	- Daily test -Laboratory experiments

	r				1
		pressure welding using explosives, and pressure welding using ultrasonic waves.			
23	2	Fusion welding and gas welding, oxy-hydrogen welding and oxy- acetylene welding, types of flame, right-hand welding and left-hand welding, cutting with oxy-acetylene	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
24	2	Arc welding, welding current, direct and reverse polarity method, types of electrodes, packaging of metal electrodes and their types.	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
25	2	Electron movement, methods of isolating electrodes and the welding area, electric arc welding using protective gases (carbon dioxide welding, arcon tig welding, brazing welding)	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
26	2	Atomic hydrogen arc welding, atrophy arc welding, fusion welding.	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
27	2	Temperature welding, caustic welding (mortar welding, plumbing welding) and some modern types of welding (laser welding, electron beam welding).	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
28	2	Welding defects, welding tests.	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
29	2	Metal forming, the theory of forming, the foundations of cold and hot forging, blacksmithing, the foundations of blacksmithing and its methods (manual, mechanical), blacksmithing equipment, manual and mechanical, blacksmithing elements.	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments
30	2	Special blacksmithing methods, blacksmithing molds and their manufacture, effective force, explanation of the different blacksmithing operations (contact,	Manufacturing processes 1	- lecture -Laboratory experiments	- Daily test -Laboratory experiments

	methods of different geometric sections in cutting operations, making simple steps, forming various			
	artifacts).			
11.Co	ourse Evaluation			
Distribution of the score from $100 = (25 \text{ for the first semester} + 25 for the second searcording to the tasks assigned to the student, such as daily preparation, daily, oral, more written exams, reports, etc. + (50 final)$				
12.Le	earning and Teaching Resources			
Require	d textbooks (curricular books, if any)	Metal manufacturing operations (Abdul Khaleq Hassan)		
Main ref	ferences (sources)	Introduction to production engineering Principles of metal casting Principles of precision in design and production		
Recomn	nended books and references (scientific , reports)	Manufacturing methods Prof. Dr. Abdul Razzaq Ismai Khadr Production Technology and Workshop Works W. A. Chapmon		
Electron	ic References, Websites	https://esco.ec.europa.eu/		

1. Course Name:

Material properties

2. Course Code:

3. Semester / Year:

First and second semester / first year

4. Description Preparation Date:

20/2/2024

5. Available Attendance Forms:

Attend a lecture weekly

6. Number of Credit Hours (Total) / Number of Units (Total):

2 hours / 4 units

7. Course administrator's name (mention all, if more than one name)

Name: Mohammed Salih Hassan Emai

Email: hs.muhamad@atu.edu.iq

8. Course Objectives

0	
Course Objectives	Studying the engineering properties of crystalline and amorphous
	materials and identifying the mechanical properties of metals and
	alloys.

9. Teaching and Learning Strategies

Strategy	1 -Identify engineering materials.
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2 -Identify Crystalline and amorphous materials..

3 -Identify the Mechanical properties of materials

4 -Learn how to Carbon steel, its most important types

5- Identify the Polymers, polymer molecules, types of polymer..

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Definition of engineering materials.	Definition of engineering materials.	lecture	Written tests Quarterly exams final exams Daily evaluation
2	2	Identify Atom, element, types of bonds in engineering materials.	Atom, element, types of bonds in engineering materials.	lecture	Written tests Quarterly exams final exams Daily evaluation

	1	I	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
3	2	Identify Crystalline and amorphous materials.	Crystalline and amorphous materials.	lecture	Written tests Quarterly exams final exams Daily evaluation
4	2	Identify Crystal forms (H.C.P) (F.C.C) (B.C.C)	fy Crystal as (H.C.P) C) (B.C.C) Crystal forms (H.C.P) (F.C.C) (B.C.C)		Written tests Quarterly exams final exams Daily evaluation
5	2	Identify Mechanical properties of materials. (Stress, strain, stress-strain curve, ductility, collapse).	Mechanical properties of materials. (Stress, strain, stress- strain curve, ductility, collapse).	lecture	Written tests Quarterly exams final exams Daily evaluation
6	2	Identify Hardness, hardness test.	Hardness, hardness test.	lecture	Written tests Quarterly exams final exams Daily evaluation
7	2	Identify Continuation.	Identify Continuation.		Written tests Quarterly exams final exams Daily evaluation
8	2	Identify Durability, Durability, durability durability tests.		lecture	Written tests Quarterly exams final exams Daily evaluation
9	2	Identify Thermal properties of materials. (thermal expansion, thermal conductivity)	nal Thermal properties of materials. nsion, (thermal expansion, thermal conductivity)		Written tests Quarterly exams final exams Daily evaluation
10	2	Identify Electrical properties of materials (ionicElectrical properties of materials (ionicmaterials (ionic materials, insulating materials, metallic materials, factors affecting conductivity)Electrical properties of materials (ionic materials, insulating materials, factors affecting conductivity).		lecture	Written tests Quarterly exams final exams Daily evaluation
11	conductivity). Identify Magnetic properties of materials 1 2 Identify Magnetic properties of materials (Ferromagnetic materials, materials, paramagnetic materials, materials, materials,		Magnetic properties of materials (Ferromagnetic materials, paramagnetic materials, diamagnetic materials, magnetic retardation, factors affecting magnetism).	lecture	Written tests Quarterly exams final exams Daily evaluation

		_ 00 _ /			
		attecting magnetism)			
12	2	Identify Chemical properties of materials (Corrosion, electrochemical series, oxidation)	Chemical properties of materials (Corrosion, electrochemical series, oxidation)	lecture	Written tests Quarterly exams final exams Daily evaluation
13	2	Identify Iron, its most important ores, extraction, blast furnace, transformers.	Identify Iron, its most important ores, extraction, blast furnace, transformers.		Written tests Quarterly exams final exams Daily evaluation
14	2	Carbon steel, its most important types, properties, and uses.	Carbon steel, its most important types, properties, and uses.	lecture	Written tests Quarterly exams final exams Daily evaluation
15	2	Alloy steel, its most important types, properties, and uses.	Alloy steel, its most important types, properties, and uses.	lecture	Written tests Quarterly exams final exams Daily evaluation
16	2	Identify Cast iron, its types, properties, and uses.	Identify Cast iron, s types, properties, and uses. Cast iron, its types, properties, and uses.		Written tests Quarterly exams final exams Daily evaluation
17	2	supplement	supplement	lecture	Written tests Quarterly exams final exams Daily evaluation
18	2	Copper, its alloys, properties, and uses.	Copper, its alloys, properties, and uses.	lecture	Written tests Quarterly exams final exams Daily evaluation
19	2	Identify Aluminum, its alloys, properties, and uses.	Aluminum, its alloys, properties, and uses.	lecture	Written tests Quarterly exams final exams Daily evaluation
20	2	Identify Nickel, its alloys, properties, and uses.	Nickel, its alloys, properties, and uses.	lecture	Written tests Quarterly exams final exams Daily evaluation
21	2	Tin, its alloys, properties, and uses. Zinc, its alloys, properties, and uses. Manganese, its alloys, properties, and uses.	Tin, its alloys, properties, and uses. Zinc, its alloys, properties, and uses. Manganese, its alloys, properties, and uses.	lecture	Written tests Quarterly exams final exams Daily evaluation
22	2	Other nonferrous alloys (white metals, bearing alloys)	Other nonferrous alloys (white metals, bearing alloys)	lecture	Written tests Quarterly exams final exams

						Daily evaluation
23	2	Powder metallurgy Identify (Methods of obtaining metal powders, mechanical methods, physical and chemical methods, natural, mechanical and chemical properties of powders.	Powder metallurgy (Methods of obtaining metal powders, mechanical methods, physical and chemical methods, natural, mechanical and chemical properties of powders.		lecture	Written tests Quarterly exams final exams Daily evaluation
24	2	Powder pressing, sintering process.	Powder p sintering	ressing, process.	lecture	Written tests Quarterly exams final exams Daily evaluation
25	2	Identify Ceramic materials	Ceramic materials		lecture	Written tests Quarterly exams final exams Daily evaluation
26	2	Glass, its types, manufacture, and uses.	Glass, its types, manufacture, and uses.		lecture	Written tests Quarterly exams final exams Daily evaluation
27	2	Identify Concrete, its industrial uses.	Concrete, its industrial uses.		lecture	Written tests Quarterly exams final exams Daily evaluation
28	2	Identify Polymers, polymer molecules, types of polymer.	Polymers, molecules, polyr	Polymers, polymer molecules, types of polymer.		Written tests Quarterly exams final exams Daily evaluation
29	2	Properties and uses of plastics.	Properties and uses of plastics.		lecture	Written tests Quarterly exams final exams Daily evaluation
30	2	Plastics supplement.	Plastics supplement.		lecture	Written tests Quarterly exams final exams Daily evaluation
11.C	ourse E	valuation	I			
Distribu prepara	ting the	score out of 100 acco y oral, monthly, or writ	ording to the t tten exams, rep	asks assigne oorts etc	d to the stu	dent such as daily
12.Le		and Teaching Resol				
Kequir	rea textl	DOOKS (CURTICULAR DO	oks, if any)	Metals	, Engineer	ring materials
Main r	eterenc	es (sources)		En	gineering	materials

Recommended	books	and	references	A collection of books in the field o
(scientific journal	s, reports	s)	Engineering materials	
Electronic References, Websites				Check out websites in this field

Course Description Form								
1. Course Name:								
Machanics								
2 Course Code:								
3. Semester / Year:								
First and second semester / first year								
4. Description Preparation Date:								
20-2-2023								
5. Available Attendance Forms:								
Mandatory attendance weekly								
6. Number of Credit Hours (Total) / Number of Units (Total)								
5 h/10 units								
7. Course admini	strator's na	ame (mention all, if more than	n one name)					
		Name: Noor Abbas Hu	ssein					
		Email: noor.hussein.tcm@a	tu.edu.iq					
8. Course Objecti	ives							
Course Objectives The student will be able to: 1. Learn about mechanics and identify its types 2. Recognize the types of forces affecting objects 3. Identify the types of moments 4. Identify the types of balance and determine the centers of gravity of objects 5. Identify the types of stresses and strains that occur as a result of loads								
9. Teaching and I	Learning S	trategies						
Strategy 1. Academic lectures. 2. Open discussions. 3. Attempts to solve exercises according to the required equations using the problem-solving method 10. Channels Structure Structure								
Week Hours Requir Learni Outcor	red ng nes	Unit or subject name	Learning method	Evaluation method				
2 content a complete applicable	ent nds the and can e the le exercises	Static, fundamental concepts, Force, Scalars and, Vectors, Units, Force polygon, Cartesian Components.	lecture And solve problems	Exams And Practical report				
2 applicable The understan 2 content complete applicable	student nds the and can e the le exercises	Analysis of Forces	lecture And solve problems	Exams And Practical report				
		34						

		The student	Resultant of Concurrent, Coplanar	lecture	Exams
		understands the	Force system (2-D)	And	And
	2	content and can		solve problems	Practical report
		complete the		1	1
3		applicable exercises			
		The student	Moments	lecture	Exams
		understands the		And	And
	2	content and can		solve problems	Practical report
		complete the			
4		applicable exercises			
		The student	Couples, transformation of the	lecture	Exams
		understands the	Couple and the force	And	And
	2	content and can		solve problems	Practical report
~		complete the			
5		applicable exercises	Developed of the Construct	1	Energy
		I ne student	Resultant of non –Concurrent,	And	Exams
	2	content and can	Copianal Torce system (3-D).	Allu solve problems	Allu Practical report
	2	complete the		solve problems	Tractical report
6		applicable exercises			
0		The student	Equillibrium , free body diagram	lecture	Exams
		understands the	(F.B.D.)	And	And
	2	content and can		solve problems	Practical report
		complete the			1
7		applicable exercises			
		The student	Equillibrium Conditions (2-D)	lecture	Exams
		understands the		And	And
	2	content and can		solve problems	Practical report
0		complete the			
8		applicable exercises		1	P
		The student	Equillibrium Conditions (3-D)	lecture	Exams
	2	content and can		Allu solvo problems	And Practical report
	2	complete the		solve problems	r lactical lepolt
9		applicable exercises			
-		The student	Friction. Dry Friction	lecture	Exams
		understands the		And	And
	2	content and can		solve problems	Practical report
		complete the			
10		applicable exercises			
		The student	Center of Gravity, Centriod (length,	lecture	Exams
	_	understands the	area), Centriod of Simple area	And	And
	2	content and can		solve problems	Practical report
11		complete the			
11		The student	Controids of Composite cross	locture	Frome
		understands the	Centrolus of Composite areas.	And	And
	2	content and can		solve problems	Practical report
	2	complete the		sorre problems	
12		applicable exercises			
		The student	Moment of inertia (Simple and	lecture	Exams
		understands the	Composite areas).	And	And
	2	content and can		solve problems	Practical report
		complete the			
13		applicable exercises			
		The student	2-Dynamics type of motion ,Linear	lecture	Exams
	-	understands the	motion with constant speed.	And	And
	2	content and can		solve problems	Practical report
14		complete the			
14		applicable exercises			
		The student	Linear motion with Constant	lecture	Exams
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		understands the	acceleration .	And	And
	2	content and can		solve problems	Practical report
		complete the			
15		applicable exercises			
		The student	Newton's Second Law	lecture	Exams
		understands the		And	And
	2	content and can		solve problems	Practical report
		complete the			
16		applicable exercises			
		The student	Curvilinear motion	lecture	Exams
	2	understands the		And	And
	2	content and can		solve problems	Practical report
17		complete the			
1/		The student	Angular motion Palative Motion	laatura	Exome
		understands the	Angular motion, Relative Motion.	And	And
	2	content and can		solve problems	Practical report
	2	complete the		solve problems	Tractical report
18		applicable exercises			
10		The student	Work, Energy, Power	lecture	Exams
		understands the	,	And	And
	2	content and can		solve problems	Practical report
		complete the		1	1
19		applicable exercises			
		The student	3-Strength of material :Fundamantal	lecture	Exams
		understands the	concept,Loads , Stress , Strain ,	And	And
	2	content and can	Eelasticity, Plasticity, Deformation.	solve problems	Practical report
		complete the			
20		applicable exercises			
		The student	Hook's Law, Stress -strain curve, type	lecture	Exams
		understands the	of stress .	And	And
	2	content and can		solve problems	Practical report
01		complete the			
21					
		applicable exercises	Normal strong due to an avial load on		
		The student	Normal stress due to an axial load on		
	2	applicable exercises The student understands the content and can	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area		
	2	applicable exercisesThestudentunderstandsthecontentandcompletethe	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area .		
22	2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercises	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area .		
22	2	applicable exercisesThestudentunderstandsthecontentandcancompleteapplicable exercisesThestudent	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress	lecture	Exams
22	2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthe	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress	lecture And	Exams And
22	2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcan	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress	lecture And solve problems	Exams And Practical report
22	2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcancompletethethe	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress	lecture And solve problems	Exams And Practical report
22	2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesTheThestudentunderstandsthecontentandcancancompletetheapplicable exercisesthe	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress	lecture And solve problems	Exams And Practical report
22	2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecompletetheapplicable exercisesThestudent	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress Torsional Stress	lecture And solve problems lecture	Exams And Practical report Exams
22	2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcancancontentandcancancontentandcancancompletetheapplicable exercisesThestudentunderstandsthe	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress Torsional Stress	lecture And solve problems lecture And	Exams And Practical report Exams And
22	2 2 2 2 2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcancancompletetheapplicable exercisesThestudentunderstandsthecompletetheapplicable exercisesThestudentunderstandsthecontentandcontentandcontentandcontentandcontentand	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress Torsional Stress	lecture And solve problems lecture And solve problems	Exams And Practical report Exams And Practical report
22	2 2 2 2 2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecompletetheapplicable exercisesThestudentunderstandsthecontentandcontentandcontentandcompletethe	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress Torsional Stress	lecture And solve problems lecture And solve problems	Exams And Practical report Exams And Practical report
22 23 24	2 2 2 2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudent	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress Torsional Stress	lecture And solve problems lecture And solve problems	Exams And Practical report Exams And Practical report
22 23 24	2 2 2 2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthe	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress Torsional Stress Thermal Stress	lecture And solve problems lecture And solve problems lecture	Exams And Practical report Exams And Practical report Exams And
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22 23 24 25	2 2 2 2 2 2	applicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecontentandcompletetheapplicable exercisesThestudentunderstandsthecompletetheapplicable exercisesThestudentunderstandsthe	Normal stress due to an axial load on 1-Uniformam Cross section area 2- Variable cross section area . Shear Stress Torsional Stress Thermal Stress Beams , types of loads , types of beams	lecture And solve problems lecture And solve problems lecture And solve problems	Exams And Practical report Exams And Practical report Exams And Practical report Exams And Practical report
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		The student	Shear force (S.F.) & bending	lecture	Exams
		understands the	moment (B.M.) of Simple supported	And	And
	2	content and can	beam under an -axial load.	solve problems	Practical report
		complete the		_	_
27		applicable exercises			
		The student	Shear force (S.F.) & bending	lecture	Exams
		understands the	moment (B.M.) of Simple supported	And	And
	2	content and can	beam under uniform distributed Load	solve problems	Practical report
		complete the			
28		applicable exercises			
		The student	Shear force (S.F.) & bending	lecture	Exams
		understands the	moment (B.M.) of cantilever beam	And	And
	2	content and can	under an -axial load.	solve problems	Practical report
		complete the			
29		applicable exercises			
		The student	Shear force (S.F.) & bending	lecture	Exams
		understands the	moment (B.M.) of cantilever beam	And	And
	2	content and can	under uniform distributed Load.	solve problems	Practical report
		complete the			
30		applicable exercises			

11.Course Evaluation

Evaluation is done through:

- 1. Daily, monthly and annual examinations.
- 2. Interaction and group participation in discussing and solving exercises.

12.Learning and Teaching Resources

Engineering mechanics Ferdinand L. singer third edition. Haber .1 and P.QW. Publisher Inc.

2. ستأتيك-ديناميك، ميكانيكا الهندسة: تعريب، د. وجيه الخاخي، د.موفق احمد عبد الله.

.3Engineering mechanics static and dynamic Higden

.4Engineering mechanics static and dynamic Merriam

.5Engineering mechanics static and dynamic Nibbler

6. ميكانيكا الموائع، د. نعمة احمد عمَّارة، الجامعة التكنولوجية-مركز التعريب والنشر

7. الميكانيك (النظرية) ترجمة د. احمد صادق ، دار مير للطباعة والنشر

Course Na	ame:				
			Industrial Drawing		
Course Co	ode:				
Compostor	/Vee				
Semester	/ rea	Ir:	1 /	1	
		First and s	second semester /secon	id year	
Descriptio	on Pro	eparation Date:	10/2/2024		
	A	1	19/2/2024		
Available	Atte	ndance Forms: Atte	a lecture		
		At	tend in computer lab.		
Number o	of Cre	dit Hours (Total) /	Number of Units (Tota	al):	
			3 hours / 6 units		
Course ad	mini	strator's name (men	tion all, if more than o	ne name)	
Name: Dr	. Zaio	d H. Rashid	Email: z	hr.1986@a	tu.edu.iq
Course O	bjecti	ves			
Course Ob	jectiv	es Introducing the stu	dent to using the AutoCA	D program to	o draw mechanical
		assemblies and inc	reasing his ability to think	c in understa	nding engineering
		designs and how to	link data with his information	ation to obtai	in a solution to the
		problem, as well as	s getting acquainted with	the correspon	nding programs in
		mechanical design.			
Teaching	and I	Learning Strategies			
Strategy	Id	lentifying projections a	and partial and total section	ns.	
	Id	lentify mechanical fast	ening tools such as screws	and rivets.	
	Id	lentify the setting of ge	cometric tolerances on dim	ensions.	
	Id	lentify the drawing of g	gears.		
Course St	ructu	re			
Week Ho	ours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Learn about a general review of first grade topics, geometric lines, projections, sections, and setting	A general review of first grade topics: geometric lines, projections, sections, and setting dimensions	lecture	Practical tests Quarterly exams final exams Daily evaluation

	1				1
		dimensions using	using the AutoCAD		
		the AutoCAD	.program		
		.program			
		Learn about			
		methods of	Methods of fastening		Practical tests
		fastening using	using screws types of		Quarterly exams
2	3	screws, types of	screws, types of nuts.	lecture	final exams
		screws, types of	with a drawing		Daily evaluation
		nuts, and drawing a			
		picture			
		Learn about			
		methods of	Fastening using		Practical tests
		fastening using	screws, types of		Ouarterly exams
3	3	screws, types of	screws, types of nuts.	lecture	final exams
		screws, types of	with a drawing		Daily evaluation
		nuts, and drawing a	5		, , , , , , , , , , , , , , , , , , ,
		picture			
		Recognizing the	F (' '		
		connection using	Fastening using		Practical tests
4	3	threads, their types,	threads, their types,	lecture	Quarterly exams
		uses, and drawing	uses, drawing an		final exams
		an assembly	assembly drawing		Daily evaluation
		drawing			
		Recognizing			Dragtical tests
		threads, their types	rastening using		Practical tests
5	3	uneaus, then types,	uneads, then types,	lecture	quarterry exams
		uses, and drawing	uses, drawing an		Doily evoluation
		drowing	assembly drawing		Daily evaluation
		Recognizing			
		fastening by	Connection by		
		welding welding	welding welding		Practical tests
6	3	symbols drawing of	symbols assembly	lecture	Quarterly exams
0	5	an assembly plate	plate drawing with	lecture	final exams
		with welding	welding symbols		Daily evaluation
		symbols	wereing symbols		
		Connection by	Connection by		
		welding, welding	welding, welding		Practical tests
7	3	symbols, assembly	symbols, assembly	lecture	Quarterly exams
		plate drawing with	plate drawing with		tinal exams
		welding symbols	welding symbols		Daily evaluation
	1	Identifying	6 ,		
		fastening using	Fastening by rivet.		
		rivets, shapes of	shapes of rivet nails.		Practical tests
8	3	rivet nails, types of	types of fastening by	lecture	Quarterly exams
		fastening with	rivet, drawing an	-	final exams
		rivets, drawing an	assembly plate		Daily evaluation
		assembly plate	7 1		
		Identifying	Fastening by rivet,		Practical tests
9	3	fastening using	shapes of rivet nails,	lecture	Quarterly exams
		rivets, shapes of	types of fastening by		final exams
		rivets, shapes of	types of fastening by		final exams

		rivet nails, types of fastening with rivets, drawing an assembly plate	rivet, drawing an assembly plate		Daily evaluation
10	3	Identification plate applied to the segmentation and assembly of a mechanical crane	Application board for segmentation and assembly of mechanical crane	lecture	Practical tests Quarterly exams final exams Daily evaluation
11	3	Identify springs, their types, uses, and draw a picture of a compression . spring	Springs, their types, uses, drawing of a . compression spring	lecture	Practical tests Quarterly exams final exams Daily evaluation
12	3	Recognizing an applied panel drawing for exhaust valve segmentation and assembly	Drawing an applied panel for segmenting and assembling the . exhaust valve	lecture	Practical tests Quarterly exams final exams Daily evaluation
13	3	Identify the types of column connections (couplings), and draw an applied drawing	Column connections (couplings), types, drawing of an applied . plate	lecture	Practical tests Quarterly exams final exams Daily evaluation
14	3	Identify clutches, their types and uses, and draw an applied . drawing	Clutches, their types and uses, with an . applied drawing	lecture	Practical tests Quarterly exams final exams Daily evaluation
15	3	Identify bearings, drawing an assembly plate for a friction bearing	Loading chairs, assembly drawing of a friction loading chair	lecture	Practical tests Quarterly exams final exams Daily evaluation
16	3	Identify pulleys and belts, their types and uses, and draw two drawings to assemble parts containing belt wheels of different .types	Pulleys and belts, their types and uses, with two drawings for assembling parts containing belt wheels of different types	lecture	Practical tests Quarterly exams final exams Daily evaluation
17	3	Identifying the types of gears, gears, basic definitions, drawing of the gear with an assembly plate for .engaging the gear	Types of gears, gears, basic definitions, drawing of the gear with an assembly plate for engaging the gear	lecture	Practical tests Quarterly exams final exams Daily evaluation
18	3	Identifying the types of gears, gears, basic	Types of gears, gears, basic definitions, drawing of the gear	lecture	Practical tests Quarterly exams final exams

		definitions,	with an assembly plate		Daily evaluation
		drawing of the gears with an assembly plate for . engaging the gears	for engaging the gear		
19	3	Identify bevel gears, with a drawing of an assembly plate for the bevel gear engagement	Bevel gears, with a drawing of the assembly plate for the bevel gear engagement	lecture	Practical tests Quarterly exams final exams Daily evaluation
20	3	Identify bevel gears, with a drawing of an assembly plate for the bevel gear engagement	Bevel gears, with a drawing of the assembly plate for the bevel gear engagement	lecture	Practical tests Quarterly exams final exams Daily evaluation
21	3	Learn an introduction to the Autodesk Inventor . program	Introduction to . Autodesk Inventor	lecture	Practical tests Quarterly exams final exams Daily evaluation
22	3	Learn an introduction to the Autodesk Inventor . program	Introduction to . Autodesk Inventor	lecture	Practical tests Quarterly exams final exams Daily evaluation
23	3	Getting to know the 2D drawing . environment	2D drawing . environment	lecture	Practical tests Quarterly exams final exams Daily evaluation
24	3	Learn about the assembly . environment	Assembly environment	lecture	Practical tests Quarterly exams final exams Daily evaluation
25	3	Learn about the assembly . environment	Assembly environment	lecture	Practical tests Quarterly exams final exams Daily evaluation
26	3	Learn about the dynamic analysis environment and . movement	Dynamic and motion . analysis environment	lecture	Practical tests Quarterly exams final exams Daily evaluation
27	3	Learn about the dynamic analysis environment and . movement	Dynamic and motion . analysis environment	lecture	Practical tests Quarterly exams final exams Daily evaluation
28	3	Identifying vectors direct and) quantitative multiplication and	Vectors (direct and quantitative multiplication and calculating angles .(between vectors	lecture	Practical tests Quarterly exams final exams Daily evaluation

		calculating angles				
29	3	Learn about the additions to the fees	Addition	s to fees	lecture	Practical tests Quarterly exams final exams Daily evaluation
30	3	Identifying a project within the jurisdiction of the concerned department for part of any practical . system	A project v jurisdictic relevant dep part of any syst	vithin the on of the artment for practical em	lecture	Practical tests Quarterly exams final exams Daily evaluation
Course	e Evalua	ation				
Distrib	ution of g	grades out of 100 for the	e semester exa	ms, continuo	ous assessme	ent, and final exam
Learni	ing and	Teaching Resources	5			
Requi	red textl	books (curricular bo	oks, if any)	، الراضي	مهندس يوسف	الرسم الصناعي للم
Main	referenc	es (sources)				
Recon (scient	nmende tific jou	d books and rnals, reports)	references	A colle	ction of bo mechanica	ooks in the field o al drawing
Electro	onic Re	ferences, Websites		Chec	k out webs	sites in this field

			Course Description Form	1		
1.	Course	Name:				
			English language1			
2	Course	Code:				
	course	0000				
3	Semest	er / Year				
	Semest		First and second semester / firs	t vear		
Δ	Descrir	tion Prenaration	Date:	t year		
т.	Desemp		20-2-2023			
5	Availat	la Attendance F	0rms:			
J.	Availat		Mondatory attendance	voobly		
6	Numbo	r of Cradit Hour	(Total) / Number of Units (T	otal		
0.	Truinde			otal)		
7	C	- 1	In/ 2 units			
1.	Course	administrator's i	name (mention all, if more that	i one name)		
			Name: Katal Salah No	oori		
			Email: <u>rafal.noori@atu.e</u>	<u>edu.1q</u>		
	a	011				
8.	Course	Objectives				
Course	Objectives	11	e student will be able to:			
	Ū	1.	Learn about Understand the basic princ	ciples and gramma	ar of the language	
	U	1.	Learn about Understand the basic princ	riples and gramma	ar of the language	
	T 1. '.	1.	Learn about Understand the basic princ	iples and gramm	ar of the language	
<u>9.</u>	Teachin	1. ng and Learning	Learn about Understand the basic princ Strategies	iples and gramm	ar of the language	
9. Strategy	Teachin	1. ng and Learning 1. Academic lect 2. Open discussi	Learn about Understand the basic princ Strategies ures. ons.	iples and gramm	ar of the language	
<u>9.</u> Strategy	Teachin	1. ng and Learning 1. Academic lect 2. Open discussi 3. Attempts to se	Learn about Understand the basic princ Strategies ures. ons. olve exercises according to the required o	ciples and gramma	ar of the language	
9. Strategy	Teachin	1. ng and Learning 1. Academic lect 2. Open discussi 3. Attempts to set	Learn about Understand the basic princ Strategies ures. ons. olve exercises according to the required o	equations using th	ar of the language	
9. Strategy 10. C	Teachin	1. ng and Learning 1. Academic lect 2. Open discussi 3. Attempts to so tructure	Learn about Understand the basic princ Strategies ures. ons. olve exercises according to the required o	iples and gramm	ar of the language	
9. Strategy 10. C Week	Teachin ourse S	1. ng and Learning 1. Academic lect 2. Open discussi 3. Attempts to so tructure Required	Learn about Understand the basic princ Strategies ures. ons. olve exercises according to the required of Unit or subject name	equations using th	ar of the language he problem-solving met Evaluation	
9. Strategy 10. C Week	Teachin ourse S Hours	1. ng and Learning 1. Academic lect 2. Open discussi 3. Attempts to so tructure Required Learning	Learn about Understand the basic princ Strategies ures. ons. olve exercises according to the required of Unit or subject name	equations using th Learning method	ar of the language he problem-solving met Evaluation method	
9. Strategy 10. C Week	Teachin ourse S Hours	1. ng and Learning 1. Academic lect 2. Open discussi 3. Attempts to so tructure Required Learning Outcomes The student	Learn about Understand the basic print Strategies ures. ons. olve exercises according to the required of Unit or subject name Hollo (om one is) How one you?	equations using th Learning method	e problem-solving met Evaluation method	
9. Strategy 10. C Week	Teachin ourse S Hours	1.ng and Learning1. Academic lect2. Open discussi3. Attempts to sotructureRequiredLearningOutcomesThe studentunderstands the	Learn about Understand the basic prino Strategies ures. ons. olve exercises according to the required of Unit or subject name Hello,(am ,are ,is),How are you? Good Morning.	equations using th Learning method lecture And	e problem-solving met Evaluation method Exams And	
9. Strategy 10. C Week	Teachin ourse S Hours	1.ng and Learning1. Academic lect2. Open discussi3. Attempts to settructureRequiredLearningOutcomesThe studentunderstands thecontent and can	Learn about Understand the basic prino Strategies ures. ons. olve exercises according to the required of Unit or subject name Hello,(am ,are ,is),How are you? Good Morning,	equations using the Learning method lecture And solve problems	e problem-solving met Evaluation method Exams And Practical report	
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<u>9.</u> Strategy 10. C Week	Teachin ourse S Hours	1. ng and Learning 1. Academic lect 2. Open discussi 3. Attempts to set tructure Required Learning Outcomes The student understands the content and can complete the applicable exercises. The student understands the content and	Learn about Understand the basic print Strategies ures. ons. olve exercises according to the required of Unit or subject name Hello,(am ,are ,is),How are you? Good Morning, What s' this in English, Numbers1_10 This is	equations using the Learning method lecture And solve problems lecture And solve problems	e problem-solving met Evaluation method Exams And Practical report Exams And Practical report	
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		complete the			
		applicable exercises			
		The student	All about you ,Jobs ,(am ,are ,is) ,	lecture	Exams
	1	understands the	Negatives and question,	And	And Dreatical report
	1	complete the		solve problems	Practical report
5		applicable exercises			
		The student	Personal information ,social	lecture	Exams
		understands the	expressions.	And	And
	1	content and can		solve problems	Practical report
6		complete the			
0		The student	My family and friends (our their)	lecture	Fyams
		understands the	possessive s'.	And	And
	1	content and can	F	solve problems	Practical report
		complete the		-	
7		applicable exercises			
		The student	has ,has, The alphabet.	lecture	Exams
	1	content and can		Allu solve problems	Allu Practical report
	1	complete the		solve problems	Tractical report
8		applicable exercises			
		The student	The way I live, sports ,food,	lecture	Exams
		understands the	drinks,(present simple- I, you, we,	And	And
	1	content and can	they.).	solve problems	Practical report
0		complete the			
,		The student	Languages and nationalities	lecture	Exams
		understands the	, (A ,an), Numbers and prices.	And	And
	1	content and can		solve problems	Practical report
		complete the			
10		applicable exercises	Energy day, the times (Alexand	1	Energy
		understands the	Every day, the time, (Always,	And	And
	1	content and can	sometimes, ivever).	solve problems	Practical report
		complete the		<u>r</u>	···· · · · · · · · · · · · · · · · · ·
11		applicable exercises			
		The student	Words that go together, Day of the	lecture	Exams
	1	understands the	week.	And	And Dreatical report
	1	complete the		solve problems	Practical report
12		applicable exercises			
		The student	My favourites , Question words	lecture	Exams
		understands the	,(me ,him, us, them)	And	And
	1	content and can		solve problems	Practical report
12		complete the			
13		The student	This That Adjectives Can I ?	lecture	Exams
		understands the	The since of Aujectives, Call I	And	And
	1	content and can		solve problems	Practical report
		complete the			
14		applicable exercises			
		The student	Where I live, Rooms and Furniture.	lecture	Exams
	1	content and can		Allu solve problems	Allu Practical report
	1	complete the		solve problems	Therear report
15		applicable exercises			
		The student	Prepositions, Directions.	lecture	Exams
	1	understands the		And	And
16		content and can		solve problems	Practical report

		complete the			
		applicable exercises			
		The student	Times past , saying years, Was	lecture	Exams
		understands the	,Were ,born .	And	And
	1	content and can		solve problems	Practical report
17		complete the			
17		The student	Doct Simple innoulan Varba	laatura	Exome
		understands the	rast Shiple – irregular verbs.	And	And
	1	content and can		solve problems	Practical report
		complete the			
18		applicable exercises			
		The student	Have , Do, Go, When s' your Birth	lecture	Exams
		understands the	Day ?	And	And
	1	content and can		solve problems	Practical report
19		applicable exercises			
17		The student	Negatives and pronunciation.	lecture	Exams
		understands the	rogent of and brondinger	And	And
	1	content and can		solve problems	Practical report
		complete the			
20		applicable exercises		1	
		The student	We Had a Great time, Past Simple-	lecture	Exams
	1	content and can	regular and irregular.	Allu solve problems	Allu Practical report
	1	complete the		solve problems	Tractical report
21		applicable exercises			
		The student	Question and Negatives ,		
		understands the			
	1	content and can			
22		complete the			
22		The student	Sport and leisure Going	lecture	Exams
		understands the	Sightseeing.	And	And
	1	content and can	8 8	solve problems	Practical report
		complete the			
23		applicable exercises		1	
		The student	I Can doThat ! Can/ Can't	lecture	Exams
	1	content and can		solve problems	Allu Practical report
	1	complete the		sorve problems	Theorem Toport
24		applicable exercises			
		The student	Adverbs , Adjective and Noun.	lecture	Exams
	_	understands the	Every day Poblems.	And	And
	1	content and can		solve problems	Practical report
25		applicable exercises			
		The student	The Internet	lecture	Exams
		understands the		And	And
	1	content and can		solve problems	Practical report
		complete the			
26		applicable exercises		lastura	Evoma
		ine student	riease and I hank you, I'd like –	And	Exams
	1	content and can	all around.	solve problems	Practical report
		complete the		r	r
27		applicable exercises			
		The student	Here and Now ,Colours and	lecture	Exams
20	1	understands the	Clothes , Present Continuous.	And	And
28		content and can		solve problems	Practical report

		complete the			
		applicable exercises			
		The student	Opposite verbs, What s' the	lecture	Exams
		understands the	Matter?	And	And
	1	content and can		solve problems	Practical report
		complete the			
29		applicable exercises			
		The student	It s' Time to go ! Future plans ,	lecture	Exams
		understands the	Grammar revision Vocabulary	And	And
	1	content and can	revision, Social expressions.	solve problems	Practical report
		complete the			
30		applicable exercises			
11.C	ourse E	valuation			
Evalua	tion is d	one through:			
1. Daily	y, monthl	y and annual examin	nations.		
2. Inter	action an	d group participation	n in discussing and solving exercis	ses.	
12.L	earning	and Teaching Re	sources		
	1	. John, Liz Soars	Mike Sayer, Head way, f "	English Cours	e", Ox ford

University, Fourth edition .

			Course Description For	m	
13.	Course	Name:			
			Human rights and democ	racy	
14.	Course	Code:	0	.	
15.	Semest	er / Year:			
			First and second semester / Fi	rst year	
16.	Descrip	tion Preparatio	n Date:		
			20-2-2023		
17.	Availat	le Attendance	Forms:		
			Mandatory attendance	weekly	
18.	Numbe	r of Credit Hou	rs (Total) / Number of Units ('	Fotal)	
			2 h/ 4 units		
19.	Course	administrator's	name (mention all, if more that	an one name)	
			Name: Haider Jawad Kaze	m	
		Th	e email address : hayder.mukh	it@atu.edu.iq	1
20.	Course	Objectives			
Course	Objectives]	The student will be able to:	ad nublic vichte er	ad fucadama
		1	. The student must be able to understand	e types of rights a	nd democratic systems
		3	. To be able to define democracy and its	types	·
21.	Teachir	ng and Learning	Strategies		
Strategy	7	The style of aca	ndemic lectures.		
		Z. UDEII (IISCIIS)	SIGHS.		
		3. Short and or	al tests .		
		3. Short and or	al tests .		
22. C	ourse S	3. Short and or	al tests .		
22. C Week	ourse S Hours	2. Open discuss 3. Short and or tructure Required	al tests . Unit or subject name	Learning	Evaluation
22. C Week	ourse S Hours	2. Open discuss 3. Short and or tructure Required Learning	al tests . Unit or subject name	Learning method	Evaluation method
22. C Week	ourse S Hours	2. Open discuss 3. Short and or tructure Required Learning Outcomes The student	Unit or subject name	Learning method	Evaluation method
22. C Week	ourse S Hours	2. Open discuss 3. Short and or tructure Required Learning Outcomes The student understands the	al tests . Unit or subject name Human rights, their definition, and goals	Learning method	Evaluation method Exams And
22. C Week	ourse S Hours	2. Open discuss 3. Short and or tructure Required Learning Outcomes The student understands the content and can content and can	Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations,	Learning method	Evaluation method Exams And Practical report
22. C Week	ourse S Hours	2. Open discuss 3. Short and or tructure Required Learning Outcomes The student understands the content and can complete the applicable exercises	Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian .	Learning method	Evaluation method Exams And Practical report
22. C Week	ourse S Hours	2. Open discuss 3. Short and or tructure Required Learning Outcomes The student understands the content and can complete the applicable exercises The student	Iteration Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization .	Learning method	Evaluation method Exams And Practical report Exams
22. C Week	ourse S Hours 2	2. Open discuss 3. Short and or tructure Required Learning Outcomes The student understands the content and can complete the applicable exercises The studer understands th	Iteration Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization .	Learning method lecture lecture	Evaluation method Exams And Practical report Exams And Exams
22. C Week	ourse S Hours 2 2	2. Open discuss 3. Short and or tructure Required Learning Outcomes The student understands the content and can complete the applicable exercises The studer understands th content and content and content and content and complete th	al tests . Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization . ten ne Human rights in divine laws, with a focus on human rights in Islam	Learning method lecture lecture	Evaluation method Exams And Practical report Exams And Practical report
22. C Week	ourse S Hours 2 2	2. Open discuss 3. Short and or attraction Required Learning Outcomes The student understands the content and can complete the applicable exercises The studer understands the content and content and content and content and complete the applicable exercises	al tests . Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization . Civilization Human rights in divine laws, with a focus on human rights in Islam	Learning method lecture lecture	Evaluation method Exams And Practical report Exams And Practical report
22. C Week	ourse S Hours 2 2	2. Open discuss 3. Short and or 3. Short and or tructure Required Learning Outcomes The student understands the content and can complete the applicable exercises The studer understands th content and complete th applicable exercises The studer understands understands th understands th	al tests . Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization . team Human rights in divine laws, with a focus on human rights in Islam team Human rights in contemporary and modern bistory interactions!	Learning method lecture lecture lecture lecture lecture	Exams And Practical report Exams And Practical report Exams And Practical report
22. C Week	ourse S Hours 2 2 2	2. Open discuss 3. Short and or 3. Short and or Itructure Required Learning Outcomes The student understands the content and can complete the applicable exercises The studer understands th content and ca complete th applicable exercises The The studer understands th content and ca complete th applicable exercises The studer understands th content and ca complete and ca complete studer and content and ca content and ca	al tests . Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization . Human rights in divine laws, with a focus on human rights in Islam t Human rights in contemporary and modern history: international recognition of human rights since	Learning method lecture lecture lecture lecture	Evaluation method Exams And Practical report Exams And Practical report Exams And Practical report Exams And Practical report
22. C Week	ourse S Hours 2 2 2	2. Open discuss 3. Short and or 3. Short and or Itructure Required Learning Outcomes The student understands the content and can complete the applicable exercises The studer understands th content and ca complete th applicable exercises The studer understands th content and ca complete th ca content and ca <td>al tests . Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization . tee Human rights in divine laws, with a focus on human rights in Islam tt Human rights in contemporary and modern history: international recognition of human rights since world War I and the League of</td> <td>Learning method lecture lecture lecture lecture</td> <td>Evaluation method Exams And Practical report Exams And Practical report Exams And Practical report Exams And Practical report</td>	al tests . Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization . tee Human rights in divine laws, with a focus on human rights in Islam tt Human rights in contemporary and modern history: international recognition of human rights since world War I and the League of	Learning method lecture lecture lecture lecture	Evaluation method Exams And Practical report Exams And Practical report Exams And Practical report Exams And Practical report
22. C Week	ourse S Hours 2 2 2 2	2. Open discuss 3. Short and or 3. Short and or tructure Required Learning Outcomes The student understands the content and can complete the applicable exercises The student understands the outcomes The studer understands the applicable exercises The understands the applicable exercises The studer understands the applicable exercises The studer understands the content and complete the applicable exercises	al tests . Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization . thuman rights in divine laws, with a focus on human rights in Islam thuman rights in contemporary and modern history: international recognition of human rights since tele Human rights in divine laws, with a focus on human rights in Islam	Learning method lecture lecture lecture	Evaluation method Exams And Practical report Exams And Practical report Exams And Practical report Exams And Practical report Exams And Practical report
22. C Week	ourse S Hours 2 2 2	2. Open discuss 3. Short and or 3. Short and or Itructure Required Learning Outcomes The student understands the content and can complete the applicable exercises The studen understands th content and ca complete th applicable exercises The studen understands th content and ca complete th applicable exercises The studen understands understands th content understands th content understands th content understands th content understands th content and ca complete th th understands th th understands th understands	al tests . Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization . <	Learning method lecture lecture lecture lecture lecture lecture lecture lecture	Evaluation method Exams And Practical report Exams And Practical report
22. C Week	ourse S Hours 2 2 2 2 2	2. Open discuss 3. Short and or 3. Short and or Itructure Required Learning Outcomes The student understands the content and can complete the applicable exercises The studen understands th content and ca complete th applicable exercises The studen understands th content and ca complete th applicable exercises The studen th understands th ca complete th applicable exercises The studen th understands th ca complete th applicable exercises The studen th understands th ca complete th ca content and ca <tr< td=""><td>al tests . Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization . <</td><td>Learning method lecture lecture lecture lecture lecture lecture</td><td>Evaluation method Exams And Practical report Exams And Practical report</td></tr<>	al tests . Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization . <	Learning method lecture lecture lecture lecture lecture lecture	Evaluation method Exams And Practical report Exams And Practical report
22. C Week	ourse S Hours 2 2 2 2 2 2	2. Open discuss 3. Short and or 3. Short and or Itructure Required Learning Outcomes The student understands the content and can complete the applicable exercises The studer understands th content and ca complete th applicable exercises The studer understands th content and ca complete th applicable exercises The studer understands th content and understands th content and ca complete th applicable exercises The studer understands th content and ca content and ca content and ca	al tests . Unit or subject name Human rights, their definition, and goals Human rights in ancient civilizations, especially the Mesopotamian civilization . <	Learning method lecture lecture lecture lecture lecture lecture	Evaluation method Exams And Practical report Exams And Practical report

		complete the applicable exercises	African Charter on Human Rights Arab Charter on Human Rights ,1981 1994			
5	2	The student understands the content and can complete the applicable exercises	Non-governmental organizations and human rights (International Committee of the Red Cross, Amnesty International, Human Rights Watch, National Human (Rights Organizations	lecture	Exams And Practical report	
6	2	The student understands the content and can complete the applicable exercises	Human rights in Iraqi constitutions between theory and reality	lecture	Exams And Practical report	
7	2	The student understands the content and can complete the applicable exercises	The relationship between human :rights and public freedoms In the Universal -1 Declaration of Human Rights In regional charters and national constitutions	lecture	Exams And Practical report	
8	2	The student understands the content and can complete the applicable exercises	Economic, social, cultural and civil human rights	lecture	Exams And Practical report	
9	2	The student understands the content and can complete the applicable exercises	Modern human rights: facts in development, the right to a clean environment, the right to solidarity, the right to religion	lecture	Exams And Practical report	
10	2	The student understands the content and can complete the applicable exercises	Guarantees of respect and protection of human rights at the national level, guarantees in the constitution and laws, guarantees in the principle of .the rule of law Guarantees in constitutional oversight, guarantees in freedom of the press and public opinion, the role of non-governmental organizations in respecting and protecting human .rights	lecture	Exams And Practical report	
11	2	The student understands the content and can complete the applicable exercises	Guarantees, respect and protection of human rights at the international :level The role of the United - Nations and its specialized agencies in providing guarantees The role of regional - organizations (the Arab League, the European Union, the African Union, the Organization of American States, the (ASEAN Organization The role of international, regional non-governmental organizations and public opinion in respecting and protecting human rights	lecture	Exams And Practical report	

12	2	The student understands the content and can complete the applicable exercises	The general theory of freedoms: the origin of rights and freedoms, the legislator's position on declared rights and freedoms, and the use of .the term public freedoms	lecture	Exams And Practical report
13	2	The student understands the content and can complete the applicable exercises	The legal base of the legal state	lecture	Exams And Practical report
14	2	The student understands the content and can complete the applicable exercises	Regulation of public freedoms by public authority	lecture	Exams And Practical report
15	2	The student understands the content and can complete the applicable exercises	Equality: The historical development of the concept of equality The modern development of the concept of equality gender equality Equality between individuals according to their beliefs and race	lecture	Exams And Practical report
16	2	The student understands the content and can complete the applicable exercises	Democracy, its definition, types	lecture	Exams And Practical report
17	2	Thestudentunderstandsthecontentandcompletetheapplicableexercises	Concepts of democracy	lecture	Exams And Practical report
18	2	The student understands the content and can complete the applicable exercises	Democracy in the third year	lecture	Exams And Practical report
19	2	The student understands the content and can complete the applicable exercises	Democratic systems in the world	lecture	Exams And Practical report
20	2	Thestudentunderstandsthecontentandcompletetheapplicable exercises	The concept of freedoms, classification of public freedoms	lecture	Exams And Practical report
21	2	Thestudentunderstandsthecontentandcompletetheapplicable exercises	Fundamental freedoms, intellectual freedoms, economic and social freedoms	lecture	Exams And Practical report
22	2	Thestudentunderstandsthecontentandcompletetheapplicableexercises	Freedom, security and feeling of reassurance Freedom to come and go		
23	2	Thestudentunderstandsthecontentandcan	Freedom of education, freedom of the press, freedom of assembly	lecture	Exams And Practical report

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1. Daily, monthly and annual examinations.							
Khaled, Hamid Hanoun/Human Rights 2015							

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Course N	lame:						
Metallur	Metallurgy						
Course C	Code:						
Semester	:/Year:						
First and	second	semester / second year					
Descripti	ion Prep	aration Date:					
2024/2/1	9						
Available	e Attend	lance Forms:					
Daily atte	endance	according to the weekly so	chedule				
Number	of Credi	t Hours (Total) / Number of	of Units (Total)				
4 hours/8	3 units						
Course a	dministı	rator's name (mention all, if	f more than one	name)			
Name: R	oaa Mol	hammed Muneer Email:	roaa.muneer@	atu.edu.iq			
Course C	Dbjective	28					
Course	Provid	ling the student with sufficient knowl	edge of the types of 1	netals and alloys, t	heir mechanical		
Objectives	formir	ties, crystal structure, and the variou or processes.	s types of defects the	at occur during the	processing and		
	101111	Providing the student with sufficient	nt knowledge and ski	ll in studying heat	treatments, how		
		to implement them, and their effect	t on the properties and	d structure of metal	ls.		
		tests and working on their devices	to implement them pr	actically and draw	their curves.		
		Providing the student with suffi	cient knowledge an	d skill in workin	g with various		
	Duran	microscopes to examine the compo	osition of minerals		1		
	of all	kinds, in addition to knowledge of co	provide and skill in perior	of preventing it. a	nd finally metal		
	recycl	ing.		i	, , , , , , , , , , , , , , , , , , ,		
Teaching	g and Le	arning Strategies					
Strategy	Ex	planation on the board - presen	tation – organizat	ion with studen	ts - training -		
<u> </u>	dis	cussion					
Course S	tructure		T T •4	. .			
Week	Hours	Required Learning	Unit or subject name	Learning	Evaluation		
			subject name	methou	Daily		
		Introduction to mineralogy, crystallization chimeric		lecture	test		
1	2	crystallization, and the effect of	Metallurgy	- Laboratory	-Direct		
		cooling rate on the structure of		experiments	- Laboratory		
		minerals.			experiments		
					Daily		
	_	Installation of metal blocks		lecture	test -Direct		
2	2	(solidification of castings)	Metallurgy	- Laboratory	questions		
		common derects in castings.		experiments	- Laboratory		
		Atomic crowding coefficient			experiments Daily		
2	2	crystallographic directions,	Motollurar	lecture	test		
5	2	crystallographic levels, the	wietanurgy	- Laboratory experiments	-Direct		
		phenomenon of rooting.		1	questions		

					- Laboratory
					experiments
4	2	Crystalline, point, linear lattice defects.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
5	2	Flexible forming and plastic forming (sliding, twinning)	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
6	2	Strain hardening, cold forming, hot forming.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
7	2	Recovery, recrystallization, crystal growth.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
8	2	Stress and strain curves in bending, stretching, fracture, types of fracture, movement from ductile to brittle fracture.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
9	2	Fatigue, fatigue mechanism, factors affecting the fatigue limit, fatigue-resistant materials.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
10	2	Creep, creep mechanism, creep- resistant materials.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
11	2	Compound, phase, solid solution, system, equilibrium, alloy formation, mechanical mixture, eutectics.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
12	2	Thermal equilibrium diagram for a binary system that is completely dissolved in the liquid and solid states. Thermal equilibrium diagram for a binary system that is completely dissolved in the liquid state and undissolved in the solid state (eutectic).	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
13	2	Thermal equilibrium diagram for a binary system with complete	Metallurgy	lecture - Laboratory experiments	Daily test

		solvation in the liquid state and limited solvation in the solid state.			-Direct questions - Laboratory experiments
14	2	Thermal equilibrium diagram for a binary system that is completely dissolved in the liquid state and forms a chemical compound when frozen.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
15	2	Iron, dissolution of carbon in iron, heat equilibrium diagram for the iron/carbon system, the most important reactions included in the diagram.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
16	2	Completion of the heat equilibrium diagram for the iron/carbon system.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
17	2	Austenite formation, mechanism of converting pearlite to austenite.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
18	2	Austenite transformations with constant temperature and transformations by continuous cooling.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
19	2	Thermal treatments (annealing, equalization, tempering)	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
20	2	Completion of thermal treatments (hardening and review), sub-zero thermal treatments, and aging.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
21	2	Surface hardening (carburization of all types and the thermal treatments that follow it) Al- Tahwah, Al-Sanida.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
22	2	Alloy steel, the effect of alloying elements on the properties of steel.	Metallurgy	lecture - Laboratory experiments	Daily test -Direct questions - Laboratory experiments
23	2	Stainless steel, tool steel.	Metallurgy	lecture - Laboratory experiments	Daily test

						Direct
						-Direct
						- Laboratory
						experiments
						Daily
		~			lecture	test
24	2	Cast iron production	and its heat	Metallurgy	- Laboratory	-Direct
		treatment	s.	25	experiments	questions
						- Laboratory
						Daily
		C 1	1		1	test
25	2	cast iron and its mo	st important	Metalluray	- Laboratory	-Direct
23	2	types.	st important	Wietantargy	experiments	questions
		51			I I I I I	- Laboratory
						experiments
		Definition of corrosi	on direct and			test
2.6	2	indirect economi	c costs of		lecture	-Direct
26	2	corrosion, manife	stations of	Metallurgy	- Laboratory	questions
		corrosion, mechanism	n of corrosion.		experiments	- Laboratory
						experiments
						Daily
		Passivity, Faraday's	law general		lecture	test Direct
27	2	corrosion, galvanic	c corrosion, rosion.	Metallurgy	- Laboratory	-Direct
		cavernous corr			experiments	- Laboratory
						experiments
						Daily
		Soil corrosion f	ocultative		lecture	test
28	2	corrosion, interc	crystalline ess corrosion.	Metallurgy	- Laboratory experiments	-Direct
		corrosion, and stres				questions
						- Laboratory
						Daily
					1 /	test
20	2	Optimal material sele	ction, contour	Motalluray	L aboratory	-Direct
29	2	softening, design an	d operation.	Wietanuigy	experiments	questions
						- Laboratory
						experiments
						Dally
• •					lecture	-Direct
30	2	Methods of corrosion	on prevention.	Metallurgy	- Laboratory	questions
					experiments	- Laboratory
						experiments
Course E	Evaluation	on				
Distributio	on of the	score from $100 =$	(25 for the	first semester +	25 for the seco	nd semester)
according	to the tas	sks assigned to the	student, such	as daily prepara	tion, daily, oral,	monthly and
written ex	ams, repo	orts, etc. $+$ (50 final))			2
Learnino	and Te	aching Resource	S			
Dequired toythooks (ourrigular Materials Engineering Principles book/Dr Hussein Ragin						
hooks if any)						
Main references (sources) Engineering metallurgy (pert1) Higgins						
Metallurgy for engineering /Rollason						
Engineering physical metallurgy						
Recomme	nded boo	ks and references	Engir	neering materials and	d their tests/Dr. Qah	tan Al Khazraji
(scientific	iournals	reports)	Engineering metrology/Dr. Arif Abu Safia			
, serentine	Joannais,		Engir	neering metrology/D	r. Abdul Razzaq Ist	mail

	- Principles of mineralogy/Dr. Adel Mahmoud Hassan
Electronic References, Websites	http://www.phase-trans.msm.cam.ac.uk/dendrites.html

1. Course Name:

Crimes of the defunct Baath Party

2. Course Code:

3. Semester / Year:

First and second semester / second year

4. Description Preparation Date:

11/3/2024

5. Available Attendance Forms:

Attend a lecture

6. Number of Credit Hours (Total) / Number of Units (Total):

1 hr / 2 units

7. Course administrator's name (mention all, if more than one name)

Name: Haider Jawad Kazem Email: hayder@atu.edu.iq

8. Course Object	ives
Course Objectives Studying the Crimes of the defunct Baath Party	

9. Teaching and Learning Strategies

Strategy	1. Identify the political regimes that ruled Iraq during the past ten decades
	2. Identify and understand the deviant ideas adopted by the Baath in state
	administration
	3. That the student will be able to identify the repressive policies followed by the
	Baathist regime
	4. The student should understand the impact of the deviant behaviors of the Baath
	Party on the social life of individuals

5. To learn about the crimes committed by the Baath during its time in power

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	Identify A brief overview of the political systems in Iraq (1921-2003)	A brief overview of the political systems in Iraq (1921-2003) "The monarchy, the	lecture	Written tests Quarterly exams final exams Daily evaluation

	1		~ • • • • • • • •		1
		"The monarchy, the Republican era (1958-1968), the Republican era (Baathist 1968- 2003)	Republican era (1958- 1968), the Republican era (Baathist 1968- 2003)		
2	1	A brief overview of the political systems in Iraq (1921-2003) "The monarchy, the Republican era (1958-1968), the Republican era (Baathist 1968- 2003)	A brief overview of the political systems in Iraq (1921-2003) "The monarchy, the Republican era (1958- 1968), the Republican era (Baathist 1968- 2003)	lecture	Written tests Quarterly exams final exams Daily evaluation
3	1	The Baathist regime's violations of public rights and freedoms "violation of intellectual rights and public freedoms, violation of intellectual rights, violation of public freedoms, violation of the right to party pluralism."	The Baathist regime's violations of public rights and freedoms "violation of intellectual rights and public freedoms, violation of intellectual rights, violation of public freedoms, violation of the right to party pluralism."	lecture	Written tests Quarterly exams final exams Daily evaluation
4	1	Identify The Baathist regime's violations of public rights and freedoms "violation of intellectual rights and public freedoms, violation of intellectual rights, violation of public freedoms, violation of the right to party pluralism."	The Baathist regime's violations of public rights and freedoms "violation of intellectual rights and public freedoms, violation of intellectual rights, violation of public freedoms, violation of the right to party pluralism."	lecture	Written tests Quarterly exams final exams Daily evaluation
5	1	Identify The Baathist regime's violations of public rights and freedoms "violation of intellectual rights and public freedoms, violation of intellectual rights, violation of public freedoms, violation	The Baathist regime's violations of public rights and freedoms "violation of intellectual rights and public freedoms, violation of intellectual rights, violation of public freedoms, violation of the right to party pluralism."	lecture	Written tests Quarterly exams final exams Daily evaluation

		C (1) 1 ()			
		of the right to party pluralism."			
6	1	Violations of social, political and cultural rights, violation of freedom of opinion, revocation of citizenship, other social rights, violation of cultural rights and freedoms, violation of international law, the first and second Gulf wars, the international blockade on Iraq due to the invasion of Kuwait.	Violations of social, political and cultural rights, violation of freedom of opinion, revocation of citizenship, other social rights, violation of cultural rights and freedoms, violation of international law, the first and second Gulf wars, the international blockade on Iraq due to the invasion of Kuwait.	lecture	Written tests Quarterly exams final exams Daily evaluation
7	1	Identify Violations of social, political and cultural rights, violation of freedom of opinion, revocation of citizenship, other social rights, violation of cultural rights and freedoms, violation of international law, the first and second Gulf wars, the international blockade on Iraq due to the invasion of Kuwait	Violations of social, political and cultural rights, violation of freedom of opinion, revocation of citizenship, other social rights, violation of cultural rights and freedoms, violation of international law, the first and second Gulf wars, the international blockade on Iraq due to the invasion of Kuwait.	lecture	Written tests Quarterly exams final exams Daily evaluation
8	1	IdentifyViolations of social, political and cultural rights, violation of freedom of opinion, revocation of citizenship, other social rights, violation of cultural rights and freedoms, violation of international law, the first and second Gulf wars, the	Violations of social, political and cultural rights, violation of freedom of opinion, revocation of citizenship, other social rights, violation of cultural rights and freedoms, violation of international law, the first and second Gulf wars, the international blockade on Iraq due to the invasion of Kuwait.	lecture	Written tests Quarterly exams final exams Daily evaluation

[]	international			
	blockade on Iraq due to the invasion of Kuwait.			
9 1	Identify The impact of the Baathist regime's behavior on society and its control over the state: random arrests, torture of prisoners, and executions, arbitrary arrest of suspects and torture of prisoners, execution of soldiers and civilians.	The impact of the Baathist regime's behavior on society and its control over the state: random arrests, torture of prisoners, and executions, arbitrary arrest of suspects and torture of prisoners, execution of soldiers and civilians. •	lecture	Written tests Quarterly exams final exams Daily evaluation
10 1	Identify The impact of the Baathist regime's behavior on society and its control over the state: random arrests, torture of prisoners, and executions, arbitrary arrest of suspects and torture of prisoners, execution of soldiers and civilians.	 The impact of the Baathist regime's behavior on society and its control over the state: random arrests, torture of prisoners, and executions, arbitrary arrest of suspects and torture of prisoners, execution of soldiers and civilians. 	lecture	Written tests Quarterly exams final exams Daily evaluation
11 1	Limiting the three powers in the hands of the Baathist regime: separation of powers, ruling powers under the system (executive, legislative and judicial), partisan requirements for limiting power, tyranny in corrupting morals and fighting scholars.	Limiting the three powers in the hands of the Baathist regime: separation of powers, ruling powers under the system (executive, legislative and judicial), partisan requirements for limiting power, tyranny in corrupting morals and fighting scholars.	lecture	Written tests Quarterly exams final exams Daily evaluation
12 1	Limiting the three powers in the hands of the Baathist	Limiting the three powers in the hands of the Baathist regime:	lecture	Written tests Quarterly exams final exams
		F0		

		regime: separation of powers, ruling powers under the system (executive, legislative and judicial), partisan requirements for limiting power, tyranny in corrupting morals and fighting scholars.	separation of powers, ruling powers under the system (executive, legislative and judicial), partisan requirements for limiting power, tyranny in corrupting morals and fighting scholars.		Daily evaluation
13	1	The impact of the transitional period in combating authoritarian politics: The concept of transitional justice and the mechanisms for achieving it. "The concept of transitional justice and its advantages, the goals of transitional justice."	The impact of the transitional period in combating authoritarian politics: The concept of transitional justice and the mechanisms for achieving it. "The concept of transitional justice and its advantages, the goals of transitional justice."	lecture	Written tests Quarterly exams final exams Daily evaluation
14	1	The impact of the transitional period in combating authoritarian politics: The concept of transitional justice and the mechanisms for achieving it. "The concept of transitional justice and its advantages, the goals of transitional justice."	The impact of the transitional period in combating authoritarian politics: The concept of transitional justice and the mechanisms for achieving it. "The concept of transitional justice and its advantages, the goals of transitional justice."	lecture	Written tests Quarterly exams final exams Daily evaluation
15	1	The psychological field: The psychological and social mechanisms used by the previous regime: the phenomenon of scarcity and scarcity, the phenomenon of	The psychological field: The psychological and social mechanisms used by the previous regime: the phenomenon of scarcity and scarcity, the phenomenon of distraction, the mechanism of terror	lecture	Written tests Quarterly exams final exams Daily evaluation

		distraction, the mechanism of terror and intimidation, the mechanism of psychological pressure and punishment, ethnic cleansing, scientific and cultural impoverishment.	and intimidation, the mechanism of psychological pressure and punishment, ethnic cleansing, scientific and cultural impoverishment.		
16	1	Identify The psychological field: The psychological and social mechanisms used by the previous regime: the phenomenon of scarcity and scarcity, the phenomenon of distraction, the mechanism of terror and intimidation, the mechanism of psychological pressure and punishment, ethnic cleansing, scientific and cultural impoverishment	The psychological field: The psychological and social mechanisms used by the previous regime: the phenomenon of scarcity and scarcity, the phenomenon of distraction, the mechanism of terror and intimidation, the mechanism of psychological pressure and punishment, ethnic cleansing, scientific and cultural impoverishment.	lecture	Written tests Quarterly exams final exams Daily evaluation
17	1	The psychological field: The psychological and social mechanisms used by the previous regime: the phenomenon of scarcity and scarcity, the phenomenon of distraction, the mechanism of terror and intimidation, the mechanism of psychological pressure and punishment, ethnic cleansing, scientific and cultural impoverishment	The psychological field: The psychological and social mechanisms used by the previous regime: the phenomenon of scarcity and scarcity, the phenomenon of distraction, the mechanism of terror and intimidation, the mechanism of psychological pressure and punishment, ethnic cleansing, scientific and cultural impoverishment.	lecture	Written tests Quarterly exams final exams Daily evaluation

18	1	Family rule and the reduction of the nation to the personality of the ruler, the dialectic of the ruler and the citizen between hypocrisy and injustice and the promotion of a culture	Family rule and the reduction of the nation to the personality of the ruler, the dialectic of the ruler and the citizen between hypocrisy and injustice and the promotion of a culture	lecture	Written tests Quarterly exams final exams Daily evaluation
19	1	Family rule and the reduction of the nation to the personality of the ruler, the dialectic of the ruler and the citizen between hypocrisy and injustice and the promotion of a culture	Family rule and the reduction of the nation to the personality of the ruler, the dialectic of the ruler and the citizen between hypocrisy and injustice and the promotion of a culture	lecture	Written tests Quarterly exams final exams Daily evaluation
20	1	Religion and the State: Crimes of preventing the dissemination of religious teachings and confiscating science and knowledge. Crimes of preventing the dissemination of religious teachings and confiscating science and knowledge. Crimes of killing scholars and religious youth and banning religious parties. Religious authority and the religious seminary. Banning parties in general and religious parties in particular.	Religion and the State: Crimes of preventing the dissemination of religious teachings and confiscating science and knowledge. Crimes of preventing the dissemination of religious teachings and confiscating science and knowledge. Crimes of killing scholars and religious youth and banning religious parties. Religious authority and the religious seminary. Banning parties in general and religious parties in particular.	lecture	Written tests Quarterly exams final exams Daily evaluation
21	1	Religion and the State: Crimes of preventing the dissemination of religious teachings	Religion and the State: Crimes of preventing the dissemination of religious teachings and confiscating science	lecture	Written tests Quarterly exams final exams Daily evaluation

		and confiscating science and knowledge. Crimes of preventing the dissemination of religious teachings and confiscating science and knowledge. Crimes of killing scholars and religious youth and banning religious parties. Religious authority and the religious seminary. Banning parties in general and religious parties	and knowledge. Crimes of preventing the dissemination of religious teachings and confiscating science and knowledge. Crimes of killing scholars and religious youth and banning religious parties. Religious authority and the religious seminary. Banning parties in general and religious parties in particular.		
22	1	In particular. Religion and the State: Crimes of preventing the dissemination of religious teachings and confiscating science and knowledge. Crimes of preventing the dissemination of religious teachings and confiscating science and knowledge. Crimes of killing scholars and religious youth and banning religious parties. Religious authority and the religious seminary. Banning parties in general and religious parties in particular	Religion and the State: Crimes of preventing the dissemination of religious teachings and confiscating science and knowledge. Crimes of preventing the dissemination of religious teachings and confiscating science and knowledge. Crimes of killing scholars and religious youth and banning religious parties. Religious authority and the religious seminary. Banning parties in general and religious parties in particular.	lecture	Written tests Quarterly exams final exams Daily evaluation
23	1	Culture, media, and the militarization of society: the militarization of the educational institution, the militarization of media discourse, the	Culture, media, and the militarization of society: the militarization of the educational institution, the militarization of media discourse, the	lecture	Written tests Quarterly exams final exams Daily evaluation

		militarization of	militarization of		
		literature and art.	literature and art.		
24	1	Culture, media, and the militarization of society: the militarization of the educational institution, the militarization of media discourse, the militarization of literature and art.	Culture, media, and the militarization of society: the militarization of the educational institution, the militarization of media discourse, the militarization of literature and art.	lecture	Written tests Quarterly exams final exams Daily evaluation
25	1	The impact of oppression and wars on the environment and the population: the use of internationally prohibited weapons and environmental pollution" Halabja - Basra	The impact of oppression and wars on the environment and the population: the use of internationally prohibited weapons and environmental pollution" Halabja - Basra	lecture	Written tests Quarterly exams final exams Daily evaluation
26	1	Scorched Earth Policy: The Battle of the Jassim River and its effects on the environment, burning oil wells, minefields and war remnants, bombing Iraqi cities.	Scorched Earth Policy: The Battle of the Jassim River and its effects on the environment, burning oil wells, minefields and war remnants, bombing Iraqi cities.	lecture	Written tests Quarterly exams final exams Daily evaluation
27	1	Drying the marshes and straw migration: concept and importance, the role of the former regime in drying the marshes, the effects of drying the marshes,	Drying the marshes and straw migration: concept and importance, the role of the former regime in drying the marshes, the effects of drying the marshes,	lecture	Written tests Quarterly exams final exams Daily evaluation
28	1	Destruction of the agricultural and animal environment and radioactive contamination: Dujail, bulldozing palm groves, Basra,	Destruction of the agricultural and animal environment and radioactive contamination: Dujail, bulldozing palm groves, Basra,	lecture	Written tests Quarterly exams final exams Daily evaluation
29	1	Destruction of the agricultural and animal environment and radioactive	Destruction of the agricultural and animal environment and radioactive	lecture	Written tests Quarterly exams final exams Daily evaluation

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		contamination:	contaminati	on: Dujail,				
		palm groves Basra	groves	Basra.				
30	1	Mass graves and bombing of places of worship	Mass graves and bombing of places of worship		lecture	Written tests Quarterly exams final exams Daily evaluation		
11.C	11.Course Evaluation							
Distributing the score out of 100 according to the t preparation, daily oral, monthly, or written exams, rep		asks assigne orts etc	d to the stu	ident such as daily				
12.Le	earning	and Teaching Resou	urces					
Required textbooks (curricular books, if any)			Human rights book					
Main references (sources)			Human rights book		nts book			
Recon (scient	Recommended books and references (scientific journals, reports)			A collection of books in the field of Human rights book		ooks in the field o ghts book		
Electro	Electronic References, Websites			Chec	k out webs	sites in this field		

1. (Course	Name:			
Machir	ne Parts				
2. (Course	Code:			
3. 5	Semeste	er / Year:			
First ar	nd seco	nd semester / second	vear		
4. 1	Descrip	tion Preparation Date	e:		
20/2/20)24	<u> </u>			
5	Availah	le Attendance Forms	•		
	Attend	a lecture	•		
6	Number	c of Credit Hours (To	tal) / Number of Uni	ts (Total)	
	3 hours	/ 6 units			
7 (administrator's name	(mention all if more	than one nam	ne)
, , , , , , , , , , , , , , , , , , ,	Vame: 1	nohammed salih has	san		
	Fmail· 1	ns muhamad@atu ed	u ia		
8 (Course	Objectives	u.iq		
Course	Objectiv	ves machine parts aims	s to explain the role of	mechanical par	ts through mach
Course	Objecti	System, the relation	links them , how to cond	uct some calcula	tions to design th
		parts and to specify	all factors that are affect	ted.	
9. 7	Feachir	g and Learning Strat	egies		
Strateg	y	1 -Identify Riveted	d Joints, Welded Joints a	nd Screwed Join	nts.
		2 -Identify Friction	nal Clutches.		
		3 -Identify Types	of Springs , Design.		
10. Co	ourse St	ructure			
Week	Hours	Required Learning	Unit or subject	Learning	Evaluation
		Outcomes	name	method	Written tests
					Ouarterly
1	2	Review of Strength of	Review of Strength of	laatura	exams
1	5	Materials	Materials	lecture	final exams
					Daily
		Identify Riveted			Written tests
		Joints.Types of	Riveted Joints.Types of		Quarterly
2_3	6	Riveted Joints ,Design	of Riveted Joints, Design	lecture	exams
2-3	0	of Riveted Joints,	Efficiency of Riveted	lecture	final exams
		Efficiency of Riveted	Joints .		Daily
		JUIIIIS .			Written tests
		Identify Welded Joints	Welded Joints Types		Quarterly
4-5	6	Types of welding	of welding Joints	lecture	exams
+ 5	0	Joints ,Design of	,Design of welding	locture	final exams
		welding Joints	Joints		Daily
		Identify Screwed			Written tests
6-7	6	Joints, Design of Bolts	Screwed Joints, Design	lecture	Quarterly
		for Fastening, Design	of Bolts for Fastening,		exams

		of Bolts for Power Transition .	Design of Bolts for Power Transition .		final exams Daily evaluation
8-9	6	Identify Keyed Joints , Types of Key , Design of Sunk Key .	Keyed Joints , Types of Key , Design of Sunk Key .	lecture	Written tests Quarterly exams final exams Daily evaluation
10-11	6	Frictional Clutches, Type of Frictional Clutches , Design of Frictional Clutches.	Frictional Clutches, Type of Frictional Clutches , Design of Frictional Clutches.	lecture	Written tests Quarterly exams final exams Daily evaluation
12-13	6	Types of Springs , Design of Springs	Types of Springs , Design of Springs	lecture	Written tests Quarterly exams final exams Daily evaluation
14-15	6	Types of Belts , Design of Belts.	Types of Belts, Design of Belts.	lecture	Written tests Quarterly exams final exams Daily evaluation
16-17	6	Design of Shafts	Design of Shafts	lecture	Written tests Quarterly exams final exams Daily evaluation
18-19	6	Design of Journal Bearings	Design of Journal Bearings	lecture	Written tests Quarterly exams final exams Daily evaluation
20	3	Selection of Ball Bearings	Selection of Ball Bearings	lecture	Written tests Quarterly exams final exams Daily evaluation
21-22	6	Design of Gears by Lewis Equation	Design of Gears by Lewis Equation	lecture	Written tests Quarterly exams final exams Daily evaluation
23-24	6	Gears Trains	Gears Trains	lecture	Written tests Quarterly exams final exams

						Daily
						evaluation
						Written tests
					Quarterly	
25-26	25-26 6	Design of Simple	Des	ign of Simple	lecture	exams
25-20	0	Gears Box		Gears Box	lecture	final exams
						Daily
						evaluation
						Written tests
						Quarterly
27-28	6	Worm Gears	W	Jorm Gears	lecture	exams
27 20	0	worm Ocars	•	onn Ocurs	lecture	final exams
					Daily	
						evaluation
		6 Cams				Written tests
						Quarterly
29-30	6			Cams	lecture	exams
27 50	0	Cullis		Cullis		final exams
						Daily
						evaluation
11.Cc	ourse Ev	aluation				
Distribu	ting the s	score out of 100 accord	ding to	the tasks assign	ed to the studer	t such as daily
preparat	ion, daily	oral, monthly, or writte	en exam	s, reports etc		-
12.Le	arning a	nd Teaching Resour	rces			
Required textbooks (curricular books, if any)				Mach	ine design	R.S. KHURI
Main references (sources)			Machine design			
Recommended books and references (scientific			A collect	tion of books i	n the field of	
journals,	, reports	.)			Machine des	ign
Electron	ic Refere	nces, Websites		Check	out websites i	n this field

				L		
1. (Course	e Nam	e:			
Manuf	acturir	ig pro	cesses 2			
2. (Course	e Code	2:			
3	Semest	ter / Y	ear:			
First a	nd seco	ond se	emester / second	year		
4.]	Descri	ption	Preparation Date	2:		
19/2/20	024					
5. 4	Availa	ble A	ttendance Forms			
Physic	al atter	ndanc	e according to th	e weekly schedule		
6.]	Numbe	er of C	Credit Hours (To	tal) / Number of Uni	ts (Total)	
4 hr./ 8	3 unites	5				
7. (Course	admi	nistrator's name	(mention all, if more	e than one nan	ne)
]]	Name:	Ali A	wad Ismaeel			
]	Email:	aliaw	ad@atu.edu.iq			
8. (Course	e Obje	ctives			
Course C	Objective	s	Teaching students t	o work on production macl mation	nines	
9. 7	Teachi	ng an	d Learning Strat	egies		
Strategy		1- Dat	a Show	0		
		2- Wh	iteboard culator			
		4- Mi	ling workshop			
10. Co	ourse S	Structu	ıre			
Week	Hours	s Re	quired Learning	Unit or subject	Learning	Evaluation
		Ou	tcomes	name	method	method
		C C	ouplings, coupling		1- Data Show 2- Whiteboard	
1			systems, ranks of	Manufacturing processes	3- Calculator	Quick exams, class questions
		to un	olerances, coupling		4-Milling workshop	1
		Тур	es of tolerances, hole		workshop	
		ba	sic system, column		1- Data Show	
2		d	uals, tolerances for	Manufacturing processes	2- Whiteboard	Quick exams,
2	2		loose dimensions,	2	4-Milling	class questions
		det	of duals, selection		workshop	
		ec	onomic advantages.			
		Ge	ometric tolerances in		1- Data Show	
3		sha	ape and position and	Manufacturing processes	3- Calculator	Quick exams,
		p p	osition tolerances.	2	4-Milling	class questions
		1			worksnop	
		Me	asurement specifiers.		1 D	
		Me des	asurement specifiers, sign of measurement		1- Data Show 2- Whiteboard	
4		Me des	asurement specifiers, sign of measurement specifiers, types of asurement specifiers	Manufacturing processes	 Data Show Whiteboard Calculator 	Quick exams, class questions
4		Me des me	asurement specifiers, sign of measurement specifiers, types of asurement specifiers internal measuring	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling	Quick exams, class questions

	measuring specifiers, adjustable measuring specifiers, solid			
	special measuring specifiers).			
5	Classification of metal fabrication, metal working, introduction to the theory of blade formation and influencing factors, methods of fixing workpieces, including round and non-round, the cutting edges used, and the longitudinal and transverse feed shares.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
6	Identifying the pens used and how to install them for crafts, shaping lathe pens.	Manufacturing processes 2	2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
7	Identifying the types of turning pen angles, the effect of turning pen angles on the cutting process, types of turning pen metals, cutting conditions, cutting elements, uses of cutting speeds, and the use of tables and speed maps, classification of cutting tools with respect to operating methods and number of cutting edges.	Manufacturing processes 2	 Data Show Whiteboard Calculator Milling workshop 	Quick exams, class questions
8	The cutting edge, the emerging cutting edge and the theory of its formation, the factors that affect it, the factors that lead to reducing its size, cooling and its importance for cutting operations, various cooling liquids.	Manufacturing processes 2	 Data Show Whiteboard Calculator Milling workshop 	Quick exams, class questions
9	How to conduct an operating card for a group of operations, calculate its components, and calculate the cutting time for each operation	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
10	How to take advantage of the sequence card to make a product path through the different units.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
11	Factors that affect the choice of cutting speed (1- The effect of the	Manufacturing processes 2	 Data Show Whiteboard Calculator 	Quick exams, class questions

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	properties of the cutting tool. 2- The effect of the operating elements. 3- The effect of the properties of the metal being worked.		4-Milling workshop	
12	Automatic turret turning machines, studying the processes that can be operated and analyzing the processes on the product, how to prepare operating cards.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
13	Types of tools used and their arrangement on the front and rear hexagonal and quadrilateral heads.	Manufacturing processes 2	 Data Show Whiteboard Calculator Milling workshop 	Quick exams, class questions
14	Studying how to program automatic programmed lathes and the factors influencing the operating steps.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
15	Milling, learning about the operations that can be performed on milling machines, parts and components of horizontal and vertical milling machines, and the nature of the work of each part.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
16	Machine accessories, dividing heads, tools for attaching workpieces, mandrels, and bushings.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
17	Types of milling knives (disc and finger), gear sharpening knives, angle milling knives.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
18	Explaining the steps for performing milling operations, choosing the appropriate machine, the initial dimensions of the artifacts, and methods of attaching the artifacts.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
19	Milling different types of gears (steel, conical, helical, worm gears)	Manufacturing processes 2	1- Data Show2- Whiteboard3- Calculator4-Millingworkshop	Quick exams, class questions
20	How to make a ghanfari clutch, a V-block clutch.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
21	Operating rates, cutting and feeding speeds, and	Manufacturing processes 2	1- Data Show 2- Whiteboard	Quick exams, class questions
· · · · · · · · · · · · · · · · · · ·		1		11
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	the basis for their selection for the following various		3- Calculator 4-Milling workshop	
	milling operations. Skimming: Introduction to the types of planers (trolley, hopper,		1- Data Show	
22	vertical), operations performed on the planing machine, operating capabilities available with each machine, methods of attaching the work.	Manufacturing processes 2	2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
23	Operating rates, including cutting and feeding speeds, planer attachments such as dividing heads or special devices, angles of planer pens, and types of forces affecting them.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
24	The planer planer, clarification of (the cutting stroke, the return stroke), methods of connection to the planer machine and operating rates, calculating the cutting time for planing, preparing the planer sequence card.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
25	Grinding: An introduction to the theory of cutting and the shape of the blade in the grinding process, the grinding stones used (circumferential, face, side, cup, external, internal), their specifications and uses, attachment methods and balances.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
26	Different grinding machines and the operating capabilities of each type (external and internal cylindrical grinding machines, tool sharpening machines).	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
27	Preparing a comprehensive operating card for all cutting operations.	Manufacturing processes 2	1- Data Show 2- Whiteboard 3- Calculator 4-Milling workshop	Quick exams, class questions
28	Metal forming: theory of forming, foundations of cold and hot forming, types of forming.	Manufacturing processes 2	1- Data Show2- Whiteboard3- Calculator4-Millingworkshop	Quick exams, class questions

29		Rolling mill:	Manufa	acturing processes 2	 Data Show Whiteboard Calculator Milling workshop 	Quick exams, class questions
30	30 The basics of rolling and its methods, rolled products, sequence of operations in rolling, machines used, conditions for completing the rolling process.		Manufa	acturing processes 2	 Data Show Whiteboard Calculator Milling workshop 	Quick exams, class questions
11.Co	ourse Ev	aluation				
Distribu	tion of th	the grade from $100 = (2)$	25 for th	ne first semester	+ 25 for the se	cond semester)
accordin	ig to the t	asks assigned to the stu	dent, su	ch as daily prepa	aration, daily, or	al, monthly and
written e	exams, re	ports, etc. $+$ (50 final)				
12.Le	arning a	and Teaching Resour	ces			
Require	d textboo	ks (curricular books, if a	any)			
Main ret	Main references (sources)				processes, part ty	WO
Recomn	Recommended books and references (scientific					
journals	, reports	.)				
Electron	ic Refere	nces, Websites				

Course Description Form

13.Co	13.Course Name:								
	Computer application 2								
14.Co	ourse Co	ode:							
15.Se	mester /	/ Year:							
		First and	second semester / seco	nd year					
16.De	escriptio	on Preparation Date:							
			19/2/2024						
17.Av	vailable	Attendance Forms:							
			Attend a lecture						
18.Nı	umber o	f Credit Hours (Tota	al) / Number of Units (Total):					
			3 hours / 6 units						
19.Co	ourse ad	ministrator's name (mention all, if more th	an one nan	ne)				
Name	e: Dr. Za	aid H. Rashid	Email: 2	<u>zhr.1986@</u> ;	atu.edu.iq				
20.	Course	Objectives							
Course	Course Objectives Introducing the student to the use of AutoCAD and its two-dimensional								
		.drawing tools	and drawing models.	, us well us					
21.	Teachin	ig and Learning Stra	itegies						
Strateg	y	1 Get to know th 2 Recognizing dra 3- Recognizing dra	e program environment ar awing and 2D editing tapes awing and 3D editing tapes	nd the advant	ages of working in				
		4- Identify the type	of files and convert them t	o and from c	corresponding				
22. C	ourse St	ructure							
Week	Hours	Required Learning	Unit or subject name	Learning	Evaluation				
		Introduction to the	Introduction to the	method	method				
1	AutoCAD program , AutoCAD program , Quarterly exa								
-	Limit, Grid, Pan, Zoom								
2	2 3 Draw . menu Draw . menu lecture Practical tests Draw . menu Draw . menu lecture Draws final exams Daily evaluation								
3	3	Draw . menu	Draw . menu	lecture	Practical tests Quarterly exams final exams				

					Daily evaluation
4	3	Draw . menu	Draw . menu	lecture	Practical tests Quarterly exams final exams Daily evaluation
5	3	List of revisions (modify) .	List of revisions(modify)	lecture	Practical tests Quarterly exams final exams Daily evaluation
6	3	List of revisions (modify) .	List of revisions(modify)	lecture	Practical tests Quarterly exams final exams Daily evaluation
7	3	List(Object Snap)	List(Object Snap)	lecture	Practical tests Quarterly exams final exams Daily evaluation
8	3	. Layers_	. Layers_	lecture	Practical tests Quarterly exams final exams Daily evaluation
9	3	Dimensions_	Dimensions_	lecture	Practical tests Quarterly exams final exams Daily evaluation
10	3	Writing, scratching Hatching	Writing, scratching Hatching	lecture	Practical tests Quarterly exams final exams Daily evaluation
11	3	Store files, import files from other programs, and export .them	Store files, import files from other programs, and .export them	lecture	Practical tests Quarterly exams final exams Daily evaluation
12	3	Makingblocks and importing parts from other programs, such as dividing an element into equal spaces(Divide) the, distribution of elements along a path (Measure).	Makingblocks and importing parts from other programs, such as dividing an element into equal spaces(Divide), the distribution of elements along a path (Measure).	lecture	Practical tests Quarterly exams final exams Daily evaluation
13	3	Computer drawing applications according to the department's .specialty	Computer drawing applications according to the department's .specialty	lecture	Practical tests Quarterly exams final exams Daily evaluation
14	3	Computer drawing applications according to the department's .specialty	Computer drawing applications according to the department's .specialty	lecture	Practical tests Quarterly exams final exams Daily evaluation
15	3	Printing, copying and extracting files on the .plotter	Printing, copying and extracting files on the .plotter	lecture	Practical tests Quarterly exams final exams

					Daily evaluation
16	3	Principles of drawing .in three dimensions	Principles of drawing in .three dimensions	lecture	Practical tests Quarterly exams final exams Daily evaluation
17	3	List of cortical trigrams(Surface .(List of cortical trigrams (Surface .(lecture	Practical tests Quarterly exams final exams Daily evaluation
18	3	List of cortical trigrams(Surface .(List of cortical trigrams (Surface .(lecture	Practical tests Quarterly exams final exams Daily evaluation
19	3	List of cortical trigrams(Surface .(List of cortical trigrams (Surface .(lecture	Practical tests Quarterly exams final exams Daily evaluation
20	3	List of cortical trigrams(Surface .(List of cortical trigrams (Surface .(lecture	Practical tests Quarterly exams final exams Daily evaluation
21	3	List ofSolids .	List ofSolids .	lecture	Practical tests Quarterly exams final exams Daily evaluation
22	3	List ofSolids .	List ofSolids .	lecture	Practical tests Quarterly exams final exams Daily evaluation
23	3	List ofSolids .	List ofSolids .	lecture	Practical tests Quarterly exams final exams Daily evaluation
24	3	Applications on the commandsSlice - Revolve - Extrude	Applications on the commandsSlice - Revolve - Extrude	lecture	Practical tests Quarterly exams final exams Daily evaluation
25	3	Applications on the commandsSlice - Revolve - Extrude	Applications on the commandsSlice - Revolve - Extrude	lecture	Practical tests Quarterly exams final exams Daily evaluation
26	3	Applications on the commandsSlice - Revolve - Extrude	Applications on the commandsSlice - Revolve - Extrude	lecture	Practical tests Quarterly exams final exams Daily evaluation
27	3	Solid Editing drawing revisions	Solid Editing drawing revisions	lecture	Practical tests Quarterly exams final exams Daily evaluation
28	3	Solid Editing drawing revisions	Solid Editing drawing revisions	lecture	Practical tests Quarterly exams final exams Daily evaluation

29	3	Draw an applied example within the department's specialty	Draw an applied example within the department's specialty		lecture	Practical tests Quarterly exams final exams Daily evaluation			
30	3	Draw an applied example within the department's specialty	Draw an applied example within the department's specialty		lecture	Practical tests Quarterly exams final exams Daily evaluation			
23.C	23.Course Evaluation								
Distribu	ution of g	grades out of 100 for the	e semester exa	ms, continuc	ous assessme	ent, and final exam			
24.L	earning	and Teaching Resou	urces						
Requir	red textl	books (curricular bo	oks, if any)						
Main 1	referenc	es (sources)		Introduction to Auto CAD 2009 2D					
				and 3D	design 1'st	tedition 2008			
				Alf Yarv	vood				
Recommended books and references (scientific journals, reports)				Educa	tional bool	ks for AutoCAD			
Electro	onic Re	ferences, Websites	Chec	k out webs	ites in this field				

			Course Description Form	n		
25.Cou	rse	Name:				
			Industrial management			
26.Cou	rse	Code:	<u> </u>			
27.Sem	neste	er / Year:				
]	First and second semester / seco	nd year		
28.Des	crip	tion Preparation	on Date:			
			20-2-2023			
29.Ava	ilab	le Attendance	Forms:			
20.11	1		Mandatory attendance w	veekly		
30.Nun	nbei	r of Credit Hou	urs (Total) / Number of Units (T	otal)		
21.0		. 1	2 hr/ 4 units			
31.Cou	rse	administrator's	name (mention all, if more than	n one name)		
			Iname: Kalal Salah N Emeil: refel noori @etr			
			Email: ratar.noon@atu.	edu.lq		
32 Cou	rse	Objectives				
Course Objec	tives		The student will be able to:			
33.Tea Strategy	chir	ng and Learnin	2. Learn about production planning and t planning. 3. Learn about linear programming metho 4. Learn about the concept of maintenanc concept of the technological system 5. Learn about quality control, quality con characteristics g Strategies ectures.	he objectives and n ods e, the importance o ntrol methods, and	nethods of production f maintenance, and the sample inspection	
	0.	2. Open discus 3. Attempts to	ssions. solve exercises according to the required	equations using the	e problem-solving metho	
34. Cours	e St	tructure		T	T	
week Hot	irs	Learning Outcomes	Unit or subject name	method	method	
12The student understands the content and can complete the applicable exercises.Management: Management and its development, stages of managementlectureExams12The student understands the content and can complete the applicable exercises.Management: Management and its development, basic principles of management, characteristics of management.lectureExams					Exams And Practical report	
2	2 2 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
			78			

3	2	The student understands the content and can complete the applicable exercises	Industrial unit arrangement: -Location and arrangement of the industrial unit. -The main factors affecting the selection of industrial project sites. -Arrangement of the industrial unit (initial arrangement of the factory.(-Classification of types of industrial unit arrangements. -Advantages, limitations, and cases in which it is applied (commodity, functional, mixed, and combined arrangement).	lecture And solve problems	Exams And Practical report
4	2	The student understands the content and can complete the applicable exercises	Feasibility study for industrial projects: An idea about the feasibility study for industrial projects. Industrial project Stages of feasibility studies The importance of feasibility studies.	lecture And solve problems	Exams And Practical report
5	2	The student understands the content and can complete the applicable exercises	Production planning: Production planning, the concept of production planning, objectives of production planning and control.	lecture And solve problems	Exams And Practical report
6	2	The student understands the content and can complete the applicable exercises	Production planning: Types of production, production planning methods.	lecture And solve problems	Exams And Practical report
7	2	The student understands the content and can complete the applicable exercises	Linear programming methods, graphical method and transportation method	lecture And solve problems	Exams And Practical report
8	2	The student understands the content and can complete the applicable exercises	Study work and standard time: Work study, work study methods, method study, time study, work measurement	lecture And solve problems	Exams And Practical report
9	2	The student understands the content and can complete the applicable exercises	Maintenance: Maintenance, the importance of maintenance, the concept of the technological system	lecture And solve problems	Exams And Practical report
10	2	The student understands the content and can	Maintenance: Types of maintenance, types of holidays.	lecture And solve problems	Exams And Practical report
79					

				,	
		complete the applicable exercises			
11	2	The student understands the content and can complete the applicable exercises	Training: Training, the concept of training, the importance of training, training methods.	lecture And solve problems	Exams And Practical report
12	2	The student understands the content and can complete the applicable exercises	Industrial costs and wages: Costs, classification of costs, wages.	lecture And solve problems	Exams And Practical report
13	2	The student understands the content and can complete the applicable exercises	Industrial costs and wages: Methods of calculating wages, incentives, and types of incentives	lecture And solve problems	Exams And Practical report
14	2	The student understands the content and can complete the applicable exercises	purchase management: Purchases, purchasing steps, inventory, types of stored materials and methods of controlling them.	lecture And solve problems	Exams And Practical report
15	2	The student understands the content and can complete the applicable exercises	Industrial safety: Industrial safety, accident, types of accidents, protective equipment and its types.	lecture And solve problems	Exams And Practical report
16	2	The student understands the content and can complete the applicable exercises	Quality control: The meaning of control, the meaning of quality.	lecture And solve problems	Exams And Practical report
17	2	The student understands the content and can complete the applicable exercises	Quality control: Definition of quality, quality specifications, factors controlling quality, development and improvement of quality, design, quality conformity, international and Iraqi standard specifications.	lecture And solve problems	Exams And Practical report
18	2	The student understands the content and can complete the applicable exercises	Quality control methods and sample inspection plans: Quality control methods, examination and inspection methods, quality control steps, sampling methods, sample inspection schedule.	lecture And solve problems	Exams And Practical report
19	2	The student understands the content and can	Quality control methods and sample inspection plans:	lecture And solve problems	Exams And Practical report

		complete the	Operating characteristic curve,		
		applicable	quality of design, data collection		
		exercises	(type and analysis).		
20	2	The student understands the content and can complete the applicable	Control charts.	lecture And solve problems	Exams And Practical report
21	2	The student understands the content and can complete the applicable exercises	Control charts: Preparing and using a mean chart. Preparing and using a Pareto chart.	lecture And solve problems	Exams And Practical report
22	2	The student understands the content and can complete the applicable exercises	Control charts: Prepare a chart with standard deviation Prepare a defect chart.		
23	2	The student understands the content and can complete the applicable exercises	Control charts: Scatterplot, how to prepare a scatterplot.	lecture And solve problems	Exams And Practical report
24	2	The student understands the content and can complete the applicable exercises	Control charts: Quality control charts for standard deviation and percentage of defective units. Histogram (preparation and use).	lecture And solve problems	Exams And Practical report
25	2	The student understands the content and can complete the applicable exercises	Types of control charts: Control charts for honeycombs (arithmetic mean control chart (X- chart).	lecture And solve problems	Exams And Practical report
26	2	The student understands the content and can complete the applicable exercises	Types of control charts: Control charts for defects (control chart for range R-Chart and control chart for standard deviation δ-chart).	lecture And solve problems	Exams And Practical report
27	2	The student understands the content and can complete the applicable exercises	Types of control charts: Control charts for defects (control chart for the percentage of defective units P-chart).	lecture And solve problems	Exams And Practical report
28	2	The student understands the content and can complete the	Types of control charts: Control charts for defects (Control chart, number of defects in one unit, C-Chart).	lecture And solve problems	Exams And Practical report

دورا العالي المعالي ال			applicable				
30 2 The student understands the content and can complete the applicable exercises Summary of quality control panels. lecture And solve problems Exams And Practical repo 35.Course Evaluation Evaluation is done through: 1.	29	2	The student understands the content and can complete the applicable exercises	Types of control charts: Control charts for defects (Control chart for the average number of defects in the set of items (U- chart).	lecture And solve problems	Exams And Practical report	
<u>35.Course Evaluation</u> Evaluation is done through: 1. Daily, monthly and annual examinations. 2. Interaction and group participation in discussing and solving exercises. 36.Learning and Teaching Resources "Industrial management majors guide "world widelearn ,retrieved .2 industrial manager :job description , duties" and requirements". Bestaccredited .3 colleges .3Industrial organization.asp" investopedia retrieved" .4 Hammdy A. taha "operation research : an introduction " edition prentice -hall .0. الإدارة الصناعية ، هيئة المعاهد الفنية , ايسر سوسان , فر اس جعبار . .6. الهندسة الصناعية – دار الكتب للطباعة والنشر – الطبعة الأولى ,د. عادل كوريال. .7. ادارة الجودة الشاملة ومتطلبات الأيزو, الطبعة الأولى, مطبعة بغداد , خليل العاني , اسماعيل القزاز .	30	2	The student understands the content and can complete the applicable exercises	Summary of quality control panels.	lecture And solve problems	Exams And Practical report	
Evaluation is done through: 1. Daily, monthly and annual examinations. 2. Interaction and group participation in discussing and solving exercises. 36.Learning and Teaching Resources "Industrial management majors guide "world widelearn , retrieved .2 industrial manager :job description , duties" and requirements". Bestaccredited .3 colleges .3Industrial organization.asp" investopedia retrieved" .4 Hammdy A. taha "operation research : an introduction " edition prentice -hall .5. Iffect [Encileage & elixite , law weight] .6. Image: Best and the set of the set	35.C	ourse E	valuation				
 2. Interaction and group participation in discussing and solving exercises. 36.Learning and Teaching Resources "Industrial management majors guide "world widelearn , retrieved .2 industrial manager :job description , duties" and requirements". Bestaccredited .3 colleges .3Industrial organization.asp" investopedia retrieved" .4 Hammdy A. taha "operation research : an introduction " edition prentice -hall .9. الإدارة الصناعية ، هيئة المعاهد الفنية , ايسر سوسان , فراس جعبار .5 .18. الهندسة الصناعية – دار الكتب للطباعة والنشر – الطبعة الأولى , د.عادل كوريل. .9. الهندسة الصناعية – دار الكتب للطباعة والنشر – الطبعة الأولى , د.عادل كوريل. 	E valua 1 Daily	tion is do y monthl	one through: Iv and annual examination of the second s	nations			
<u>36.Learning and Teaching Resources</u> "Industrial management majors guide "world widelearn , retrieved .2 industrial manager : job description , duties" and requirements". Bestaccredited .3 colleges .3Industrial organization.asp" investopedia retrieved" .4 Hammdy A. taha "operation research : an introduction " edition prentice -hall .4 Hammdy A. taha "operation research : an introduction " edition prentice -hall .5. الإدارة الصناعية ، هيئة المعاهد الفنية , ايسر سوسان , فر اس جعبار .6. الهندسة الصناعية – دار الكتب للطباعة والنشر – الطبعة الأولى , د. عادل كوريال. .7. ادارة الجودة الشاملة ومتطلبات الإيزو, الطبعة الأولى, مطبعة بغداد , خليل العاني , اسماعيل القزاز .	2. Inter	action an	d group participation	n in discussing and solving exercis	es.		
Industrial management majors guide "world widelearn, retrieved .2 industrial manager : job description, duties" and requirements". Bestaccredited .3 colleges .3Industrial organization.asp" investopedia retrieved" .4 Hammdy A. taha "operation research : an introduction " edition prentice -hall .4 Hammdy A. taha "operation research : an introduction " edition prentice -hall .5 .6 الإدارة الصناعية – دار الكتب للطباعة والنشر – الطبعة الأولى د. عادل كوريال. .7 ادارة الجودة الشاملة ومتطلبات الايزو, الطبعة الأولى, مطبعة بغداد , خليل العاني , اسماعيل القز از.	36.L	earning	and Teaching Re	sources			
industrial manager : job description , duties " and requirements ". Bestaccredited .3 colleges .3 Industrial organization.asp " investopedia retrieved ".4 Hammdy A. taha "operation research : an introduction " edition prentice - hall .5 .5 . الإدارة الصناعية ، هيئة المعاهد الفنية , ايسر سوسان , فر اس جعبار .6			"Industrial ma	nagement majors guide "worl	d widelearn ,re	etrieved .2	
.3Industrial organization.asp" investopedia retrieved" .4 Hammdy A. taha "operation research : an introduction " edition prentice -hall 5. الإدارة الصناعية ، هيئة المعاهد الفنية , ايسر سوسان ,فراس جعبار . 6. الهندسة الصناعية – دار الكتب للطباعة والنشر – الطبعة الاولى ,د.عادل كوريال . 7. ادارة الجودة الشاملة ومتطلبات الايزو, الطبعة الاولى, مطبعة بغداد , خليل العاني , اسماعيل القزاز .	ind	ustrial r	nanager :job desc	cription, duties" and requirem	ents". Bestacci	redited .3 colleges	
4 Hammdy A. taha "operation research : an introduction " edition prentice -hall . 5. الإدارة الصناعية ، هيئة المعاهد الفنية , ايسر سوسان ,فراس جعبار . 6. الهندسة الصناعية – دار الكتب للطباعة والنشر – الطبعة الاولى ,د.عادل كوريال . 7. ادارة الجودة الشاملة ومتطلبات الايزو, الطبعة الاولى, مطبعة بغداد , خليل العاني , اسماعيل القزاز .		.3Indus	strial organization	n.asp" investopedia retrieved"		C	
5. الإدارة الصناعية ، هيئة المعاهد الفنية , ايسر سوسان , فراس جعبار . 6. الهندسة الصناعية – دار الكتب للطباعة و النشر – الطبعة الأولى ,د. عادل كوريال . 7. ادارة الجودة الشاملة ومتطلبات الأيزو, الطبعة الأولى, مطبعة بغداد , خليل العاني , اسماعيل القزاز .		.4 Ham	mdy A. taha "ope	ration research : an introducti	on " edition pr	rentice -hall	
6. الهندسة الصناعية – دار الكتب للطباعة والنشر – الطبعة الاولى ,د.عادل كوريال. 7. ادارة الجودة الشاملة ومتطلبات الايزو, الطبعة الاولى, مطبعة بغداد , خليل العاني , اسماعيل القزاز .	.5 الإدارة الصناعية ، هيئة المعاهد الفنية , ايس سوسان , فراس جعبار.						
7. ادارة الجودة الشاملة ومتطلبات الايزو, الطبعة الأولى, مطبعة بغداد , خليل العاني , اسماعيل القراز .		ل کوریال.	الطبعة الاولى د عادا	سناعية – دار الكتب للطباعة والنشر –	6. الهندسة الم	• • • -	
		بل القزاز.	, خليل العاني , اسماعي	ن الايزو, الطبعة الأولي, مطبعة بغداد	دة الشاملة ومتطلبان	7. ادارة الجود	

Course Description Form

			L					
25.	25.Course Name:							
		New he	ead way English course					
26.	Cours	e Code:						
27.	Seme	ster / Year:						
		First and	second semester / secor	nd year				
28.	Descr	iption Preparation Date	2:					
			20/2/2024					
29.	Avail	able Attendance Forms	:					
			Mandatory attenda	ance weekly				
30.	Numb	per of Credit Hours (To	tal) / Number of Units	(Total)				
		X	1 h/ 2 units					
31.	Cours	e administrator's name	(mention all, if more th	nan one name)			
	Name	: Wassan Jabbar	,		,			
	Emai	l: Wassan Jabbar @9	mail .com					
32.	Cours	e Objectives						
Course	Objectiv	res • The student will	be able to:					
		• 1. Learn about E	nglish Basic & Grammar					
		• 2. Identify the	construction of sentences ,uses	in examples & Sh	ort answers			
		• 5. Tenses of Verb	ontity: much and many /	some and any	y - something			
		anvone nobody e	everywhere / a few a littl	e a lot of - A	rticles			
33	Taach	ving and Learning Strat						
Strategy	, reach	1 Academic lectures	egies					
Servicegy		2. Open discussions.						
		3. Attempts to solve exer	cises according to the req	uired equation	s using the			
		problem-solving method			_			
34. C	ourse	Structure						
Week	Hou	Required Learning	Unit or subject name	Learning	Evaluation			
	rs	Outcomes		method	method			
	1	The student	Getting to know you /	lecture	Daily			
		understands the :	future Questions -		Evaluation, Exams And			
		future Questions	Where were you born?		Practical report			
		Questions words	What do you do?					
		Questions words	Questions words					
1			Who ?,Why					
	1	Present tenses	The way we live	lecture	Daily			
		Present Simple	Present tenses		evaluation,			
		What's he doing at the	Present Simple		Exams And Practical report			
		moment? Uses	Present Continuous		r lacucal report			
		have/have got	What's he doing at the					
2			moment? have/have got					

				1	1
	1	Past tenses, Past	It all went wrong	lecture	Daily
		Simple - Past	Past tenses, Past		evaluation,
		Continuous	Simple - What did you		Exams And
			do last night ?		Practical report
3			Past Continuous		
	1	Quantity: much and	Let's go shopping!	lecture	Daily
		many / some and any	Quantity: much and		evaluation,
		something, anyone,	many / some and any		Exams And
		nobody, everywhere	something, anyone,		Practical report
		Articles	nobody, everywhere		
		Anticics	a few, a little, a lot of		
4			Articles		
	1	Verb patterns 1	What do you want to	lecture	Daily
		want/hope to do,	do? Verb patterns 1		evaluation,
		enjoy/like doing	want/hope to do,		Exams And
		Future intentions	enjoy/like doing		Practical report
			Future intentions		
5			going to and will		
	1	What's it like	Tell me! What's it like	lecture	Daily
		What's it like?	What's it like?		evaluation,
		Comparative and	Comparative and		Exams And
6		superlative adjectives	superlative adjectives		Practical report
	1	Present Perfect and	Famous couples	lecture	Daily
		Past Simple /	Present Perfect and		evaluation,
		for and since	Past Simple		Exams And
		Tense revision	She has written 20		Practical report
			novels.		
			for and since		
			Tense revision		
7			Where do you live ?		
	1	have (got) to / should	Do's and don'ts	lecture	Daily
		/ must	have (got) to You have		evaluation,
			to pay bills / should		Exams And
			You should talk to your		Practical report
			boss / must		
			You must go to the		
8			dentist.		
	1	Time and conditional	Going places	lecture	Daily
		clauses - as soon as,	Time and conditional		evaluation,
		when, while, until .	clauses - as soon as,		Exams And
		What if?	when, while, until		Practical report
1			When we're in		
Q			Australia, we'll.		

			viai n n i pass		
			my exams, I'll		
	1	Verb patterns 2	Scared to death - Verb	lecture	Daily
		Infinitives - Purpose	patterns 2		evaluation,
		what, etc. + infinitive	manage to do, used to		Exams And
		something ,etc. +	do, go walking		Practical report
		infinitive	Infinitives - Purpose		
			I went to the shops to		
			buy some shoes.		
			what, etc. + infinitive		
			I don't know what to		
			say./ something .etc. +		
			infinitive		
10			I need something to eat		
10	1	Things that changed the	Things that changed the	lecture	Daily
	1	world - Passives	world - Passives	lootulo	evaluation,
			Coca-Cola is enjoyed all		Exams And
			over the world		Practical report
11			It was Invented In 1886		
11	1	Dreams and reality	Dreams and reality	lecture	Daily
	1	Second conditional	Second conditional	lecture	evaluation.
		Might	If I were a princess I'd		Exams And
		wiigin	live In a castle		Practical report
			Might I might as to		
			Mignt - I might go to		
12	-			1 .	
	1	Present Perfect	Earning a living	lecture	Daily
		Continuous . Present Perfect Simple	Present Periect		Exams And
		versus Continuous	Continuous - I've been		Practical report
		versus continuous	living on the streets for		
			a year. / How long have		
			you been selling The		
			Big Issue?		
			Present Perfect Simple		
			versus Continuous		
13			He's been running.		
	1	Past Perfect .	Love you and leave you	lecture	Daily
			Past Perfect	evalu	evaluation,
		Reported statements	They had met only one		Exams And Practical report
			week earlier		
			Reported statements		
			She told me that she		
14			loved John.		
35.C	ourse	Evaluation			
valua	tion is	s done through:			

2. Interaction and group participation in discussing and solving exercises.						
Distributing the score out of 100 according to the tasks assigned to the student such as dail						
preparation, daily oral, monthly, or written exam	is, reports etc					
36.Learning and Teaching Resources						
Required textbooks (curricular books, if any)	Pre - Intermediate					
	New head way English course					
	John and Liz Soars / OXFORD					
	UNIVERSITY PRESS					
Main references (sources)						
Recommended books and references (scientific						
journals, reports)						
Electronic References, Websites						

Course Description Form								
37.Course Name: Electrical Technology								
38 (e Code:						
	Course							
39.5	Semes	ter / Year:						
40.1	Dagari	Firs	t and second semester / I	First year				
40.1	Descri	ption Preparation Date	20/2/2024					
41.4	Availa	ble Attendance Forms	:					
			Mandatory attend	dance weekly				
42.1	Numb	er of Credit Hours (To	tal) / Number of Units (Fotal)				
43.0	Course	e administrator's name	(mention all, if more the	an one name)				
1	Name:	Wassan Jabbar	(
l	Email:	Wassan Jabbar @g	nail .com					
44.0 Course 0	COURSE Diective	e Objectives	he able to:					
	~J••••	• 1. Learn abou	it Electrical Basic Electric	rical(units, symb	ols) simple Electric			
		Circuit , • 2 Identify the	Electric Circuit					
		3. Identify the	The Effective Magnetic for	·Electric current,	Application on users			
		4. Identify the Reversal	Alternating Current, type	es, construction,	Utilization , Rotation			
		5. Electric Tr	ansformers. / 6. Moto	rs Protection				
45.7 Strategy	Feachi	ing and Learning Strat	egies					
Shategy		2. Open discussions.						
		3. Attempts to solve exe	rcises according to the rec	quired equations u	using the problem-so			
46. Co	ourse S	Structure						
Week	Hou	Required Learning	Unit or subject name	Learning	Evaluation method			
	rs	The student	First : Electrical Basic	lecture	Daily evaluation.			
		understands the content	Electrical(units, symbols	And	Exams And			
	and can complete the) simple Electric Circuit ,	solve problems	Practical report			
1	applicable exercises. Electric Current, Potential).							
	2 The student V		Voltage, Amper, Ohms	lecture	Daily evaluation ,			
		and can complete the	, Series & Parallel Circuits	solve problems	Practical report			
2		applicable exercises.						
	2	I ne student understands the content	Problems for Electric Circuit.	And	Exams And			
		and can complete the		solve problems	Practical report			
3	3 applicable exercises.							
	87							

	2	The student	Second : Alternating	lecture	Daily evaluation,		
		understands the content	Current, Methods of	And	Exams And		
		and can complete the	approach Alternating	solve problems	Practical report		
4		applicable exercises.	current .				
	2	The student	The Sine wave, General	lecture	Daily evaluation,		
		understands the content	format for the Sinusoidal	And	Exams And		
		and can complete the	voltage or current,	solve problems	Practical report		
		applicable exercises.	Effective values {Root				
~			Wr m a)				
5	2	The student	VI.III.S)}.	lactura	Daily avaluation		
	Z	understands the content	current types of power	And	Exams And		
		and can complete the	plant	solve problems	Practical report		
6		applicable exercises.	plant.	solve problems	r lactical report		
0	2	The student	Third : Electromagnetic	lecture	Daily evaluation.		
	2	understands the content	:Magnetic Field .	And	Exams And		
		and can complete the	Magnetic flux lines,	solve problems	Practical report		
7		applicable exercises.	Magnetic flux density	1	1		
	2	The student	The Effective Magnetic	lecture	Daily evaluation,		
		understands the content	for Electric current,	And	Exams And		
		and can complete the	Application on users	solve problems	Practical report		
8		applicable exercises.	Magnetic Motive force.				
	2	The student	4 Th : Alternating Current	lecture	Daily evaluation,		
		understands the content	Single phase , Alternating	And	Exams And		
0		and can complete the	Current three phase .	solve problems	Practical report		
9	2	applicable exercises.	Stor Connected for three	laatuma	Daily avaluation		
	2	I ne student understands the content	star Connected for three	And	Daily evaluation,		
		and can complete the	current & Line current	solve problems	Practical report		
		applicable exercises.	phase Voltage & line	solve problems	r ractical report		
10		appricació encicises:	Voltage . Power .				
	2	The student	Delta Connected for three	lecture	Daily evaluation,		
		understands the content	phase system , phase	And	Exams And		
		and can complete the	current & Line current,	solve problems	Practical report		
		applicable exercises.	phase Voltage & line				
11			Voltage, Power.				
	2	The student	5 Th : Electric	lecture	Daily evaluation,		
		understands the content	Transformers	And	Exams And		
10		and can complete the		solve problems	Practical report		
12	r	The student	$6 \text{ Th} \cdot \Delta C \text{ motors motor}$	lecture	Daily evaluation		
	Z	understands the content	types three phase motors	And	Exams And		
		and can complete the	(types Utilization)	solve problems	Practical report		
13		applicable exercises.		sorre procrems	r nachen report		
-	2	The student	Construction of three	lecture	Daily evaluation,		
	-	understands the content	phase motors, Principle	And	Exams And		
		and can complete the	to operate motors.	solve problems	Practical report		
14		applicable exercises.					
	2	The student	Methods to start With	lecture	Daily evaluation,		
		understands the content	motion three phase	And	Exams And		
15			motors .	solve problems	Practical report		
88							

		and can complete the										
		applicable exercises.										
	2	The student	Methods to control &	lecture	Daily evaluation,							
		understands the content	specifically change	And	Exams And							
		and can complete the	Velocity of three phase	solve problems	Practical report							
16		applicable exercises.	motors.									
	2	The student	7 Th Alternating Current	lecture	Daily evaluation,							
		understands the content	Single phase motors	And	Exams And							
		and can complete the	Single phase motors,	solve problems	Practical report							
		applicable exercises.	types, construction,									
			Utilization, Rotation									
17			Reversal.									
	2	The student	Single phase motors to	lecture	Daily evaluation,							
		understands the content	start with condenser	And	Exams And							
		and can complete the	types construction,	solve problems	Practical report							
18	-	applicable exercises.	Utilization.	1 4								
	2	I ne student	8 In : Motors Protection .	lecture	Daily evaluation,							
		and con complete the		Allu solvo problems	Exams And Practical report							
10		and can complete the		solve problems	r ractical report							
17	2	The student	Circuit Fuse types	lecture	Daily evaluation							
	4	understands the content	characteristic	And	Exams And							
		and can complete the	To be Separated	solve problems	Practical report							
20		applicable exercises.	1	1	1							
	2	The student	9 Th : Method of	lecture	Daily evaluation,							
		understands the content	specifically devoid in	And	Exams And							
		and can complete the	motors .	solve problems	Practical report							
21		applicable exercises.										
	2	The student	High motors temperature	lecture	Daily evaluation,							
		understands the content	during rotation, rotation	And	Exams And							
		and can complete the	motors with clamor.	solve problems	Practical report							
22	-	applicable exercises.		1								
	2	The student	Reformation Method to	lecture	Daily evaluation,							
		understands the content	break down.	And	Exams And							
22		and can complete the		solve problems	Practical report							
23	2	The student	Circuit to be in control of	lecture	Daily evaluation							
	2	understands the content	operation cybernetics	And	Exams And							
		and can complete the	motors	solve problems	Practical report							
		applicable exercises.	10 Th: Motors security &	···· · · ·								
24		11	perpetuation .									
	2	The student	Method of operation	lecture	Daily evaluation,							
		understands the content	conservation motors	And	Exams And							
		and can complete the		solve problems	Practical report							
25		applicable exercises.										
	2	The student	Motors greasing &	lecture	Daily evaluation,							
		understands the content	cleaning.	And	Exams And							
		and can complete the		solve problems	Practical report							
26	~	applicable exercises.	Induction 1 f	Locture A 1	Deiler en linet							
27	2	ine student	Industrial safe or	Lecture And	Daily evaluation,							
27		understands the content	moustrial secure.	solve problems								
			00									
			07		89							

		and can complete the				Practical report
		applicable exercises.				
	2		Metho	ds of Generation	lecture	Daily evaluation,
			Power	electricity	And	Exams And
28					solve problems	Practical report
	2		Genera	ation of Power	lecture	Daily evaluation,
			electri	city	And	Exams And
29					solve problems	Practical report
	2				lecture	Daily evaluation,
					And	Exams And
30					solve problems	Practical report
47.Co	ourse I	Evaluation				
Evaluat	tion is o	done through:				
1. Daily	, montł	nly and annual examination	ıs.			
2. Intera	ction a	nd group participation in d	liscussi	ng and solving exerc	cises.	
Distribu	ting the	e score out of 100 accordin	ng to th	e tasks assigned to t	he student such as o	daily preparation, dail
oral, mo	onthly, o	or written exams, reports	etc			
48.Le	earning	g and Teaching Resource	ces			
Require	d textb	ooks (curricular books, if a	iny)	ة الكهر بائية الأساسية	علم الهندس	
				کي . تي . هوزي	س . مكنزي سميث _.	تأليف / آي
				الدكتور مظفر أنور	کے محمد خضیر ۔	ر جمة / الدكتور محمد ز
				النعمة		
Main references (sources)			إِنْر والقياسات الكهربانية - تاليف / د. اسعد عبد المجيد الأوسي-			
				م يحيى احمد / 1991	<u> کریم سعید – ابر اهی</u>	لله محمد عيوش - صدقے
Recomm	nended	books and references (scie	entific			
journals	, report	s)				
Electron	ic Refe	erences, Websites				